



R&M Product Catalog
DC/LAN/FTTx 2024

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R&M

Company Introduction

R&M (www.rdm.com) is a globally active corporate group in the information and communication technology market with U.S. offices in California and Maryland. The company develops, manufactures and sells infrastructure solutions for communication and data networks.

R&M solutions are used in Telecommunication, Fiber to the Home, Fiber to the Antenna, LAN and Data Center networks. Software from R&M supports the management of network infrastructures.

The family owned company founded in 1964 has its own manufacturing facilities in 14 locations worldwide.

Quality



High Product Quality and farsighted system design

Innovation



More than 100 patents and collaboration in international standard-setting bodies

Availability



Maximum availability with cost-effective operation

Protection of Investment



Future-proof networks and secure long terms investment

Customer Proximity



Represented in 35 countries with proprietary organizations

Sustainability



Keeping the balance between economic, ecological and social aspects

R&MinteliPhy - Automated Infrastructure Management (AIM)

Network security, cost savings and the reduction of maintenance time are requirements of modern high-performance networks. The R&MinteliPhy system supports the operators of these networks with a balanced and advanced range of hardware and software solutions for all transmission technologies. All components of R&MinteliPhy fit on R&M standard products and can be retro-fitted at a later date.



Free trial & video

Automated Infrastructure Management

R&MinteliPhy

Components of the R&MinteliPhy Automated Infrastructure Management System



Analyzer

The Analyzer is connected with all sensorbars via a cable system. It reads out the sensorbars and provides the server with the latest connection data. Its site of operation: in a 19" cabinet or saving space on top hat rails within the cabinet. An Analyzer can cover several cabinets.



Remote Display

One Analyzer can cover many network cabinets. In each cabinet an own display shows important alarm messages and patching instructions. The Remote Display also features a power input port to extend the powering capacity of the Analyzer in configurations with many Sensorbars.



Sensorbars

A sensor strip detects the RFID tag in a non-contact operation. It can be retrofitted to all R&MinteliPhy-compatible patch panels. The strip records connectors and connections. LEDs indicate the operating state of the ports and support the technician in patching.



RFID tags

An RFID tag on the connector contains all the necessary information to identify cables and connectors without any doubt. The retrofittable plastic guard with the tag fits all R&M copper and fiber optic connectors.



R&MinteliPhy Manage Server

In a central position, the R&MinteliPhy Manage Server controls and monitors the entire infrastructure in real time. Furthermore, it offers a complete set of administration and automation tools.



R&MinteliPhy Manage Clients

A browser or smartphone is all you need to operate R&MinteliPhy. The graphical user interface features intuitive operation and provides access to all functions, from automatic routing to the scheduling of modification projects.

inteliPhy Net - A DCIM designed for simplicity

R&M inteliPhy net is your easy to use DCIM solution for asset, capacity and change management. Reduce deployment time and ensure high data quality of your documentation with great IT infrastructure visualization.

Explore your data center from a bird's eye view to the depths of your cabinets, and drill into interdependences with pre-defines views – without leaving your desk. Experience unexpected simplicity in buying, deploying, using and maintaining inteliPhy net. Understand current usage of space, power and ports as compared to capacity limits.

Document your entire cabling plant and map physical relationships between all IT devices so you can easily see how everything is physically connected – down to the individual port level.

Asset management - Smart model library with detailed model info like U space, dimensions, weight and detailed network port information like connector and medium. Drag and drop assets into and within a rack. Track and visualize relationships between assets.

Connectivity management - Automatically validate physical connections and media type – for network and power. Visually track cable plant to simplify troubleshooting and maintenance. Get an automated real-time view of all links connections, with the AIM package.

Capacity management - Availability insights on rack space, power outlets on rack PDU, network ports with media and connector match. Real-time data for seamless rack space reserving with multiple users on multiple projects. Visualize space, power, and network connections.

Change management - Coordinate activities across independent departmental resources. Ensure change management requests are compiled correctly and in a timely manner. Make quick reservations or plan deployment scenarios.

Automated Infrastructure Management

R&MinteliPhy

Software inteliPhy net



FEATURES

- Asset Management
- Connectivity Management
- Change Management
- Reporting
- Capacity Management
- Extensive model library
- Intuitive user interface
- Server based architecture with browser based client

| Software | License per Rack | Maintenance Contract |
|------------------------|------------------|----------------------|
| InteliPhy Net Standard | R380384 | R380388 |
| InteliPhy Net Plus | R380386 | R380389 |
| InteliPhy Net Pro | R380387 | R380390 |

Active Port Monitoring



Visibility. End to end.

The more powerful networks become, the more complex physical infrastructures get. There is a dire void in automated end to end connectivity management, while many network administrators still document their cabling plant manually. The R&MinteliPhy Port Monitoring Cables bridge a crucial segment of automated cabling management: the link between patch panel and equipment port. Remove blind spots in your physical network by identifying ports with RFID-based port markers. Reduce downtime and mean time to repair with a fully integrated R&MinteliPhy Automated Infrastructure Management System.



intelIPhy Port Marker

intelIPhy Port Monitoring Cable LC OM4

| | | | |
|-----|---------|-----|---------|
| OdB | R842209 | 3m | R842207 |
| | | 7,5 | R842208 |

FEATURES

- Automated network cabling documentation end to end
- Always updated data
- Cabling IoT
- Identifying the port
- Insights into connectivity
- Instant intelligence

Analyzers



FEATURES

- The Analyzer is connected with all sensorbars via a cable bus system
- LCD display and Ethernet interface
- Reads out the sensorbars and provides the server with the latest connections data
- Controls up to 42 sensorbars
- Provides power to the sensorbars via the cable bus system



Analyzer 19" 1U
with power supply

R837015



Monitor 19" 1U Remote Display
with power supply

R814561



Analyzer Compact 0U
with power supply

R837016



Analyzer, bus termination

10pc

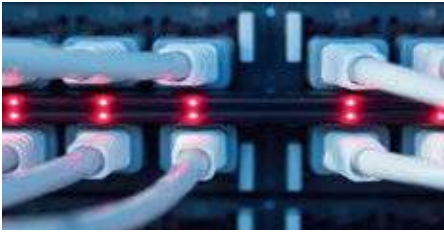
R809359

Analyzer, bus connector

10pc







R809358

Sensorbars



FEATURES

- The sensor strip detects the RFID tag
- Non-contact operation, galvanic isolation
- Retrofittable to all compatible patch panels
- Port identification









| | | | |
|---|---|--|---|
|  |  |  |  |
| Sensorbar for 19" 1U Patch Panel | Monitor Bus Cable | Bus connector | Bus, wiring tool |
| HD ELISO 48-port Netscale 48 PC panel 24-ports FiberEasy/Unirack | 98 feet | 10pc | |
| R837017 R809353 R812772 R812272 | R809363 | R809364 | R809365 |
| |  |  | |
| | Sensorbar, mounting kit | Bus Cable clip | |
| | 10pc | 10pc | |
| | R809355 | R810223 | |

RFID Clips



FEATURES

- Contains all necessary information
- Toolless installation
- Identifies the cable
- Identifies the connector
- Delivered in pairs (pack of 10 pairs)

| | | | |
|---|---|--|---|
|  |  |  |  |
| RJ45 | LC Duplex | E2000 | SC Simplex |
| R809348 | R809349 | R809350 | R809351 |
|  |  |  |  |
| LC-QR Duplex | MPO | MPO-QR | RFID Reader |
| R827357 | R809352 | R835019 | R828642 |



Datacenter Solutions

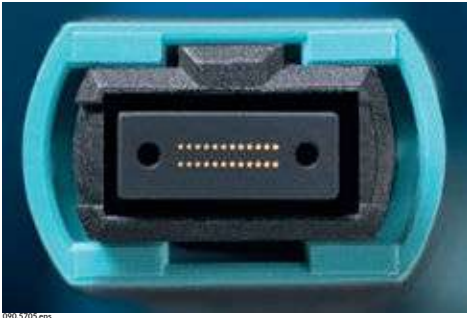
Data center network cabling accounts for only 2-4% of all data center project investments. However, it is of crucial importance for network performance. Knowing about the impact of infrastructure is essential to fully leverage your IT strategy.

R&M's Data Center Solutions provide:

- Flexible, modular high density solutions
- Allow a mixed media integration, fiber and copper
- Innovation with Quick Release fiber optic patch cords
- LSZH or Plenum trunks and patch cords

Datacenter Solutions

Fiber Optic Applications 10G, 40G, 100G, 400G

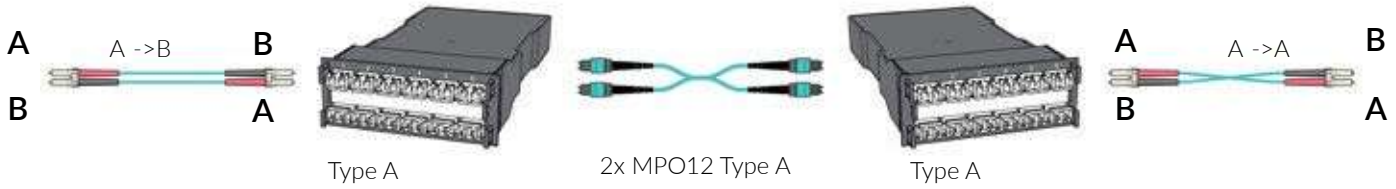


Although passive connection and distribution technology may be a detail in many IT projects, high-end solutions based on copper and fiber optic cables are a core commitment for R&M and are the origin of all our developments for data centers.

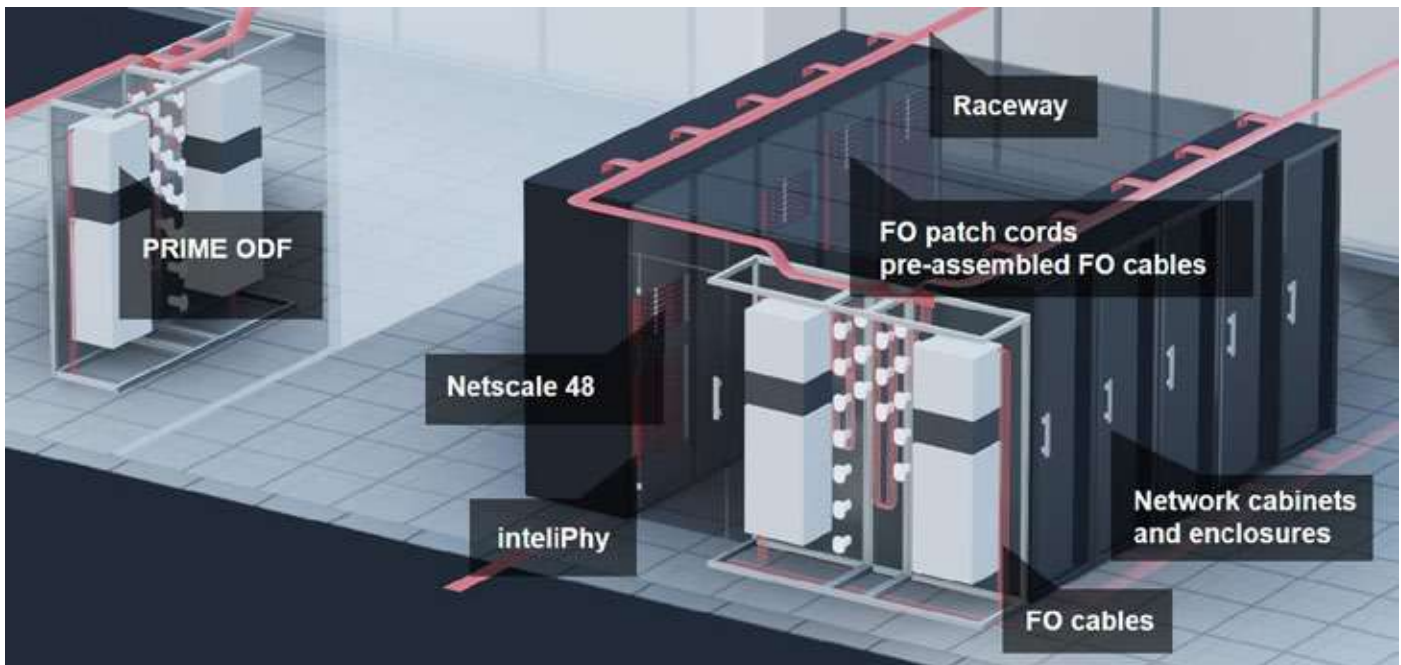
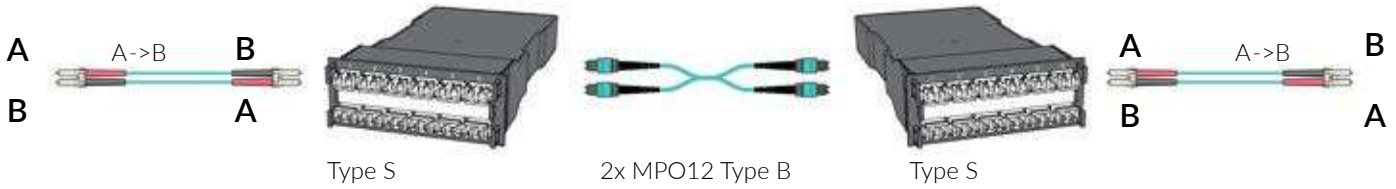
R&M fiber optic cabling systems consist of technology-leading fiber optic components that take your network to the next level of performance. We produce in-house and test every product 100% before it leaves the factory. Guaranteed!

MPO Polarization Guide

Polarization Type A (Standard R&M)



Polarization Type B



Building Entry Point

PRIME Optical Distribution Frame

Racks Prime



Prime Cabinet , complete

- 1.8m Height
900mmx300mm **R851193**
- 2.2m Height
900mmx300mm **R851192**



Prime Wall Cabinet

- 0.7m Height**
900mmx300mm **R851195**
- 1.2m Height**
900mmx300mm **R851194**



Cabinet ODF , backplane

- 2.2m Height
900mmx300mm **R851191**



Standard Door

- 2200mmx600mm **R510768**
- 2200mmx300mm **R510767**

Swing Door

- use in combination with standard door
- 2200mmx600mm **R807352**
- 2200mmx300mm **R510884**

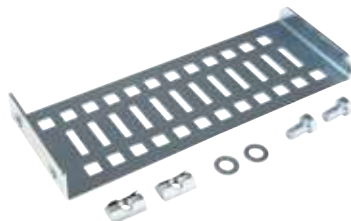
Side Wall

- Left **R510765**
- Right **R510766**

Accessories



Cable Management
R510774



Side Cable Management
R849846



Grounding Set
R804294

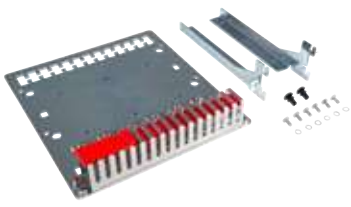


T-Nut Set
R807354

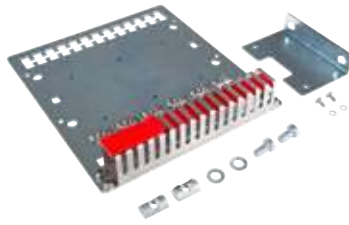
Building Entry Point

PRIME Optical Distribution Frame

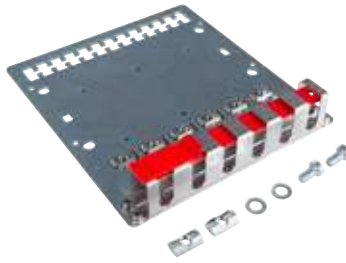
Cable Breakout Boxes



Central 64 tubes 5mm (ETSI)
R851196



Side 64 tubes 5mm (ETSI)
R851197



Central 12 tubes NW10 (ETSI)
R851198



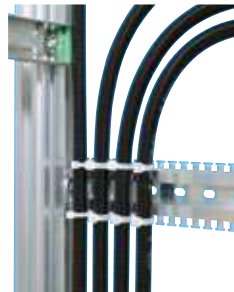
Cover Breakout Box
R851672



Breakout Box 10xNW17
R814623



Breakout Box 72 tubes 5mm
R814538



Cable Guide Kit NW17
R308694



Transport Tube 5mm OD
50m
R849848



Building Entry Point

PRIME Optical Distribution Frame

Prime ODF Sub-Racks 1U & 3U



Features:

Innovative High Density System, allowing the placement of 4 trays in 3U, allowing up to 192 fibers in SC or 384 in LC in a 3U space.

- 1U & 3U version for installation in 19" cabinet or on the ETSI frame Prime

Prime Chassis

3U Sub-Rack-19"-FM-empty

R850364

1U Sub-Rack-19"-FM-empty

R867703

3U Sub-Rack-ETSI-empty

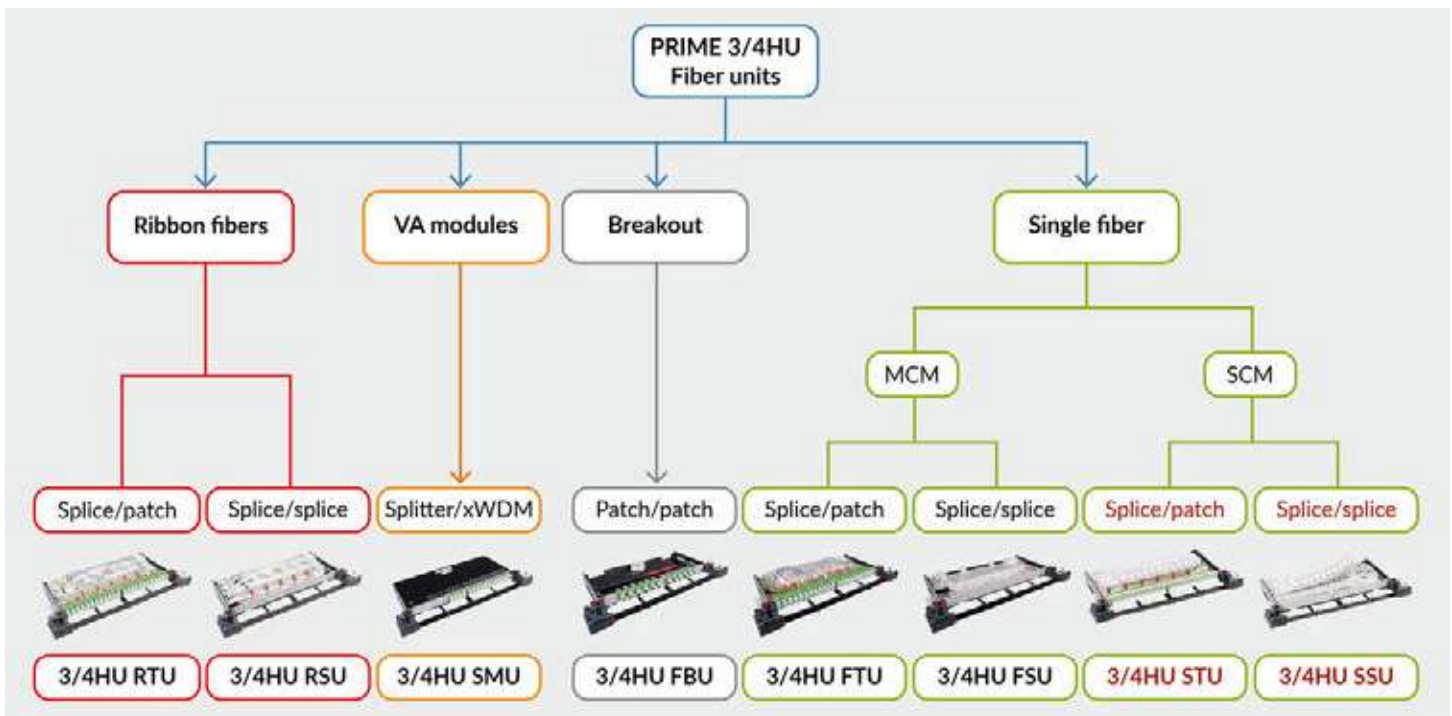
R850363

Front Cover 3U

R850804



Overview available Prime Fiber Units



Ribbon Termination Units (RTU) and Ribbon Splice Units (RSU) provide a ribbon fiber splice tray for up to 24 heat shrink ribbon splice sleeves.

Splitter Mount Units (SMU) split the feed signal to a given ratio (1/32 above). Fiber Breakout Units (FBU) provide convenient fixation and slack management for pre-terminated trunk cables.

Fiber Termination Units (FTU) provide up to 4 splice trays with 24 splice sleeve positions each with the pigtailed fully assembled. Fiber Splice Units (FSU) are pure splice units without adapters in the front or pigtailed.

Single Termination Units (STU) are splice patch units with 12 separate splice trays (4 splice per tray). The Single Splice Units (SSU) are pure splicing units providing 12 FMTS splice trays as well. The FMTS splice tray system is used in the Polaris assortment as well, they are interchangeable.

Building Entry Point

PRIME Optical Distribution Frame

Ribbon Termination Unit (RTU)

The 3/4U PRIME Ribbon Termination Unit RTU is a splice patch unit for up to 96 fibers. The splice tray has an integrated splice protector holder for up to 24 heat shrink ribbon splice protectors (8F/12F). All configurations 250µm flat ribbon.



LC Duplex 48 Fiber

ETSI (Left-Side Entrance)

24 LCD-UPC OS2 (48 FO)

R892099

19" Rack (Rear Entrance)

24 LCD-UPC OS2 (48 FO)

R892100

24 LCD OM4 HV (48 FO)

R892101

LC Duplex 96 Fiber

ETSI (Left-Side Entrance)

48 LC Duplex UPC OS2

R892102

19" Rack (Rear Entrance)

48 LC Duplex UPC OS2

R892103

48 LC Duplex OM4 HV

R892104

Fiber Termination Unit (FTU)

3 /4U PRIME FTU is the splice patch unit. The basic fiberinlay is suitable for 24/48 HS sleeves. Depending on the number of fibers, up to three additional MCM splice trays are equipped for 24/48 HS each.



LC Duplex Singlemode OS2

ETSI (Left Side Entrance)

24 UPC OS2 (48F)

R892106

48 UPC OS2 (96F)

R892107

19" Rack (Rear Entrance)

24 UPC OS2 (48F)

R892108

48 UPC OS2 (96F)

R892109

LC Duplex Multimode OM4 HV

ETSI (Left Side Entrance)

24 OM4 (48F)

R892110

48 OM4 (96F)

R892111

19" Rack (Rear Entrance)

24 OM4 (48F)

R891508

48 OM4 (96F)

R891509

Ribbon Splice Unit (RSU)

The 3/4U PRIME Ribbon Splice Unit RSU is a pure splice unit for up to 288 splices. The splice tray has an integrated splice protector holder for up to 24 heat shrink ribbon splice protectors (8F / 12F). All configurations 250µm flat ribbon.



ETSI Frame (cable entry)

Left Side

R875331

Right Side

R875332

19" Rack (cable entry)

Rear

R875333

Fiber Splice Unit (FSU)

3/4U PRIME FSU is a pure splice unit. The basic fiber inlay is suitable for 24/48 HS splice protectors. Up to three additional MCM splice cassettes with 24/48 HS each can be retrofitted.



ETSI (cable entry)

Left side

R849841

Right side

R849842

19" Rack (cable entry)

Rear

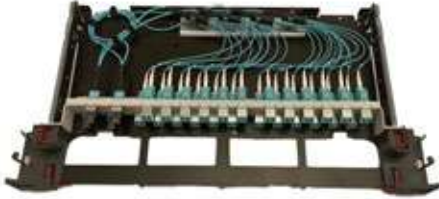
R849845

Building Entry Point

PRIME Optical Distribution Frame

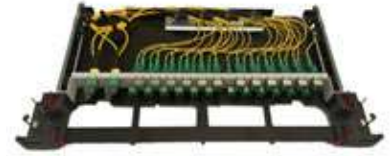
MPO Breakout Unit (MBU)

3/4U PRIME MBU is breaking out an MPO trunk into duplex LC connections. Additional configurations are available upon request. Suitable for PRIME-3U rack ETSI and 19" rack mounting.



LC Duplex (ETSI & 19" Rack)

| | |
|--------------------|----------------|
| 2*24F MPO OM4 Aqua | R882607 |
| 4*12F MPO OM4 Aqua | R882434 |
| 4*12F MPO SM UPC | R878440 |



Fiber Breakout Unit (FBU)

3/4U PRIME FBU is a breakout unit. Simple connection of pre-terminated cables. Attaching the fan-out cable with safety strap. Suitable for PRIME-3U rack ETSI and 19" rack mounting.



LC Duplex (ETSI & 19" Rack)

| | |
|-----------------|----------------|
| 24 SM UPC (48F) | R858605 |
| 24 OM4 HV (48F) | R865175 |

SC Simplex (ETSI & 19" Rack)

| | |
|-----------|----------------|
| 24 SM UPC | R858619 |
| 24 OM4 HV | R892105 |



12 SM MPO Pass Through green

R878441



12 OM4 MPO Pass Through gray

R878442

Fiber Overlength Unit (FOU)

3/4U PRIME FOU is a fiber overlength unit. Inside the unit can store up to 32m (105 feet) fiber overlength of loose tube or patch cord fibers. With the two Velcro tape the cable can be fixed in a safe way.



ETSI (cable entry)

| | |
|------------|----------------|
| Left Side | R849849 |
| Right Side | R850806 |

19" Rack (cable entry)

| | |
|------|----------------|
| Rear | R850807 |
|------|----------------|

Building Entry Point

Building Entrance Facility

Building Entrance Facility - BEF

The R&M Building Entrance Facility (BEF) enables hyperscale data center managers to quickly deploy massive amounts of fiber connections wherever needed. It is stackable and meets any high fiber count requirements. BEFs are available with 12, 24, 60, 72, 144 or 192 splice drawers, each capable of splicing 384 ribbon fibers (e.g. 60 splice drawers = 23,040 fiber splices). A NEMA rated housing is configured upon request.



Splice Drawer

The Splice Drawer SD-08 (8*4 ribbon splices) is a universal splice drawer designed for use in R&M fiber management panels. 384 fibers can be spliced and managed in each of the stackable splice trays. A transparent plastic cover protects the fibers. During servicing, all an engineer has to do is look through the cover to assess the situation in the splice drawer.



High Count Fanout Kit

The R&M High Count Fanout Kit is designed to distribute the fiber bundles in cables with up to 6,912 fibers when using 200µm fiber ribbons in usable furcated socks. The HCFK is flat sided and uses unique U-shaped ferrules to protect the fibers as well as to protect the furcation sock. The HCFK units are stackable and can be securely mounted on the backplate of the BEF system. While using the real estate behind the Splice Drawer cradles, two HCFKs can be stacked on top of each other.



Shingles

Various cable entry solutions have been added to the BEF system. To enter the BEF from the sides, shingles with either 4 x 1.5" (38mm) or 1 x 2.5" (63mm) cable entries are available. In a stacked configuration, the outdoor cables are routed in from behind the cabinet through the rear cable entry port. The rear cable entry port is exposed when a shingle is removed.



Building Entry Point

Building Entrance Facility



BEF 24: Allows for splicing a 3,456 fiber cable and having reserve capacity for the future. Up to 9,216 splices are possible.



BEF 60: Flexibility. The amount of shingles allows for splicing all types of cables, from 288 fibers to 6,912. Up to 23,040 splices.



010.5624

BEF 72: Designed to splice four 6,912 fiber cables onto smaller count cables. Up to 27,648 splices are possible per unit.



BEF 144: Up to 55,296 splices are possible in this unit. The two sides are installed separately for convenient installation.

| BEF | Cable Entries | Splice Capacity | P/N |
|---------------|---------------|-----------------|---------|
| BEF 12 | custom | 3,456 | R277012 |
| BEF 12 NEMA 4 | custom | 3,456 | custom |
| BEF 24 | 20 | 6,921 | R876500 |
| BEF 24 NEMA 4 | 20 | 6,921 | custom |
| BEF 60 | 30 | 17,280 | R273458 |
| BEF 72 | 30 | 29,736 | R874202 |
| BEF 144 | 40 | 41,472 | R875663 |

Fiber Optic Connectivity

Netscale Systems

Netscale 48 - Mixed Media Panel



Netscale 48 is the most flexible mixed media patch panel. It provides smart cable management and offers everything on a single height unit in the rack.

Netscale 48 - Housing



Netscale 48 empty straight
Netscale 48 empty angled

R868288
R875195

Netscale 48 front door kit 80
Netscale 48 front door kit 100

R868289
R875198

Rear cable support
Label holder

R868290
R512430

Netscale 48 - Inserts



LC Duplex 24 Fiber Splice Top SM UPC
LC Duplex 24 Fiber Splice Bot SM UPC

R870476
R875201

MPO-LC 2x6 Port OM4 HV A
MPO-LC 2x6 Port OM5 A

R869120
R870471

Cu 6x Empty Unshielded
Cu 6x Empty Shielded

R868292
R868291



LC Duplex 6 Ports OM4
LC Duplex 6 Ports OM5
LC Duplex 6 Ports SM UPC
SC Simplex 6 Fibers SM UPC

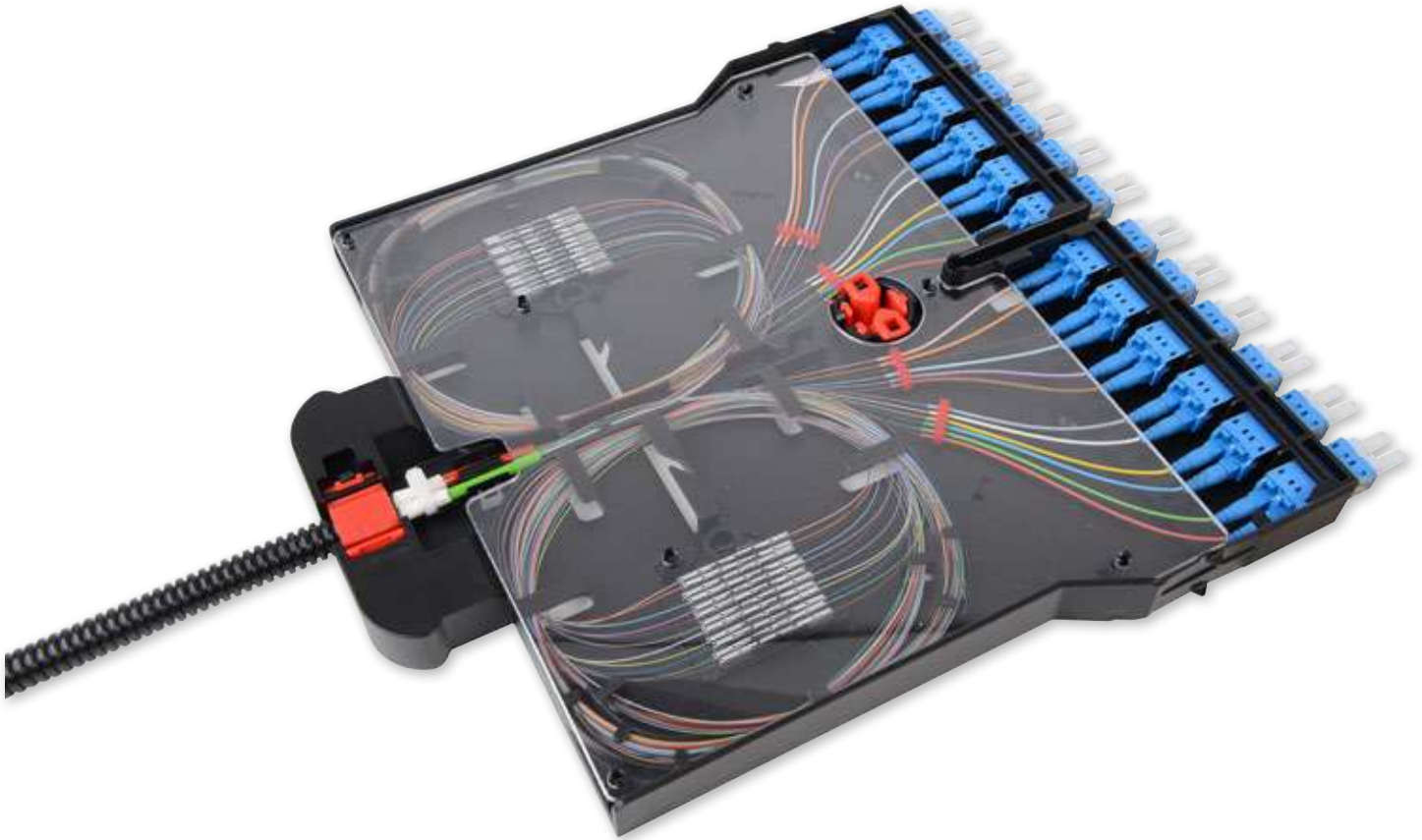
R869111
R869112
R869113
R872415



LC Duplex 6 Ports IDS OM4
LC Duplex 6 Ports IDS OM5
LC Duplex 6 Ports IDS SM UPC
LC Duplex 6 Ports IDS SM APC

R872420
R869112
R869113
R872415

Netscale 48 Splice Cassette



LC Duplex Splice Cassettes

- | | |
|--------------------------------------|----------------|
| LC-D 12P Splice OM4 top (HV, 24F) | R870474 |
| LC-D 12P Splice OM5 top (LG, 24F) | R870475 |
| LC-D 12P Splice UPC SM top (BL, 24F) | R870476 |
| LC-D 12P Splice APC SM top (GR, 24F) | R870477 |
| LC-D 12P Splice OM4 bot (HV, 24F) | R875199 |
| LC-D 12P Splice OM5 bot (LG, 24F) | R875200 |
| LC-D 12P Splice UPC SM bot (BL, 24F) | R875201 |
| LC-D 12P Splice APC SM bot (GR, 24F) | R875202 |

SC Simplex Splice Cassettes

- | | |
|-------------------------------------|----------------|
| SC-S 6P Splice OM4 top (HV, 12F) | R870478 |
| SC-S 6P Splice OM5 top (LG, 12F) | R872435 |
| SC-S 6P Splice UPC SM top (BL, 12F) | R870479 |
| SC-S 6P Splice APC SM top (GR, 12F) | R870480 |
| SC-S 6P Splice OM4 bot (HV, 12F) | R875207 |
| SC-S 6P Splice OM5 bot (LG, 12F) | R875208 |
| SC-S 6P Splice UPC SM bot (BL, 12F) | R875209 |
| SC-S 6P Splice APC SM bot (GR, 12F) | R875210 |



Splice Sleeve Holder R320246

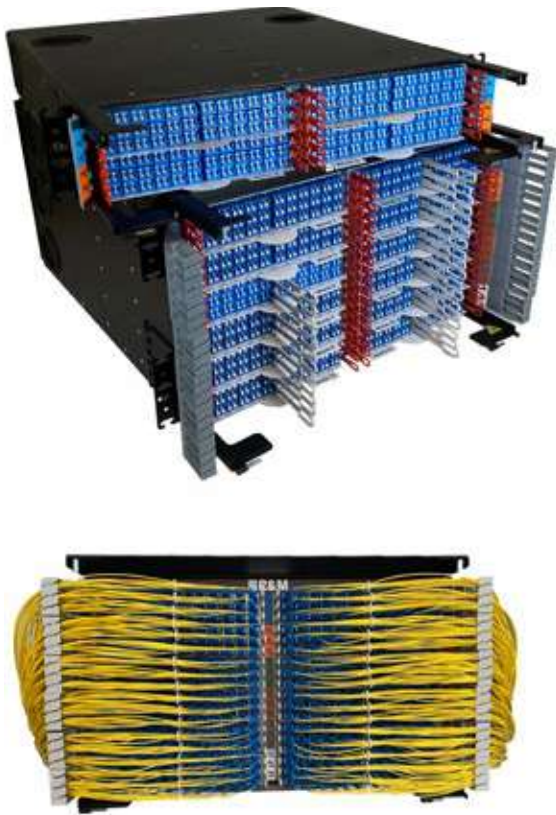


Splice Sleeves 35mm R30087-35

Fiber Optic Connectivity

Pre-Loaded Panels

864 Fiber Panel High Density - Mercury



Mercury

R&M's factory-terminated and 100% tested preloaded panels accommodate 288 (2U) or 864 (6U) fiber terminations using LC connectors. The Mercury panels offer high density in the front and convenient access to the splicing area in the back. It is stackable up to 6,912 fiber terminations in a single rack.

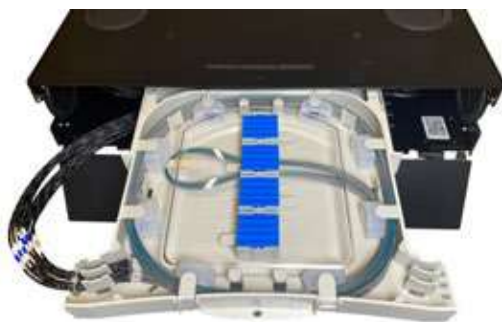
R&M's Mercury panels have been designed for ribbon fiber. They allow implementing the data center physical network infrastructure in a much more efficient and flexible manner. These panels take full advantage of the ribbon technology and minimize the installation time required in the secured zone. R&M took a fresh approach to solving issues related to managing high count fiber terminations. Unique features include 200µm or 250µm ribbon pigtailed, stackable up to 48 rack units and large 2.5" internal ports to conveniently combine two 864 fiber systems into a 1,728 fiber system. Standard features are internal dust shutters and 100% port inspection before packaging. The pull out charts for documentation in the front are fixed to the panel. They won't be lost or mixed up. The test results can be accessed anytime via QR code and all panels offer an unparalleled fiber slack storage space in the back. Every row of patch cords is separated and secured with its own fiber management.

High Density Fiber Distribution Splice & Patch Panel - Mercury 5

Mercury provides 864 fiber terminations in a 2U or 6U housing. It has been developed for Hyperscale Data Centers with massive requirements for fiber optic connections.

The stackable 864 Mercury panel is an ideal solution to connect redundant Data Centers. The cable to be used can be optimized for scarce duct space with 200µm rollable ribbon fibers.

| | |
|--|---------|
| Mercury 5 HDFD Panel 864 Fibers (LC Duplex) 200µm - 6U | R891865 |
| Mercury 5 HDFD Panel 288 Fibers (LC Duplex) 200µm - 2U | R891866 |



Fiber Optic Connectivity

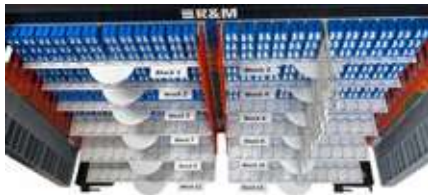
Pre-Loaded / Pre-Stubbed Panels

864 Fiber Panel High Density - Mercury



Key Features and Advantages

- A total of 6,912 fibers can be terminated to LC connectors per rack when using all 48 height units
- The 200µm configuration allows to reduce required duct space by 30% compared with 250µm ribbon fiber
- Each patch cord can be identified and accessed safely under operation
- Unparalleled fiber management and documentation options



Large pull-out charts for convenient documentation

Each block of 144 fibers is equipped with a large pull-out chart for secure and convenient documentation.



Large cassettes, removable from the front and rear

The 9" x 8" cassettes with a transparent provide plenty of space for inspection and even repair if necessary.



Triple secure labeling on the left, right and middle pole

In addition to the structured setup of the panel, colored labels all over the panel allow for a secure fiber identification.

Pre-Stubbed Splice Panel



Rack Distribution Insert - RDI

The R&M Rack Distribution Insert (RDI) is a factory terminated preloaded splice panel with up to a 1000ft+ pigtail. It provides rapid and low cost installation in new or existing infrastructures. The RDI is supplied inside the spool with a cable stub. Using LC connectors, up to 432 fibers are factory-terminated (MPO 1,728 fibers). The R&M RDI panel is slid into place from the rear of the 19" rack. The cable is secured in a sturdy breakout box, attached to the rear of the panel. The unique design allows for the cable reel to be installed on a through axle for easy cable pay off. The enclosed stubbed panel spins with the reel.

RDI 3U, 288 Fiber SM 250µm Flat Ribbon, LC Duplex Internal Dust Shutters, 200ft* Pigtail
*contact R&M for different configurations and cable lengths

R871965

Cross Connect

Trunk Cable Assemblies

Trunk Cable Assemblies

R&M's pre-terminated, high-fiber-count cable assemblies are the most secure way to extend your data center connectivity. Pre-terminated cable assemblies are delivered custom made according to your configuration, cut to length, connectorized and tested, ready for installation in tight maintenance windows; clean and quick. Production quality is monitored and guaranteed by 100% testing of all cable assemblies. Pre-terminated cables are available with up to 144 fiber counts and all common connector and cable types.



Cable

Select the trunk cable depending on your requirements. The fiber counts start at 12 fibers and go up to 144 fibers. The jacket material is usually Plenum, but Riser and LSZH are available as well. To save space in the cable runs, micro cables are commonly used. For lengths above 450ft, R&M recommends a ruggedized or armored cable jacket.



Fanout Kit

R&M's patented Fanout Kit secures the trunk cable on one side and the fanout tubes on the other side. It's sturdy jacket is designed to be clipped to the back of R&M's Netscale panels or into the square hole of any standard 19" rack. The size of the Fanout Kit varies depending on the fiber count and the amount of fanout tubes used.

Legs

Each leg is individually numbered with numbering beads. The leg length can be configured at any length between 1ft and 5ft. A netting protects the legs from the fanout kit up to the connectors.

Connectors

R&M produces all their highest quality connectors in-house. Along with all common connector types, like MPO, LC, SC, FC, ST and E2000 can be selected to terminate the fiber.



Cross Connect

Trunk Cable Assemblies

Trunk MPO - MPO



Features:

- 12 Fiber Optic Connector USConec MTP Pro
- Available with A or B polarity, Male or Female (default A - Male)
- Test report provided with each cable
- Per default, female cassettes are used, and the cables are manufactured with male connectors
- Plenum jacket

Cable length optical end to end: 30m (100 feet), please contact us for other lengths or 8 fiber configurations

| Polarity | A | | | | B | | | | |
|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | OM3/OM4 | OM4 | OM5 | OS2 | OM3/OM4 | OM4 | OM5 | OS2 | |
| 12F | M - M | R893349 | R893617 | R893620 | R893547 | R893624 | R893627 | R893630 | R893633 |
| | F - F | R893258 | R893618 | R893621 | R893499 | R893625 | R893628 | R893631 | R893634 |
| | M - F | R893616 | R893619 | R893622 | R893623 | 893626 | R893629 | R893632 | R893635 |

Fanout MPO - LC



Features:

- The standard fanout length is 0.6 meters on both sides and can be modified upon request.
- Various configurations are available according to customer needs
- 12 Fiber Optic MPO Connector US Conec MTP Pro
- Test report provided with each cable assembly
- Plenum jacket

Cable length optical end to end: 30m (100 feet), please contact us for other lengths or 8 fiber configurations

| Polarity | LC | A | | | | B | | | |
|----------|----|---------|---------|---------|---------|---------|---------|---------|---------|
| | | OM3/OM4 | OM4 | OM5 | OS2 PC | OM3/OM4 | OM4 | OM5 | OS2 PC |
| 12F | M | R893636 | R893637 | R893638 | R893639 | R893640 | R893641 | R893642 | R893645 |
| | F | R893646 | R893647 | R893648 | R893649 | R893650 | R893651 | R893652 | R893653 |

Fanout LC - LC



Features:

- The standard fanout length is 0.6 meters on both sides and can be modified upon request.
- Various configurations are available according to customer needs
- Test report provided with each cable assembly
- Plenum jacket

Cable length optical end to end: 30m (100 feet), please contact us for other lengths or 8 fiber configurations

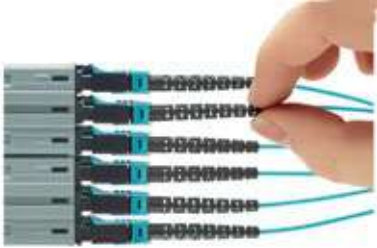
| Connector | Standard LC | | | | LC Qick Release | | | |
|-----------|-------------|---------|---------|---------|-----------------|---------|---------|---------|
| | OM3/OM4 | OM4 | OM5 | OS2 PC | OM3/OM4 | OM4 | OM5 | OS2 PC |
| 12F | R893654 | R893658 | R893663 | R893667 | R893655 | R893659 | R893664 | R893670 |
| 24F | R893656 | R893661 | R893665 | R893672 | R893657 | R893662 | R893666 | R893673 |



Cross Connect

Quick Release Patch Cords

LC-QR Quick Release Patch Cords



Most conventional LCs are unlocked via a clip on the plug. This mechanism restricts the capacity density on patch panels. A space must be maintained between the plugs or adapters so that the clip is accessible and to enable unlocking.

R&M's LC-QR connector has a push-pull mechanism integrated into the socket. It can be operated from the rear and the user should no longer hold directly the front of the connector. Furthermore, the LC-QR can be locked and unlocked via the boot.

- Possibility of manual reverse the polarity, without tools
- Ready for the intelPhy Management System
- Twinfiber cable LSZH
- Polarity A -> B (configurable A ->A, as well as changeable on site)



| 1.4mm cable | OM3/OM4 | OM4 HV | OM5 | OS2 UPC |
|-------------|---------|---------|---------|---------|
| 1 m | R837140 | R836465 | R848093 | R849313 |
| 2 m | R837141 | R836463 | R848094 | R867831 |
| 3 m | R837142 | R836466 | R843965 | R833973 |
| 5 m | R837143 | R836467 | R844231 | R846972 |
| 10 m | R837603 | R836468 | R892173 | R867830 |
| 15 m | R837608 | R836488 | R892174 | R892175 |

| 2mm cable | OS2 UPC | OS2 APC |
|-----------|---------|---------|
| 1 m | R872329 | R872324 |
| 2 m | R872330 | R872325 |
| 3 m | R872331 | R872326 |
| 5 m | R871953 | R872327 |
| 10 m | R872332 | R872328 |

MPO-QR Trunk Cables



Contact R&M to take advantage of the online configurator. The trunk cables below are configured using:

- 12 Fiber cable LSZH
- Polarity A
- Male

| | OM3 | OS2 UPC |
|------|---------|---------|
| 1 m | R915177 | R876734 |
| 2 m | R915178 | R911847 |
| 3 m | R915179 | R911848 |
| 5 m | R915180 | R876528 |
| 10 m | R915181 | R875772 |

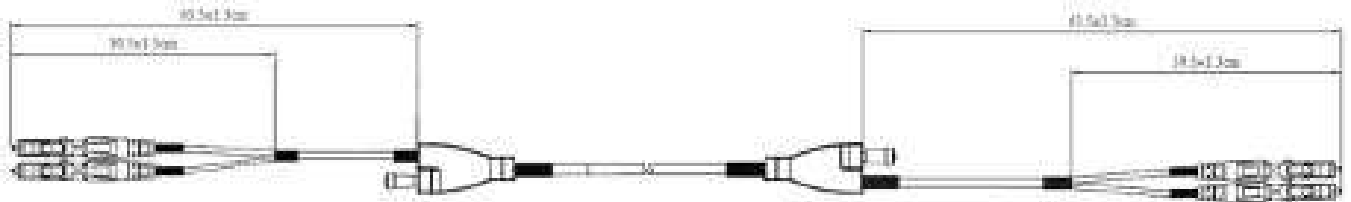
LaserCate - Tracer Patch Cords



LaserCate tracer cables by R&M are an innovative and simple solution to solving the common problem of tracing fiber optic jumpers in many of today's crowded network deployments. It is a completely passive solution that requires no special tools or maintenance and can be customized to meet cabling layouts and equipment setup. By connecting a VFL to the launch cable, and then attaching to the ferrule on the fan-out kit, the other end will glow in red light thanks to the specially designed dust cap on the other end.

Features

- 2.0 mm simplex main jacket, 2.0 mm zip or simplex connector ends based on connector type
- G.657.A2 bend-insensitive single-mode fiber
- Available with LC Duplex, LC Duplex Uniboot Push-Pull Reversible Polarity, or SC Connector Types
- Manufactured to meet GR-326 compliance
- APC polish and other configurations available upon request



Standard breakout lengths are shown. With these lengths, the fan-out portion is located in the vertical cable manager. Breakout lengths can be adjusted per customer requirement.



LC Duplex Zip
(Removable Clip)



LC Duplex Push-Pull
Polarity Flip w/51mm Tab



SC Zip
(Removable Duplex Clip)



LaserCate Patch Cords

| | |
|-------------------------------|----------------|
| LCU-LCU Duplex Push-Pull 2m | R854297 |
| LCU-LCU Duplex 2m | R854266 |
| LCU-SCU 2m | R854296 |
| SCU-SCU 1.2mm Blue 2m | R854268 |
| LCU Duplex Push Pull - SCU 2m | R854267 |



1 Meter Launch Cable

R854626

The launch cable is recommended for workflow optimization, but fan-out ferrule may be plugged directly into 2.5mm port of VFL)

Copper Connectivity

Patch Panel Shielded



Coupler RJ45/s C6A -sp

Pack of 10
Pack of 24

R848272
R854750



Connection Module Cat.6A/s

Pack of 1 **R813508**



1U 19" Patch Panel Shielded, empty

48 Port angled **R854758**
48 Port straight **R837065**
24 Port (incl. labels) **R813483**



Accessories 48 Port Panel

Cable Guide angled **R855332**
Cable Guide **R837062**
Label Holder **R512430**
Blind Cover **R842593**



Cable Management

1U Ring **R802948**
2U Ring **R802949**



Grounding

19" Grounding Bar **R25034**
Panel Grounding Connector **R302150**

PowerSafe Patch Cords



| Length | PowerSafe Cat. 6A/s LSRZH TIA 568B | | |
|-----------|------------------------------------|------------|------------------|
| | Blue | Light Gray | Orange crossover |
| 1m (3ft) | R892166 | R899381 | R897772 |
| 2m (7ft) | R805061 | R899382 | R897773 |
| 3m (10ft) | R805062 | R899383 | R897720 |
| 5m (16ft) | R805063 | R899384 | R897771 |



Additional configurations available

Security



Jack Guard RJ45

20pcs, incl. 1 key
1 spare key



R307199
R304828



Plug Guard RJ45

20pcs, incl. 1 key, red
1 spare key



R512759
R512760

Thinline Patch Cords



R&Mthinline Patch Cords



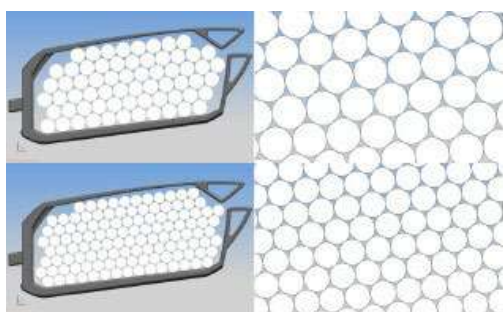
R&MthinLine patch cords are a reliable solution for all applications. The unique IDC technology in combination with extra thin cables gives keeps the cable bundles small and flexible.

Key features and benefits

The optimized kink protection is adapted to the thin cables. The latch protection with unlocking function is also used for thinLine cords. The proven R&M IDC contacting method is integrated in the connector. Depending on the cable category, the diameter varies between 3.8 mm and 4.7 mm.

Thin - 65 vs. 119 cables in 90 mm cable ring (+83 %)

The small volume is ideal for use in cabinets with little space – for example in home distribution cabinets or in data center racks with high densities. It also allows smaller bending radii.



Climate optimized

The thin cable ensures better ventilation in the racks, which can be an advantage especially with high densities.

Full R&MinteliPhy and Security Level Compatibility

The patch cords are fully compatible with the R&MinteliPhy RFID tags for the AIM and the security accessories which provide clear identification and protection against unauthorized access.



Integrated serial numbering

Each R&M patch cord has a unique serial number for unambiguous identification and inventory.

| R&Mthinline Patch Cord Cat. 6A, U/FTP, 4P, LSZH, RJ45/s- RJ45/s, TIA 568A, IDC contact plug, Supports PoE, PoEPlus, 4PPoE | | | | | | | | |
|---|----------|----------|----------|----------|----------|----------|----------|----------|
| | GREY | YELLOW | VIOLET | GREEN | RED | BLUE | ORANGE | BLACK |
| Length | RAL 7035 | RAL 1012 | RAL 4005 | RAL 6018 | RAL 3018 | RAL 5012 | RAL 2011 | RAL 9011 |
| 0.2 m (8 in) | 866405 | 883410 | 883812 | 883421 | 883796 | 883371 | 883430 | 875514 |
| 0.3 m (1 ft) | 863854 | 883072 | 882065 | 876297 | 882800 | 876295 | 882801 | 875434 |
| 0.5 m (20 in) | 861040 | 882808 | 883813 | 876234 | 878004 | 876225 | 883431 | 883800 |
| 1.0 m (3 ft) | 861041 | 882809 | 883074 | 875792 | 878005 | 876128 | 878725 | 883073 |
| 1.5 m (5 ft) | 862934 | 883411 | 883814 | 876235 | 878006 | 876227 | 883432 | 883801 |
| 2.0 m (7 ft) | 861042 | 882810 | 883815 | 875790 | 875788 | 875789 | 883433 | 878600 |
| 3.0 m (10 ft) | 861043 | 881246 | 881502 | 875793 | 875928 | 875930 | 883440 | 875736 |
| 5.0 m (16 ft) | 861044 | 882811 | 883817 | 882803 | 879094 | 879078 | 883441 | 878602 |
| 7.5 m (25 ft) | 861045 | 882812 | 883820 | 882804 | 879101 | 879083 | 883444 | 883804 |
| 10.0 m (30 ft) | 861046 | 883418 | 883823 | 883426 | 879107 | 879088 | 883447 | 883807 |
| 12.5 m (40 ft) | 861047 | 883419 | 883824 | 883427 | 883797 | 883407 | 883448 | 883808 |
| 15.0 m (50 ft) | 861048 | 881613 | 883825 | 883428 | 883798 | 883408 | 881241 | 883809 |
| 20.0 m (65 ft) | 861049 | 883420 | 883826 | 883429 | 883799 | 883409 | 883449 | 883811 |

Available for Cat.6 UTP, Cat. 6A U/UTP as well

19" Cabinets

Server Rack



19" Progress Server Rack

1000 mm depth

- 75% perforated doors
- Supplied with two pairs of uprights with unit counter
- Numbered uprights guides for the progressive and precise horizontal excursion
- Supplied with two lateral wire baskets for cable organization
- 1000 Kg load capacity



| | U | H ^(!) | W | D | Color | P/N |
|--|----|------------------|-----|------|-------|----------------|
| SS-2 Front Single door Rear Single door 2x Side blind panels 100mm height plinth Front & Rear 19" uprights | 42 | 2057 | 600 | 1000 | Black | R896525 |
| | | | 800 | 1000 | Black | R896984 |
| | | | 600 | 1000 | White | R896668 |
| | | | 800 | 1000 | White | R897140 |

| | | | | | | |
|--|----|------|-----|------|-------|----------------|
| SD-2 Front Single door Rear Double door 2x Side blind panels 100mm height plinth Front & Rear 19" uprights | 42 | 2057 | 600 | 1000 | Black | R896528 |
| | | | 800 | 1000 | Black | R897003 |
| | | | 600 | 1000 | White | R896669 |
| | | | 800 | 1000 | White | R897164 |

| | | | | | | |
|--|----|------|-----|------|-------|----------------|
| DD-2 Front Double door Rear Double door 2x Side blind panels 100mm height plinth Front & Rear 19" uprights | 42 | 2057 | 600 | 1000 | Black | R896558 |
| | | | 800 | 1000 | Black | R897063 |
| | | | 600 | 1000 | White | R896670 |
| | | | 800 | 1000 | White | R897197 |

| | | | | | | |
|--|----|------|-----|------|-------|----------------|
| DS-2 Front Double door Rear Single door 2x Side blind panels 100mm height plinth Front & Rear 19" uprights | 42 | 2057 | 600 | 1000 | Black | R896578 |
| | | | 800 | 1000 | Black | R896975 |
| | | | 600 | 1000 | White | R896672 |
| | | | 800 | 1000 | White | R897331 |



LOAD

CAPACITY Vertical Cable Manager showed in picture is sold separately

 **Black RAL 9005**  **White RAL 9016**

U = Units
H = Includes 100 mm height of the plinth
(!) = for feet only subtract 83 mm from value in column H
W = Width
D = Depth

19" Cabinets

Network Equipment Rack



19" Progress Network Equipment Rack

600 mm / 800mm depth

- 75% perforated doors
- Supplied with uprights with unit counter
- Numbered uprights guides for the progressive and precise horizontal excursion
- Supplied with two lateral wire baskets for cable organization
- 1000 Kg load capacity



| | U | H ^(!) | W | D | Color | P/N |
|--|----|------------------|-----|-----|-------|----------------|
| SS-2 Front Single door Rear Single door 2x Side blind panels 100mm height plinth Front & Rear 19" uprights | 42 | 2057 | 600 | 600 | Black | R896373 |
| | | | 800 | 800 | Black | R896715 |
| | | | 600 | 600 | White | R896414 |
| | | | 800 | 800 | White | R896946 |

| | | | | | | |
|--|----|------|-----|-----|-------|----------------|
| SD-2 Front Single door Rear Double door 2x Side blind panels 100mm height plinth Front & Rear 19" uprights | 42 | 2057 | 600 | 600 | Black | R896374 |
| | | | 800 | 800 | Black | R896717 |
| | | | 600 | 600 | White | R896415 |
| | | | 800 | 800 | White | R896947 |

| | | | | | | |
|--|----|------|-----|-----|-------|----------------|
| DD-2 Front Double door Rear Double door 2x Side blind panels 100mm height plinth Front & Rear 19" uprights | 42 | 2057 | 600 | 600 | Black | R896391 |
| | | | 800 | 800 | Black | R896775 |
| | | | 600 | 600 | White | R896455 |
| | | | 800 | 800 | White | R896958 |

| | | | | | | |
|--|----|------|-----|-----|-------|----------------|
| DS-2 Front Double door Rear Single door 2x Side blind panels 100mm height plinth Front & Rear 19" uprights | 42 | 2057 | 600 | 600 | Black | R896409 |
| | | | 800 | 800 | Black | R896933 |
| | | | 600 | 600 | White | R896514 |
| | | | 800 | 800 | White | R896975 |



LOAD

CAPACITY Vertical Cable Manager showed in picture is sold separately

Black RAL 9005 **White RAL 9016**

U = Units
H = Includes 100 mm height of the plinth
(!) = for feet only subtract 83 mm from value in column H
W = Width
D = Depth

19" Cabinets

4 Post Frame



19" Progress 4 Post Frame

600mm / 800mm / 1000 mm

- Supplied with uprights with unit counter;
- Numbered uprights guides for the progressive and precise horizontal excursion;
- Supplied with two lateral wire baskets for cable organization
- 1000 Kg load capacity;



| | U | H ⁽¹⁾ | W | D | Color | P/N |
|--|----|------------------|-----|------|-------|----------------|
| 100mm height plinth Front & Rear 19" uprights | 42 | 2057 | 600 | 600 | Black | R896904 |
| | | | 800 | 800 | Black | R896905 |
| | | | 600 | 1000 | Black | R896906 |
| | | | 800 | 1000 | Black | R896907 |
| | | | 600 | 600 | White | R896908 |
| | | | 800 | 800 | White | R896909 |
| | | | 600 | 1000 | White | R896910 |
| | | | 800 | 1000 | White | R896911 |

19" TPatch 2 Post Frame



| Part # | Description | Height | Width [in] | Payload [lbs] |
|--------|--------------------------------|--------|------------|---------------|
| T1550N | TPatch - 19" Open Frame | 45U | 20.8 | 1100 |
| T1551N | TPatch - Cable management unit | 45U | 7.87 | 1100 |
| T1552N | TPatch - End panel | 45U | | |

Cable Management



Pair of vertical cable management with cover and snap lock system; only for R&M 800 with cabinets

Equipped with cable entrances, on the bearing structure 19 " casings of one unit (blue graphics) are present in a variable quantity depending on the height.

The closing cage door increases the efficiency of the air flows compartmentalisation and gives a compact and neat appearance to your wiring.

| | U | Color | P/N |
|----------|----|-------|----------------|
| Standard | 42 | Black | R896926 |
| | | White | R896928 |

| | U | Color | P/N |
|--------------|----|-------|----------------|
| High Density | 42 | Black | R896927 |
| | | White | R896928 |



19" Cable Management Horizontal

| | |
|----|----------------|
| 1U | R795375 |
| 2U | R795452 |

19" Cabinets

Flat Packs



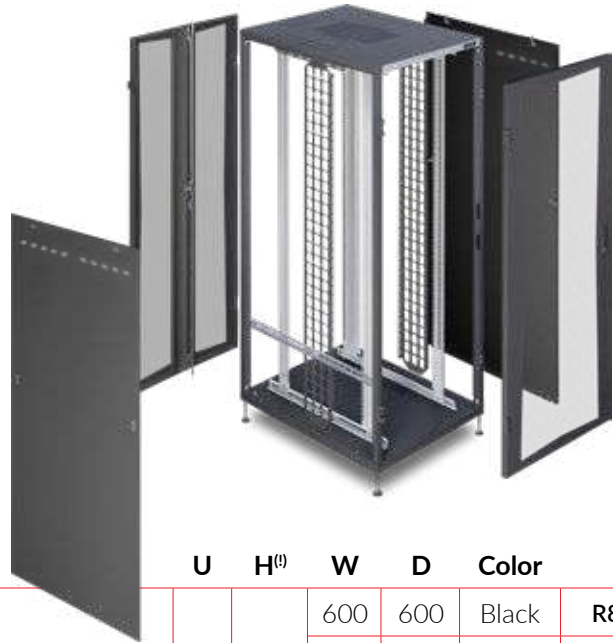
19" Progress Modular Flat Pack Rack

Modular Concept

Build your own cabinet according to your desired configuration.

Then receive it in a flat pack concept that:

- Reduces storage and transport volume by up to 50%
- It is ideal for places with difficult access.
- It is essential when the use of ladders is necessary.
- It is assembled in 10 minutes with a few standard tools.



Black RAL 9005
White RAL 9016

| | U | H ⁽¹⁾ | W | D | Color | P/N |
|---|----|------------------|------|------|-------|-----------------|
| 100mm height plinth Front & Rear 19" uprights 2 lateral wire baskets Supplied in a flat pack | 42 | 2057 | 600 | 600 | Black | R896904 |
| | | | 800 | 800 | Black | R896905 |
| | | | 600 | 1000 | Black | R896906 |
| | | | 800 | 1000 | Black | R896907 |
| | | | 600 | 600 | White | R896908 |
| | | | 800 | 800 | White | R896909 |
| | | | 600 | 1000 | White | R896910 |
| | | | 800 | 1000 | White | R896911 |
| Single Door Perforated 75% 3 lock points | 42 | | 600 | | Black | R896912 |
| | | | 800 | | Black | R896914 |
| | | | 600 | | White | R896916 |
| | | | 800 | | White | R896918 |
| Double Doors Perforated 75% 3 lock points | 42 | | 600 | | Black | R896913 |
| | | | 800 | | Black | R896915 |
| | | | 600 | | White | R896917 |
| | | | 800 | | White | R896919 |
| Blind Side Panels | 42 | | 600 | | Black | R896920 |
| | | | 800 | | Black | R896921 |
| | | | 1000 | | Black | R896967W |
| | | | 600 | | White | R896923 |
| | | | 800 | | White | R896924 |
| | | | 1000 | | White | R896925 |

19" Cabinets

Wall Mount



19" Wall Mount Cabinet

Modular, sturdy wall mount cabinet. Easy to install.



1 Door with glass front and lock

2 Side wall with lock

3 19" rails depth flexible to max. 4in (100mm)

4 Cover is prepared for ventilator install

5 Knockouts for incoming cables

6 Floor with knockouts for cables

7 Keyholes for easy wall installation

8 Prepared for optional rear 19" rails



Installation Video

19" Cabinets

Wall Mount



19" Wall Mount Cabinet Options

The R&M wall mount cabinets are either delivered in a convenient flat pack or fully assembled.

| Assembled | Flatpack | Rack Units | H [in] | W [in] | D [in] |
|-----------|----------|------------|--------|--------|--------|
| R891180 | R891189 | 9 | 18.4 | 23.6 | 15.7 |
| R891184 | R891193 | 9 | 18.4 | 23.6 | 23.6 |
| R891181 | R891190 | 12 | 23.6 | 23.6 | 15.7 |
| R891185 | R891194 | 12 | 23.6 | 23.6 | 23.6 |
| R891182 | R891191 | 15 | 29.3 | 23.6 | 15.7 |
| R891186 | R891195 | 15 | 29.3 | 23.6 | 23.6 |
| R892324 | R891196 | 18 | 34.1 | 23.6 | 23.6 |
| R891187 | R891197 | 21 | 39.4 | 23.6 | 23.6 |
| R891188 | R891198 | 24 | 44.6 | 23.6 | 23.6 |



19" Blank Rack Mount Panel Spacer

| | |
|---------|--------------|
| R854121 | 1 Rack Unit |
| R854124 | 2 Rack Units |
| R854127 | 3 Rack Units |
| R854128 | 4 Rack Units |

Cable Management

| | |
|---------|-----------|
| R795375 | 1U Closed |
| R795452 | 2U Closed |

Caster kit (4 wheels)

Two 2x wheels are equipped with a brake

R892406

Leveling feet kit

Adjustable

R892407

19" shelf, front mount

| Part # | Height | Depth [in] | Payload [lbs] |
|---------|--------|------------|---------------|
| R892373 | 1U | 7.9 | 33 |
| R892375 | 2U | 9.8 | 55 |
| R892377 | 1U | 12.2 | 33 |
| R892379 | 1U | 13.8 | 33 |
| R892381 | 2U | 15.8 | 55 |

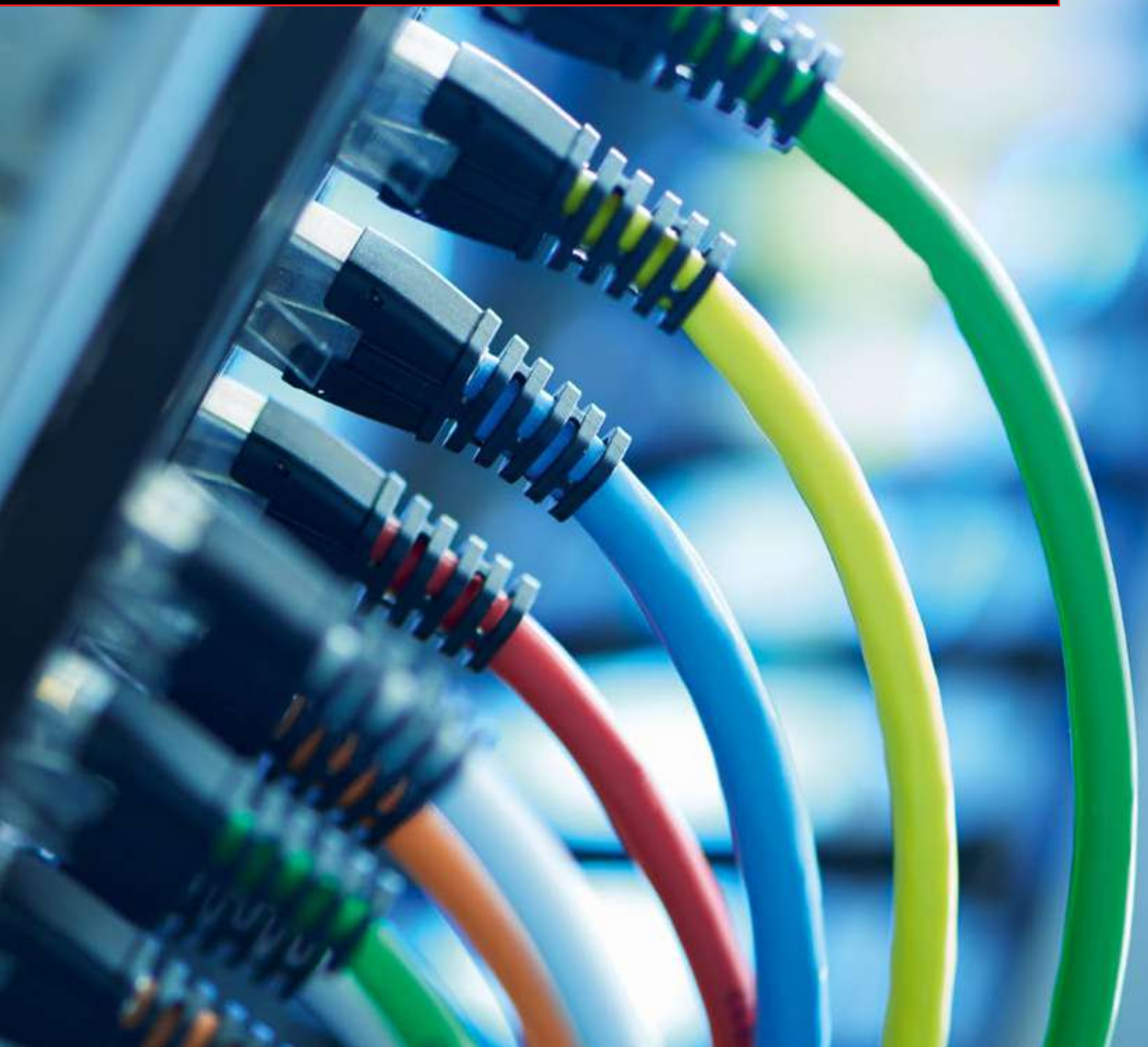


Structured Cabling Systems

High product quality and farsighted system design ensure future-proof networks and secure the investments long-term.

Folowing the international standards ISO11801 and EIA/TIA 568D.

Solutions for Category 6, 6A and 8.

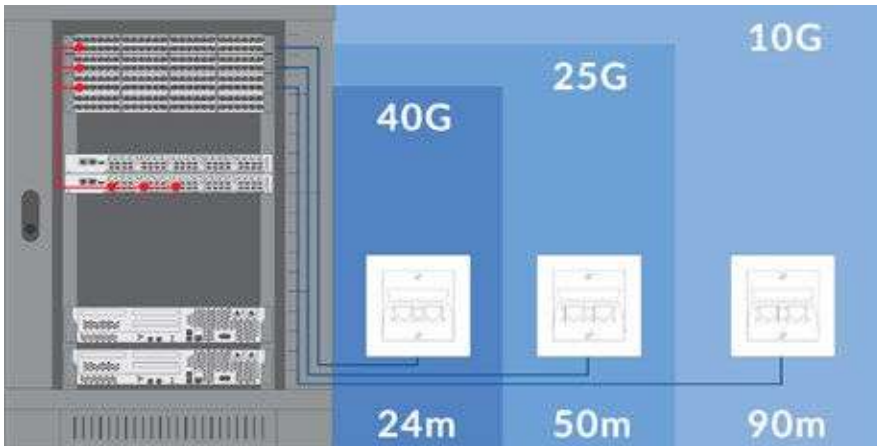




R&M Freenet 40Gbps

Cat. 8 is a new connection and cabling technology for data transmission up to 40 Gigabit/s. Cat. 8 takes copper cabling to its limits and works with a bandwidth of 2,000 MHz. R&M developed the Cat. 8.1 portfolio primarily for data transmission in data centers and for connecting upcoming WiFi and high bandwidth applications.

The independent German testing company GHMT confirmed that a Cat. 8.1 cabling system from R&M reliably transfers 25 Gigabit/s over 50 meters (164 feet). This is the performance level required for the connection of WiFi 6 WAVE 2 and future WiFi 7 access points. GHMT tested on the basis of the standard ISO/IEC DTR 11801-9909. The R&M system fulfilled the corresponding requirements with outstanding transmission quality.



R&M's Cat. 8.1 cabling system is backwards compatible. It covers performance levels from 40 to 10 Gbit/s Ethernet (40G-10G).

Cable, Modules & Panels



Cable S/FTP Cat8 2000MHZ
LSZHFR (500m) **R828594**



Special



R847824



Adapter Keystone (EL)

R837034



1U 19" Patch Panel Shielded, empty
48 Port angled **R854758**
48 Port **R837065**
24 Port (incl. labels) **R813483**

Patch Cords Cat.8



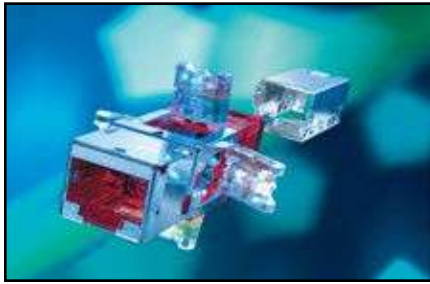
| Length | LSZH |
|--------|------------|
| | Light Gray |
| 1.5m | R875577 |
| 2.0m | R875578 |
| 3.0m | R875579 |
| 4.0m | R875580 |
| 5.0m | R876134 |

1 meter = 3.28 feet

Tools & Accessories



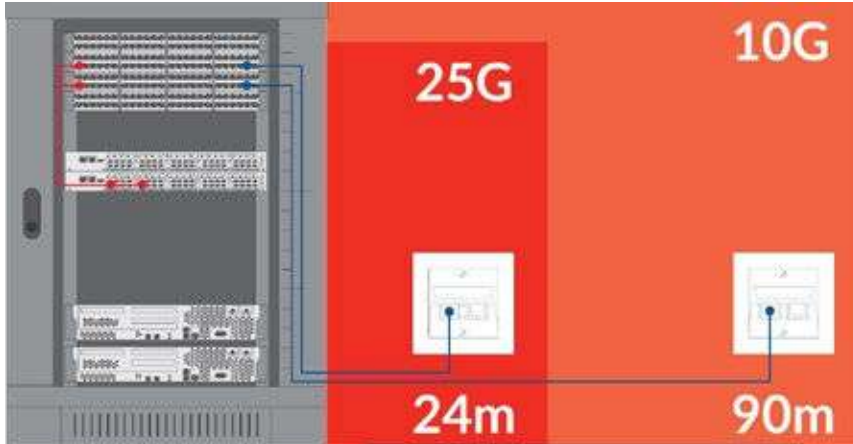
Termination Tool
1pc **R516050**



R&Mfreenet 25G Ready

The structured cabling system R&Mfreenet Category 6A ISO has been proven to be the best choice for transmission speeds up to 25Gbps.

Since ISO/IEC TR 11801-9905 defines the maximum operation frequency of 1250MHz, the cabling system must be supported by cables with the highest guaranteed performance frequency, opting for the category 7A 1500MHz and category 8.1/8.2 band (all of them AWG22), along with the already known and widely used connectivity of shielded RJ45 Category 6A ISO.



2 Zones

Zone 1 - 25 Gbps
 - Up to 24 meters (78 feet)
 - High performance zone

Zone 2 - 10 Gbps
 - Up to 90 meters (295 feet)
 - Office area

Cables, Modules & Panels



Cable S/FTP Cat7A 1500MHZ
 LSFZRH (500m) R507032



Keystone (Faceplates)
 R509509



Special (Panels)
 R803927

Patch Cords Cat6A (S/FTP)



1U 19" Patch Panel Shielded, empty
 48 Port angled R854758
 48 Port R837065
 24 Port (incl. labels) R813483



| Length | LSFRZH |
|--------|------------|
| | Light Gray |
| 1.0m | R899381 |
| 2.0m | R899382 |
| 3.0m | R899383 |
| 5.0m | R899384 |

Tools & Accessories



Termination Tool
 1pc R516050

Cable, Modules & Panels



Cable S/FTP Cat7 1000MHZ
 Riser blue **R892640**
 Plenum blue **R892639**



Cable F/UTP Cat6A 650MHZ
 Riser white / blue **R859100/R859099**
 Plenum white / blue **R878978/R859101**
**white on plastic drums; blue on wooden reels*



Keystone (Faceplates)
 Metallic **R813512** White **R891660** Blue **R891661**
Special (Panels) **R813508** **R891663** **R891664**



1U 19" Patch Panel Shielded, empty
 48 Port angled **R854758**
 48 Port straight **R837065**
 24 Port (incl. labels) **R813483**



Accessories
 Cable Guide angled **R855332**
 Cable Guide **R837062**
 Label Holder **R512430**
 Blind Cover **R842593**



Cable Management
 1U Ring **R802948**
 2U Ring **R802949**



Grounding
 19" Grounding Bar **R25034**
 Panel Grounding Connector **R302150**

Patch Cords Cat6A S/FTP



| Length | PowerSafe Cat. 6A/s Riser TIA 568B | | | |
|-------------|------------------------------------|---------|------------|---------|
| | White | Green | Light Gray | Orange |
| 1ft (0.3m) | R864981 | R864973 | R864974 | R864990 |
| 3ft (1m) | R864982 | R864971 | R836653 | R864991 |
| 5ft (1.5m) | R864983 | R864975 | R836654 | R864992 |
| 7ft (2.1m) | R864984 | R864972 | R836655 | R864993 |
| 10ft (3m) | R864985 | R864976 | R836656 | R864994 |
| 15ft (4.6m) | R864986 | R864977 | R836657 | R864995 |

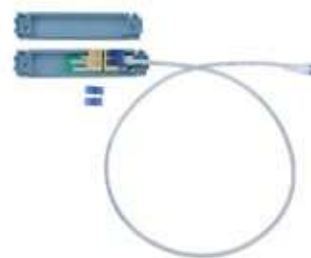
Additional configurations and lengths available

| Length | Cat. 6A/s LSZH TIA 568B | | | | | |
|--------------|-------------------------|---------|---------|---------|---------|---------|
| | White | Blue | Green | Yellow | Red | Black |
| 0.5m (1.6ft) | R881203 | R881161 | R881170 | R881145 | R881153 | R881187 |
| 1m (3.2ft) | R881204 | R881162 | R881171 | R881146 | R881154 | R881188 |
| 1.5m (5ft) | R881205 | R881163 | R881172 | R881147 | R881155 | R881189 |
| 2m (6.6ft) | R881206 | R881164 | R881173 | R881148 | R881156 | R881190 |
| 3m (9.8ft) | R881207 | R881165 | R881174 | R881149 | R881157 | R881191 |
| 5m (16.4ft) | R881208 | R881166 | R881176 | R881150 | R881158 | R881192 |

Additional configurations and lengths available

| Length | PowerSafe Cat. 6A/s LSZHFR TIA 568B | | |
|-------------|-------------------------------------|------------|------------------|
| | Blue | Light Gray | Orange crossover |
| 1m (3.2ft) | R892166 | R899381 | R897772 |
| 2m (6.6ft) | R805061 | R899382 | R897773 |
| 3m (9.8ft) | R805062 | R899383 | R897720 |
| 5m (16.4ft) | R805063 | R899384 | R897771 |

Additional configurations and lengths available



Connection Kit C6A/s 1m (MPTL)

R872827

Tools & Accessories



Cable Preparation **R804325**



Module Termination **R820784**
 Spare reopening tool **R813540**

Cable, Modules & Panels



| | White | Black | Blue | Green | Yellow | Red |
|-----------------------|---------|---------|---------|---------|---------|---------|
| Keystone (Faceplates) | R891665 | R813514 | R891667 | R891668 | R891669 | R891670 |
| Special (Panels) | R891671 | R813510 | R891673 | R891674 | R891675 | R891676 |

| Type | Cat. 6A Cable 650MHZ, 1000ft | | | | | |
|--------------|------------------------------|---------|---------|---------|---------|---------|
| | White | Blue | Green | Yellow | Red | Black |
| Riser, Reel | R883514 | R883515 | R888253 | R888254 | R888255 | R888256 |
| Plenum, Reel | R883512 | R883513 | R888257 | R888258 | R888259 | R888260 |

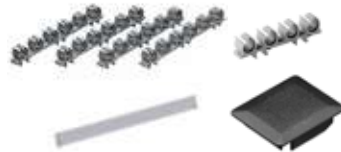


PowerSafe explained



1U 19" Patch Panel, empty

| | |
|------------------------|---------|
| 48 Port angled | R854757 |
| 48 Port straight | R837063 |
| 24 Port (incl. labels) | R813484 |



Accessories

| | |
|--------------------|---------|
| Cable Guide angled | R855332 |
| Cable Guide | R837062 |
| Label Holder | R512430 |
| Blind Cover | R842593 |



Cable Management

| | |
|---------|---------|
| 1U Ring | R802948 |
| 2U Ring | R802949 |



Cable Management

| | |
|-----------|---------|
| 1U Closed | R795375 |
| 2U Closed | R795452 |

Patch Cords Cat6A U/UTP



| Length | PowerSafe Cat. 6A Riser TIA 568B | | | |
|--------|----------------------------------|---------|---------|---------|
| | Blue | Green | Yellow | Red |
| 3ft | R836620 | R836628 | R836636 | R836645 |
| 5ft | R836621 | R836629 | R836638 | R836646 |
| 7ft | R836622 | R836630 | R836639 | R836647 |
| 10ft | R836623 | R836631 | R836640 | R836648 |
| 15ft | R836624 | R836632 | R836641 | R836649 |
| 25ft | R836625 | R836633 | R836641 | R836650 |

Additional configurations available

| Length | Cat. 6A LSZH TIA 568B | | | | | |
|--------------|-----------------------|---------|---------|---------|---------|---------|
| | White | Blue | Green | Yellow | Red | Black |
| 0.5m (1.6ft) | R880996 | R880948 | R880957 | R880923 | R880940 | R880973 |
| 1m (3ft) | R880997 | R880949 | R880958 | R880924 | R880941 | R880974 |
| 1.5m (5ft) | R880998 | R880950 | R880959 | R880926 | R880942 | R880982 |
| 2m (7ft) | R880999 | R880951 | R880960 | R880930 | R880943 | R880983 |
| 3m (10ft) | R881000 | R880952 | R880961 | R880935 | R880944 | R880984 |
| 5m (16ft) | R881001 | R880953 | R880962 | R880936 | R880945 | R880985 |

Additional configurations available

Tools



Cable Preparation

R804325



Module Termination
Spare reopening tool

R820784

R813540

Cable, Modules & Panels



Pack of 10

Keystone (Faceplates)

Special (Panels)



White

R891704



Black

R862129



Blue

R891707



Green

R891708



Yellow

R891709



Red

R891710



R891711



R832193



R891714



R891715



R891716



R891718

Cat. 6 Cable 450MHZ, 1000ft

| Type | White | Blue | Green | Yellow | Red | Black |
|-------------|---------|---------|---------|---------|---------|---------|
| Riser, Box | R883510 | R883511 | R886975 | R886976 | R886977 | R886978 |
| Plenum, Box | R883508 | R883509 | R886979 | R886980 | R888251 | R888252 |



Installation video



1U 19" Patch Panel, empty

| | |
|------------------------|----------------|
| 48 Port angled | R854757 |
| 48 Port straight | R837063 |
| 24 Port (incl. labels) | R813484 |



Accessories

| | |
|--------------------|----------------|
| Cable Guide angled | R855332 |
| Cable Guide | R837062 |
| Label Holder | R512430 |
| Blind Cover | R842593 |



Cable Management

| | |
|---------|----------------|
| 1U Ring | R802948 |
| 2U Ring | R802949 |



Cable Management

| | |
|-----------|----------------|
| 1U Closed | R795375 |
| 2U Closed | R795452 |

Patch Cords Cat6 U/UTP



| Length | PowerSafe Cat. 6 Riser TIA 568B | | | | |
|--------|---------------------------------|---------|---------|---------|---------|
| | Gray | Blue | Green | Yellow | Red |
| 3ft | R868926 | R836579 | R836588 | R836596 | R836604 |
| 5ft | R868928 | R836580 | R836589 | R836597 | R836605 |
| 7ft | R868930 | R836582 | R836590 | R836598 | R836606 |
| 10ft | R868999 | R836583 | R836591 | R836599 | R836607 |
| 15ft | R868901 | R836584 | R836592 | R836600 | R836608 |
| 25ft | R868903 | R836585 | R836593 | R836601 | R836609 |

Additional configurations available

| Length | Cat. 6 LSZH TIA 568B | | | | | |
|--------------|----------------------|---------|---------|---------|---------|---------|
| | White | Blue | Green | Yellow | Red | Black |
| 0.5m (1.6ft) | R881060 | R881020 | R881028 | R881004 | R881012 | R881044 |
| 1m (3ft) | R881061 | R881021 | R881029 | R881005 | R881013 | R881045 |
| 1.5m (5ft) | R881062 | R881022 | R881030 | R881006 | R881014 | R881046 |
| 2m (7ft) | R881063 | R881023 | R881031 | R881007 | R881015 | R881047 |
| 3m (10ft) | R881064 | R881024 | R881032 | R881008 | R881016 | R881048 |
| 5m (16ft) | R881065 | R881025 | R881033 | R881009 | R881017 | R881049 |

Additional configurations available

Tools



Cable Preparation

R804325



Module Termination
Spare reopening tool

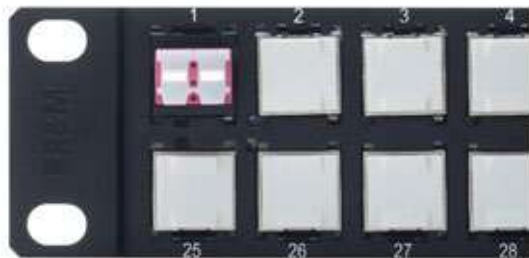
R820784

R813540

Structured Cabling

Fiber Optic Adapters Special

| | | | |
|---|---|--|---|
|  090.7868 |  090.7865 |  090.7371 |  090.7864 |
| LC Duplex Special MM OM4 R840203 | LC Duplex Special MM OM3/OM4 R840201 | LC Duplex Special SM OS2 UPC R821302 | LC Duplex Special SM OS2 APC R840200 |
|  090.5851 |  090.7862 |  090.7861 |  090.7867 |
| MPO Special Polarity A (black) R847821 Polarity B (gray) R847822 | SC Simplex Special MM OM2/3 R822673 | SC Simplex Special SM OS2 UPC R822672 | SC Simplex Special SM OS2 APC R840202 |



Coupler RJ45/s C6A -sp
Pack of 10 **R848272**



Keystone Adapter **R837033**



Keystone Adapter shielded **R837034**

Micro Splitter RMS45



090.2849

Micro Splitter RMS45

- Can be installed on any R&M Cat.6, Cat.6A and Cat. 8 RJ45 module
- Can be installed on patch panels or faceplates
- Allows you to split a cable into 4 services using the RJ45 connectors already installed
- No tools needed



Module RMS 45
10 pcs **R319034**



Plug RMS 45
1 Pair **R319035**
2 Pairs **R319036**



Identification Clips (10pc)
Red **R319029**
Green **R319028**
Yellow **R319026**
Blue **R319024**

Field Mountable Connector FM45



FM45

- Supports a transmission speed of 10 Gigabit Ethernet (Cat. 6A)
- IDC ensures smooth Power over Ethernet (PoE e 4PoEP).
- Ideal to directly connect WLAN access points and IP cameras
- Terminates all common cables (AWG22 to AWG26)
- UL Certified MPTL Cat.6A (Modular Plug Terminated Link 90m)



090.7437

FM45 Cat6A (s/u)

Pack of 10

R815651



030.5840

FM45 Cat6A 90° (s/u)

Pack of 10

R845599



090.7434

FM45 Cat6A IP67/NEMA 4

Pack of 10

R814568



090.2158

Color Coding Rings (10pc)

| | |
|--------|----------------|
| Red | R311571 |
| Green | R311577 |
| Yellow | R311579 |
| Blue | R311580 |

Security Level 3



Security

- These products introduce passive security to network connections
- Only trained and authorized installers can release connections
- Safe Clip - simple reminder to not unplug connection by accident, for example the internet connection of a branch office
- Patch Guard - for blocking patch cords, ideal for IP phones in conference rooms
- Port Guard - lock a port on a faceplate or a distribution panel, for example the network management VLAN



010.1910

Safe Clip

20pc

R304807



Jack Guard RJ45

20pcs, incl. 1 key

R307199

1 spare key

R304828



090.5855

Port Guard

20pc (inc 20 Chaves)

R510854



090.2288

Patch Guard

20pc (inc. 1 key)

R313814

Key (spare)

R313815



Plug-in: insert plug with mounted Patch Guard into the port.



Locking: Patch Guard is locked and blocks the unlatching lever.



Unlocking: insert key in opening on the back, release locking fixture.



Plug-out: the authorized person can release the port.

Distribution Box System

U-BOX

Desktop & Distribution Solutions - U-BOX



Features:

- The U-Box is a flexible universal box that allows multiple configurations
- Can be used as a consolidation point or distribution box
- Can accommodate copper, fiber optic cabling and power outlets
- Fully modular and scalable

Box



030.5331

2 Plates 110 + 2 Plates 210

U-BOX 4110

R451735



030.5332

4 Plates 210

U-BOX 2210

R451736



030.5333

2 Plates 210 + 2 Plates 410

U-BOX 4210

R451739



030.5334

4 Plates 410

U-BOX 4410

R451741

Plates



Plates Keystone

110 - 2 Keystone

R451676

210 - 4 Keystone

R451683

410 - 6 Keystone

R451765



Brush Plate Dust Protection

110 - black

R451825

210 - black

R451823

410 - black

R451821



Plates Cable Entry

110

R451712

210

R451713

410

R450606



Blank Plates

110

R451675

210

R451682

410

R450605

Accessories



Separation Wall

R451668



Box Joiner

R451670



Box Bridge

R451761



Box Fixation

R451671



Cable Fixation

R451765



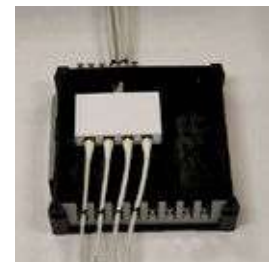
Enforcement 4410

R451658



Faceplate 45x45

R833451



Checkout Counter
Cashier U-Box

R891494

Faceplates Special

DESKBOX



Features:

- For an organized and secure workspace
- Connecting deskboxes with cable ducts
- Can accommodate copper, fiber optic cabling and power outlets
- Fully modular and scalable



030.5403

Deskbox housing **R451103**



010.2730

FLEXKanal

Flexible duct 1m

R451000

Floor rail 1m

R451008



010.2613



030.5398

Accessories

T-piece



030.5409

Internal corner

R450907

R451539



090.3189

Faceplates 45x45

2 port white

R832240

2 port black

R833451

Mounting plate black

R451351

Freenet Adapter req.

R513484

Faceplates Special



2xRJ45 Special

R865331

4xRJ45 Special

R865332

6xRJ45 Special

R865333



Blank Insert, White

Pack of 12

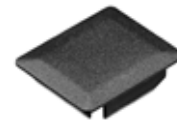
R842594



Furniture Faceplate

3xRJ45

R863089



Blank Insert Black

Pack of 12

R842593



HD Hinged Dust Cover: dust protection and color-coding for data outlets

Black

R512748

Green

R512753

Blue

R512749

Red

R512754

Brown

R512750

Violet

R512755

Yellow

R512751

White

R512756

Gray

R512752



Surface Mount Frame

R897363



Plug Guard green

R512757

Plug Guard white

R512758

Plug Guard red

R512759



Plug Guard key

R512760



12xRJ45 Surface Mount Box, special
(Plug Guard option not available)

R893812

Keystone Cat.6A Jacks unshielded



Cable F/UTP Cat6A 650MHZ

Riser white / blue **R859100/R859099**

Plenum white / blue **R878978/R859101**

**white on plastic drums; blue on wooden reels*



Metallic White Blue
Cat.6A/s R813512 R891660 R891661

Keystone Cat.6A Jacks unshielded



Cat.6A/u R891665 R891667 R891668 R891669 R891670 R813514

| Type | Cat. 6A Cable 650MHZ, 1000ft | | | | | |
|--------------|------------------------------|---------|---------|---------|---------|---------|
| | White | Blue | Green | Yellow | Red | Black |
| Riser, Reel | R883514 | R883515 | R888253 | R888254 | R888255 | R888256 |
| Plenum, Reel | R883512 | R883513 | R888257 | R888258 | R888259 | R888260 |

Keystone Cat.6 Jacks unshielded



Cat.6/u R891704 R891707 R891708 R891709 R891710 R862129

| Type | Cat. 6 Cable 450MHZ, 1000ft | | | | | |
|-------------|-----------------------------|---------|---------|---------|---------|---------|
| | White | Blue | Green | Yellow | Red | Black |
| Riser, Box | R883510 | R883511 | R886975 | R886976 | R886977 | R886978 |
| Plenum, Box | R883508 | R883509 | R886979 | R886980 | R888251 | R888252 |

Keystone 19" Patch Panels



Keystone 24 Port Panel, straight, shielded, stainless steel

Keystone 24 Port Panel, straight, black

Keystone 24 Port Panel, angled, black



R835001

R912243

R815656



Fiber Optic Adapters Keystone

LC Duplex MM **R916848**

LC Duplex SM/UPC **R916847**

LC Duplex SM/APC **R916846**

SC Simplex SM/UPC **R916849**

SC Simplex SM/APC **R916792**

MPO Polarity A key up / key down **R916851**



Coupler RJ45 w/o Keystond Adapter

R848272

Keystone Adapter shielded

R837034

Keystone Adapter

R837033

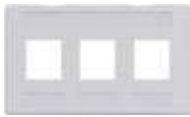
Faceplates Keystone



1xRJ45 Keystone **R888985** 4xRJ45 Keystone
 2xRJ45 Keystone **R888986** 6xRJ45 Keystone
 3xRJ45 Keystone **R888987** Blank Insert Keystone white



R888988 1xRJ45 Keystone Stainless Steel **R912245**
R888989 2xRJ45 Keystone Stainless Steel **R912259**
R888990 3xRJ45 Keystone Stainless Steel **R912262**
 4xRJ45 Keystone Stainless Steel **R912263**
 6xRJ45 Keystone Stainless Steel **R912264**
 Blank Insert Keystone Black **R277753**



3xRJ45 Furniture Faceplate white
 3xRJ45 Furniture Faceplate black



R897367
R897366



Surface Mount Frame **R897363**

Surface Mount Boxes



1xRJ45 Keystone Surface Mount Box **R894147**
 2xRJ45 Keystone Surface Mount Box **R894148**



4xRJ45 Keystone Surface Mount Box **R919244**
 6xRJ45 Keystone Surface Mount Box **R919248**



Blank Insert Keystone white
 Blank Insert Keystone black



R888990
R277753



8xRJ45 Keystone Surface Mount Box with shutters **R919251**



Keystone Adapter **R837033**


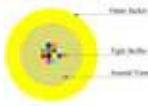




Keystone Adapter shielded **R837034**

Fiber Optic

Fiber Optic Cables - FO Field Connectors

Fiber Optic Cables - Direct Connections

| | Indoor Distribution Plenum | | |
|---|----------------------------|---------|---------|
| | OM4 Aqua | OM5 | OS2 |
|  | | | |
|  | | | |
|  | | | |
|  | | | |
| 2 | R891767 | R891816 | R891736 |
| 4 | R891768 | R891818 | R891737 |
| 6 | R891769 | R891863 | R891738 |
| 8 | R891770 | R891871 | R891739 |
| 12 | R891776 | R891872 | R891740 |
| 24 | R891777 | R891874 | R891741 |
| 48 | R891778 | R891875 | R891742 |
| 96 | R891779 | R891876 | R891743 |

| | Indoor Armored Distribution Plenum | | |
|-----|------------------------------------|---------|---------|
| | OM4 Aqua | OM5 | OS2 |
| 12 | R891882 | R891892 | R891877 |
| 24 | R891883 | R891893 | R891878 |
| 48 | R891884 | R891894 | R891879 |
| 96 | R891885 | R891895 | R891880 |
| 144 | R891886 | R891896 | R891881 |











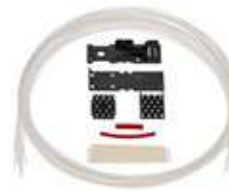



Fiber Optic Connector FO Field



Features:

- No tools needed
- Fast and safe assembly
- Simple and easy logistics: one connector for all cable types
- Real alternative to splicing
- Possibility to re-terminate

| | | | |
|--|---|--|---|
|  090.7344.jpg |  090.7343.tif |  090.7160 |  090.7161 |
| LC OM4 R846322 | SC OM4 R846327 | FO Kit (without cleaver) R810212 | Cleaver 8° R810207 |
|  090.7341 |  090.7342 |  030.6031 |  030.7004 |
| LC OS2 PC G657 R846320 | SC OS2 PC G657 R846325 | Stripping tool R852199 | Assembling tool R861313 |
|  090.6815 |  090.7337 |  090.7577 |  021.4738 |
| LC OS2 APC G657 R846317 | SC OS2 APC G657 R846323 | Fanout kit R823877 | Patch Set 2mm R841480 |
| | | | Patch Set 3mm R841479 |



Watch the FO Field connector termination video

Pigtails 900 µm - Set of 12 Single Fiber Pigtails



Features:

- Set of 12 colored pigtails (TIA)*
- 900 µm semi-tight-buffer tubing
- 4 meter, ¼” netting
- Designed for R&M panels with adapter plates

| Connector | | LC | SC |
|------------|---------|---------|---------|
| Fiber Type | OM4 | R916852 | R916853 |
| | OS2 UPC | R916854 | R916855 |
| | OS2 APC | R916856 | R916857 |

**available as a set of 6 fibers as well*

Pigtails Ribbon Fiber



Features:

- Ribbon 12 fiber pigtails 250 µm
- Fan-out at 13” of 900 µm tubing
- ¼” netting on ribbon fiber
- Length of ribbon fiber is 4 meter

| Connector | | LC | SC |
|------------|---------|---------|---------|
| Fiber Type | OM4 | R916862 | R916863 |
| | OS2 UPC | R916858 | R916859 |
| | OS2 APC | R916860 | R916861 |

Single Fiber Pigtails



Features:

- Single fiber pigtails
- 900 µm semi-tight-buffer tubing
- 1 meter
- Designed for R&M wallmount panels, splice cartridges and outdoor boxes

| | blue | orange | green | brown | slate | white | red | black | yellow | violet | rose | aqua |
|------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| LC OS2 UPC | R916887 | R916888 | R916889 | R916890 | R916891 | R916892 | R916893 | R916894 | R916895 | R916896 | R916898 | R916899 |
| LC OS2 APC | R916940 | R916941 | R916942 | R916943 | R916944 | R916945 | R916946 | R916947 | R916845 | R916948 | R916949 | R916950 |
| SC OS2 UPC | R916864 | R916865 | R916866 | R916867 | R916868 | R916869 | R916870 | R916871 | R916742 | R916872 | R916873 | R916874 |
| SC OS2 APC | R916875 | R916876 | R916877 | R916878 | R916879 | R916880 | R916881 | R916882 | R916883 | R916884 | R916885 | R916886 |

Structured Cabling Fiber Optic

Fiber Optic Distribution Panels

Unirack 2 - Fiber Splicing

090.7186



Features:

- The UniRack 2 has all the necessary accessories for a quick and hassle-free installation in a 19" rack and also reduces the installation time
- The integrated drawer offers space for 6 feet of loose tube fiber slack. Thanks to this slack space, the complete unit including splicing trays is easy to remove and to splice on a table
- The adapter front with LC Duplex is ready for the R&M inteliPhy system

| Unirack 2 | | | Fiber Type | | | |
|----------------|--------|----------|------------|---------|---------|---------|
| Connector Type | Fibers | Adapters | OM3 | OM4 | OM5 | OS2 UPC |
| LC Duplex | 12 | 6 | R846168 | R896728 | R880303 | R880300 |
| | 24 | 12 | R846167 | R896731 | R892086 | R846549 |
| | 48 | 24 | R846166 | R896733 | R880297 | R846547 |
| SC Duplex | 12 | 6 | R892093 | Rxxxx | --- | R892090 |
| | 24 | 12 | R892094 | Rxxxx | --- | R892091 |
| | 48 | 24 | R892095 | Rxxxx | --- | R847501 |

Unirack 2 empty

- 24 SC/E2000/LC Duplex **R819674**
- 24 SC Duplex **R818433**
- Blank Plug (12 pcs) **R809342**



FiberEasy 2 - for an installation with FO Field or pre-terminated trunks

090.7187



Features:

- Plug & play solution for cabling for LAN, office or campus data networks.
- The housing allows particularly quick installation, extension or adaptation of fiber optic distribution cabling.
- Cable entry is on the right or left. Cables are attached to the chassis.
- The tray with LC Duplex is ready for the R&M inteliPhy system

| FiberEasy 2 | | | Fiber Type | | | |
|----------------|--------|----------|------------|---------|---------|---------|
| Connector Type | Fibers | Adapters | OM3/OM4 | OM4 HV | OM5 | OS2 UPC |
| LC Duplex | 12 | 6 | R821987 | R836758 | R870199 | R829308 |
| | 24 | 12 | R821583 | R836759 | R870200 | R821584 |
| | 48 | 24 | R820052 | R825265 | R870201 | R819382 |
| SC Duplex | 12 | 6 | R816224 | R816224 | --- | R819980 |
| | 24 | 12 | R816056 | R816056 | --- | R818975 |
| | 48 | 24 | R816059 | R816059 | --- | R819984 |

Watch the video!



FiberEasy 2 without adapters

- 24 SC/E2000/LC Duplex **R822810**
- 24 SC Duplex **R818429**
- Blank Plug (12pcs) **R809342**

Accessories for Unirack2 & Fibereasy2

010.1693



Rear Cable Entry M20 R302006

010.1692



Cable Entry R302058

010.3205



Cable Gland IP67 R310726

090.7859



Splice Sleeve Holder R320246

090.7376



Cable Guide R815251

010.2183



Patching Ring left/right R302005

010.2137



Patching Guide R304440

090.7732



Splice Sleeves 35mm R30087-35

Structured Cabling Fiber Optic

Fiber Optic Distribution Panels

Fiber Optic Adapters R&M Freenet (to be used in FiberEasy2 & Unirack2)



LC Duplex (12pcs)

- OM5 - Limegreen **R842201**
- OM4 - H. violet **R823206**
- OM3/OM4 - Aqua **R823204**
- OM2 - Beige **R820420**
- OS2 UPC - Blue **R820419**
- OS2 APC - Green **R820418**

SC Simplex (12pcs)

- Multimode - Beige **R804282**
 - OS2 UPC - Blue **R804274**
 - OS2 APC - Green **R803945**
- #### SC Duplex (12pcs)
- Multimode - Beige **R821235**
 - OS2 UPC - Blue **R821236**
 - OS2 APC - Green **R821237**

E2000 Simplex (12pcs)

- OS2 APC - Green **R823249**
- #### E2000 Duplex (12pcs)
- OS2 APC - Green **R823257**

Adaptador MPO (12pcs)

- Polarity A **R824361**
- Polarity B **R824363**

Patch Cords Freenet Duplex 2mm Riser



| Connector Type | LC DUPLEX | | | SC Duplex | | |
|----------------|-----------|------------|---------|-----------|------------|---------|
| | Multimode | Singlemode | | Multimode | Singlemode | |
| | OM3/OM4 | OS2 APC | OS2 UPC | OS2 APC | OS2 UPC | |
| Length | 1 m | R892789 | R892837 | R892825 | R892786 | R892798 |
| | 2 m | R892792 | R892840 | R892826 | R892787 | R892799 |
| | 3 m | R892793 | R892841 | R892827 | R882863 | R892801 |
| | 5 m | R892794 | R892842 | R892828 | R892788 | R892831 |
| | 7 m | R892795 | R892843 | R892829 | R892790 | R892832 |
| | 10 m | R892796 | R892846 | R892830 | R892791 | R892834 |

Contact R&M for additional configurations or visit www.rdm.com

UniRack2 & EasyRack2 Grounding



Unirack2 & FiberEasy2 Grounding

Armored Cable Grounding Clamp 3/8"



R893166

Structured Cabling Fiber Optic

Fiber Optic Distribution Panels

L-Type Fiber Distribution Panels (LGX)



Fiber Distribution Panel Sliding - 1/2/4 Rack Units

Features:

- Deep design increases fiber management capabilities (depth 17.56")
- Dual sliding tray allows front panel to slide out without straining rear mounted cable
- Includes cable clamp, waterfalls and bonding lug

Dual Sliding 1U Panel, up to 3 L-Type Fiber Cartridges, empty

R271534

Dual Sliding 2U Panel, up to 6 L-Type Fiber Cartridges, empty

R271538

Sliding 4U Panel, up to 12 L-Type Fiber Cartridges, empty

R271541

Splice Cartridges L-Type

Splice Cartridge L-Type

Features:

- Low insertion loss performance
- LC Duplex UPC or SC Simplex UPC
- Internal dust shutters on LC ports
- 100% Tested in USA
- Removable front plate for connector access
- Includes adapters, pigtails, and appropriate splice protection sleeves
- Available in SC, APC, single/ribbon fiber, all common connector types



| Splice Cartridge | | | Fiber Type | | | |
|------------------|--------|----------|--------------------------------------|----------------|----------------|----------------|
| Connector Type | Fibers | Adapters | Single OS2 | Ribbon OS2 | OM4 | OM5 |
| | | | UPC | UPC 250 F | UPC | UPC |
| LC Duplex | 12 | 6 | R869037 | R861487 | R869357 | R892879 |
| | 24 | 12 | R869041 | R865062 | R869359 | R892880 |
| SC Duplex | 12 | 6 | R888663 | R270314 | -- | --- |
| | 12 | 6 | Single Fiber OS2 APC: R875033 | | | |

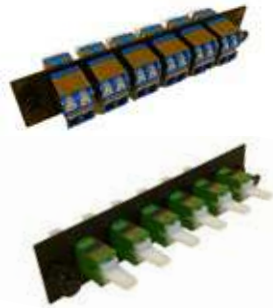
L-Type Blank Plate

R271426

Structured Cabling Fiber Optic

Fiber Optic Distribution Panels

L-Type Adapter Plates



| Adapter Plates | | Fiber Type | |
|----------------|-------------------|------------|---------|
| Connector Type | Fibers / Adapters | Single OS2 | OM4 |
| | | UPC | UPC |
| LC Duplex | 12 / 6 | R274965 | R869511 |
| | 24 / 12 | R875482 | R878247 |
| SC Simplex | 6 / 6 | Rxxxxx | Rxxxxxx |
| MPO | 72 (144) / 6 | Rxxxxx | R908309 |

Adapter Pigtails



Features:

- Set of 12 colored pigtails (TIA)*
- 900 μm semi-tight-buffer tubing
- 4 meter, ¼" netting
- Designed for R&M panels with adapter plates

| | | Connector | |
|------------|---------|-----------|---------|
| | | LC | SC |
| Fiber Type | OM4 | R916852 | R916853 |
| | OS2 UPC | R916854 | R916855 |
| | OS2 APC | R916856 | R916857 |

**available as a set of 6 fibers as well*

Splice Tray S-500, Single Fiber or Ribbon Fiber



Splice Tray S-500 72 Single Fiber

R900383



Splice Tray S-500 288 Ribbon Fiber

R900383



Single Fiber Splice Sleeves (50pcs)

R920487



Ribbon Fiber Splice Sleeves (50pcs)

R920489

Structured Cabling Fiber Optic

Fiber Optic Distribution Panels

L-Type MPO Cassettes



Features:

- High density- (Up to 12 ports per module)
- Low insertion loss performance
- Multiple polarity options available (default is type A polarity)
- Internal dust shutters on LC ports
- 100% Tested in USA
- Available in SC, APC, all common connector types

| MPO Cassettes | | | Fiber Type | | |
|----------------|-------------------|--------------|-----------------|---------|---------|
| Connector Type | Fibers / Adapters | MPO Adapters | Single OS2 | OM4 | OM5 |
| | | | UPC | UPC | UPC |
| LC Duplex | 12 / 6 | 1 | R862369 | R867824 | R893724 |
| | 24 / 12 | 2 | R885113 | R893723 | R893725 |
| SC Duplex | 12 / 6 | 1 | R270344 | -- | -- |
| | 12 / 6 | 1 | SC/APC: R864434 | | |

Trunks MPO-MPO



Features:

- 12 Fiber Optic Connector USConec MTP Pro
- Available with A or B polarity, Male or Female (default A - Male)
- Test report provided with each cable
- Per default, female cassettes are used, and the cables are manufactured with male connectors
- Plenum jacket, 2mm OD cable

| MPO Trunk Cable Polarity Type A | | Female/Female | | Male/Male | |
|---------------------------------|------------|---------------|---------|------------|---------|
| Connector Type | Length [m] | Single OS2 | OM4 | Single OS2 | OM4 |
| MTP Pro | 1 | R911086 | R911099 | R911122 | R911256 |
| | 2 | R911092 | R911101 | R911124 | R911306 |
| | 3 | R911094 | R911120 | R911247 | R911307 |
| | 5 | R893424 | R893224 | R893514 | R893344 |
| | 7 | R911096 | R911121 | R911252 | R911308 |
| | 10 | R893495 | R893207 | R893519 | R892706 |
| | 15 | R893496 | R893225 | R893535 | R893345 |
| | 20 | R893497 | R893226 | R893536 | R893346 |
| | 25 | R893498 | R893227 | R893538 | R893347 |
| | 30 | R893499 | R893258 | R893547 | R893349 |
| | 35 | R893500 | R893259 | R893548 | R893350 |
| | 40 | R893501 | R893261 | R893549 | R893351 |
| | 50 | R893503 | R893264 | R893551 | R892712 |
| | 70 | R893507 | R893270 | R893555 | R893416 |
| | 100 | R893513 | R893276 | R893561 | R893422 |

Structured Cabling Fiber Optic

Fiber Optic Distribution Panels

L-Type Panel Special Solutions



Sliding Tray Fiber Distribution Panel, 1 Rack Unit

- Accommodates 3 L-Type cartridges
- Removable sliding tray allows for fiber routing and splicing to be done outside of the panel
- Accepts ST-08 splice trays

Sliding 1U Panel, up to 3 L-Type Fiber Cartridges, empty

R272682



11" Ultra Short Panel, Sliding Tray, 1 Rack Unit

- Protected patch cords in front with sheet metal flip door

Ultra Short Sliding 1U Panel, up to 3 L-Type Adapter Plates, empty

R275731



11" Ultra Short Panel, Sliding Tray, 4 Rack Units

- Reversible ears for 19" or 23" mounting which can be wall or flush mounted

Ultra Short Sliding 4U Panel, up to 12 L-Type Fiber Cartridges, empty

R277423



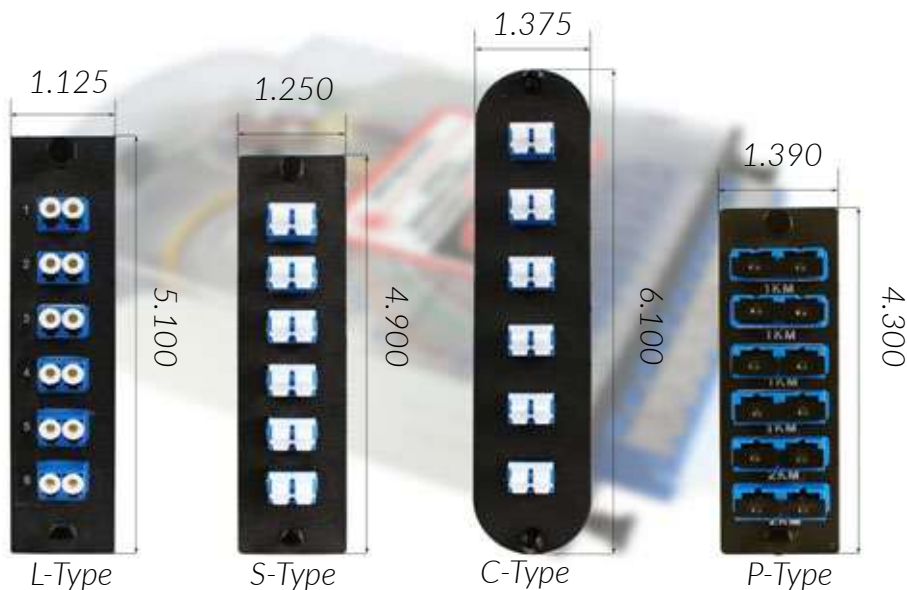
Fixed Fibers Distribution Panel, 4 Rack Units

- Accepts L-Type, C-Type and S-Type cassettes, interchangeable bulkhead

Fixed 4U Panel, up to 12 L-Type Fiber Cartridges, empty

R272882

Comparison of typical industry adapter plate dimensions



Structured Cabling Fiber Optic

Fiber Optic Distribution Panels

C-Type Fiber Distribution Panels



Fiber Distribution Panels C-Type

Features:

- Accommodates up to 12 vertically mounted industry standard adapter plates
- Removable front and rear door
- Deep design increases fiber management capabilities
- Reversible mounting ears for 19" or 23" mounting
- Includes cable clamp, waterfalls and bonding lug

Sliding 1U Panel, up to 2 C-Type Adapter Plates, empty
 Sliding 2U Panel, up to 4 C-Type Adapter Plates, empty
 Fixed 4U Panel, up to 12 C-Type Fiber Cartridges, empty

R872038
R872041
R273153

C-Type Splice Cartridges, Cassettes and Adapter Plates



Splice Cartridge C-Type

Features:

- Low insertion loss performance
- LC Duplex UPC or SC Simplex UPC
- Internal dust shutters on LC ports
- 100% Tested in USA
- Removable front plate for connector access
- Includes adapters, pigtails, and appropriate splice protection sleeves



| Splice Cartridges C-Type | | | Fiber Type | | | | |
|--------------------------|--------|----------|----------------|----------------|----------------|----------------|----------------|
| Connector Type | Fibers | Adapters | Single OS2 | Single OS2 | Ribbon OS2 | OM4 | OM5 |
| | | | APC | UPC | UPC 250 F | UPC | UPC |
| LC Duplex | 12 | 6 | R889507 | R869051 | R884867 | R869367 | R893719 |
| | 24 | 12 | -- | R869053 | R890633 | R869370 | R893720 |
| LC Simplex | 12 | 12 | R894656 | -- | -- | -- | -- |
| SC Simplex | 6 | 6 | R848131 | -- | -- | -- | -- |
| | 12 | 12 | -- | -- | R891575 | -- | -- |



| MPO Cassettes C-Type | | | Fiber Type | | |
|----------------------|-------------------|--------------|----------------|----------------|----------------|
| Connector Type | Fibers / Adapters | MPO Adapters | Single OS2 | OM4 | OM5 |
| | | | UPC | UPC | UPC |
| LC Duplex | 12 / 6 | 1 | R881962 | R881964 | R893727 |
| | 24 / 12 | 2 | R881961 | R893726 | R893785 |



| Adapter Plates | | Fiber Type | |
|----------------|-------------------|----------------|----------------|
| Connector Type | Fibers / Adapters | Single OS2 | OM4 |
| | | UPC | UPC |
| LC Duplex | 12 / 6 | R891314 | R880609 |
| | 24 / 12 | R891315 | R893792 |



C-Type Blank Plate **R271406**
 C-Type Wall Mount box, empty **R281428**

Structured Cabling Fiber Optic

Fiber Optic Distribution Panels

S-Type Fiber Distribution Panels



Fiber Distribution Panel Modular

Features:

- Panels are designed to handle large count fiber cables
- Modular in 3U increments (288 Fiber with LC, 144 with SC)
- Large 2.5" opening for cable entry
- Large cable slack storage area in the rear
- Comes preloaded with 100% tested, labeled and cleaned pigtails pre-dressed into the splice drawers in the rear
- Optimized for ribbon fiber

| | |
|---|----------------|
| Anaconda 3U Panel, Flat Ribbon, LC Duplex UPC SM IDS, 288 Fibers, incl. Accessories | R882195 |
| Anaconda 9U Panel, Flat Ribbon, LC Duplex UPC SM IDS, 864 Fibers, incl. Accessories | R882412 |
| Anaconda 18U Panel, Single Fiber, SC Duplex UPC SM, 864 Fibers, incl. Accessories | R870052 |
| Anaconda 18U Panel, Single Fiber, SC Duplex APC SM, 864 Fibers, incl. Accessories | R854337 |

S-Type Fiber Distribution Panels



S-Type Fiber Distribution Panels

- Sliding 1U Panel, up to 3 S-Type Fiber Cartridges, empty **R277740**
- Fixed 3U Panel, up to 12 S-Type Fiber Cartridges, empty **R271515**
- S-Type Blank Plate **R869373**

| Splice Cartridges S-Type LC | | | Fiber Type | | | |
|-----------------------------|--------|----------|----------------|----------------|----------------|----------------|
| Connector Type | Fibers | Adapters | Single OS2 | Ribbon OS2 | OM4 | OM5 |
| | | | UPC | UPC 250 | UPC | UPC |
| LC Duplex | 12 | 6 | R869043 | R858846 | R869360 | R893721 |
| | 24 | 12 | R869046 | R277486 | R869363 | R893722 |

| Splice Cartridges S-Type SC | | | Fiber Type |
|-----------------------------|-------------------|--------|----------------|
| Connector Type | Fibers / Adapters | Polish | Ribbon OS2 |
| SC Duplex | 12 / 6 | UPC | R273684 |
| | | APC | R837304 |

| MPO Cassettes S-Type LC | | | Fiber Type | | |
|-------------------------|-------------------|--------------|----------------|----------------|----------------|
| Connector Type | Fibers / Adapters | MPO Adapters | Single OS2 | OM4 | OM5 |
| | | | UPC | UPC | UPC |
| LC Duplex | 12 / 6 | 1 | R862384 | R893788 | R893790 |
| | 24 / 12 | 2 | R864437 | R893789 | R893791 |

| MPO Cassettes S-Type LC | | | Fiber Type | |
|-------------------------|-------------------|--------------|----------------|----------------|
| Connector Type | Fibers / Adapters | MPO Adapters | Single OS2 | Single OS2 |
| | | | UPC | APC |
| SC Duplex | 12 / 6 | 1 | R275585 | R276344 |

Structured Cabling Fiber Optic

Fiber Optic Distribution Panels

Wall Mount Panels



R&M Wall Mount panels were developed to bridge the specifications of the fiber provider and the requirements of the customer. Our selection of R&M connectivity systems fulfill these technical needs, the closed R&M wallmount panels are equipped with up to two lockable sections, i.e., one for the customer and one for the fiber provider.



Structured Cabling Fiber Optic

Fiber Optic Distribution Panels

Wall Mount Panels



Cable openings have a captive/non-captive option for easy and secure cable entry. Custom web grommets for cable openings provide dust & rodent protection. Interior cable chart for quick and easy documentation. A removable door allows an unobstructed panel opening in tight spaces. Interior bridge lances provide secure cable tie down points and various buffer tube and pigtail routing options. Multiple mounting keyholes for both side and rear mounting capability.



Open L1, (HxWxD 5.67"x6.34"x1.3")

| | | |
|---------|-------|--------------|
| LC/UPC | 24 FO | R880041 |
| LC/APC | 24 FO | R885651 |
| SC/UPC | 12 FO | R885656 |
| SC/APC | 12 FO | R885661 |
| LSH/APC | 12 FO | Upon request |



Closed L1, (HxWxD 6.57" x 11.63" x 1.91")

| | | |
|-------------------|----------|---------|
| L-Type | empty | R901275 |
| S-Type | empty | R901276 |
| C-Type | empty | R901277 |
| L-Type LCD/SM/UPC | 12 Fiber | R906486 |
| L-Type LCD/SM/UPC | 24 Fiber | R906487 |



Closed L2, (HxWxD 6.2"x12.2"x3.5")

| | | |
|---------|-------|--------------|
| LC/UPC | 48 FO | R885648 |
| LC/APC | 48 FO | R885653 |
| SC/UPC | 24 FO | R885658 |
| SC/APC | 24 FO | R885663 |
| LSH/APC | 24 FO | Upon request |



Closed L4, (HxWxD 12.66"x15.75"x3.25")

| | | |
|---------|-------|--------------|
| LC/UPC | 96 FO | R885649 |
| LC/APC | 96 FO | R885654 |
| SC/UPC | 48 FO | R885660 |
| SC/APC | 48 FO | R885664 |
| LSH/APC | 48 FO | Upon request |



Closed L8, (HxWxD 12.50"x15.5"x6.00")

| | | |
|---------|--------|--------------|
| LC/UPC | 192 FO | R885650 |
| LC/APC | 192 FO | R885655 |
| SC/UPC | 96 FO | R885659 |
| SC/APC | 96 FO | R885665 |
| LSH/APC | 96 FO | Upon request |

Structured Cabling Fiber Optic

Fiber Optic Distribution Panels

Micro Duct Distribution System (MDS)

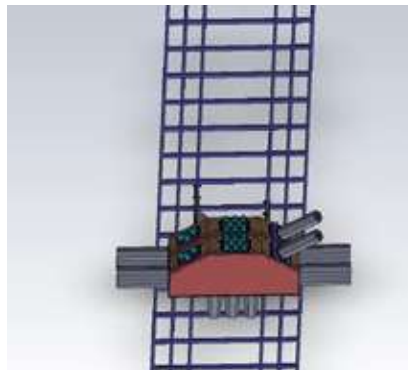
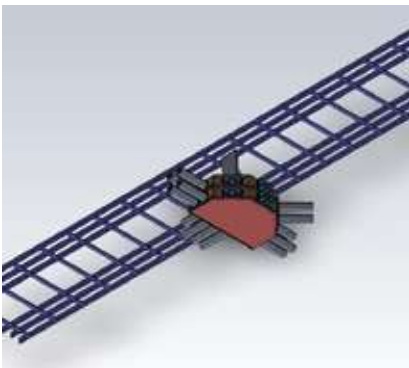


MDS L6 is a highly versatile enclosure designed to accommodate and optimize the distribution and termination of air-blown cable and duct as well as traditional fiber optic cable. The first of its kind, it optimizes the splicing and distribution of microduct systems in one enclosure, which eliminates extra parts and reduces the amount of room needed to distribute individual ducts.

- MDS (Micro Duct Distribution System)* is designed for Data Center and indoor DAS applications to manage all forms of duct up to 2.5" OD and used as a breakout box for routing large count cables into an OCEF
- Scalable—the MDS can be deployed as a single unit or stacked and attached back-to-back for larger jobs
- The MDS can be used as a termination point as well as a pass through

- Unique angular design allows for gentle sweeps to enhance fiber blowing
- Can be mounted to the wall or overhead ladder rack where it can be positioned to make optimal use of its ports
- The MDS can be mounted above or below the ladder rack and the mounting brackets (sold separately) work on 12", 18", and 24" ladder rack
- Duct mounting options include the use of cord grips, hose clamps, or tie wraps
- The MDS will accept splice trays and the rectangular front ports accept industry standard L-type adapter plates, splice cartridges or cassettes
- The closure features captive/non-captive openings and the cabinet has a knock-out feed through for stacking as well as front knock-outs for single bulkhead adapters
- Can be housed in a NEMA 6P closure in an OSP environment
- Powder-coated steel construction and mounting plates available for the 12.7/10 and 8.5/6 bulkheads and ducts up to 2.5" OD
- There are express ports on each side of the front rectangular slots for 12.7/10 and 8.5/6 bulkheads. Additional laterals can be added if the plates are full.

| Height | Width | Depth | Adapter Plates |
|------------------|------------------|-----------------|----------------|
| 14.53" (36.91cm) | 21.23" (53.92cm) | 3.475" (8.83cm) | 6 |



Example of MDS mounted on overhead ladder rack



Micro Duct Distribution System (empty)

R272933

Structured Cabling Fiber Optic

Fiber Optic Distribution Panels

Patch Cords Duplex 1.2mm Riser Short Boot



| Length | Connector Type | LC DUPLEX | | |
|--------|----------------|-----------|------------|---------|
| | Cable Type | Multimode | Singlemode | |
| | | OM3/OM4 | OS2 UPC | OS2 UPC |
| 1 m | | 880836 | 879495 | R879480 |
| 2 m | | 880837 | 879496 | R879481 |
| 3 m | | 880838 | 879497 | R879482 |
| 5 m | | 880840 | 879499 | R879484 |
| 7 m | | 880842 | 880826 | R879486 |
| 10 m | | 880845 | 880829 | R879480 |



Patch Cords Freenet Duplex 1.6mm Riser



| Length | Connector Type | LC DUPLEX | | | SC Duplex | |
|--------|----------------|-----------|------------|---------|-----------|------------|
| | Cable Type | Multimode | Singlemode | | Multimode | Singlemode |
| | | OM3/OM4 | OS2 APC | OS2 UPC | OS2 APC | OS2 UPC |
| 1 m | | R897940 | R897886 | R897926 | R897478 | R896270 |
| 2 m | | R897944 | R897887 | R897929 | R897480 | R897836 |
| 3 m | | R897951 | R897890 | R897931 | R897582 | R897837 |
| 5 m | | R897954 | R897889 | R897932 | R897583 | R897880 |
| 7 m | | R897955 | R897891 | R897934 | R896258 | R897884 |
| 10 m | | R897957 | R897892 | R897935 | R896269 | R897885 |

Contact R&M for additional configurations or visit www.rdm.com

Patch Cords Freenet Duplex 2mm Riser



| Length | Connector Type | LC DUPLEX | | | SC Duplex | |
|--------|----------------|-----------|------------|---------|-----------|------------|
| | Cable Type | Multimode | Singlemode | | Multimode | Singlemode |
| | | OM3/OM4 | OS2 APC | OS2 UPC | OS2 APC | OS2 UPC |
| 1 m | | R892789 | R892837 | R892825 | R892786 | R892798 |
| 2 m | | R892792 | R892840 | R892826 | R892787 | R892799 |
| 3 m | | R892793 | R892841 | R892827 | R882863 | R892801 |
| 5 m | | R892794 | R892842 | R892828 | R892788 | R892831 |
| 7 m | | R892795 | R892843 | R892829 | R892790 | R892832 |
| 10 m | | R892796 | R892846 | R892830 | R892791 | R892834 |

Contact R&M for additional configurations or visit www.rdm.com

Structured Cabling Mixed Media Distribution Panels

Netscale 48 - Mixed Media Panel



Netscale 48 is the most flexible mixed media patch panel. It provides smart cable management and offers everything on a single height unit in the rack.

Netscale 48 - Housing



Netscale 48 empty straight
Netscale 48 empty angled

R868288
R875195

Netscale 48 front door kit 80
Netscale 48 front door kit 100

R868289
R875198

Rear cable support
Label holder

R868290
R512430

Netscale 48 - Inserts



LC Duplex 24 Fiber Splice Top SM UPC
LC Duplex 24 Fiber Splice Bot SM UPC

R870476
R875201

MPO-LC 2x6 Port OM4 HV A
MPO-LC 2x6 Port OM5 A

R869120
R870471

Cu 6x Empty Unshielded
Cu 6x Empty Shielded

R868292
R868291



LC Duplex 6 Ports OM4
LC Duplex 6 Ports OM5
LC Duplex 6 Ports SM UPC
SC Simplex 6 Fibers SM UPC

R869111
R869112
R869113
R872415



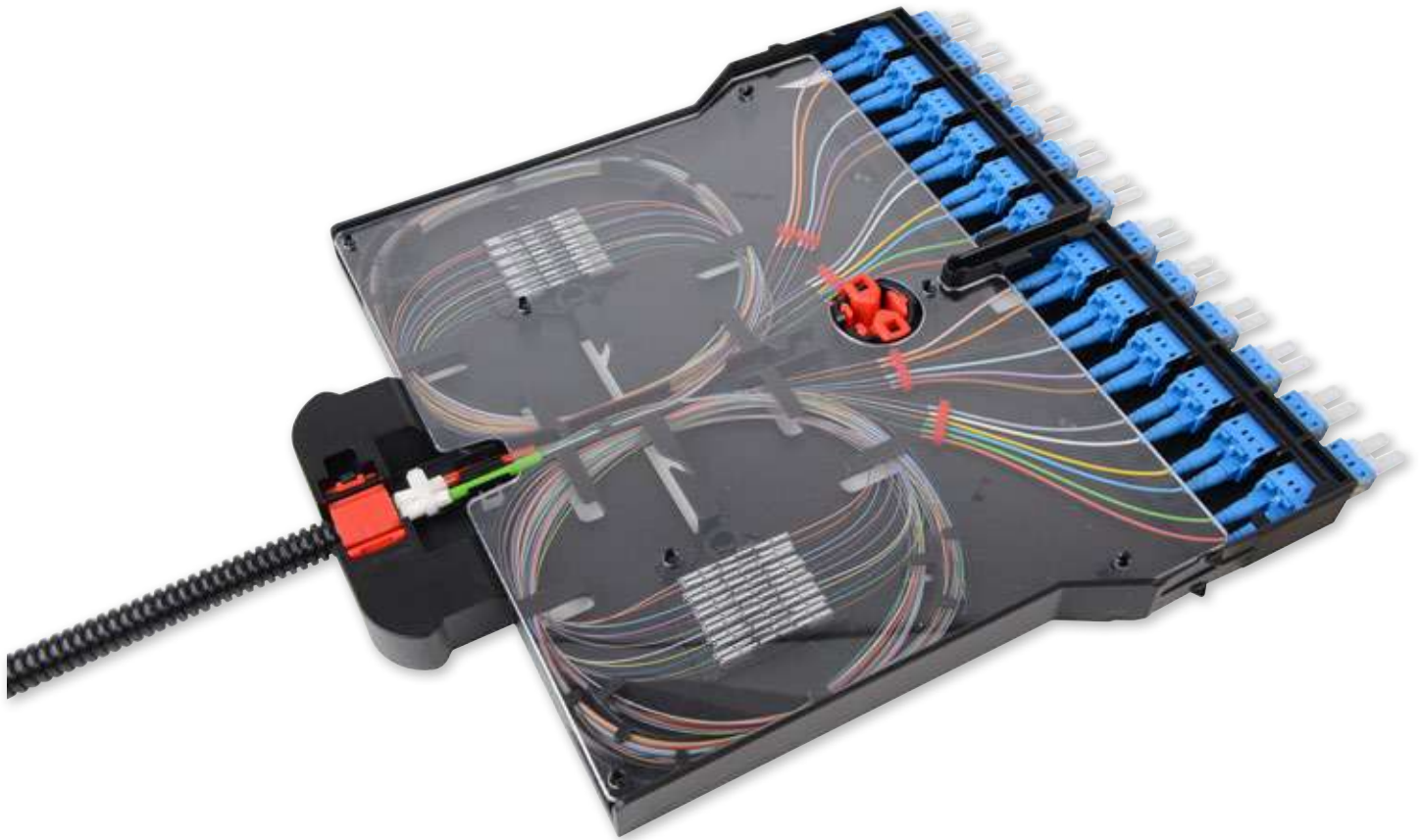
LC Duplex 6 Ports IDS OM4
LC Duplex 6 Ports IDS OM5
LC Duplex 6 Ports IDS SM UPC
LC Duplex 6 Ports IDS SM APC

R872420
R869112
R869113
R872415

Structured Cabling Mixed Media

Distribution Panels

Netscale 48 Splice Cassette



LC Duplex Splice Cassettes

- LC-D 12P Splice OM4 top (HV, 24F) **R870474**
- LC-D 12P Splice OM5 top (LG, 24F) **R870475**
- LC-D 12P Splice UPC SM top (BL, 24F) **R870476**
- LC-D 12P Splice APC SM top (GR, 24F) **R870477**
- LC-D 12P Splice OM4 bot (HV, 24F) **R875199**
- LC-D 12P Splice OM5 bot (LG, 24F) **R875200**
- LC-D 12P Splice UPC SM bot (BL, 24F) **R875201**
- LC-D 12P Splice APC SM bot (GR, 24F) **R875202**

SC Simplex Splice Cassettes

- SC-S 6P Splice OM4 top (HV, 12F) **R870478**
- SC-S 6P Splice OM5 top (LG, 12F) **R872435**
- SC-S 6P Splice UPC SM top (BL, 12F) **R870479**
- SC-S 6P Splice APC SM top (GR, 12F) **R870480**
- SC-S 6P Splice OM4 bot (HV, 12F) **R875207**
- SC-S 6P Splice OM5 bot (LG, 12F) **R875208**
- SC-S 6P Splice UPC SM bot (BL, 12F) **R875209**
- SC-S 6P Splice APC SM bot (GR, 12F) **R875210**



Splice Sleeve Holder R320246



Splice Sleeves 35mm R30087-35

Shielded Cabling Solution



Cable S/FTP Cat7 1000MHZ

Riser blue **R892640**
Plenum blue **R892639**

Cable F/UTP Cat6A 650MHZ

Riser white / blue **R859100/R859099**
Plenum white / blue **R878978/R859101**

**white on plastic drums; blue on wooden reels*

Metallic White Blue
Keystone **R813512 R891660 R891661**
Special (DIN Rail) **R813508 R891663 R891664**



Industrial cables solid wire, direct burial, UV-resistant

Inst C6-U/UTP-4P-PE AWG23-450MHz-bk **R823882**

Inst C6-F-U/UTP-4P-PE-AWG23-450MHz-bk **R823884**

Inst C7-S/FTP-4P-2 Eca AWG23-900MHz-bk **R823883**



Stainless Steel 24 Port Panel

Keystone, empty **R835001**



Cable Management

1U Ring **R802948**
2U Ring **R802949**



Grounding

19" Grounding Bar **R25034**
Panel Grounding Connector **R302150**



1xRJ45 Keystone Stainless Steel **R912245**
2xRJ45 Keystone Stainless Steel **R912259**
3xRJ45 Keystone Stainless Steel **R912262**
4xRJ45 Keystone Stainless Steel **R912263**
6xRJ45 Keystone Stainless Steel **R912264**
Blank Insert Keystone Black **R277753**

DIN Rail Adapter

| | | | |
|---|---|--|---|
|  090.7875 |  090.7180 |  090.7179 |  090.7777 |
| Adapter DRM45-1TE R845861 | Module Cat6A EL Shielded R813508 | Module Cat6A EL UTP R813510 | Module Cat6 EL UTP R832193 |
|  090.7865 |  090.7868 |  090.7371 |  090.7864 |
| LC Duplex Special MM OM3 R840201 OM4 R840203 | LC Duplex Special SM OS2 PC R821302 OS2 APC R840200 | SC Simplex Special MM OM2/3 R822673 | SC Simplex Special SM OS2 PC R822672 OS2 APC R840202 |

NEMA 6 / IP 67 Solutions



R&M NEMA 6 / IP67 solutions enable companies to secure data transmission in harsh environments. Available for fiber optic connections with SC-RJ connector and for copper connections with RJ45.

SC-RJ Developed by R&M is a new IP67 protection class fiber optic connector that unites a unique range of features and supports applications up to 10 Gigabit Ethernet. The connector system is the first of its kind for industrial applications, designed in Small Form Factor and with 2.5mm ferrule technology, a security and color coding options.



Surface Mount Box IP66

- 1-port wall mount box-IP66-110x110x66-1x30mm
- 1-port wall mount box-IP54-110x110x66-1x30mm
- 2-port wall mount box-IP66-130x130x75-2x30mm
- 2-port wall mount box-IP54-130x130x75-2x30mm

R873770
R873772
R873771
R873773



Faceplate IP67 **R309588**



Cable gland IP67 M20 **R813726**



Cover IP67

R309589



Freenet Adapter **R513484**



RJ45 Mini Outlet IP67 **R885110**



Connector Cat.6A IP67 **R814568**



Patch cords equipped with PUR jackets, ideal for use in harsh environments.



RJ45 IP20 - RJ45 IP20 CAT6A

2,5m **R313633**
5,0m **R313634**
10,0m **R313632**



RJ45 IP67 - RJ45 IP20 CAT6A

2,5m **R313637**
5,0m **R313638**
10,0m **R313639**



RJ45 IP67 - RJ45 IP67 CAT6A

2,5m **R313641**
5,0m **R313642**
10,0m **R313640**



SC-RJ IP67 - SC-RJ IP67

custom built

Harsh Environment

Field Mountable RJ45 in Die Cast Housing

R&M FM45



Field-Mountable Plug FM45 EL Cat. 6A (RJ45)

Completely newly developed, state-of-the-art FM45 with metal housing, intuitive handling, robust and compact design. The R&M FM45 EL Cat.6A offers fast and easy termination. Just like the well-known EL module, it comes with a solid housing for a variety of clever field applications.



FM45 EL Cat. 6A, die cast housing

Plug FM45 ELC6A s/u 22-26 IP20 ms (straight, slim version)

R836543

Plug FM45 ELC6A s/u 22-26 IP20 m (straight, standard version)

R888230

Plug FM45 ELC6A s/u 22-26 IP20 Am (90° angled version)

R886069

Solution IP54 / NEMA 3S



Features:

- For surface or recessed installations in locations subject to water spray from all directions
- Protection against water and dust IP 54 / NEMA 3S
- Temperatures from -15°F to +180°F
- Protection against steam, hot water, oils
- Protection against condensation
- Protection against dust of any kind
- Protection against air pollution in general (non-acidic)



Wall Mount IP54, 87x87mm

2 Port Outlet

R880928



Wall Mount IP67, 87x87mm

2 Port Outlet

R880929



010.2133

Splash Cap IP54 (10pcs)

Red

R306062

Green

R306061

Yellow

R306060

Blue

R306058

White

R306063



010.2127

Splash Sleeve IP54

R306064



010.2140

Splash Tool

R306057



Freenet Adapter

R513484



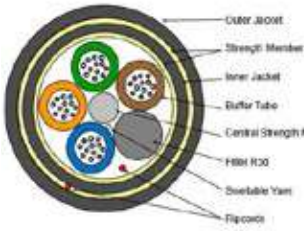
Cable gland IP67 M20

R813726

Harsh Environment / Healthcare Solutions

Harsh Environment Fiber Optic Cables - Healthline

Dielectric Indoor/Outdoor Fiber Optic Cables



Indoor/Outdoor, Industrial Gel-Free Loose Tube

- Dielectric Double Jacket OFNR-LS
- Gel-free buffer tubes
- Dry water-blocking technology
- Identification color coding EIA/TIA-598
- Layer of strength elements over inner jacket



Indoor/Outdoor, Gel-Free Loose Tube

- Plenum Dielectric Single Jacket OFNP / FT6
- Gel-free buffer tubes
- Identification color coding EIA/TIA-598
- Flame-retardant outer Jacket

| Fiber Count | OS2 Riser | OM4 Riser |
|-------------|-----------|-----------|
| 6 | R854461 | R854456 |
| 12 | R854462 | R854457 |
| 24 | R854450 | R854449 |
| 48 | R854463 | R854458 |
| 72 | R854464 | R854459 |

| Fiber Count | OS2 Plenum | OM4 Plenum |
|-------------|------------|------------|
| 6 | R854471 | R854466 |
| 12 | R854472 | R854467 |
| 24 | R854452 | R854451 |
| 48 | R854473 | R854468 |
| 72 | R854474 | R854469 |

R&M Healthline Solution



R&MhealthLine - antibacterial cabling solution

The healthcare environment adds additional requirements to ordinary LAN products. In addition to reliability and the ability to identify and separate multiple different network, specific features like antimicrobial treatment or overvoltage protection improve the functionality.



090.7629

Mini Surface 2x1-port

R825748



090.7633

WM Global Outlet 80x80, 2x1-port

R824376



090.7631

DM Global Outlet 80x86, 2x1-port

R824377



US Faceplate 2 port

R859109



090.7713

Patch Cord Healthline

- Cat6 UTP - 2m **R825749**
- Cat6 UTP - 3m **R825750**
- Cat6 UTP - 5m **R825751**
- Cat6A STP - 2m **R825752**
- Cat6A STP - 3m **R825753**
- Cat6A STP - 5m **R825754**



Safeline Network Isolator 10Gbps

R885314

Safeline Network Isolator

R810599



Freenet Adapter

R513484



Hinged Dust Cover HL

R825747

Fiber to the Home



Indoor FO Cable



Fast Reel Outlet Box

Buildings



Connectivity



Optical Distribution Frames



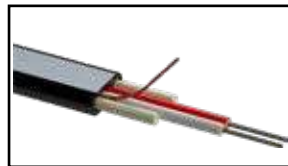
Polaris-box Family:
Outdoor & Indoor
Distribution
Termination
Building Entry Point



Mechanical Gel sealed
SYNO Closures



Mechanical
Dome Closures



FTTH deployment
Fiber Optic Cables



Customized Street Cab-
inets

Outside Plant



Raceway



Splitter Panels



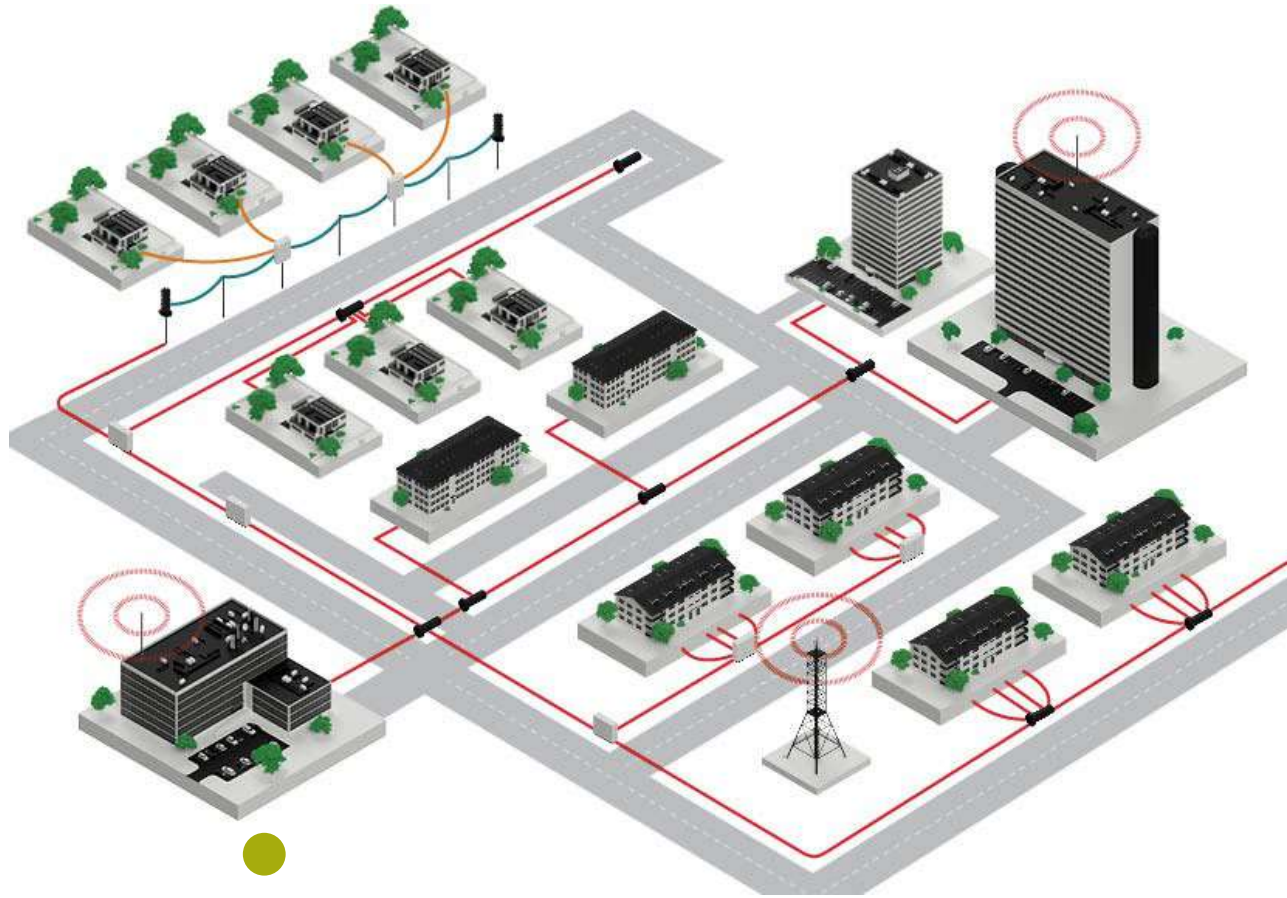
19" Panels



Cable Assemblies

Central Office

Fiber to the Home



Central Office

Customer specific solutions for effective assembly, future-proof expansion and effective operation of optical or copper connectivity based distribution frames. Modular system elements complemented by professional planning consultancy.

Outside Plant

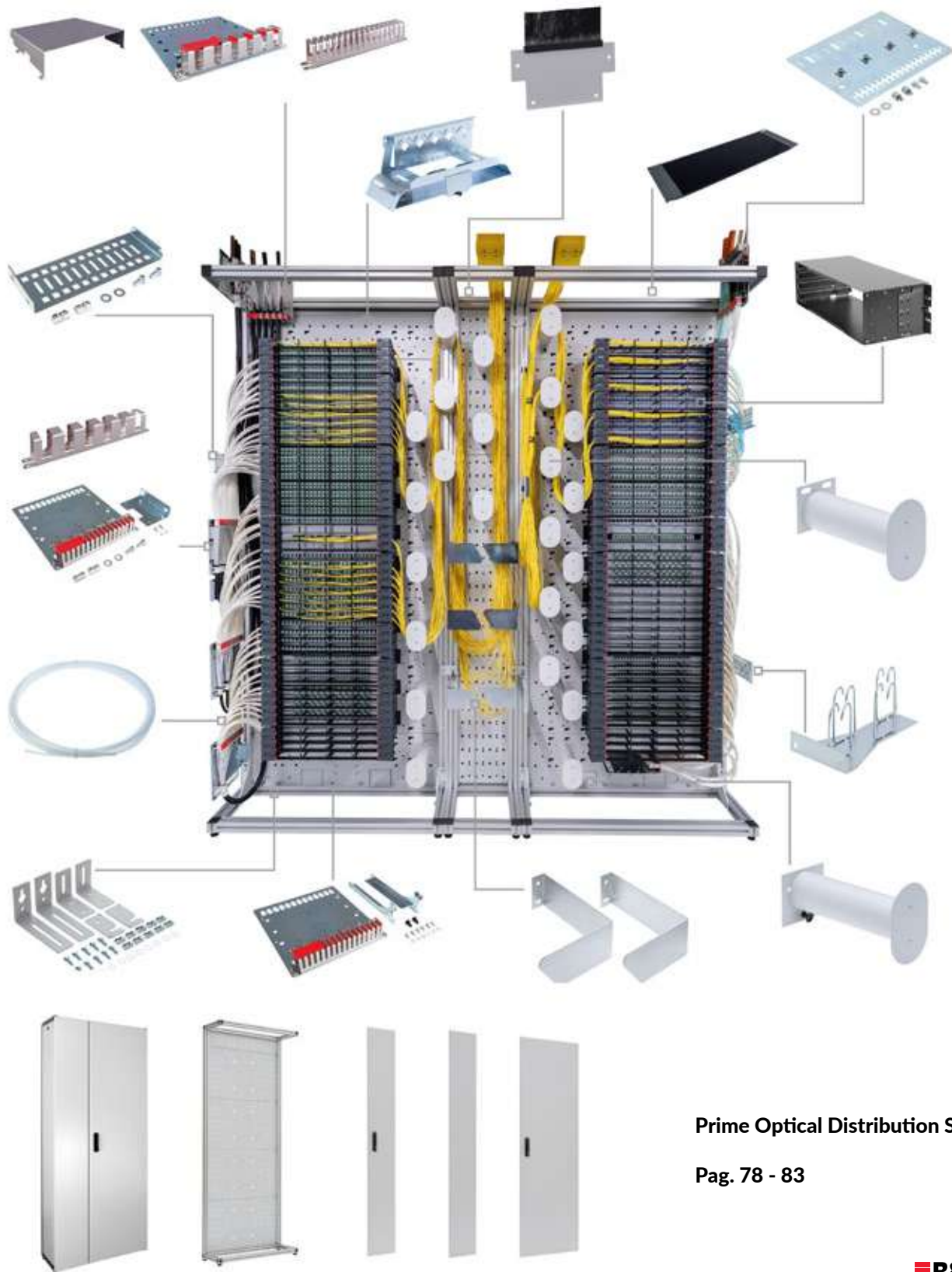
Complete portfolio of robust street cabins, underground closures and distribution boxes offering latest technology in fiber connectivity and management. The different product platforms support all common cable types and fiber optical network topologies.

Customer Premises, Buildings and Cell Sites

Efficient solutions for supplying different buildings and urban infrastructure with fiber optic connectivity. Building entry points inside and outside of the building, realized with Polaris-box family a compact, flexible and modular concept for fiber termination. Complemented by field deployable connectors as a modern alternative to fusion splicing. Fiber optic connection in no time.

PRIME Fiber Optic Distribution System

High fiber density is achieved with the PRIME Optical Distribution Frame (ODF).



Prime Optical Distribution System

Pag. 78 - 83

Central Office

Fox Fiber Optic Distribution System

Fox Fiber Optic Distribution System

ETSI Rack Solution Benefits

TCO reduction

- Excellent subscriber and cable management saves on maintenance costs
- Strain-less fiber guidance ensures data security
- Scalable investments thanks to modular configuration

Easy and time-saving installation

- Short fiber connections between splice and patch module
- No tools needed
- Easy drop arrangement
- Open fiber guidance
- Smart hinge down splice element

Features

- High-density up to 2304 fibers
- Bending radius R40
- Subscriber management with SCM
- ETSI standard compliant
- Retrofittable side panels and door



Into the Future with Fiber Optics

Next generation networks are expanding. The demand for more bandwidth and new services calls for more and more optical fibers.

Network operators need new ideas for central office, hub and data center applications in order to manage the expansion of fiber optic infrastructures more efficiently and more flexibly.

R&M's answer: the Optical Distribution Frame (ODF) combined with the Single Circuit Management System (SCM). This distribution solution allows to network operators to set up their next generation central office. It helps them master the planning, assembly and operation – smoothly and reliably. Thanks to the modular design and outstanding rapid-assembly technology. There is no limit to the expansion of fiber optic networks.

Fox Fiber Optic Distribution System



Flexibility for 19" Solutions

The 5U and 10U 19" ODF-SCM MODULE are especially designed to be implemented in an existing 19" or 21" infrastructure.

The ODF-MODULE can be installed from the front- or backside offering of the cabinet. Outstanding is the modular system approach SCM cassettes and ODF Patch, Splitter and CWDM inserts in the portfolio.

The flexible platform supports optical fibers for P2P and P2MP networks. With the two module sizes 5U and 10U, R&M offers distribution capacity for up to 288(5U) / 576(10U) splice and patch connections or up to 576(5U) / 1152(10U) pure splice connections.

19" Rack Solution Benefits

- Pay as you grow
- Safe network operation
- Separation of subscribers
- Flexible and extendable solution

Features

- Up to 6/12 1U-ODF-Patch inserts
- Max. density 576 patch-splice or 1152 splice connection on 10U
- Up to 48/96 SC cassettes
- Tool-free assembly



Central Office

Fox Fiber Optic Distribution System

Racks ODF SCM



Cabinet ODF , complete

1.8m Height

| | |
|-------------|---------|
| 600mmx300mm | R807362 |
| 900mmx300mm | R807361 |

2.2m Height

| | |
|-------------|---------|
| 600mmx300mm | R807360 |
| 900mmx300mm | R807353 |



Wall Mount ODF

0.7m Height

| | |
|-------------|---------|
| 900mmx300mm | R515520 |
|-------------|---------|

1.2m Height

| | |
|-------------|---------|
| 900mmx300mm | R515521 |
|-------------|---------|

| | |
|----------------|---------|
| Mounting Plate | R511902 |
|----------------|---------|

- use 1pc for Splice or Patch
- use 2pc for CombiModule

ODF SCM (Modular Chassis)



Cabinet ODF , backplane

2.2m Height

| | |
|-------------|---------|
| 300mmx300mm | R825746 |
| 600mmx300mm | R510763 |
| 900mmx300mm | R823241 |



Standard Door

| | |
|--------------|---------|
| 2200mmx600mm | R510768 |
| 2200mmx300mm | R510767 |

Swing Door

use in combination with standard door

| | |
|--------------|---------|
| 2200mmx600mm | R807352 |
| 2200mmx300mm | R510884 |

Side Wall

| | |
|-------|---------|
| Left | R510765 |
| Right | R510766 |

Accessories ODF SCM



Cover ODF

| | |
|-------------|---------|
| 900mmx300mm | R510769 |
| 600mmx300mm | R510770 |
| 300mmx300mm | R511962 |



T-Nut Set ODF, 10x

R807354



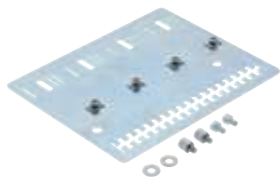
Cabinet ODF, grounding Kit

R804294

Central Office

Fox Fiber Optic Distribution System

Assembly & Cable Management Accessories for ODF Foxs & CombiModules SCM



Cable Strain Relief

R510771



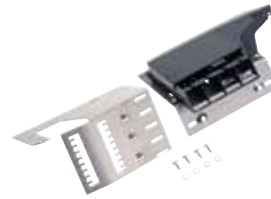
Cable Strain Relief 45°

R809763



Cable Guide, blow-in

R511984



Fiber Management,
Splice Module

| | |
|-------|---------|
| Left | R809343 |
| Right | R809344 |



Mounting plate for
cable or tubes

R808397



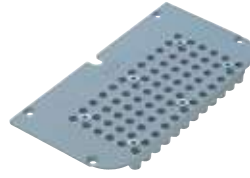
Mounting Plate 600,
SpliceModule

R513575



Protective Tube

3,5-5mm R510718



Mounting Plate 72
tubes 5mm

R510775



Cable Support Plate

R511903



Fiber Guide,
Splice Module

R809345



Patch cords redirection

R510774



Patch cord lead away

R511966



Patch Cord Holder

R804324



Patch Separation

R510880



Cable Management,
Patch Module

R513570



Cover Plate

R510723



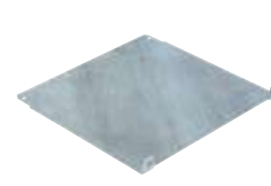
Blind Cover insert

R510719



Overlength Tray

R511904



Mounting Table

R510772



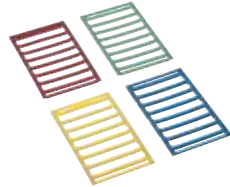
Snap-in Clip

R510834



Numbering Clips

| | |
|-------|---------|
| 13-24 | R511963 |
| 25-36 | R511964 |
| 37-48 | R512402 |



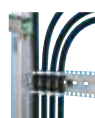
Color Clip, Splice Trays

| | |
|--------|---------|
| Red | R508343 |
| Yellow | R508345 |
| Green | R508346 |
| Blue | R508347 |



Labeling Kit

R512250



Cable Guide Kit NW17

3m



Fiber i=Divider Box
10xNW17

R814623



Fiber Divider Box,
72x5mm

R814538

Central Office

Fox Fiber Optic Distribution System

CombiMODULES ODF SCM



CombiModule **Left** with adapt. APC, G652D

288 Fibers

| | |
|---------------|---------|
| LC Duplex | R510715 |
| E2000 Compact | R512773 |
| SC Simplex | R807369 |

576 Fibers

| | |
|-----------|---------|
| LC Duplex | R807373 |
|-----------|---------|



CombiModule **Right** with adapt. APC, G652D

288 Fibers

| | |
|---------------|---------|
| LC Duplex | R510761 |
| E2000 Compact | R512772 |
| SC Simplex | R807370 |

576 Fibers

| | |
|-----------|---------|
| LC Duplex | R807374 |
|-----------|---------|



CombiMODULE Left, empty

R510714



CombiMODULE Right, empty

R510760



SpliceMODULE, empty

R510712



Patch MODULE, empty

R510713

CombiMODULES - ODF SCM (Racks 19")



CombiModule Left 10U

R814290



CombiMODULE Right 10U

R814291



CombiMODULE Left 5U

R835032



CombiMODULE Right 5U

R835033

Splice Trays SCM

Splice Trays SCM, R40



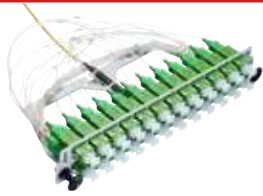
| | |
|-----------------|---------|
| 6 FO (1pc) | R508434 |
| 6 FO (12pc) | R508440 |
| 12 FO (1pc) | R804270 |
| 12 FO (12pc) | R804272 |
| 24 Fibers (1pc) | R508436 |
| 24 Fibers (6pc) | R508441 |

Splitter Tray SCM



| | |
|-------|---------|
| Grey | R508439 |
| Black | R812556 |

Patch Inserts ODF for CombiModule (with fanout and adapters)



24 SC

| | |
|-----|---------|
| APC | R813195 |
| PC | R804299 |



12 E2000 (24 FO)

| | |
|-----|---------|
| APC | R510729 |
| PC | R510730 |



12 LC DUPLEX (24 FO)

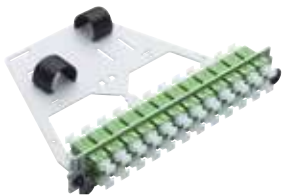
| | |
|-----|---------|
| APC | R813196 |
| PC | R510727 |



24 LC DUPLEX (48 FO)

| | |
|-----|---------|
| APC | R813197 |
| PC | R804298 |

Patch Inserts ODF for CombiModule (breakout)



24 SC

| | |
|-----|---------|
| APC | R515943 |
| PC | R807363 |



12 E2000 (24 FO)

| | |
|-----|---------|
| APC | R514473 |
| PC | R807359 |



12 LC DUPLEX (24 FO)

| | |
|-----|---------|
| APC | R514471 |
| PC | R807357 |

Splitters PLC 1260-1560nm - G657, APC



Splitter Insert ODF 1U

| | |
|---------------|---------|
| 4x 1:4 SC | R804305 |
| 4x 1:4 LC | R804306 |
| 4x 1:4 E2000 | R804307 |
| 2x 1:8 SC | R804308 |
| 4x 1:8 LC | R804309 |
| 2x 1:8 E2000 | R804310 |
| 1x 1:16 SC | R804311 |
| 1x 1:16 LC | R804312 |
| 1x 1:16 E2000 | R804313 |
| 1x 1:32 LC | R804315 |



Splitter Insert ODF 2U

| | |
|---------------|---------|
| 1x 1:32 SC | R804314 |
| 1x 1:32 E2000 | R804316 |
| 1x 1:64 LC | R804318 |



Splitter Insert ODF 3U

| | |
|---------------|---------|
| 1x 1:64 SC | R804317 |
| 1x 1:64 E2000 | R804319 |

Splitters CWDM - G657, APC



Characteristics:

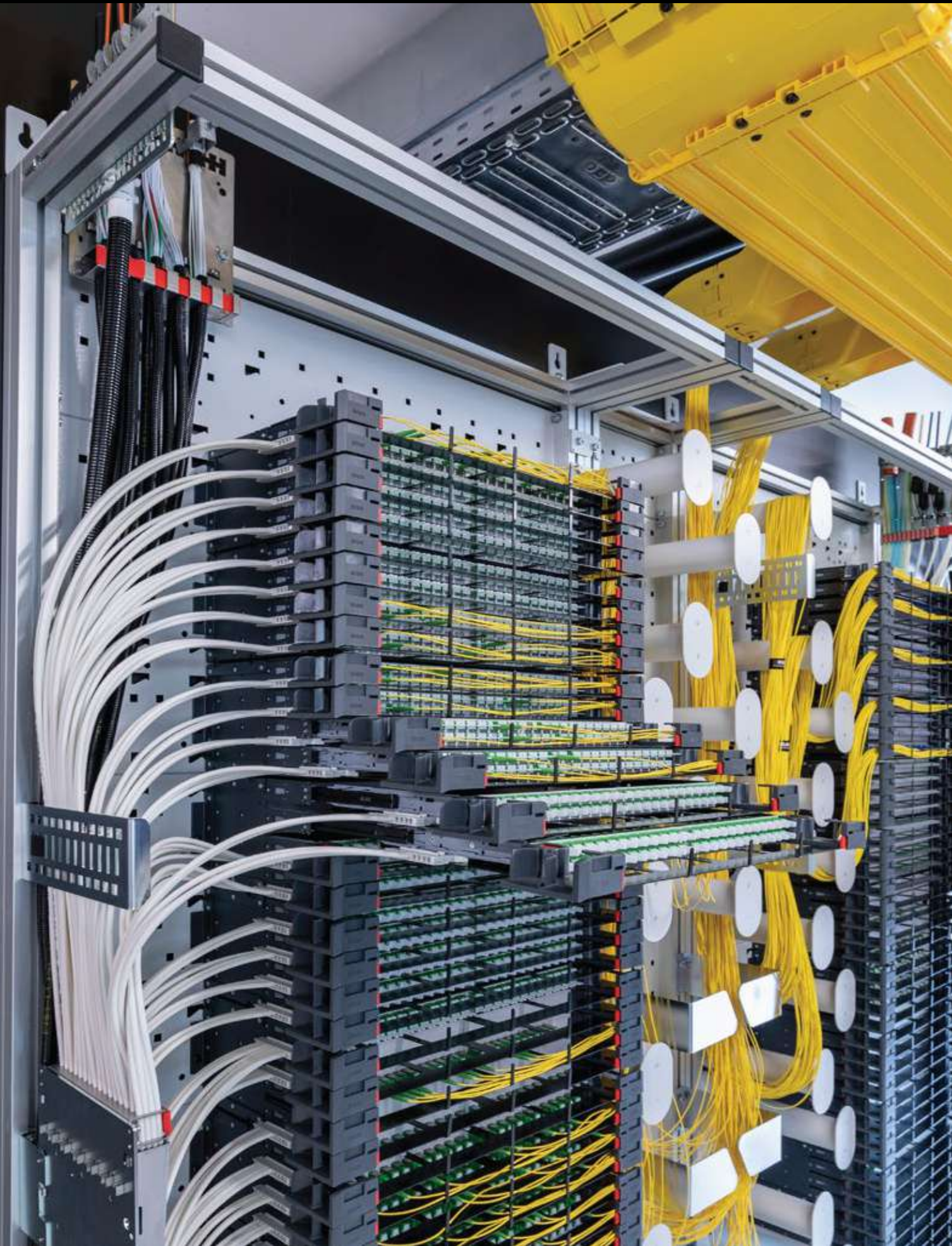
- 8 channel CWDM
- 1271/1291/1311/1331/1351/1371/1431/1451 nm
- Bidirectional

Patch Module CWDM 1U

R804320

Central Office

PRIME Fiber Optic Distribution System



Central Office

PRIME Fiber Optic Distribution System

PRIME Fiber Optic Distribution System

Flexibility

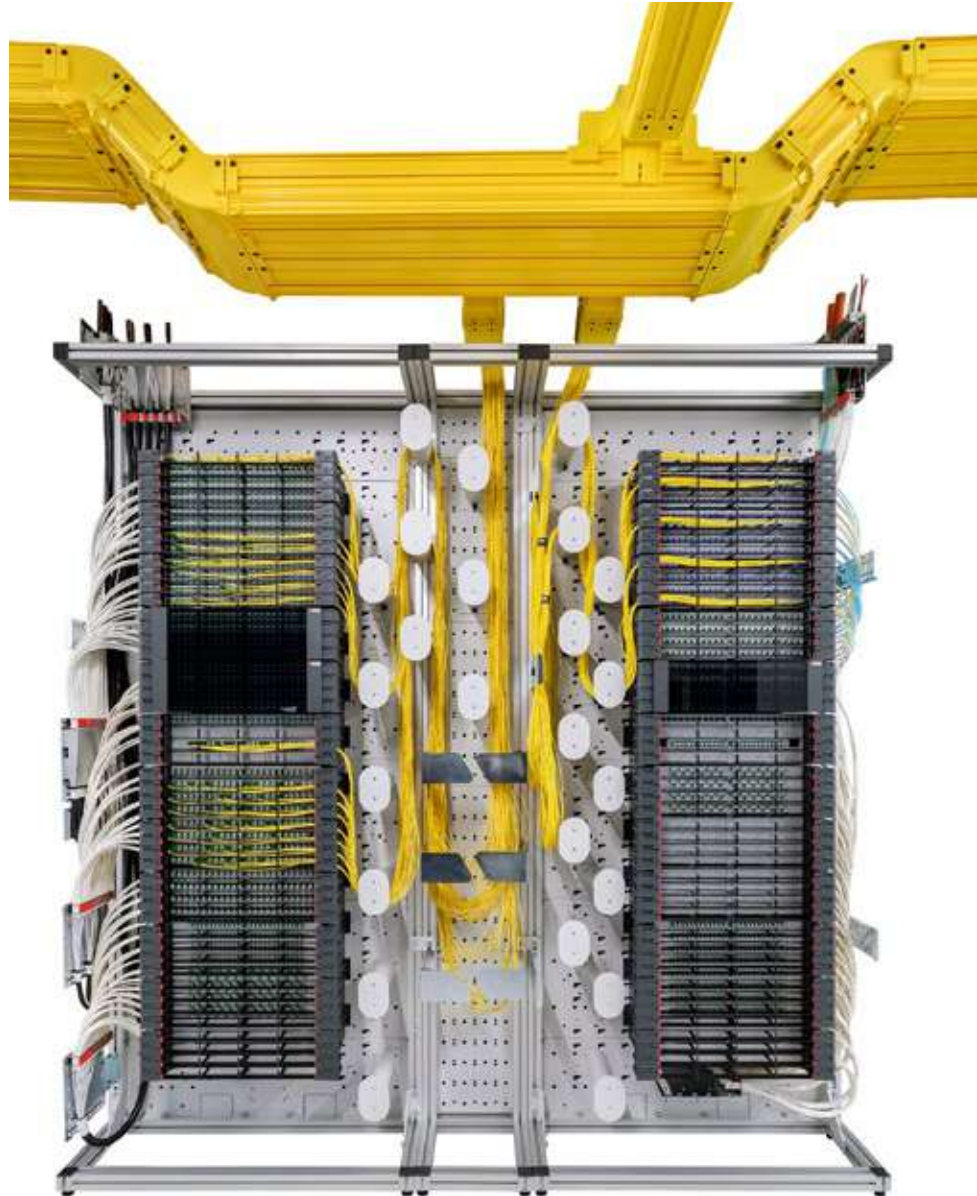
- Migration to existing and new network infrastructures
- Front or rear mounting in 19" and ETSI racks
- Modular application (pure splice, splice patch, breakout applications, fiber storage)

Simple installation

- Front access to connectors
- Tool-free installation
- Simple and secure routing of loose tube cables to the splice trays
- Fine distribution of the fibers to the individual modules
- Terminal block for transport tubes

Features

- Top fiber density
- Optimized space
- Modular use
- Tool-free migration
- Consistent and flexible
- Mirrored system configuration



The New Generation of Optical Distribution Systems

Next generation networks are expanding. The demand for more bandwidth and new services calls for more and more optical fibers. Network operators need new ideas for central office, hub and data center applications in order to manage the expansion of fiber optic infrastructures more efficiently and more flexibly. R&M's answer: the Optical Distribution Frame (ODF) combined with the Single Circuit Management System (SCM). This distribution solution allows to network operators to set up their next generation central office. It helps them master the planning, assembly and operation – smoothly and reliably. Thanks to the modular design and outstanding rapid-assembly technology. There is no limit to the expansion of fiber optic networks.

Central Office

PRIME Fiber Optic Distribution System

ODF Prime Solution

Quick and Simple Installation in space-constrained environments as well as locations with high fiber optic density.

The compact and versatile PRIME optical distribution modules are suitable for flexible use of fiber optic terminations. They enable quick and simple installation in limited environments as well as in high fiber density locations. The tool-less assembly approach and high modularity ensure smooth migration between a new or existing infrastructure.

Main benefits:

- . Diversity / Migration between existing infrastructure and new network infrastructure.
- . Front or rear mounting on 19" and ETSI racks.
- . Modular Application & Simplified Installation
- . Front access to connectors.
- . Toolless Installation of 3U Subracks
- . Simple and safe routing of loose tubes, individually to splice trays
- . Precise fiber distribution for individual modules

Racks Prime



Prime Cabinet , complete

1.8m Height

| | |
|-------------|---------|
| 900mmx300mm | R851193 |
|-------------|---------|

2.2m Height

| | |
|-------------|---------|
| 900mmx300mm | R851192 |
|-------------|---------|



Prime Wall Cabinet

0.7m Height

| | |
|-------------|---------|
| 900mmx300mm | R851195 |
|-------------|---------|

1.2m Height

| | |
|-------------|---------|
| 900mmx300mm | R851194 |
|-------------|---------|



Cabinet ODF , backplane

2.2m Height

| | |
|-------------|---------|
| 900mmx300mm | R851191 |
|-------------|---------|



Standard Door

| | |
|--------------|---------|
| 2200mmx600mm | R510768 |
|--------------|---------|

| | |
|--------------|---------|
| 2200mmx300mm | R510767 |
|--------------|---------|

Swing Door

use in combination with standard door

| | |
|--------------|---------|
| 2200mmx600mm | R807352 |
|--------------|---------|

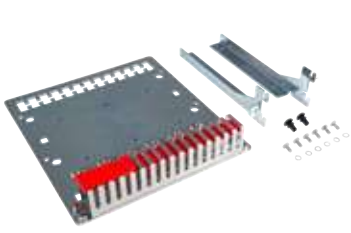
| | |
|--------------|---------|
| 2200mmx300mm | R510884 |
|--------------|---------|

Side Wall

| | |
|------|---------|
| Left | R510765 |
|------|---------|

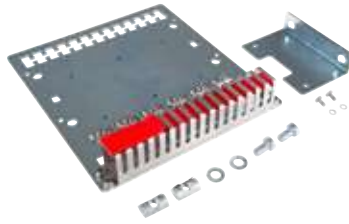
| | |
|-------|---------|
| Right | R510766 |
|-------|---------|

Cable Breakout Boxes



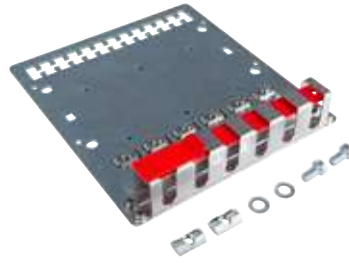
Central 64 tubes 5mm (ETSI)

R851196



Side 64 tubes 5mm (ETSI)

R851197



Central 12 tubes NW10 (ETSI)

R851198



Cover Breakout Box

R851672



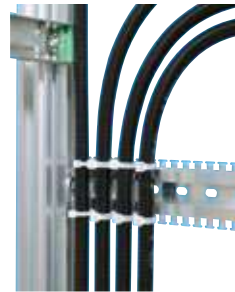
Breakout Box 10xNW17

R814623



Breakout Box 72 tubes 5mm

R814538



Cable Guide Kit NW17

R308694



Transport Tube 5mm

50m

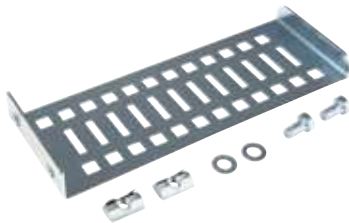
R849848

Accessories



Cable Management

R510774



Side Cable Management

R849846



Grounding Set

R804294



T-Nut Set

R807354

Central Office

PRIME Fiber Optic Distribution System

Prime ODF Sub-Racks 1U & 3U



Features:

Innovative High Density System, allowing the placement of 4 trays in 3U, allowing up to 192 fibers in SC or 384 in LC.

- 1U & 3U version for Rack 19" or Rack Prime

Prime Chassis 3U (empty)

| | |
|--------------------------|----------------|
| Sub-Rack ETSI | R850363 |
| Sub-Rack 19" Front Mount | R850364 |
| Sub-Rack 19" Back Mount | R850365 |
| Front Cover | R850804 |
| Back Cover | R850805 |

Prime Chassis 1U (empty)

| | |
|--------------------------|----------------|
| Sub-Rack 19" Front Mount | R867703 |
| Sub-Rack 19" Back Mount | R867704 |
| Sub-Rack 21" Front Mount | R867705 |
| Sub-Rack 21" Back Mount | R867706 |

Ribbon Termination Unit (RTU)

The 3/4U PRIME Ribbon Termination Unit RTU is a splice patch unit for up to 96 fibers. The splice tray has an integrated splice protector holder for up to 24 heat shrink ribbon splice protectors (8F/12F).



ETSI (LEFT - Side Entrance)

| | |
|-------------------|----------------|
| 48 LCD APC G657A2 | R875305 |
| 48 LCD OM3 | R875307 |
| 48 LCD OM4 | R875310 |
| 48 LCD OM5 | R875313 |
| 48 SC APC G657A2 | R875319 |

ETSI (RIGHT - Side Entrance)

| | |
|-------------------|----------------|
| 48 LCD APC G657A2 | R875289 |
| 48 LCD OM3 | R875308 |
| 48 LCD OM4 | R875311 |
| 48 LCD OM5 | R875314 |
| 48 SC APC G657A2 | R875320 |

19" RACK (Back Entry)

| | |
|-------------------|----------------|
| 48 LCD APC G657A2 | R875306 |
| 48 LCD OM3 | R875309 |
| 48 LCD OM4 | R875312 |
| 48 LCD OM5 | R875315 |
| 48 SC APC G657A2 | R875321 |

Fiber Termination Unit (FTU)

3 /4U PRIME FTU is the splice patch unit. The basic fiber inlay is suitable for 24/48 HS sleeves. Depending on the number of fibers, up to three additional MCM splice trays are equipped for 24/48 HS each.



ETSI (LEFT - Side Entrance)

| | |
|-----------------|----------------|
| 24 LCD APC SM | R903744 |
| 24 LCD UPC SM | R892106 |
| 48 LCD APC SM | R916352 |
| 48 LCD UPC SM | R892107 |
| 24 LCD OM4 (HV) | R892110 |
| 48 LCD OM4 (HV) | R892111 |
| 24 SC APC SM | R916356 |
| 24 SC UPC SM | R916357 |

ETSI (RIGHT - Side Entrance)

| | |
|-----------------|----------------|
| 24 LCD APC SM | R903745 |
| 24 LCD UPC SM | R903746 |
| 48 LCD APC SM | R916358 |
| 48 LCD UPC SM | R913370 |
| 24 LCD OM4 (HV) | R916359 |
| 48 LCD OM4 (HV) | R916360 |
| 24 SC APC SM | R916361 |
| 24 SC UPC SM | R916362 |

19" RACK (Back Entry)

| | |
|-----------------|----------------|
| 24 LCD APC SM | R900336 |
| 24 LCD UPC SM | R892108 |
| 48 LCD APC SM | R907238 |
| 48 LCD UPC SM | R892109 |
| 24 LCD OM4 (HV) | R891508 |
| 48 LCD OM4 (HV) | R891509 |
| 24 SC APC SM | R916363 |
| 24 SC UPC SM | R916364 |

Fiber Overlength Unit (FOU)

3/4U PRIME FOU is a fiber overlength unit. Inside the unit can store up to 32m Fiber overlength of loose tube or patch cord fibers.

With the two Velcro tape the cable can be fixed safely.



ETSI (cable entry)

| | |
|------------|----------------|
| Left Side | R849849 |
| Right Side | R850806 |

19" Rack

| | |
|------------|----------------|
| Back Entry | R850807 |
|------------|----------------|

Central Office

PRIME Fiber Optic Distribution System

Ribbon Splice Unit (RSU)

The 3/4U PRIME Ribbon Splice Unit RSU is a pure splice unit for up to 288 splices. The splice tray has an integrated splice protector holder for up to 24 heat shrink ribbon splice protectors (8F / 12F)



ETSI (Cable Entry)

| | |
|------------|---------|
| Left Side | R875331 |
| Right Side | R875332 |

19" Rack

| | |
|------------|---------|
| Back Entry | R875333 |
|------------|---------|

Fiber Splice Unit (FSU)

3/4U PRIME FSU is a pure splice unit. The basic fiber inlay is suitable for 24/48 HS splice protectors. Up to three additional MCM splice cassettes with 24/48 HS each can be retrofitted.



ETSI (cable entry)

| | |
|------------|---------|
| Left side | R849841 |
| Right side | R849842 |

19" Rack

| | |
|------------|---------|
| Back Entry | R849845 |
|------------|---------|

Splice Trays

| | |
|------------------------|-----------|
| MCM Tray 24/48 HS | R849850 |
| MCM Tray Cover | R850808 |
| Splice Protectors 35mm | R30087-35 |

Fiber Breakout Unit (FBU)

3/4U PRIME FBU is a breakout unit. Simple connection of pre-assembled cables. Attaching the fan-out cable with safety strap. Suitable for PRIME-3U rack ETSI and 19" rack mounting.



LC DUPLEX (ETSI & 19")

| | |
|-----------------|---------|
| 24 LCD APC | R858604 |
| 24 LCD PC | R858605 |
| 24 LCD OM4 (HV) | R865175 |

SC SIMPLEX (ETSI & 19")

| | |
|-------------|---------|
| 24 APC | R858606 |
| 24 PC | R858619 |
| 24 OM4 (HV) | R892105 |

MPO (ETSI & 19")

| | |
|---------------|---------|
| 12 Singlemode | R878441 |
| 12 Multimode | R878442 |

PRIME Special Configurations

PRIME MPO - LC Tray

3/4U PRIME MBU is breaking out an MPO trunk into duplex LC connections.



LC DUPLEX (ETSI & 19" Rack)

| | |
|-----------------|---------|
| 2x24 MPO OM4 AQ | R882607 |
| 4x12 MPO OM4 AQ | R882434 |
| 4x12 MPO SM UPC | R878440 |

PRIME Splicing Panel

High Splicing Capacity in a 19" rack. Up to 768 Splices in 3U



Single Fiber Splicing Panel, 19" Front Mount, Back Entry, Incl. Trays, Cover, Splice Sleeves

| | |
|----------------------------|---------|
| 192FO 0.9um Splicing Panel | R915956 |
| 384FO 0.9um Splicing Panel | R915957 |
| 576FO 0.9um Splicing Panel | R915958 |
| 768FO 0.9um Splicing Panel | R915959 |

Prime ODF Splitter Modules

The R&M PRIME Splitter Module Unit SMU is an empty unit and allows the mounting (sliding in) of PRIME VAM. The integrated horizontal fiber guidance allows a simple and secure patch-cord routing to the left and/or right. The PRIME SMU is suitable for all types of the PRIME-3U & 1U SubRacks.



PRIME ODF SMU

| | |
|--|---------|
| PR 3/4U Splitter Module Unit SMU empty | R867751 |
|--|---------|

PRIME ODF Splitter Module Type 1



| | |
|---|---------|
| Prime Splitter Module 1 HP 2x1:8 G657A LCC1 LCC1 | R877220 |
| Prime Splitter Module 1 HP 4x1:4 G657A LCC1 LCC1 | R867752 |
| Prime Splitter Module 1 HP 6x1:2 G657A LCC1 LCC1 | R867753 |
| Prime Splitter Module 1 HP 8x1:2 G657A LCC1 LCC1 | R900201 |
| Prime Splitter Module 1 HP 1x1:16 G657A LCC1 LCC1 | R900202 |

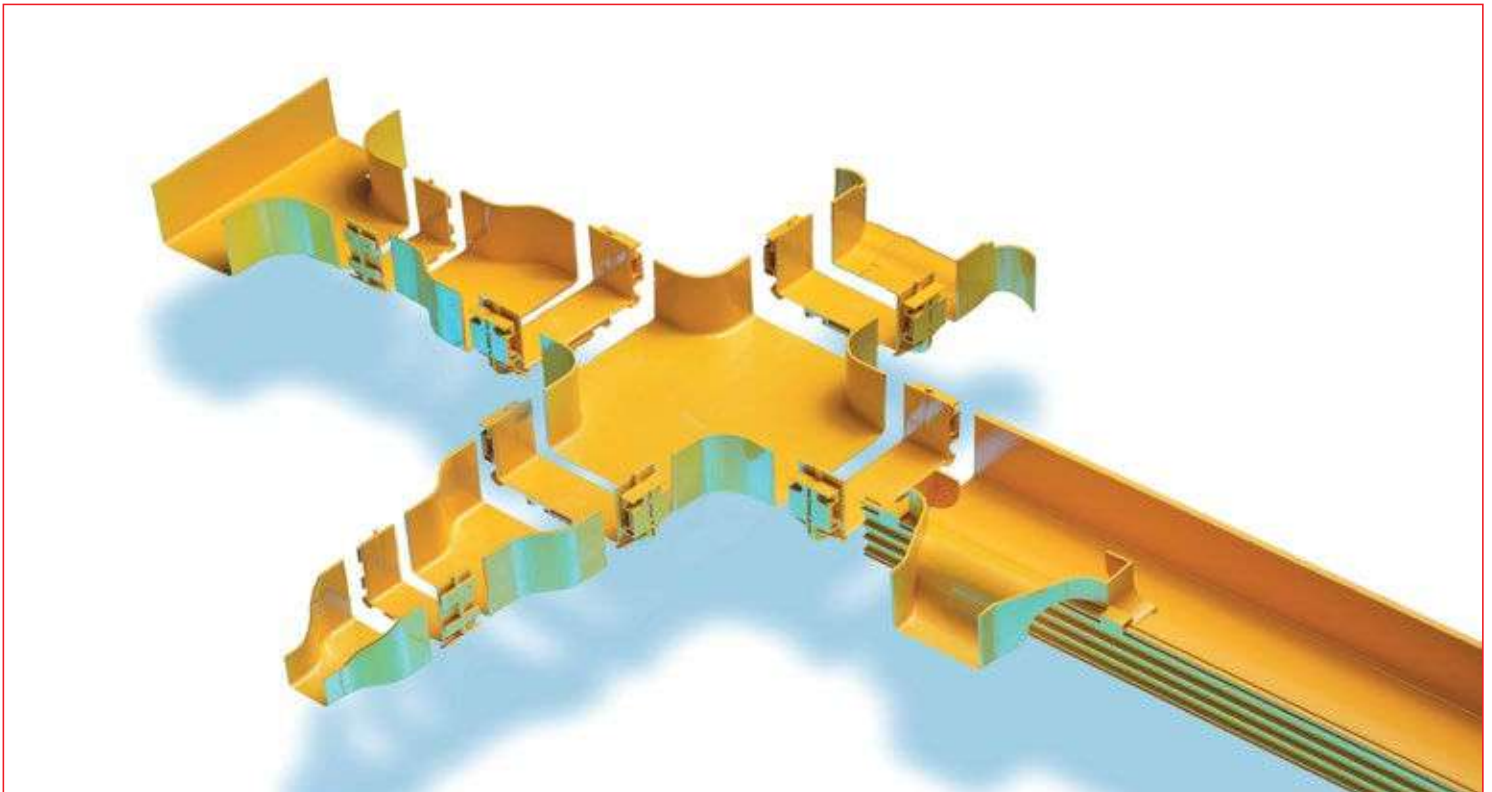
PRIME ODF Splitter Module Type 2



| | |
|---|---------|
| Prime Splitter Module 2 HP 8x1:4 G657A LCC1 LCC1 | R900203 |
| Prime Splitter Module 2 HP 2x1:8 G657A SCC1 SCC1 | R900206 |
| Prime Splitter Module 2 HP 4x1:8 G657A LCC1 LCC1 | R900204 |
| Prime Splitter Module 2 HP 1x1:16 G657A SCC1 SCC1 | R900207 |
| Prime Splitter Module 2 HP 2x1:16 G657A LCC1 LCC1 | R900205 |
| Prime Splitter Module 2 HP 1x1:32 G657A LCC1 LCC1 | R878861 |
| Prime Splitter Module 2 HP 1x2:32 G657A LCC1 LCC1 | R882253 |



Raceway Fiber Optic Cable Management



Benefits

- Higher network availability
- Fast snap-in installation
- Seamless expansion and retrofitting
- Reductions of up to 60 % in installation and maintenance costs

Features

- All-round protection for optical fibers
- Guaranteed bending radius of 30 mm
- Flexible, modular system

Rely on smart cable raceways

Operators of broadband networks and data centers prefer taking the fast, efficient route. That is also true of raceways in central installations and distribution sites. Installation and re-equipping of fiber optic raceway systems have to proceed as smoothly as possible to save time for productive tasks. You can now switch to the passing lane when it comes to cable raceways. With the Fiber Optic Raceway System from R&M, you take the lead in managing fiber optic links while adding benefits for your own operation. The R&M Raceway System has a smart design: safe, fast, efficient, modular, customized and easy to handle.



Fiber Raceway System - LSZH + UL-V0



Main Duct (2 meters)

| | |
|---------|---------|
| 100x100 | R805808 |
| 160x100 | R805809 |
| 220x100 | R805810 |
| 300x100 | R805811 |



Main Duct Cover (1 meter)

| | |
|---------|---------|
| 100x100 | R509512 |
| 160x100 | R509513 |
| 220x100 | R509514 |
| 300x100 | R509515 |

Accessories



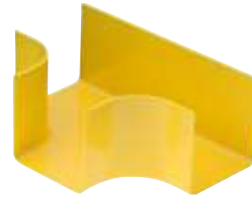
Cross Raceway

| | |
|---------|---------|
| 100x100 | R509417 |
| 160x100 | R509418 |
| 220x100 | R509419 |
| 300x100 | R509420 |



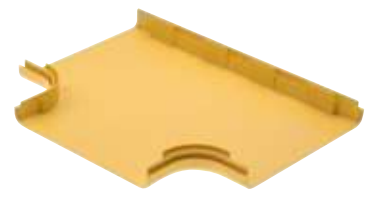
Cross Cover

| | |
|---------|---------|
| 100x100 | R510306 |
| 160x100 | R509517 |
| 220x100 | R509518 |
| 300x100 | R509519 |



T-Joint

| | |
|---------|---------|
| 100x100 | R509424 |
| 160x100 | R509425 |
| 220x100 | R509426 |
| 300x100 | R509427 |



T-Joint Cover

| | |
|---------|---------|
| 100x100 | R509520 |
| 160x100 | R510307 |
| 220x100 | R510308 |
| 300x100 | R509523 |



Elbow 45° Horizontal

| | |
|---------|---------|
| 100x100 | R509431 |
| 160x100 | R509432 |
| 220x100 | R509433 |
| 300x100 | R510309 |



Cover Elbow 45° Horizontal

| | |
|---------|---------|
| 100x100 | R510310 |
| 160x100 | R510311 |
| 220x100 | R510312 |
| 300x100 | R510313 |



Elbow 90° Horizontal

| | |
|---------|---------|
| 100x100 | R509435 |
| 160x100 | R509436 |
| 220x100 | R509437 |
| 300x100 | R509438 |



Cover Elbow 90° Horizontal

| | |
|---------|---------|
| 100x100 | R510314 |
| 160x100 | R509529 |
| 220x100 | R510315 |
| 300x100 | R510316 |



Elbow 45° Vertical

| | |
|---------|---------|
| 100x100 | R509440 |
| 160x100 | R509441 |
| 220x100 | R509442 |
| 300x100 | R509443 |



Cover Elbow 45° Vertical

| | |
|---------|---------|
| 100x100 | R510318 |
| 160x100 | R510319 |
| 220x100 | R510320 |
| 300x100 | R510321 |



Elbow 90° Vertical

| | |
|---------|---------|
| 100x100 | R509445 |
| 160x100 | R509446 |
| 220x100 | R509447 |
| 300x100 | R509448 |



Cover Elbow 90° Vertical

| | |
|---------|---------|
| 100x100 | R509538 |
| 160x100 | R510323 |
| 220x100 | R510324 |
| 300x100 | R510325 |



Elbow 45° Vertical

| | |
|---------|---------|
| 100x100 | R509450 |
| 160x100 | R509451 |
| 220x100 | R509452 |
| 300x100 | R509453 |



Cover Elbow 45° Vertical

| | |
|---------|---------|
| 100x100 | R509543 |
| 160x100 | R510327 |
| 220x100 | R509545 |
| 300x100 | R509546 |



Elbow 90° Vertical

| | |
|---------|---------|
| 100x100 | R509455 |
| 160x100 | R509456 |
| 220x100 | R509457 |
| 300x100 | R509458 |



Cover Elbow 90° Vertical

| | |
|---------|---------|
| 100x100 | R510329 |
| 160x100 | R510330 |
| 220x100 | R509550 |
| 300x100 | R510331 |

Reducers



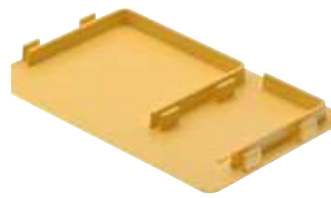
Reducer

| | |
|------------|---------|
| 160 to 100 | R509466 |
| 220 to 160 | R509467 |
| 300 to 220 | R509468 |



Reducer

| | |
|------------|---------|
| 160 to 100 | R510334 |
| 220 to 160 | R509555 |
| 300 to 220 | R509556 |



End Cap

| | |
|---------|---------|
| 100x100 | R510335 |
| 160x100 | R509474 |
| 220x100 | R509475 |
| 300x100 | R509476 |

Drop Outlets



Drop Outlet Horizontal

| | |
|---------|---------|
| 100x100 | R509459 |
|---------|---------|



Drop Outlet Vertical

| | |
|---------|---------|
| 100x100 | R807764 |
| 220x100 | R866550 |



Drop Outlet Cover

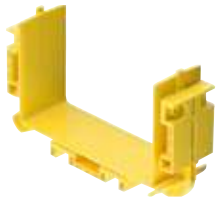
| | |
|------------|---------|
| Horizontal | R510332 |
| Vertical | R807765 |



Trumpet Outlet

| | |
|---------|---------|
| 100x100 | R509461 |
| 160x100 | R509462 |
| 220x100 | R509463 |
| 300x100 | R509464 |

Accessories



Snap-on Joint

| | |
|---------|---------|
| 100x100 | R509470 |
| 160x100 | R509471 |
| 220x100 | R509473 |
| 300x100 | R510341 |



Drop Outlet Support Kit

| | |
|---------|---------|
| 100x100 | R509479 |
|---------|---------|



T-Bolt M6/25x25

| | |
|--|---------|
| | R509480 |
|--|---------|

Splitter Panels



L-Type Panels

The R&M Patch Panels allow for easy access to the splice cartridges as well as the fiber slack in the rear.

Sliding Panels

| | |
|---|----------------|
| Sliding 1U Panel, up to 3 L-Type Fiber Cartridges, empty | R271534 |
| Sliding 2U Panel, up to 6 L-Type Fiber Cartridges, empty | R271538 |
| Sliding 4U Panel, up to 12 L-Type Fiber Cartridges, empty | R271541 |

Fixed Panels

| | |
|--|----------------|
| Fixed 1U Panel, up to 3 L-Type Cartridges, empty | R275731 |
| Fixed 2U Panel, up to 6 L-Type Cassettes, empty | R862757 |
| Fixed 4U Panel, up to 12 L-Type Cassettes, empty | R277423 |

Splitter LGX Type Cassettes



The R&M L-type GPON splitter cassettes can be installed in any LGX type panel.

Assembled with high quality grade components, the cassettes are supplied with 1.6mm G657.A2 fiber optic jumpers. Jumpers are individually identified and are 2 meters long.

Telcordia GR-1209-CORE: Generic Requirements for Passive Optical Components
 Telcordia GR-1221-CORE: Reliability Requirements for Passive Optical Components

| Type | | 1x4 | 1x8 | 1x16 | 1x32 | 2x16 | 2x32 | 1x4 | 1x8 | 1x16 | 1x32 | 2x16 | 2x32 |
|---------------------------------|-----|--|------|------|------|------|------|--------|------|------|------|------|------|
| Connector Type | | LC/APC | | | | | | SC/APC | | | | | |
| Fiber Type | | 2 meters of G657.A.2 LSZH fiber jumpers with 1.6mm | | | | | | | | | | | |
| Operating wavelength range (nm) | | 1260 - 1650 | | | | | | | | | | | |
| Test Wavelength (nm) | | 1310 - 1550 | | | | | | | | | | | |
| Insertion Loss (dB) | Max | 7.5 | 10.6 | 13.8 | 17.2 | 14.2 | 17.5 | 7.5 | 10.6 | 13.8 | 17.2 | 14.2 | 17.5 |
| TDL (dB) | Max | 0.3 | 0.3 | 0.3 | 0.5 | 0.5 | 0.5 | 0.3 | 0.3 | 0.3 | 0.5 | 0.5 | 0.5 |
| PDL (dB) | Max | 0.2 | 0.3 | 0.2 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 |
| Uniformity (dB) | Max | 0.6 | 0.8 | 1.2 | 1.5 | 2.0 | 2.0 | 0.6 | 0.8 | 1.2 | 1.5 | 2.0 | 2.0 |
| Return Loss (dB) | Min | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 |
| Directivity (dB) | Min | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 |
| Operating Temperature (C°) | | -40° + 85° | | | | | | | | | | | |
| Storage Temperature (C°) | | | | | | | | | | | | | |
| Dimension (mm) | | 155 x 129.5 x 28.6 (LGX Type) | | | | | | | | | | | |

Central Office

LGX Splitters



Splitter Box 1x4 LC/APC
R863694



Splitter Box 1x8 LC/APC
R863696



Splitter Box 1x16 LC/APC
R863698



Splitter Box 1x32 LC/APC
R863702



Splitter Box 2x16 LC/APC
R863700



Splitter Box 2x32 LC/APC
R863704



Splitter Box 1x4 SC/APC
R863693



Splitter Box 1x8 SC/APC
R863695



Splitter Box 1x16 SC/APC
R863697



Splitter Box 1x32 SC/APC
R863701



Splitter Box 2x16/APC
R863699



Splitter Box 2x32 SC/APC
R863703

High Power R&M

With the quality of R&M, the E2000/ APC and SC/ APC grade B connectors allow the connection of high power equipment while maintaining compatibility with APC polishing 8°



High Power R&M Solution

High power transmissions are already realities and allow long distance connections and high transmission capacity with the use of amplifiers (EDFA) and transmission equipment with Raman laser, in addition to systems that use wavelength multiplexing - WDM.

In order to implement a high power transmission system, it is important to ensure the perfect coupling between the transmission equipment with the fiber optic network, so that all the generated signal power is transmitted in the communication channel. A perfect coupling and a quality communication channel will guarantee lower losses, longer links and more reliable systems, that is, a more efficient system.

The industry has developed several ways to achieve these requirements, however some owners.

The R&M formula is based on a solution already accepted by the industry, (APC 8 degree polishing) but it has rigorous and high technical precision and performance criteria. Qualifying each component of the solution individually, Optical adapter, connectors and production process and following an appropriate installation of the products, ensuring a data communication channel of high precision and quality.

5W High Power Simplex Singlemode Optical Cord - G657 LSZH 2mm



E2000/APC - E2000/APC



SC/APC - SC/APC



E2000/APC - SC/APC



SC/UPC - SC/UPC

Single-mode Simplex High Performance 2.0W Optical Cord - G657 LSZH 2mm



E2000/APC - LC/APC



E2000/APC - SC/APC



E2000/APC - LC/UPC



E2000/APC - SC/UPC



LC/APC - LC/APC



LC/UPC - LC/UPC



LC/APC - SC/APC



LC/APC - SC/UPC

Singlemode G657A.2 SIMPLEX Fiber Optic Patch Cords - OFNR (Riser)

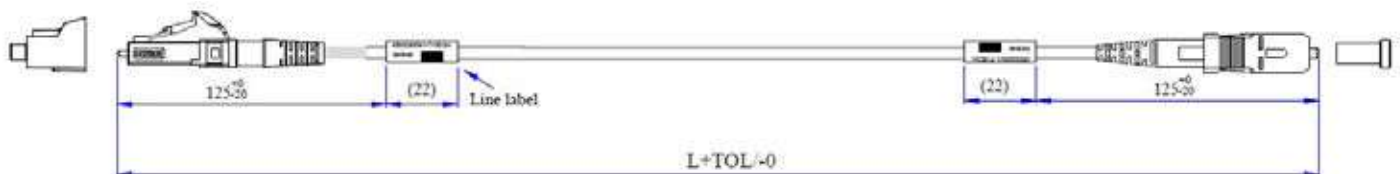
Characteristics

- High quality interconnectivity components are the key to powerful fiber optic networks. R&M offers a complete range of optical cords and pigtails finished in a variety of cable and connector configurations.
- The cable is fully compatible with all standard cable management accessories and requires no special tools or knowledge to install.
- G657A2
- All cords are assembled in accordance with ISO IEC 61753-1 and guarantee the highest quality and reliability.
- Available in a wide range of lengths, according to the customer's needs
- OFNR Fiber (Riser)
- Typical IL ≤ 0.2 dB
- Patch cords: Diameter 1.2mm / 1.6mm / 2.0mm / 3.0 mm

| | Length | SCA/SCA | SCU-SCU | SCA-SCU | LCA-LCA | LCU-LCU | LCA-LCU | LCA-SCA | LCU-SCA | LCU-SCU |
|-------|------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 2.0mm | 1 M (≈ 3.3ft) | R885816 | R885811 | R885812 | R885823 | R885820 | R885821 | R885818 | R885817 | R885813 |
| | 2 M (≈ 6.6ft) | R885960 | R885932 | R885938 | R885996 | R885980 | R885985 | R885970 | R885965 | R885944 |
| | 3 M (≈ 9.8ft) | R885961 | R885934 | R885939 | R885997 | R885981 | R885986 | R885971 | R885966 | R885945 |
| | 5 M (≈ 16.4ft) | R885962 | R885935 | R885940 | R885998 | R885982 | R885987 | R885972 | R885967 | R885946 |
| | 7 M (≈ 23.0ft) | R885963 | R885936 | R885941 | R885999 | R885983 | R885988 | R885973 | R885968 | R885947 |
| | 10 M (≈ 32.8ft) | R885964 | R885937 | R885942 | R886000 | R885984 | R885989 | R885974 | R885969 | R885948 |

| | | | | | | | | | | |
|-------|------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1.6mm | 1 M (≈ 3.3ft) | R897393 | R897406 | R897415 | R897469 | R897476 | R897511 | R897525 | R897531 | R897551 |
| | 2 M (≈ 6.6ft) | R897394 | R897408 | R897416 | R897470 | R897477 | R897512 | R897526 | R897532 | R897552 |
| | 3 M (≈ 9.8ft) | R897396 | R897409 | R897417 | R897471 | R897479 | R897513 | R897527 | R897547 | R897553 |
| | 5 M (≈ 16.4ft) | R897399 | R897410 | R897418 | R897473 | R897481 | R897514 | R897528 | R897548 | R897578 |
| | 7 M (≈ 23.0ft) | R897403 | R897411 | R897419 | R897474 | R897482 | R897523 | R897529 | R897549 | R897580 |
| | 10 M (≈ 32.8ft) | R897404 | R897414 | R897421 | R897475 | R897483 | R897524 | R897530 | R897550 | R897581 |

| | | | | | | | | | | |
|-------|------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 3.0mm | 1 M (≈ 3.3ft) | R897217 | R897227 | R897236 | R897249 | R897297 | R897305 | R897315 | R897326 | R897352 |
| | 2 M (≈ 6.6ft) | R897220 | R897230 | R897239 | R897252 | R897299 | R897307 | R897317 | R897328 | R897355 |
| | 3 M (≈ 9.8ft) | R897221 | R897232 | R897240 | R897290 | R897300 | R897309 | R897318 | R897330 | R897357 |
| | 5 M (≈ 16.4ft) | R897223 | R897233 | R897241 | R897292 | R897301 | R897310 | R897319 | R897347 | R897358 |
| | 7 M (≈ 23.0ft) | R897224 | R897234 | R897245 | R897294 | R897302 | R897312 | R897321 | R897349 | R897360 |
| | 10 M (≈ 32.8ft) | R897226 | R897235 | R897247 | R897295 | R897303 | R897314 | R897323 | R897351 | R897362 |



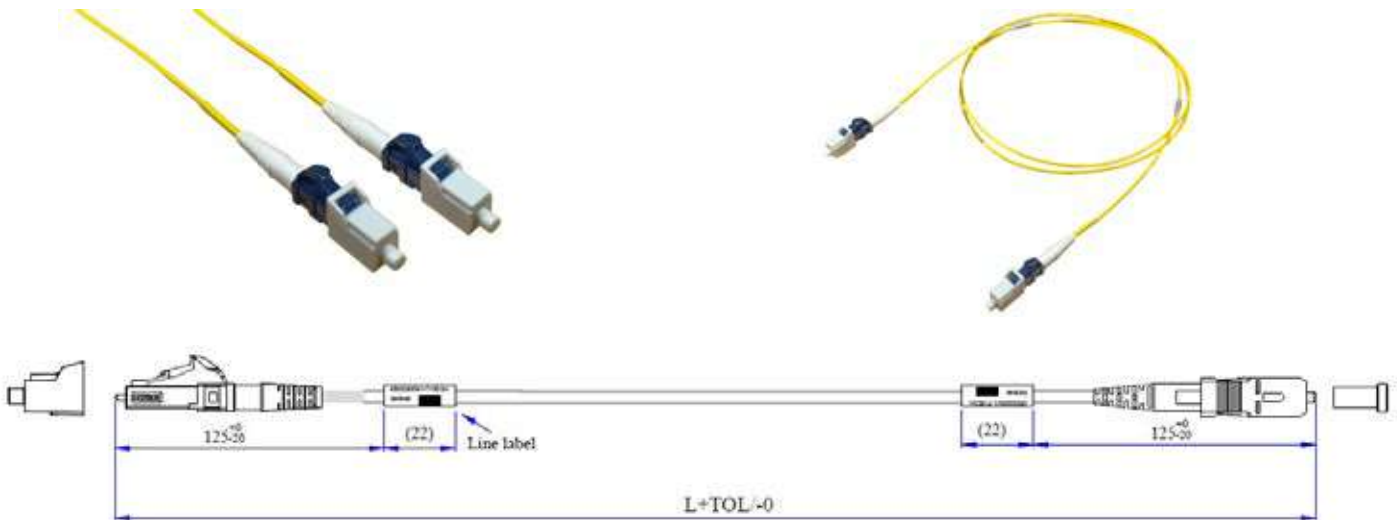
Singlemode G657A.2 SIMPLEX Fiber Optic Patch Cords - OFNP (Plenum)

Characteristics

- High quality interconnectivity components are the key to powerful fiber optic networks. R&M offers a complete range of optical cords and pigtails finished in a variety of cable and connector configurations.
- The cable is fully compatible with all standard cable management accessories and requires no special tools or knowledge to install.
- G657A2
- All cords are assembled in accordance with ISO IEC 61753-1 and guarantee the highest quality and reliability.
- Available in a wide range of lengths, according to the customer's needs
- OFNP Fiber (Plenum)
- Typical IL ≤ 0.2 dB
- Patch cords: Diameter 1.2mm / 1.6mm / 2.0mm / 3.0 mm

| | Length | SCA-SCA | SCU-SCU | SCA-SCU | LCA-LCA | LCU-LCU | LCA-LCU | LCA-SCA | LCU-SCA | LCU-SCU |
|-------|------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 2.0mm | 1 M (≈ 3.3ft) | R903762 | R903820 | R903827 | R903833 | R903895 | R903910 | R904066 | R904072 | R904078 |
| | 2 M (≈ 6.6ft) | R903763 | R903821 | R903828 | R903835 | R903896 | R903930 | R904067 | R904073 | R904079 |
| | 3 M (≈ 9.8ft) | R903764 | R903822 | R903829 | R903836 | R903898 | R903931 | R904068 | R904074 | R904080 |
| | 5 M (≈ 16.4ft) | R903765 | R903823 | R903830 | R903892 | R903902 | R903932 | R904069 | R904075 | R904082 |
| | 7 M (≈ 23.0ft) | R903818 | R903824 | R903831 | R903893 | R903905 | R903933 | R904070 | R904076 | R904083 |
| | 10 M (≈ 32.8ft) | R903819 | R903825 | R903832 | R903894 | R903909 | R903934 | R904071 | R904077 | R904084 |

| | | | | | | | | | | |
|-------|------------------|---------|---------|------------|------------|------------|------------|------------|------------|------------|
| 3.0mm | 1 M (≈ 3.3ft) | R904085 | R904094 | on request | on request | on request | on request | on request | on request | on request |
| | 2 M (≈ 6.6ft) | R904088 | R904095 | on request | on request | on request | on request | on request | on request | on request |
| | 3 M (≈ 9.8ft) | R904089 | R904096 | on request | on request | on request | on request | on request | on request | on request |
| | 5 M (≈ 16.4ft) | R904090 | R904097 | on request | on request | on request | on request | on request | on request | on request |
| | 7 M (≈ 23.0ft) | R904092 | R904098 | on request | on request | on request | on request | on request | on request | on request |
| | 10 M (≈ 32.8ft) | R904093 | R904124 | on request | on request | on request | on request | on request | on request | on request |



Singlemode G657A.2 DUPLEX Fiber Optic Patch Cords - OFNR (Riser)

Characteristics

- High quality interconnectivity components are the key to powerful fiber optic networks. R&M offers a complete range of optical cords and pigtailed finished in a variety of cable and connector configurations.
- The cable is fully compatible with all standard cable management accessories and requires no special tools or knowledge to install.
- G657A2
- All cords are assembled in accordance with ISO IEC 61753-1 and guarantee the highest quality and reliability.
- Available in a wide range of lengths, according to the customer's needs
- OFNR Fiber (Riser)
- Typical IL ≤ 0.2 dB
- Patch cords: Diameter 1.2mm / 1.6mm / 2.0mm / 3.0 mm

| | Length | SCA/SCA | SCU-SCU | SCA-SCU | LCA-LCA | LCU-LCU | LCA-LCU | LCA-SCA | LCU-SCA | LCU-SCU |
|-------|------------------|------------|------------|------------|------------|----------------|------------|------------|------------|------------|
| 1.2mm | 1 M (≈ 3.3ft) | on request | on request | on request | on request | R879495 | on request | on request | on request | on request |
| | 2 M (≈ 6.6ft) | on request | on request | on request | on request | R879496 | on request | on request | on request | on request |
| | 3 M (≈ 9.8ft) | on request | on request | on request | on request | R879497 | on request | on request | on request | on request |
| | 5 M (≈ 16.4ft) | on request | on request | on request | on request | R879499 | on request | on request | on request | on request |
| | 7 M (≈ 23.0ft) | on request | on request | on request | on request | R880826 | on request | on request | on request | on request |
| | 10 M (≈ 32.8ft) | on request | on request | on request | on request | R880829 | on request | on request | on request | on request |

| | | | | | | | | | | |
|-------|------------------|----------------|----------------|------------|----------------|----------------|------------|------------|------------|------------|
| 2.0mm | 1 M (≈ 3.3ft) | R892786 | R892798 | on request | R892837 | R892825 | on request | on request | on request | on request |
| | 2 M (≈ 6.6ft) | R892787 | R892799 | on request | R892840 | R892826 | on request | on request | on request | on request |
| | 3 M (≈ 9.8ft) | R882863 | R892801 | on request | R892841 | R892827 | on request | on request | on request | on request |
| | 5 M (≈ 16.4ft) | R892788 | R892831 | on request | R892842 | R892828 | on request | on request | on request | on request |
| | 7 M (≈ 23.0ft) | R892790 | R892832 | on request | R892844 | R892829 | on request | on request | on request | on request |
| | 10 M (≈ 32.8ft) | R892791 | R892834 | on request | R892846 | R892830 | on request | on request | on request | on request |

| | | | | | | | | | | |
|-------|------------------|----------------|----------------|------------|----------------|----------------|------------|------------|------------|------------|
| 1.6mm | 1 M (≈ 3.3ft) | R897478 | R896270 | on request | R897886 | R897926 | on request | on request | on request | on request |
| | 2 M (≈ 6.6ft) | R897480 | R897836 | on request | R897887 | R897929 | on request | on request | on request | on request |
| | 3 M (≈ 9.8ft) | R897582 | R897837 | on request | R897890 | R897931 | on request | on request | on request | on request |
| | 5 M (≈ 16.4ft) | R897583 | R897880 | on request | R897889 | R897932 | on request | on request | on request | on request |
| | 7 M (≈ 23.0ft) | R896258 | R897884 | on request | R897891 | R897934 | on request | on request | on request | on request |
| | 10 M (≈ 32.8ft) | R896269 | R897885 | on request | R897892 | R897935 | on request | on request | on request | on request |

| | | | | | | | | | | |
|-------|------------------|----------------|----------------|------------|----------------|----------------|------------|------------|------------|----------------|
| 3.0mm | 1 M (≈ 3.3ft) | R897225 | R897244 | on request | R897316 | R897345 | on request | on request | on request | R904544 |
| | 2 M (≈ 6.6ft) | R897231 | R897246 | on request | R897320 | R897346 | on request | on request | on request | on request |
| | 3 M (≈ 9.8ft) | R897237 | R897304 | on request | R897322 | R897348 | on request | on request | on request | on request |
| | 5 M (≈ 16.4ft) | R897238 | R897306 | on request | R897324 | R897350 | on request | on request | on request | on request |
| | 7 M (≈ 23.0ft) | R897242 | R897308 | on request | R897325 | R897353 | on request | on request | on request | on request |
| | 10 M (≈ 32.8ft) | R897243 | R897313 | on request | R897344 | R897354 | on request | on request | on request | on request |

Singlemode G657A.2 DUPLEX Fiber Optic Patch Cords (Simplex) - OFNP (Plenum)

Characteristics

- High quality interconnectivity components are the key to powerful fiber optic networks. R&M offers a complete range of optical cords and pigtails finished in a variety of cable and connector configurations.
- The cable is fully compatible with all standard cable management accessories and requires no special tools or knowledge to install.
- G657A2
- All cords are assembled in accordance with ISO IEC 61753-1 and guarantee the highest quality and reliability.
- Available in a wide range of lengths, according to the customer's needs
- OFNP Fiber (Plenum)
- Typical IL ≤ 0.2 dB
- Patch cords: Diameter 1.2mm / 1.6mm / 2.0mm / 3.0 mm

| | Length | SCA-SCA | SCU-SCU | SCA-SCU | LCA-LCA | LCU-LCU | LCA-LCU | LCA-SCA | LCU-SCA | LCU-SCU |
|-------|------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| 2.0mm | 1 M (≈ 3.3ft) | R903897 | R903906 | on request | R903915 | R903924 | on request | on request | on request | on request |
| | 2 M (≈ 6.6ft) | R903899 | R903907 | on request | R903916 | R903925 | on request | on request | on request | on request |
| | 3 M (≈ 9.8ft) | R903900 | R903908 | on request | R903918 | R903926 | on request | on request | on request | on request |
| | 5 M (≈ 16.4ft) | R903901 | R903911 | on request | R903920 | R903927 | on request | on request | on request | on request |
| | 7 M (≈ 23.0ft) | R903903 | R903912 | on request | R903921 | R903929 | on request | on request | on request | on request |
| | 10 M (≈ 32.8ft) | R903904 | R903913 | on request | R903922 | R903935 | on request | on request | on request | on request |
| 1.6mm | 1 M (≈ 3.3ft) | on request | on request | on request | on request | on request | on request | on request | on request | on request |
| | 2 M (≈ 6.6ft) | on request | on request | on request | on request | on request | on request | on request | on request | on request |
| | 3 M (≈ 9.8ft) | on request | on request | on request | on request | on request | on request | on request | on request | on request |
| | 5 M (≈ 16.4ft) | on request | on request | on request | on request | on request | on request | on request | on request | on request |
| | 7 M (≈ 23.0ft) | on request | on request | on request | on request | on request | on request | on request | on request | on request |
| | 10 M (≈ 32.8ft) | on request | on request | on request | on request | on request | on request | on request | on request | on request |
| 3.0mm | 1 M (≈ 3.3ft) | on request | on request | on request | on request | on request | on request | on request | on request | on request |
| | 2 M (≈ 6.6ft) | on request | on request | on request | on request | on request | on request | on request | on request | on request |
| | 3 M (≈ 9.8ft) | on request | on request | on request | on request | on request | on request | on request | on request | on request |
| | 5 M (≈ 16.4ft) | on request | on request | on request | on request | on request | on request | on request | on request | on request |
| | 7 M (≈ 23.0ft) | on request | on request | on request | on request | on request | on request | on request | on request | on request |
| | 10 M (≈ 32.8ft) | on request | on request | on request | on request | on request | on request | on request | on request | on request |



Multimode OM4 DUPLEX Fiber Optic Patch Cords LC-LC

Characteristics

- High quality interconnectivity components are the key to powerful fiber optic networks. R&M offers a complete range of optical cords and pigtails finished in a variety of cable and connector configurations.
- The cable is fully compatible with all standard cable management accessories and requires no special tools or knowledge to install.
- OM4
- All cords are assembled in accordance with ISO IEC 61753-1 and guarantee the highest quality and reliability.
- Available in a wide range of lengths, according to the customer's needs
- OFNR Fiber (Riser) / OFNP Fiber (Plenum)
- Typical IL ≤ 0.2 dB
- Patch cords: Diameter 1.2mm / 1.6mm / 2.0mm / 3.0 mm

| Length | 1.2MM | 1.6MM | 2.0MM | 3.0MM | 1.2MM | 1.6MM | 2.0MM | 3.0MM |
|--------------------|------------|---------|---------|---------|------------|------------|---------|------------|
| 1 M (≈ 3.3ft) | R880836 | R897940 | R892789 | R897356 | on request | on request | R903937 | on request |
| 1.5 M (≈ 4.9ft) | on request | R898256 | R893539 | R897445 | on request | on request | R903938 | on request |
| 2 M (≈ 6.6ft) | R880837 | R897944 | R892792 | R897359 | on request | on request | R904107 | on request |
| 2.5 M (≈ 8.2ft) | on request | R897958 | R893515 | R897397 | on request | on request | R904108 | on request |
| 3 M (≈ 9.8ft) | R880838 | R897951 | R892793 | R897361 | on request | on request | R904109 | on request |
| 3.5 M (≈ 11.4ft) | on request | R897959 | R893520 | R897398 | on request | on request | R904110 | on request |
| 4 M (≈ 13.1ft) | R880839 | R898257 | R894562 | R897448 | on request | on request | R904111 | on request |
| 4.5 M (≈ 14.8ft) | on request | R898260 | R894563 | R897457 | on request | on request | R904112 | on request |
| 5 M (≈ 16.4ft) | R880840 | R897954 | R892794 | R897373 | on request | on request | R904113 | on request |
| 6 M (≈ 19.7ft) | R880841 | R898251 | R893521 | R897400 | on request | on request | R904114 | on request |
| 7 M (≈ 23.0ft) | R880842 | R897955 | R892795 | R897392 | on request | on request | R904116 | on request |
| 7.5 M (≈ 24.6ft) | on request | R898263 | R894564 | R897464 | on request | on request | R904117 | on request |
| 9 M (≈ 29.5ft) | R880844 | R898252 | R893522 | R897405 | on request | on request | R904118 | on request |
| 10 M (≈ 32.8ft) | R880845 | R897957 | R892796 | R897395 | on request | on request | R904119 | on request |
| 12.5 M (≈ 41.0ft) | on request | R898254 | R893523 | R897420 | on request | on request | R904120 | on request |
| 15 M (≈ 49.2ft) | R880850 | R898255 | R893524 | R897422 | on request | on request | R904121 | on request |
| 20 M (≈ 65.6ft) | on request | R898272 | R893531 | R897467 | on request | on request | R904122 | on request |
| 30 M (≈ 98.4ft) | on request | R898275 | R893532 | R897468 | on request | on request | R904123 | on request |

RISER LCM-LCM

PLENUM LCM-LCM



Fiber Optic MPO Trunk Cables



- 12 fibers MPO Fiber Optic Connectors in each side
- Standard fanout length 12"
- Cable diameters: 12F (2.0 mm), 24F (6.3 mm), 48F (6.6 mm), 72F (9.3mm), 144F (10.6mm)
- Available with polarity A or B, Male or Female version
- Test report provided with each set of cables
- Plenum Jacket
- Please call for other lengths

| G.657 MPO-MPO Fiber Trunks (Plenum), 10 meters* | | | | | | |
|---|------------|-------------|---------------|------------|-------------|---------------|
| Polarity | Type A MPO | | | Type B MPO | | |
| Fibers | Male-Male | Male-Female | Female-Female | Male-Male | Male-Female | Female-Female |
| 12 | R885829 | R885831 | R885832 | R885833 | R885834 | R885835 |
| 24 | R885836 | R885841 | R885846 | R885851 | R885856 | R885861 |
| 48 | R885837 | R885842 | R885847 | R885852 | R885857 | R885862 |
| 72 | R885838 | R885843 | R885848 | R885853 | R885858 | R885863 |
| 96 | R885839 | R885844 | R885849 | R885854 | R885859 | R885864 |
| 144 | R885840 | R885845 | R885850 | R885855 | R885860 | R885865 |

Fiber Optic LC-LC Trunk Cables



| 10 meters | UPC | APC |
|-----------|---------|---------|
| 12 LC | R886035 | R886041 |
| 24 LC | R886036 | R886042 |
| 48 LC | R886037 | R886043 |
| 72 LC | R886038 | R886044 |
| 96 LC | R886039 | R886045 |
| 144 LC | R886040 | R886046 |

Fiber Optic MPO-LC Fanout Cables



G.657 MPO-LC Fiber Trunks (Plenum), 10 meters

| | Male | Female |
|------------|---------|---------|
| 12 LC/UPC | R886011 | R886012 |
| 24 LC/UPC | R886014 | R886013 |
| 48 LC/UPC | R886015 | R886025 |
| 72 LC/UPC | R886016 | R886026 |
| 96 LC/UPC | R886017 | R886027 |
| 144 LC/UPC | R886018 | R886028 |

| | Male | Female |
|------------|---------|---------|
| 12 LC/APC | R886024 | R886029 |
| 24 LC/APC | R886023 | R886030 |
| 48 LC/APC | R886022 | R886031 |
| 72 LC/APC | R886021 | R886032 |
| 96 LC/APC | R886020 | R886033 |
| 144 LC/APC | R886019 | R886034 |



Field Tool Polarity/pin MTP PRO

R894227

Outside Plant



Outdoor Fiberglass Street Cabinets



The next generation of R&M FTTx user management is in the street cabinets. The integration of R & M's new ODF distribution modules into street cabinets can be a step forward in user management. Work in this area has never been simpler, safer and more modular. The indoor modularity of the street cabinet helps the growth rate of network users.

The R&M SCM solution offers you the best way to assign and manage your users to the network at any time (up to 576 patches / amendments). In addition, smart and compact cabling management meets high requirements for office equipment density.

Produced with PC, reinforced with fiberglass, IP54



Cabinet SCM 4
Houses 1 Splice Module
R512456



Cabinet SCM 8
Houses 1 Combi Module
R512457



Cabinet SCM 15
Houses 2 Combi Modules
R512458

Accessories - Outdoor Cabinets



Base Top SCM 4
R513244



Base Top SCM 8
R513246



Base Top SCM 15
R810190



Strain Relief Kit-Street Cabinet SCM
R512463



Guidance Kit Street Cabinet SCM
R512459



Basic Concept

The concept of a preterminated fiber optic network has been around since the first decade of the 21st century. However, the initial objectives were oriented to a need arising from the lack of knowledge and technical skills to guarantee the quality and stability of optical amendments carried out in the field. Simultaneously and with the constant evolution of the data center market and the exponential increase in transmission speeds in this environment, MPO / MTP type connectors have emerged, and have become a fundamental product, and with multi fiber capacity (basically 12 or 24 fibers in the same connector).

Precon Network Division

Precon networks allow modularity and scalability, according to the needs of each carrier or Internet service provider. For better understanding, we divided the network into the following components: Central or PoP, Primary Network, Secondary Network and Activation. In each of them there are specific products and solutions that can be used according to the needs of each customer.

Central or PoP

The most important point of the network is where we will find all the active equipment on the network and the fiber tray for the network exit. At this location, it is essential to take into consideration from the beginning what will be the maximum capacity of customers that each of these locations will serve, what services we will offer on our network and what power/speed each customer will have access to.

Secondary Network

Also considered as an activation network for customers, and where distribution boxes are used. These boxes are connected to the primary network boxes using preterminated cables with reinforced SC/APC connectors at both ends.

Primary Network

Also considered as a distribution network, in a Precon network without any optical amendment, the CEO is replaced by a main box (CPO) or directly by a distribution box (CDO). All connections from the control panel to these boxes and between them are made with cables preterminated with MPO/APC Female.

Activation

The last point on the network is the client activation link. At this point, distribution boxes can have two options, totally Precon in which the activation is made with Drop cable preterminated SC/APC at one end or with a field connector. In both cases the connection at the customer's home is made with a field connector.

Fiber Trays - 3 basic options

- **Breakout Fiber Tray:** Equipped with SC/APC adapters, it is used to connect to the OLT (port to port) via an optical patch cord. At the rear, a preterminated 72 or 144 outdoor fiber optic connected with SC/APC connectors and MPO/APC connectors for outdoor connection.
- **Splitter Fiber Tray:** Equipped with 1x2 PLC splitters, to perform the first level of division of the network. For example, allowing you to start the network with 1x128 and in the future change to 1x64. Connect each splitter port to an OLT port, and the outputs will use the preterminated 72 or 144 outdoor fiber optic cable.
- **MPO Fiber Tray:** Equipped with preterminated cassettes with SC/APC adapters and MPO/APC output at the rear. Connections to the OLT are made (port to port) with optic patch cord. In each cassette in the MPO/APC output, a circular 12-fiber drop cable with an MPO-APC connector is connected.



Preterminated Cables

- **Round Drop MPO Cables:** Round drop cable with 12 fibers equipped with MPO/APC connectors at both ends. Used for interconnections between primary network boxes, or connection between MPO Fiber Tray and the first network box.
- **I/O Multifiber Cable:** Splitter or Breakout fiber trays interconnection cable to the first box. It can have 72 or 144 fibers, with SC/APC being provided at the end to be connected to the fiber tray and MPO/APC for the output.
- **Flat Drop SC/APC Cable:** Flat Drop Cable that can be supplied in two versions - with both ends connected with IP68 reinforced SC/APC connectors for interconnection between the primary and secondary networks or with just one end connected to access the inside of the house.



Precon boxes

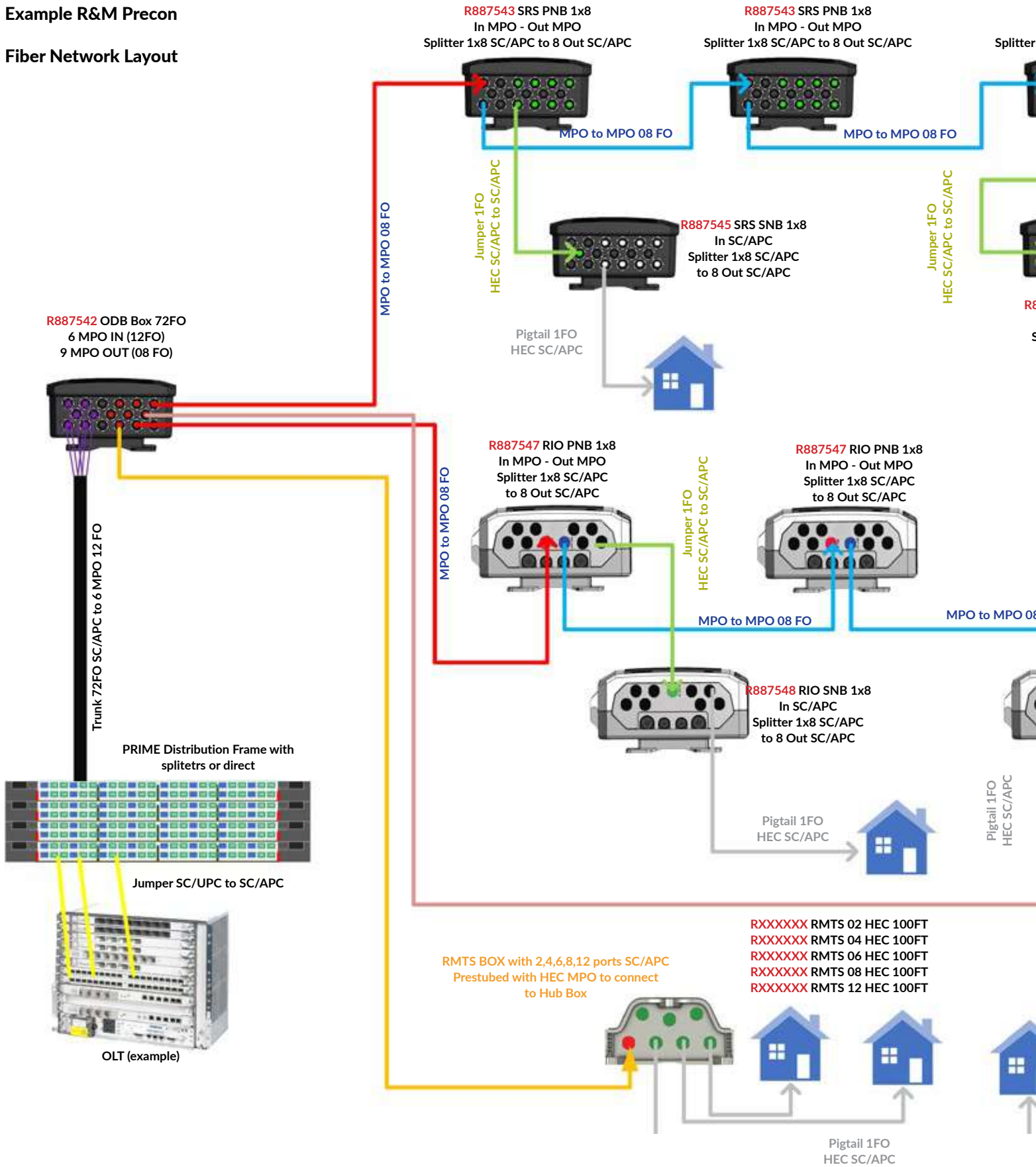
- **ODB - Optical Distribution Box:** First box in the network, replacing the Splice Closure. This box can receive 72 optical fibers (6x12 MPO/APC), and allows the creation of 9 different network branches, each with a capacity of up to 8 ODB's.
- **PNB - Primary Network Box:** Used in the primary network, this box is equipped with 2 reinforced MPO/APC connectors (input and output for the next box), 1x8 or 1x16 GPON splitters, and 8 or 16 SC/APC outputs with reinforced connector IP68 connectivity, for connection to the users or to SNB.
- **SNB - Secondary Network Box:** Used to activate customers. This box can be supplied in two different formats - the first fully preterminated (inputs and outputs with reinforced SC/APC connectors), the second only with SC/APC input and the possibility of output with a standard flat drop cable.



Outside Plant

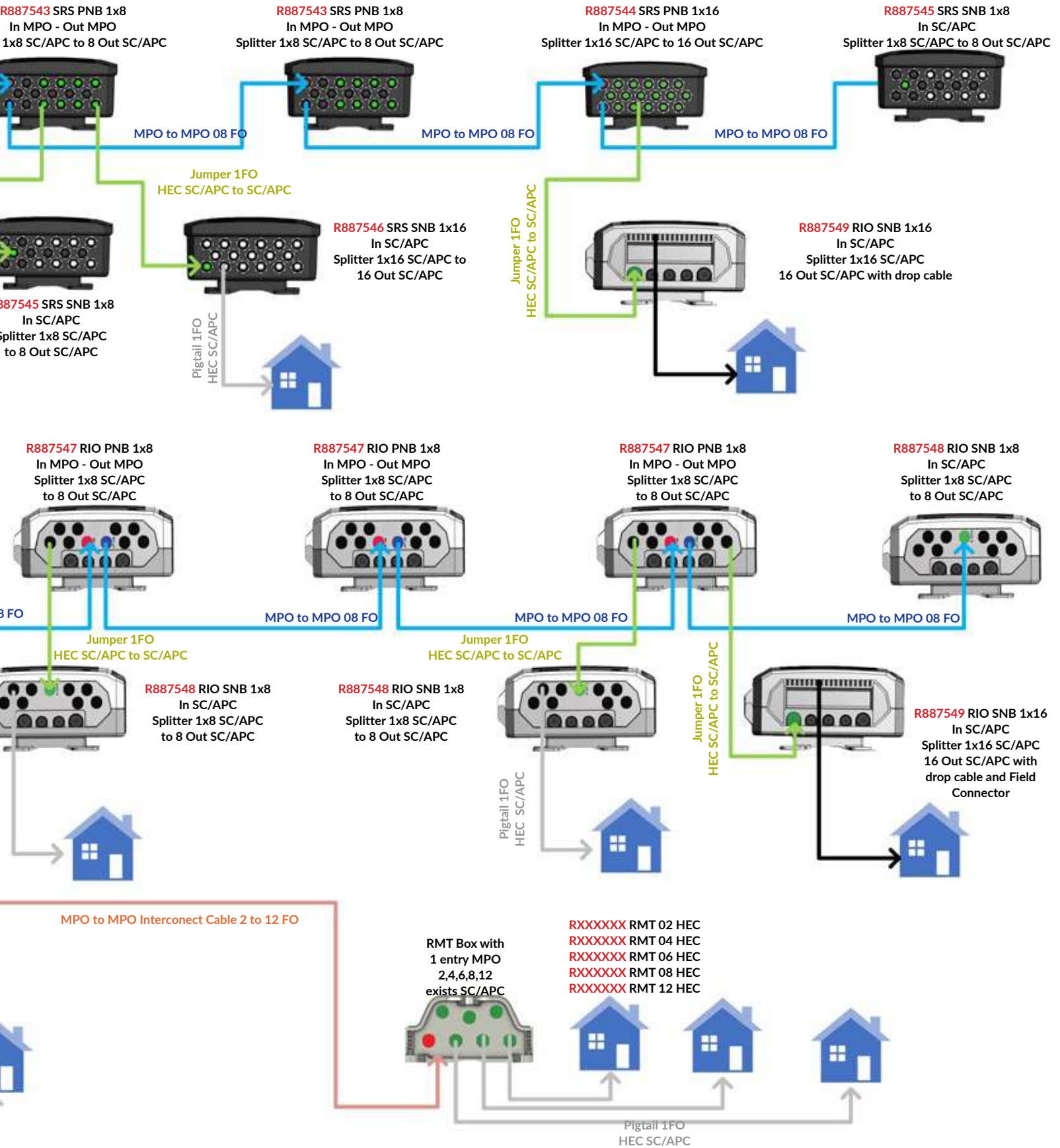
Preconnectorized Solutions

Example R&M Precon Fiber Network Layout



Outside Plant

Preconnectorized Solutions



Central Office Optical Distribution



The Precon network starts at the equipment center, there are several options for connecting the cables(s) that leave the POP to the street.

With the modular Prime solution, you can design your network with OLT imaging with SC/APC, with a first level of 1x2 SC/APC splitters or exit directly with MPO. In all cases, without any optical splicing. Information about PRIME and other solutions in the Central Office section

Precon Box SRS (Speed Requires Simplicity)



With the SRS Precon Box, the provider achieves quick installation and reliability on your network. Available in ODB, PNB and SNB versions. With the SRS box it is possible to implement a 100% Precon network from the POP to the customer's home.



Features:

- IP68
- Compact design, sealed box
- Installation on pole, wire rope or facade
- Factory assembly and testing

ODB - Optical Distribution Box

- 6 HEC MPO/APC inputs + 9 HEC MPO/APC outputs

PNB - Primary Network Box

- 1x8 1 Input + 1 Output HEC MPO 12FO + 8 Outputs HEC SC/APC
- 1x16 1 Input + 1 Output HEC MPO 12FO + 16 Outputs HEC SC/APC

SNB - Secondary Network Box

- 1x8 1 Input HEC SC/APC + 16 Outputs HEC SC/APC
- 1x16 1 Input HEC SC/APC + 16 Outputs HEC SC/APC



ODB SRS 72FO

R887542



PNB SRS 1x8

R887543



PNB SRS 1x16

R887544



SNB SRS 1x8

R887545



SNB SRS 1x16

R887546



R&M HEC Connector

Watch the video of the R&M HEC connector for harsh outdoor environments.

Precon Box RIO (Real InterOperability)



With the RIO Box, the provider can quickly install and trust your network. Available in PNB 1x8 and SNB 1x8 versions 100% Precon or SNB 1x8 or 1x16 with Precon input and output with Drop cable, offering flexibility and choice to the internet service provider.

Features:

- IP67
- Compact design with lock
- Installation on pole, wire rope or facade
- Factory assembly and testing

PNB - Primary Network Box

- 1 Input + 1 Output HEC MPO/APC 12FO + 8 Outputs HEC SC/APC

SNB - 100% Precon Secondary Network Box

- 1 HEC SC/APC input + 8 HEC SC/APC outputs



PNB RIO 1x8 R887547



SNB RIO 1x8 R887548



SNB RIO Drop 1X16 R887617

Preterminated Trunk Cables



SC/APC to MPO/APC cable - preterminated outdoor cable with SC/APC connectors at one end for application at the POP and MPO/APC connectors in multiples of 12 Fibers for mounting in the first box (ODB)

MPO-MPO cable - 12 fibers outdoor cable with MPO/APC connectors on both ends. It serves to connect the MPO tray to the first box, or to interconnect between the boxes of the primary network.



Trunk PRECON SC/APC - MPO/APC

| | |
|-------------|---------|
| 72FO 300ft | R887530 |
| 72FO 500ft | R887531 |
| 144FO 300ft | R887532 |
| 144FO 500ft | R887533 |

Trunk PRECON 12FO MPO-MPO

| | |
|------------|---------|
| 12FO 300ft | R887534 |
| 12FO 500ft | R887535 |

Contact R&M for different lengths

Preterminated Low Friction Drop Cables



The connections from the primary network to the secondary network (PNB to SNB), are made with 1FO drop flat cable with reinforced SC/APC connectors at both ends.

In the case of activation, in a 100% precon network, a service cable can also be provided with a reinforced connector at the end of the SNB Precon box, and with the other non-connectorized end to facilitate the final installation with a field connector.

Precon SC/SC Interconnect Cable

| | |
|-----------|---------|
| 1FO 100ft | R887536 |
| 1FO 200ft | R887537 |
| 1FO 300ft | R887538 |

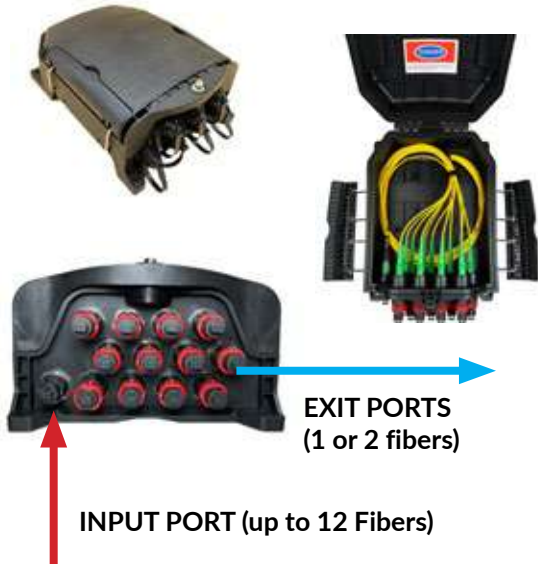
Precon SC/NC Service Cable

| | |
|-----------|---------|
| 1FO 50ft | R887539 |
| 1FO 100ft | R887540 |
| 1FO 150ft | R887541 |

Contact R&M for different lengths



Precon Box RMT (R&M TAP (Terminal Access Point))



The RMT box is an IP-68 rated compact box designed for one incoming and up to 12 outgoing cables.

Features

- IP68
- 1 entry hardened connector (MPO/SC/SN)
- 1 to 12 exits (hardened MPO/SC/SN connectors)
- Temperature Ratings -40 C to +85 C
- Wall / Pole / Aerially mounted
- 100% tested (when supplied preterminated)
- Insertion loss <0.3dB, return Loss >60dB
- Housing Color: Black
- Dimensions of the box (HxWxD) :
 - 02 to 06 Ports - 8.0" x 5.6" x 3.3"
 - 08 to 12 Ports - 9.14" x 6.47" x 3.78"

RMT BOX Configurations (1 HEC SC/APC IN to "n" exits SC/APC)

| | | |
|-------------------|---|--------------------|
| Terminal 2 ports | IN SC/APC + 1GPON Splitter 1x2 -> 2 exits SC/APC | RMT-GPON-1:2 |
| Terminal 4 ports | IN SC/APC + 1GPON Splitter 1x4 -> 4 exits SC/APC | RMT-GPON-1:4 |
| Terminal 6 ports | IN SC/APC + 1GPON Splitter 1x2 70x30 + GPON Splitter 1x4 -> 5 exits SC/APC + 1 next box | RMT-GPON-1:2 + 1:4 |
| Terminal 8 ports | IN SC/APC + 1GPON Splitter 1x8 -> 8 exits SC/APC | RMT-GPON-1:8 |
| Terminal 12 Ports | IN SC/APC + 1GPON Splitter 1x2 70x30 + GPON Splitter 1x8 -> 8 exits SC/APC + 1 next box | RMT-GPON-1:2 + 1:8 |

RMT BOX Configurations (1 HEC MPO 12FO IN to "n" exits SC/APC)

| | | |
|-------------------|---------------------------|---------|
| Terminal 2 ports | IN MPO -> 2 exits SC/APC | R899248 |
| Terminal 4 ports | IN MPO -> 4 exits SC/APC | R899249 |
| Terminal 6 ports | IN MPO -> 6 exits SC/APC | R899250 |
| Terminal 8 ports | IN MPO -> 8 exits SC/APC | R899251 |
| Terminal 12 Ports | IN MPO -> 12 exits SC/APC | R899252 |

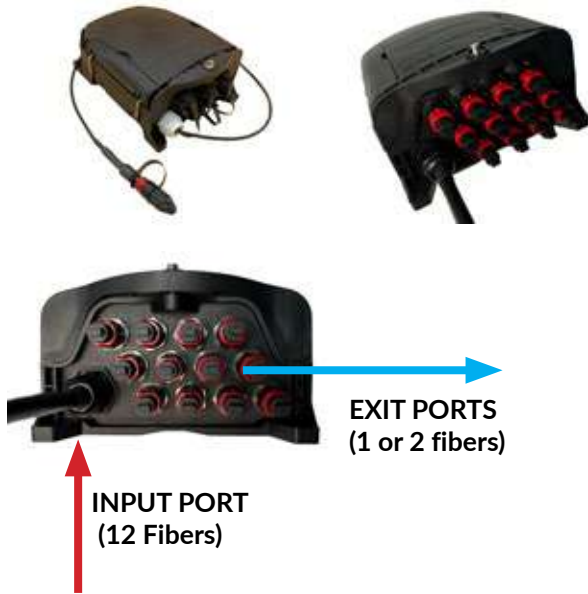
| Interconnect Cables | Lenght | 12 Fibers Round 3.8mm MPO HEC to MPO HEC Box to Box | 12 Fibers Round 3.8mm PGT to MPO HEC Splice Closure to Box |
|---------------------|--------|---|--|
| | | 50ft | R898836 |
| | 100ft | R898837 | R898865 |
| | 200ft | R898838 | R898867 |
| | 300ft | R898839 | R898869 |
| | 400ft | R898840 | R898871 |
| | 500ft | R898841 | R898874 |
| | 750ft | R898842 | R898875 |
| | 1000ft | R898843 | R898877 |
| | 1500ft | R898844 | R898878 |
| | 2000ft | R898845 | R897925 |

| Connection Box to House | Lenght | 1 Fiber Round Drop HEC SC/APC to PGT |
|-------------------------|--------|--------------------------------------|
| | | 50ft |
| | 100ft | R |
| | 150ft | R |
| | 200ft | R |
| | 250ft | R |
| | 300ft | R |
| | 400ft | R |
| | 500ft | R |
| | 750ft | R |
| | 1000ft | R |

Outside Plant

Preconnectorized Solutions

Precon Box RMTS (R&M TAP Stubbed)



The RMTS box is an IP-68 rated compact box designed for one incoming and up to 12 outgoing cables.

Features

- IP68
- Cord grip for cable up to 10mm
- 1 to 12 exits (hardened MPO/SC/SN connectors)
- Temperature Ratings -40 C to +85 C
- Wall / Pole / Aerially mounted
- 100% tested (when supplied preterminated)
- Insertion loss <0.3dB, return Loss >60dB
- Housing Color: Black
- Dimensions of the box (HxWxD) :
 - 02 to 06 Ports - 8.0" x 5.6" x 3.3"
 - 08 to 12 Ports - 9.14" x 6.47" x 3.78"

RMTS BOX STD 1xHEC MPO Stubbed to "n" exits SC/APC

| | 2 FO | 4 FO | 6 FO | 8 FO | 12 FO |
|--------|---------|---------|---------|---------|---------|
| 50ft | R899259 | R899269 | R899279 | R899321 | R899331 |
| 100ft | R899260 | R899270 | R899280 | R899322 | R899332 |
| 200ft | R899261 | R899271 | R899281 | R899323 | R899333 |
| 300ft | R899262 | R899272 | R899282 | R899324 | R899334 |
| 400ft | R899263 | R899273 | R899283 | R899325 | R899335 |
| 500ft | R899264 | R899274 | R899284 | R899326 | R899336 |
| 750ft | R899265 | R899275 | R899285 | R899327 | R899337 |
| 1000ft | R899266 | R899276 | R899286 | R899328 | R899338 |
| 1500ft | R899267 | R899277 | R899287 | R899329 | R899339 |
| 2000ft | R899268 | R899278 | R899288 | R899330 | R899340 |

RMTS BOX PGT Stubbed to "n" exits SC/APC

| | 2 FO | 4 FO | 6 FO | 8 FO | 12 FO |
|--------|---------|---------|---------|---------|---------|
| 50ft | R899341 | R899351 | R899540 | R899550 | R899560 |
| 100ft | R899342 | R899352 | R899541 | R899551 | R899561 |
| 200ft | R899343 | R899353 | R899542 | R899552 | R899562 |
| 300ft | R899344 | R899354 | R899543 | R899553 | R899563 |
| 400ft | R899345 | R899355 | R899544 | R899554 | R899564 |
| 500ft | R899346 | R899356 | R899545 | R899555 | R899565 |
| 750ft | R899347 | R899357 | R899546 | R899556 | R899566 |
| 1000ft | R899348 | R899358 | R899547 | R899557 | R899567 |
| 1500ft | R899349 | R899359 | R899548 | R899558 | R899568 |
| 2000ft | R899350 | R899360 | R899549 | R899559 | R899569 |

For the connection from box to house use 1Fiber Round Drop HEC SC/APC to PGT



Outside Plant

SYNO Splice Closure



SYNO Gel Dome Closure

The R&M SYNO Dome Closure is a high-quality connection with which our customers are better prepared for the future of ever faster networks

Benefits

- Cold-sealing technology
- High degree of flexibility
- Fast and intuitive installation
- For cable and micro duct networks

Features

- Single and Ribbon Fiber based closures
- Cable entries from 1 mm up to 28 mm
- Micro duct entries for 5, 7, 10, 12 and 14 mm
- Re-usable cable entry ports based on gel technology
- Strain relief for each cable
- Can be individually equipped with SC, SE, MCM or splitter trays



Flexible closure with cold-sealing technology

The SYNO dome closure fulfills all requirements of a modern FO network with the innovative gel technology. The SYNO closure is particularly characterized by its unique modularity and flexibility.

Thanks to the modular design, the closure can be adapted or extended at any time – even during operation.

SYNO Dome Closure



Scope of Delivery

- Closure complete prepared for tray assembly
- Closure dome including sealing ring clamp
- Clamp
- Loose tube tray kit for loop storage
- Splice Tray cover kit incl. Accessories
- Desiccant 2x 20g (silica gel bags)
- Diameter = 250mm/10 in.



Ribbon Version (R2R) - supplied with 1 tray, cable entry kits to be ordered separately.
Single Fiber (SF) Version - trays and cable entry kits to be ordered separately.

| Product Code | Number of trays | Part No. |
|---------------|--|----------|
| SYNO S-500 | 1 tray included, up to 6 trays, gel sealing | R900370 |
| SYNO S-500 HD | 1 tray included, up to 8 trays, gel sealing | R900371 |
| HSC S-500 | 1 tray included, up to 6 trays, heatshrink sealing | R900450 |
| HSC S-500 HD | 1 tray included, up to 8 trays, heatshrink sealing | R900451 |

Cable Entry kits for Dome Closure



SYNO D25 Entry Kit
1x 25-28mm (0.98"-1.1")

R812567



SYNO D25 Entry Kit
1x 20-25mm (0.79"-0.98")

R812566



SYNO D25 Entry kit
1x 12-21mm (0.47"-0.83")

R812565



SYNO D25 Entry kit
2x 7-14mm (0.28"-0.55")

R812564



SYNO D25 Entry Kit
4x 5-8mm (0.2"-3.1")

R812563



SYNO D25 Entry Kit
8x 3-5mm (0.12"-0.2")

R812562



SYNO D25 Entry Kit
16x 2-3mm (0.08"-0.12")

R812561



SYNO D25 Entry Kit
Blind

R812568



S-500 Common Grounding
Common

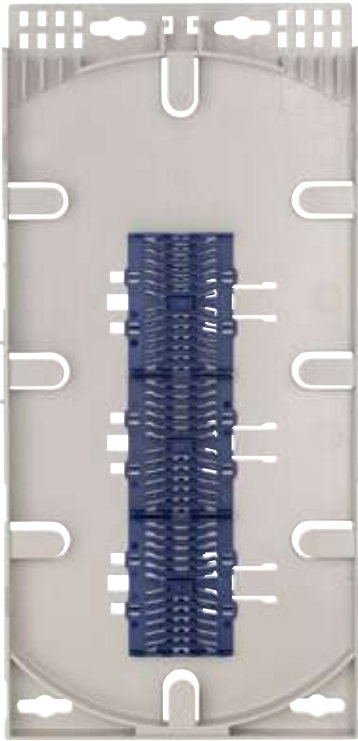
R900378



S-500 Tracing Module
up to 8 cables

R900379

Splice & Splitter Trays Syno S-500



Splice Tray Kit Single Fiber

ST-500 splice tray-additional Set-72-S

R900383



Splice Tray Kit Ribbon Fiber

ST-500 splice tray-additional Set-432-R

R900382

Accessories for SYNO Closure



Water-Gas-Termination WGT12

5,6-6,6mm

R821234



Water-Gas- Termination WGT10

5,6-6,6mm

R821233



SYNO Grounding Terminal

R812570



Wall/Pole fixing bracket

R812569



Syno External cable support

R812571



SYNO installation Support

Syno S500

R900377

Outside Plant

ZOONA Splice Closure

ZOONA Dome Closures 48F



ZOONA Closure with IP68 rubber sealing technology for reliable and quick installation with 4 trays position (4TPU). The closure provides entry points for 1xloop installation and up to 12x single cables. Various cable entry kits enable dome closures to be adjusted to individual requirements at any time.

Scope of Delivery

- fiber management R30 with 4 TPU
- splice area for 4 splices in fiber management
- splitter storage space in fiber management
- all ports sealed
- installation manual

ZOONA STP4/HS

R878261

QIK Cable Entry Kits for ZOONA Closure



QIKseal entry Kits (round)

| | |
|---------------------|---------|
| 2-3mm/0.08-0.12" | R878263 |
| 3-6mm/0.12-0.24" | R878264 |
| 6-8.5mm/0.24-0.33" | R878265 |
| 4.5x8.1mm/Flat Drop | R900366 |



QIKseal entry Kits (oval)

| | |
|--------------------------|---------|
| 2x6-9mm/2x0.24-0.35" | R878831 |
| 2x9-12.5mm/2x0.35-0.49" | R878832 |
| 2x12.5-16mm/2x0.35-0.63" | R878833 |



Accessories

| | |
|---------------------|---------|
| Pole Fixing Bracket | R878269 |
| Cable Support | R878270 |

FMTS Splice Trays



FMTS Splice Tray HS

up to 12FO (1pc) R895101



FMTS Splitter & Adapter tray

up to 4 adapters R878838



FMTS Splitter Tray

Splice & Splitter (6pc) R820097



FMTS Tray Cover

used to cover top tray R895103



Labelling Sheet

R830898

Outside Plant

RMSC Splice Closure

RMSC Splice Closure - Mechanical

The Mechanical Splice Closure 12/144 FO has a IP68 protection, which gives full guarantee to the splices of fiber optic cables in all environments. Its mechanical lock and sealing system allows for multiple cable installations (maintenance or new installations of backbone fiber cables or subscriber drop cables), without losing the degree of water tightness and its application does not require any type of accessory or equipment to close and seal the inlets and outputs of the cables.

Main Technical Characteristics:

- Possibility to received up to 6 modular splice trays that can receive single fiber or splitter/rollable ribbon splice holders.
- Each modular splice tray can receive 2 splice holders, with the capacity of 12 fibers each, bringing the overall capacity up to 144 splices using single fiber cables. Using rollable fiber cable, the capacity would be of 48 fibers per tray, reaching 288 splice per closure.
- The splitter holder (optional) can receive 2 PLC-Type Splitters and can be used next to single fiber splice holder. The splitter holder can also be used as a rollable ribbon splice holder.
- The modular splice trays have separate areas for storage, targeting and protection of fibers, besides being 'interchangeable', enabling the transport of fibers between installed trays, through transport tubes.
- It features a slack basket tray for accommodation of undistributed loose tubes.
- The assembly of the base and the dome (cover) is done by a mechanical system and seal with O-Ring.



RMSC Closure 12/144 FO

R886223

Supplied with:
1 Fiber Tray for 24 Single Fiber
1 Slack Basket

RMSC Splice Closure - Cable Kits and Accessories



Splice Tray

12/24 FO

R886224



Splitter and Adapter Tray

Empty, up to
2xPLC Splitters
and 8 adapters.

R909038



Wall or Aerial Mount

slack
managment

R886226



Splitter / Ribbon Chip

R886285



Main Cable Entry (spare)

2 of 14mm

R886225



Single Cable Entry

1 of 12mm

R886140



Round Drop Cable

6 of 5mm

R886280



Single Fiber Flat Drop Cable

9 of 2x3mm

R886141

Outside Plant

RIO Optical Termination Box

RIO Optical Termination Box

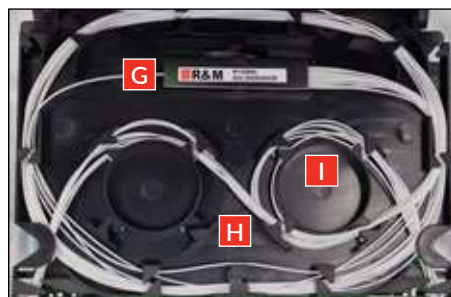
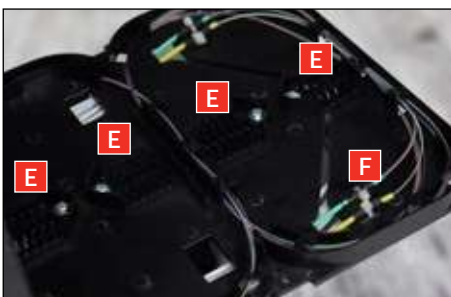
A new two-piece box concept (box + internal tray), which allows for easy and independent installation of the box and field splicing.

Easy to install and maintain, the internal tray can be removed without removing the box, allowing, for example, to install the box on the strand or pole, and the connections later below, so that the leftover cable can be more reduced.

When installed, and in case of maintenance, the installer can disassemble the inner tray and carry out maintenance on the ground, more safely.

Features:

- Installation on poles, ropes or facades
- Internal tray that can receive up to 16 SC, E2000 or LC Duplex adapters
- Separate zones for loop, splicing, splitters and drop cable operation
- Individual access to the drop cable area
- Ability to receive up to 3 splitters providing flexibility for various network configurations
- No special tools required for installation;
- Degree of protection: IP67



A Tray up to 16 adapters

B Drop cable with anti-memory seal

C 5 Cable Inputs/Outputs

D Universal cable fixation accessories

E Optical Splice Cradle (2 included)

F Cable Inputs/Outputs in Tray

G Up to 3 splitters

H Cable release locking system

I Cable management, maintaining the minimum radius

J Space dedicated to the entry of cables and slack of transport tubes

Outside Plant

RIO Optical Termination Box

RIO Optical Termination Box (Empty)



RIO BOX (Empty)

- Supply:
- RIO box
 - Internal Cable Drop Tray
 - Aerial mounting kit
 - Mounting accessory kit

R887617



GPON Optical Splitter

| | |
|-------------|----------------|
| 1x8 SC/APC | R886291 |
| 1x8 SC/UPC | R886301 |
| 1x16 SC/APC | R886290 |
| 1x16 SC/UPC | R886293 |



Adapters

| | |
|--------|----------------|
| SC/APC | R803945 |
| SC/UPC | R804274 |

RIO Optical Termination Box (preconfigured)



RIO BOX 08 (1:8) SC/APC

- Supply:
- RIO box
 - Internal Cable Drop Tray
 - Aerial mounting kit
 - Mounting accessory kit
 - 8 SC/APC Adapters
 - 1 GPON Splitter 1x8 SC/APC

R887620



RIO BOX 16 (2x1:8) SC/APC

- Supply:
- RIO box
 - Internal Cable Drop Tray
 - Aerial mounting kit
 - Mounting accessory kit
 - 16 SC/APC Adapters
 - 2 GPON Splitters 1x8 SC/APC

R887622

RIO BOX 16 (1:16) SC/APC

- Supply:
- RIO box
 - Internal Cable Drop Tray
 - Aerial mounting kit
 - Mounting accessory kit
 - 16 SC/APC Adapters
 - 1 GPON Splitter 1x16 SC/APC

R887624



RIO BOX 08 (1:8) SC/UPC

- Supply:
- RIO box
 - Internal Cable Drop Tray
 - Aerial mounting kit
 - Mounting accessory kit
 - 8 SC/UPC Adapters
 - 1 GPON Splitter 1x8 SC/UPC

R888038



RIO BOX 16 (2x1:8) SC/UPC

- Supply:
- RIO box
 - Internal Cable Drop Tray
 - Aerial mounting kit
 - Mounting accessory kit
 - 16 SC/UPC Adapters
 - 2 GPON Splitters 1x8 SC/UPC

R887626

RIO BOX 16 (1:16) SC/UPC

- Supply:
- RIO box
 - Internal Cable Drop Tray
 - Aerial mounting kit
 - Mounting accessory kit
 - 16 SC/UPC Adapters
 - 1 GPON Splitter 1x16 SC/UPC

R887628

RIO Optical Termination Box with colored trays (by request)








Tray Colors

- Black
- Red
- Blue
- Orange
- Green
- Grey
- Yellow

| |
|----|
| PT |
| VM |
| AZ |
| LJ |
| VD |
| CZ |
| AM |

R&M Fiber Optic OSP Cables

| Cable Type | Cable Family | Page | Application | Cable Sheath Material | Fiber Count | Loose Tube Count | Loose Tube Ø [mm] |
|--|----------------|------|--------------------|-----------------------|-------------|------------------|-------------------|
| MiniCore Façade Cable - Cca graded  | UAF250 FiRis | 118 | universal- facade | FRLSZH - UV stable | 6 | n.a. | n.a. |
| | UAF250 FiRis | 118 | universal- facade | FRLSZH - UV stable | 12 | n.a. | n.a. |
| | UAF 1000 FiRis | 120 | universal- facade | FRLSZH - UV stable | 2 | n.a. | n.a. |
| | UAF 1000 FiRis | 120 | universal- facade | FRLSZH - UV stable | 8 | n.a. | n.a. |
| | UAF 1000 FiRis | 120 | universal- facade | FRLSZH - UV stable | 12 | n.a. | n.a. |
| MiniCore Aerial Drop Cable - Short Span  | UAF250 | 122 | universal - aerial | FRLSZH - UV stable | 6 | n.a. | n.a. |
| | UAF250 | 122 | universal - aerial | FRLSZH - UV stable | 12 | n.a. | n.a. |
| | UAF1000 | 124 | universal - aerial | FRLSZH - UV stable | 2 | n.a. | n.a. |
| | UAF1000 | 124 | universal - aerial | FRLSZH - UV stable | 8 | n.a. | n.a. |
| | UAF1000 | 124 | universal - aerial | FRLSZH - UV stable | 12 | n.a. | n.a. |
| Flat ADSS Loose Tube Cable - Short Span  | ST1fH | 126 | outdoor - aerial | HDPE - UV stable | 12 | 1 | 1.9 |
| Flat ADSS TWIN Loose Tube Cable - Short Span  | ST2fH | 128 | outdoor - aerial | HDPE - UV stable | 24 | 2 | 1.9 |
| FTTH Micro Cable  | MT1RF | 130 | universal | FRLSZH - UV stable | 4 | 1 | 1.2 |

Outside Plant

OSP Cables

| Cable Ø [mm] | Cable Weight [kg / km] | Tensile Performance Short [N] | Crush Performance Short [N/100mm] | Temperatur Range in Operation | CPR Classification | DoP Number | Warranty Classification |
|--------------|------------------------|-------------------------------|-----------------------------------|-------------------------------|--------------------|------------|-------------------------|
| 2.8 | 13.0 | 250 | 1000 | -10 °C ÷ +60 °C | Cca-s2,d0,a1 | D9084 | product warranty |
| 3.2 | 11.0 | 250 | 1000 | -10 °C ÷ +60 °C | Cca-s2,d0,a1 | D9084 | product warranty |
| 3.2 | 11.0 | 1000 | 1000 | -10 °C ÷ +60 °C | Cca-s2,d0,a1 | D9085 | product warranty |
| 3.6 | 13.0 | 1000 | 1000 | -10 °C ÷ +60 °C | Cca-s2,d0,a1 | D9085 | product warranty |
| 3.8 | 14.0 | 1000 | 1000 | -10 °C ÷ +60 °C | Cca-s2,d0,a1 | D9085 | product warranty |
| 2.8 | 13.0 | 250 | 1000 | -20 °C ÷ +70 °C | Fca | D9010 | product warranty |
| 3.2 | 11.0 | 250 | 1000 | -20 °C ÷ +70 °C | Fca | D9010 | product warranty |
| 3.2 | 11.0 | 1000 | 1000 | -20 °C ÷ +70 °C | Fca | D9011 | product warranty |
| 3.6 | 13.0 | 1000 | 1000 | -20 °C ÷ +70 °C | Fca | D9011 | product warranty |
| 3.8 | 14.0 | 1000 | 1000 | -20 °C ÷ +70 °C | Fca | D9011 | product warranty |
| 8.0 x 4.0 | 38.0 | 1600 | 4000 | -40 °C ÷ +70 °C | Fca | D9971 | product warranty |
| 9.8 x 4.0 | 59.0 | 1600 | 4000 | -40 °C ÷ +70 °C | Fca | D9972 | product warranty |
| 3.0 | 11.0 | 150 | 500 | -20 °C ÷ +70 °C | Fca | D9038 | product warranty |

MiniCore Facade Cable – Cca graded



1. Optical fibers
2. Aramid yarn
3. FRLSZH UV stable outer jacket

General Description

Non-metallic FTTH drop cable with up to 12 fibers for indoor or outdoor duct, façade or aerial short span installation. In addition, this cable construction has a „Cca“ CPR classification and is therefore a true universal cable that can also be installed in buildings without further problems.

Construction and Dimension

| Cable family code | UAF250 FiRis | UAF250 FiRis |
|--------------------------------|--|--------------|
| Fiber count | 6 | 12 |
| Outer sheath thickness | 0.8 mm | 0.8 mm |
| Cable outer diameter | 2.8 mm | 3.2 mm |
| Cable weight | 9 kg / km | 11 kg / km |
| Outer sheath material | UV stable FRLSZH | |
| Sheath color | black | |
| Sheath marking method, color | Ink-Jet, white | |
| Fiber types available | Bend optimized singlemode fibers (G.657.A1, G.657.A2) | |
| Fiber color coding (IEC 60304) | 1.-12.: red, green, blue, yellow, white, grey, brown, violet, turquoise, black, orange, pink | |
| DIN / VDE Code | U-(ZN)H | |
| Standard put-up length * | 2100 m ± 5 % | |

* other put-up length available on special request

Order Information

| Cable Family | Fiber Count | G.657.A1 * |
|--------------|-------------|------------|
| UAF250 FiRis | 2 | 857713 |
| | 4 | 857714 |
| | 6 | 857715 |
| | 8 | 857716 |
| | 12 | 857717 |

other fiber counts and/or fiber types available on request

Mechanical Data

| Test | Test Method | Value / Value Range | Acceptance Criteria * |
|---|---------------------|--|--|
| Tensile performance – in service | IEC 60794-1-21:E1 | 250 N (max. allow-able tension) | $\Delta\alpha \leq 0,05$ dB |
| Crush resistance - long term | IEC 60794-1-21:E3A | 500 N / 100 mm | $\Delta\alpha \leq 0,05$ dB prior release, no damage |
| Crush resistance - short term | IEC 60794-1-21:E3A | 1000 N / 100 mm | $\Delta\alpha \leq 0,05$ dB after release, no damage |
| Impact resistance | IEC 60794-1-21:E4 | 3 Nm, 3 impacts, d=20 mm, R=300 mm | $\Delta\alpha \leq 0,05$ dB after test, no damage |
| Torsion | IEC 60794-1-21:E7 | L = 2 m, rotation angle $\pm 180^\circ$, 5 cycles | no damage |
| Cable bend - no tension | IEC 60794-1-21:E11A | d=15 x cable diameter, 4 turns, 3 cycles | $\Delta\alpha \leq 0,05$ dB after test, no damage |
| Repeated bending | IEC 60794-1-21:E6 | R=20 x cable diameter, 25 cycles | no damage |
| Maximal recommended span | Telenco clamp 7593 | 40 m (min. sag 60 cm), max. allow-able tension | $\Delta\alpha \leq 0,05$ dB, no damage |
| Minimum bend radius – in service | | 55 mm | |
| Minimum bend radius – during installation | | 75 mm | |

Climatic Data

| Test | Test Method | Value / Value Range | Acceptance Criteria * |
|---------------------|--------------------|--|---|
| Temperature cycling | IEC 60794-1-22:F1 | - 20°C ÷ + 60°C | $\Delta\alpha \leq 0,05$ dB |
| Temperature range | | - 5°C ÷ + 50°C - 20°C ÷ + 60°C - 25°C ÷ + 60°C | during installation in service in storage & transport |
| Water penetration | IEC 60794-1-22 F5B | L = 3 m, h = 1 m, 24 h | no water leakage |
| Expected lifetime | | minimum 30 years | |

* IEC 60794-3-10, IEC 60794-3-11

Fire Properties

| Test | Value / Value Range | Test Method |
|--------------------------------------|---------------------|--------------------------|
| Euro classification to CPR | Cca-s2,d0,a1 | EN 50575, EN 13501-6 |
| Declaration of performance number | D9084 | |
| Flammability - vertical single cable | Pass | IEC 60332-1-2 |
| Smoke density | Pass | IEC 61034-1, IEC 61034-2 |
| Halogen free, acid gases | Pass | IEC 60754-2 |
| 2015 / 863 / EU - RoHS 3 | conform | |
| 1907 / 2006 / EU - REACH | conform | |

MiniCore Facade Cable – Cca graded



1. Optical fibers
2. Aramid strength members
3. FRLSZH UV stable outer jacket

General Description

Non-metallic FTTH drop cable with up to 12 fibers for outdoor duct, façade or aerial short span installation. Additionally, this cable construction features an intensified tensile force compared to the UAF250 construction. What's more, this cable construction has a „Cca“ CPR classification and is therefore a true universal cable that can also be installed in buildings without further problems.

Construction and Dimension

| Cable family code | UAF1000 FiRis | UAF1000 FiRis | UAF1000 FiRis |
|--------------------------------|--|---------------|---------------|
| Fiber count | 2 | 8 | 12 |
| Outer sheath thickness | 0.8 mm | 0.8 mm | 0.8 mm |
| Cable outer diameter | 3.2 mm | 3.6 mm | 3.8 mm |
| Cable weight | 11 kg / km | 13 kg / km | 14 kg / km |
| Outer sheath material | UV stable FRLSZH | | |
| Sheath color | black | | |
| Sheath marking method, color | Ink-Jet, white | | |
| Fiber types available | Bend optimized singlemode fibers (G.657.A1, G.657.A2) | | |
| Fiber color coding (IEC 60304) | 1.-12.: red, green, blue, yellow, white, grey, brown, violet, turquoise, black, orange, pink | | |
| DIN / VDE Code | U-(ZN)H | | |
| Standard put-up length * | 2100 m ± 5 % | | |

* other put-up length available on special request

Order Information

| Cable Family | Fiber Count | G.657.A1 * |
|----------------|-------------|------------|
| UAF 1000 FiRis | 2 | 857731 |
| | 4 | 857732 |
| | 6 | 857733 |
| | 8 | 857734 |
| | 12 | 857735 |

other fiber counts and/or fiber types available on request

Mechanical Data

| Test | Test Method | Value / Value Range | Acceptance Criteria * |
|---|---------------------|--|--|
| Tensile performance – in service | IEC 60794-1-21:E1 | 1000 N (max. allow-able tension) | $\Delta\alpha \leq 0,05$ dB |
| Crush resistance - long term | IEC 60794-1-21:E3A | 500 N / 100 mm | $\Delta\alpha \leq 0,05$ dB prior release, no damage |
| Crush resistance - short term | IEC 60794-1-21:E3A | 1000 N / 100 mm | $\Delta\alpha \leq 0,05$ dB after release, no damage |
| Impact resistance | IEC 60794-1-21:E4 | 3 Nm, 3 impacts, d=20 mm, R=300 mm | $\Delta\alpha \leq 0,05$ dB after test, no damage |
| Torsion | IEC 60794-1-21:E7 | L = 2 m, rotation angle $\pm 180^\circ$, 5 cycles | no damage |
| Cable bend - no tension | IEC 60794-1-21:E11A | d=15 x cable diameter, 4 turns, 3 cycles | $\Delta\alpha \leq 0,05$ dB after test, no damage |
| Repeated bending | IEC 60794-1-21:E6 | R=20 x cable diameter, 25 cycles | no damage |
| Maximal recommended span | Telenco clamp 7593 | 60 m (min. sag 90 cm), max. allow-able tension | $\Delta\alpha \leq 0,05$ dB, no damage |
| Minimum bend radius – in service | | 55 mm | |
| Minimum bend radius – during installation | | 75 mm | |

Climatic Data

| Test | Test Method | Value / Value Range | Acceptance Criteria * |
|---------------------|--------------------|--|---|
| Temperature cycling | IEC 60794-1-22:F1 | - 20°C ÷ + 60°C | $\Delta\alpha \leq 0,05$ dB |
| Temperature range | | - 5°C ÷ + 50°C - 20°C ÷ + 60°C - 25°C ÷ + 60°C | during installation in service in storage & transport |
| Water penetration | IEC 60794-1-22 F5B | L = 3 m, h = 1 m, 24 h | no water leakage |
| Expected lifetime | | minimum 30 years | |

* IEC 60794-3-10, IEC 60794-3-11

Fire Properties

| Test | Value / Value Range | Test Method |
|--------------------------------------|---------------------|--------------------------|
| Euro classification to CPR | Cca-s2,d0,a1 | EN 50575, EN 13501-6 |
| Declaration of performance number | D9085 | |
| Flammability - vertical single cable | Pass | IEC 60332-1-2 |
| Smoke density | Pass | IEC 61034-1, IEC 61034-2 |
| Halogen free, acid gases | Pass | IEC 60754-2 |
| 2015 / 863 / EU - RoHS 3 | conform | |
| 1907 / 2006 / EU - REACH | conform | |

MiniCore Aerial Drop Cable – Short Span



1. Optical fibers
2. Aramid yarn
3. FRLSZH UV stable outer jacket

General Description

Non-metallic FTTH drop cable with up to 12 fibers for indoor, aerial short span, façade or outdoor duct installation.

Construction and Dimension

| Cable family code | UAF250 | UAF250 |
|--------------------------------|--|------------|
| Fiber count | 6 | 12 |
| Outer sheath thickness | 0.8mm | 0.8mm |
| Cable outer diameter | 2.8mm | 3.2mm |
| Cable weight | 9 kg / km | 11 kg / km |
| Outer sheath material | UV stable FRLSZH | |
| Sheath color | black | |
| Sheath marking method, color | Ink-Jet, white | |
| Fiber types available | Bend optimized singlemode fibers (G.657.A1, G.657.A2) | |
| Fiber color coding (IEC 60304) | 1.-12.: red, green, blue, yellow, white, grey, brown, violet, turquoise, black, orange, pink | |
| DIN / VDE Code | U-(ZN)H | |
| Standard put-up length * | 2100m ± 5% | |

* other put-up length available on special request

Order Information

| Cable Family | Fiber Count | G.657.A1 * |
|--------------|-------------|------------|
| UAF250 | 2 | 857705 |
| | 4 | 857706 |
| | 6 | 851161 |
| | 8 | 857707 |
| | 12 | 851162 |

other fiber counts and/or fiber types available on request

Mechanical Data

| Test | Test Method | Value / Value Range | Acceptance Criteria * |
|---|---------------------|--|--|
| Tensile performance – in service | IEC 60794-1-21:E1 | 250 N (max. allow-able tension) | $\Delta\alpha \leq 0,05$ dB |
| Crush resistance - long term | IEC 60794-1-21:E3A | 500 N / 100 mm | $\Delta\alpha \leq 0,05$ dB prior release, no damage |
| Crush resistance - short term | IEC 60794-1-21:E3A | 1000 N / 100 mm | $\Delta\alpha \leq 0,05$ dB after release, no damage |
| Impact resistance | IEC 60794-1-21:E4 | 3 Nm, 3 impacts, d=20 mm, R=300 mm | $\Delta\alpha \leq 0,05$ dB after test, no damage |
| Torsion | IEC 60794-1-21:E7 | L = 2 m, rotation angle $\pm 180^\circ$, 5 cycles | no damage |
| Cable bend - no tension | IEC 60794-1-21:E11A | d=15 x cable diameter, 4 turns, 3 cycles | $\Delta\alpha \leq 0,05$ dB after test, no damage |
| Repeated bending | IEC 60794-1-21:E6 | R=20 x cable diameter, 25 cycles | no damage |
| Maximal recommended span | Telenco clamp 7593 | 40 m (min. sag 60 cm), max. allow-able tension | $\Delta\alpha \leq 0,05$ dB, no damage |
| Minimum bend radius – in service | | 55 mm | |
| Minimum bend radius – during installation | | 75 mm | |

Climatic Data

| Test | Test Method | Value / Value Range | Acceptance Criteria * |
|---------------------|--------------------|--|---|
| Temperature cycling | IEC 60794-1-22:F1 | - 20°C ÷ + 60°C | $\Delta\alpha \leq 0,05$ dB |
| Temperature range | | - 5°C ÷ + 50°C - 20°C ÷ + 60°C - 25°C ÷ + 60°C | during installation in service in storage & transport |
| Water penetration | IEC 60794-1-22 F5B | L = 3 m, h = 1 m, 24 h | no water leakage |
| Expected lifetime | | minimum 30 years | |

* IEC 60794-3-10, IEC 60794-3-11

Fire Properties

| Test | Value / Value Range | Test Method |
|-----------------------------------|---------------------|----------------------|
| Euro classification to CPR | Fca | EN 50575, EN 13501-6 |
| Declaration of performance number | D9010 | |
| 2015 / 863 / EU - RoHS 3 | conform | |
| 1907 / 2006 / EU - REACH | conform | |

MiniCore Aerial Drop Cable – Short Span



1. Optical fibers
2. Aramid strength members
3. FRLSZH UV stable outer jacket

General Description

Non-metallic FTTH drop cable with up to 12 fibers for indoor, aerial short span, façade or outdoor duct installation. Additionally, this cable construction features an intensified tensile force and thus a longer short span length compared to the UAF250 construction.

Construction and Dimension

| Cable family code | UAF1000 | UAF1000 | UAF1000 |
|--------------------------------|--|------------|------------|
| Fiber count | 2 | 8 | 12 |
| Outer sheath thickness | 0.8 mm | 0.8 mm | 0.8 mm |
| Cable outer diameter | 3.2 mm | 3.6 mm | 3.8 mm |
| Cable weight | 11 kg / km | 13 kg / km | 14 kg / km |
| Outer sheath material | UV stable FRLSZH | | |
| Sheath color | black | | |
| Sheath marking method, color | Ink-Jet, white | | |
| Fiber types available | Bend optimized singlemode fibers (G.657.A1, G.657.A2) | | |
| Fiber color coding (IEC 60304) | 1.-12.: red, green, blue, yellow, white, grey, brown, violet, turquoise, black, orange, pink | | |
| DIN / VDE Code | U-(ZN)H | | |
| Standard put-up length * | 2100 m ± 5 % | | |

* other put-up length available on special request

Order Information

| Cable Family | Fiber Count | G.657.A1 * |
|--------------|-------------|------------|
| UAF 1000 | 2 | 857723 |
| | 4 | 857724 |
| | 6 | 851164 |
| | 8 | 857725 |
| | 12 | 851165 |

other fiber counts and/or fiber types available on request

Mechanical Data

| Test | Test Method | Value / Value Range | Acceptance Criteria * |
|---|---------------------|--|--|
| Tensile performance – in service | IEC 60794-1-21:E1 | 1000 N (max. allow-able tension) | $\Delta\alpha \leq 0,05$ dB |
| Crush resistance - long term | IEC 60794-1-21:E3A | 500 N / 100 mm | $\Delta\alpha \leq 0,05$ dB prior release, no damage |
| Crush resistance - short term | IEC 60794-1-21:E3A | 1000 N / 100 mm | $\Delta\alpha \leq 0,05$ dB after release, no damage |
| Impact resistance | IEC 60794-1-21:E4 | 3 Nm, 3 impacts, d=20 mm, R=300 mm | $\Delta\alpha \leq 0,05$ dB after test, no damage |
| Torsion | IEC 60794-1-21:E7 | L = 2 m, rotation angle $\pm 180^\circ$, 5 cycles | no damage |
| Cable bend - no tension | IEC 60794-1-21:E11A | d=15 x cable diameter, 4 turns, 3 cycles | $\Delta\alpha \leq 0,05$ dB after test, no damage |
| Repeated bending | IEC 60794-1-21:E6 | R=20 x cable diameter, 25 cycles | no damage |
| Maximal recommended span | Telenco clamp 7593 | 60 m (min. sag 90 cm), max. allow-able tension | $\Delta\alpha \leq 0,05$ dB, no damage |
| Minimum bend radius – in service | | 55 mm | |
| Minimum bend radius – during installation | | 75 mm | |

Climatic Data

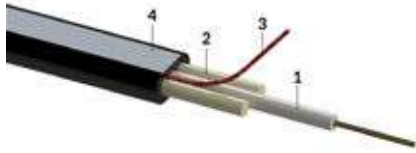
| Test | Test Method | Value / Value Range | Acceptance Criteria * |
|---------------------|--------------------|--|---|
| Temperature cycling | IEC 60794-1-22:F1 | - 20°C ÷ + 60°C | $\Delta\alpha \leq 0,05$ dB |
| Temperature range | | - 5°C ÷ + 50°C - 20°C ÷ + 60°C - 25°C ÷ + 60°C | during installation in service in storage & transport |
| Water penetration | IEC 60794-1-22 F5B | L = 3 m, h = 1 m, 24 h | no water leakage |
| Expected lifetime | | minimum 30 years | |

* IEC 60794-3-10, IEC 60794-3-11

Fire Properties

| Test | Value / Value Range | Test Method |
|-----------------------------------|---------------------|----------------------|
| Euro classification to CPR | Fca | EN 50575, EN 13501-6 |
| Declaration of performance number | D9011 | |
| 2015 / 863 / EU - RoHS 3 | conform | |
| 1907 / 2006 / EU - REACH | conform | |

Flat ADSS TWIN Loose Tube Cable – Short Span



1. Gel filled PBT loose tube with optical fibers
2. FRP strength members
3. Rip-cord
4. HDPE UV stable outer jacket

General Description

Non-metallic and flat self-supporting loose tube cable in a uni-tube construction for up to 12 fibers. The cable is built for outdoor aerial or direct buried installation.

Construction and Dimension

| | |
|--------------------------------|--|
| Cable family code | ST1fH |
| Loose tube diameter | 1.9 mm |
| Fiber count per tube | 12 |
| Outer sheath thickness | 1.0 mm |
| Cable outer diameter | 8.0 x 4.0 mm |
| Cable weight | 38 kg / km |
| Outer sheath material | UV stable HDPE |
| Sheath color | black |
| Sheath marking method, color | Ink-Jet, white |
| Fiber types available | Bend optimized singlemode fibers (G.657.A1) |
| Fiber color coding (IEC 60304) | 1.-12.: red, green, blue, yellow, white, grey, brown, violet, turquoise, black, orange, pink |
| DIN / VDE Code | A-D(ZN)2YT (2FRP 2,0) |
| Standard put-up length * | 2100 m ± 5 % |

* other put-up length available on special request

Order Information

| Cable Family | Fiber Count | G.657.A1 * |
|--------------|-------------|------------|
| ST1fH | 1 x 2 (2) | 857698 |
| | 1 x 4 (4) | 857699 |
| | 1 x 6 (6) | 857700 |
| | 1 x 8 (8) | 857701 |
| | 1 x 12 (12) | 851140 |

Mechanical Data

| Test | Test Method | Value / Value Range | Acceptance Criteria * |
|---|---------------------|--|--|
| Tensile performance – in service | IEC 60794-1-21:E1 | 1600 N (max. allow-able tension) | $\Delta\alpha \leq 0,05$ dB |
| Crush resistance - long term | IEC 60794-1-21:E3A | 2000 N / 100mm | $\Delta\alpha \leq 0,05$ dB prior release, no damage |
| Crush resistance - short term | IEC 60794-1-21:E3A | 4000 N / 100mm | $\Delta\alpha \leq 0,05$ dB after release, no damage |
| Impact resistance | IEC 60794-1-21:E4 | 10Nm, 3 impacts, d=20mm, R=300mm | $\Delta\alpha \leq 0,05$ dB after test, no damage |
| Torsion | IEC 60794-1-21:E7 | L = 2 m, rotation angle $\pm 180^\circ$, 5 cycles | no damage |
| Cable bend - no tension | IEC 60794-1-21:E11A | R=150mm, 4 turns, 3 cycles | $\Delta\alpha \leq 0,05$ dB after test, no damage |
| Repeated bending | IEC 60794-1-21:E6 | R=150mm, 25 cycles | no damage |
| Maximal recommended span | Telenco clamp 5126 | 80 m (min. sag 1 m), max. allow-able tension | $\Delta\alpha \leq 0,05$ dB, no damage |
| Minimum bend radius – in service | | 120mm | |
| Minimum bend radius – during installation | | 160mm | |

Climatic Data

| Test | Test Method | Value / Value Range | Acceptance Criteria * |
|---------------------|--------------------|--|---|
| Temperature cycling | IEC 60794-1-22:F1 | - 40°C ÷ + 70°C | $\Delta\alpha \leq 0,05$ dB |
| Temperature range | | - 5°C ÷ + 50°C - 40°C ÷ + 70°C - 40°C ÷ + 70°C | during installation in service in storage & transport |
| Water penetration | IEC 60794-1-22 F5B | L = 3 m, h = 1 m, 24 h | no water leakage |
| Expected lifetime | | minimum 30 years | |

* IEC 60794-3-10, IEC 60794-3-11

Fire Properties

| Test | Value / Value Range | Test Method |
|-----------------------------------|---------------------|----------------------|
| Euro classification to CPR | Fca | EN 50575, EN 13501-6 |
| Declaration of performance number | D9971 | |
| 2015 / 863 / EU - RoHS 3 | conform | |
| 1907 / 2006 / EU - REACH | conform | |

Flat ADSS TWIN Loose Tube Cable – Short Span



1. Gel filled PBT loose tube with optical fibers
2. FRP strength members
3. Rip-cord
4. HDPE UV stable outer jacket

General Description

Non-metallic and flat self-supporting loose tube cable in a twin-tube construction for up to 24 fibers. The cable is built for outdoor aerial or direct buried installation.

Construction and Dimension

| | |
|--------------------------------|--|
| Cable family code | ST2fH |
| Maximum fiber count | 24 |
| Maximum fiber count per tube | 12 |
| Maximum loose tube count | 2 |
| Loose tube diameter | 1.9 mm |
| Outer sheath thickness | 1.0 mm |
| Cable outer diameter | 9.8 x 4.0 mm |
| Cable weight | 59 kg / km |
| Outer sheath material | UV stable HDPE |
| Sheath color | black |
| Sheath marking method, color | Ink-Jet, white |
| Fiber types available | Bend optimized singlemode fibers (G.657.A1) |
| Fiber color coding (IEC 60304) | 1.-12.: red, green, blue, yellow, white, grey, brown, violet, turquoise, black, orange, pink |
| DIN / VDE Code | A-D(ZN)2YT (2FRP 2,0) |
| Standard put-up length * | 2100 m ± 5 % |

* other put-up length available on special request

Order Information

| Cable Family | Fiber Count | G.657.A1 * |
|--------------|-------------|------------|
| ST2fH | 2 x 4 (8) | 857702 |
| | 2 x 6 (12) | 857703 |
| | 2 x 8 (16) | 857704 |
| | 2 x 12 (24) | 851160 |

Mechanical Data

| Test | Test Method | Value / Value Range | Acceptance Criteria * |
|---|---------------------|---|--|
| Tensile performance – in service | IEC 60794-1-21:E1 | 1600 N (max. allow-able tension) | $\Delta\alpha \leq 0,05$ dB |
| Crush resistance - long term | IEC 60794-1-21:E3A | 2000 N / 100mm | $\Delta\alpha \leq 0,05$ dB prior release, no damage |
| Crush resistance - short term | IEC 60794-1-21:E3A | 4000 N / 100mm | $\Delta\alpha \leq 0,05$ dB after release, no damage |
| Impact resistance | IEC 60794-1-21:E4 | 10Nm, 3 impacts, d=20mm, R=300mm | $\Delta\alpha \leq 0,05$ dB after test, no damage |
| Torsion | IEC 60794-1-21:E7 | L = 2 m, rotation angle $\pm 180^\circ$, 5 cycles | no damage |
| Cable bend - no tension | IEC 60794-1-21:E11A | R=150mm, 4 turns, 3 cycles | $\Delta\alpha \leq 0,05$ dB after test, no damage |
| Repeated bending | IEC 60794-1-21:E6 | R=150mm, 25 cycles | no damage |
| Maximal recommended span | Telenco clamp 5126 | 80 m (min. mid-span sag 1 m), max. allow-able tension | $\Delta\alpha \leq 0,05$ dB, no damage |
| Minimum bend radius – in service | | 150mm | |
| Minimum bend radius – during installation | | 200mm | |

Climatic Data

| Test | Test Method | Value / Value Range | Acceptance Criteria * |
|---------------------|--------------------|--|---|
| Temperature cycling | IEC 60794-1-22:F1 | - 40°C ÷ + 70°C | $\Delta\alpha \leq 0,05$ dB |
| Temperature range | | - 5°C ÷ + 50°C - 40°C ÷ + 70°C - 40°C ÷ + 70°C | during installation in service in storage & transport |
| Water penetration | IEC 60794-1-22 F5B | L = 3 m, h = 1 m, 24 h | no water leakage |
| Expected lifetime | | minimum 30 years | |

* IEC 60794-3-10, IEC 60794-3-11

Fire Properties

| Test | Value / Value Range | Test Method |
|-----------------------------------|---------------------|----------------------|
| Euro classification to CPR | Fca | EN 50575, EN 13501-6 |
| Declaration of performance number | D9972 | |
| 2015 / 863 / EU - RoHS 3 | conform | |
| 1907 / 2006 / EU - REACH | conform | |

FTTH Micro Cable



General Description

Non-metallic Micro-Cable in a mini central loose tube construction designed for up to a maximum of 4 fibers. The cable is designed for indoor or outdoor use for blow-in technology in Microducts.

Construction and Dimension

| | |
|--------------------------------|---|
| Cable family code | MT1RF |
| Loose tube diameter | 1.2 mm |
| Fiber count per tube | 4 |
| Outer sheath thickness | 0.9 mm |
| Cable outer diameter | 3.0 mm |
| Cable weight | 11 kg / km |
| Outer sheath material | UV stable FRLSZH |
| Sheath color | black |
| Sheath marking method, color | Ink-Jet, white |
| Fiber types available | Bend optimized single- and multi-mode fibers (G.657.A1, OM3, OM4) |
| Fiber color coding (IEC 60304) | 1.-4.: red, green, blue, yellow |
| DIN / VDE Code | U-DQ(ZN)H (2FRP 0,5) |
| Standard put-up length * | 2100 m ± 5 % |

* other put-up length available on special request

Order Information

| Cable Family | Fiber Count | G.657.A1 * |
|--------------|-------------|------------|
| MT1RF | 1 x 2 (2) | 857693 |
| | 1 x 4 (4) | 851139 |

other fiber counts and/or fiber types available on request

Mechanical Data

| Test | Test Method | Value / Value Range | Acceptance Criteria * |
|---|---------------------|---|--|
| Tensile performance – during installation | IEC 60794-1-21:E1 | 150 N | $\Delta\alpha \leq 0,05$ dB after test |
| Crush resistance - short term | IEC 60794-1-21:E3A | 500 N / 100 mm | $\Delta\alpha \leq 0,05$ dB after release, no damage |
| Impact resistance | IEC 60794-1-21:E4 | 1 Nm, 3 impacts, d=20 mm, R=300 mm | $\Delta\alpha \leq 0,05$ dB after test, no damage |
| Torsion | IEC 60794-1-21:E7 | L = 1 m, rotation angle $\pm 180^\circ$, 10 cycles | no damage |
| Kink resistance | IEC 60794-1-21:E10 | d=20 x cable diameter | no kinking |
| Cable bend - no tension | IEC 60794-1-21:E11A | d=40 x cable diameter, 4 turns, 3 cycles | $\Delta\alpha \leq 0,05$ dB after test, no damage |
| Repeated bending | IEC 60794-1-21:E6 | R=40 x cable diameter, 25 cycles | no damage |
| Minimum bend radius – in service | | 50 mm | |
| Minimum bend radius – during installation | | 70 mm | |

Climatic Data

| Test | Test Method | Value / Value Range | Acceptance Criteria * |
|---------------------|--------------------|--|---|
| Temperature cycling | IEC 60794-1-22:F1 | - 20°C ÷ + 70°C | $\Delta\alpha \leq 0,05$ dB |
| Temperature range | | - 5°C ÷ + 50°C - 20°C ÷ + 70°C - 30°C ÷ + 70°C | during installation in service in storage & transport |
| Water penetration | IEC 60794-1-22 F5B | L = 3 m, h = 1 m, 24 h | no water leakage |
| Expected lifetime | | minimum 30 years | |

* IEC 60794-3-10, IEC 60794-3-11

Fire Properties

| Test | Value / Value Range | Test Method |
|--------------------------------------|---------------------|--------------------------|
| Thermal load | 0.19 MJ / m | |
| Euro classification to CPR | Fca | EN 50575, EN 13501-6 |
| Declaration of performance number | D9038 | |
| Flammability - vertical single cable | Pass | IEC 60332-1-2 |
| Flammability - vertical cable bundle | Pass | IEC 60332-3-22 |
| Smoke density | Pass | IEC 61034-1, IEC 61034-2 |
| Halogen free, acid gases | Pass | IEC 60754-2 |
| 2015 / 863 / EU - RoHS 3 | conform | |
| 1907 / 2006 / EU - REACH | conform | |

Customer Premises

Polaris Box Family

Polaris-box Family

Multifunctional for a flexible fiber optic termination



Customer Premises

Polaris Box Family



Polaris-box 4 Polaris-box 6 Polaris-box 16 Polaris-box 24 Polaris-box 36

| | | | | | |
|---|-------------------------|-------------------------|----------------|----------------|----------------|
| Protection class | IP65 | IP65 | IP65 | IP65 | IP65 |
| Number of adapters E-2000, SC, LC-Duplex | 2/4 | 6 | 16/24 | 24 | 36 |
| Number of splices | 12 ... 24 | 12 ... 60 | 12 ... 24 | 12 ... 144 | 12 ... 288 |
| Number of FMTS trays | - | 4 | - | 12 | 24 |
| Number of splices FMTS | - | 4/12 | - | 4/12 | 4/12 |
| Number of cable inserts top/side | 2 only side entries | 2/2 | 2/2 | 2/2 | 2/2 |
| Number of cable inserts below | 2 | 4 | 4 | 8 | 12 |
| Main cable inserts | 1 x R 3 - 13mm | 1 x R 3 - 13mm | 1 x R 3 - 16mm | 1 x R 3 - 16mm | 1 x R 3 - 16mm |
| Drop cable inserts, round | 12 x R 2 - 3mm | 12 x R 2 - 3mm | 16 x R 2 - 3mm | 16 x R 2 - 3mm | 16 x R 2 - 3mm |
| Drop cable inserts, Butterfly | - | - | 16 x 2 - 3mm | 16 x 2 - 3mm | 16 x 2 - 3mm |
| Drop cable inserts | 8 x 4 - 5mm (IP55 only) | 8 x 4 - 5mm (IP55 only) | 4 x 4 - 5mm | 4 x 4 - 5mm | 4 x 4 - 5mm |
| Overlength storage | | - | | | |
| Extendability | | | | | |
| Splitter application | | | | | |
| Collocation | | | | | |
| Size | compact | small | small/medium | medium | medium/large |

Customer Premises

Polaris Box Family

Polaris Family



Polaris 4 (W x H x D) 156.0 mm x 230.0 mm x 63.0 mm / 6.14 in x 9.06 in x 2.48 in

| | |
|-----------------------------|---------|
| With Lock | R859107 |
| Without Lock | R859106 |
| Polaris 4 Pole Mounting Set | R878834 |



Polaris 6 (W x H x D) 190.0 mm x 285.0 mm x 60.0 mm / 7.48 in x 11.22 in x 2.36 in

| | |
|-----------------------------|---------|
| With Lock | R820282 |
| Without Lock | R820281 |
| Polaris 6 Pole Mounting Set | R820292 |



Polaris 6 with 16 SC/APC Adapters installed, cable entries and splitters

| | |
|---|---------|
| Polaris 6 with 16 SCA adapters, with lock | R910925 |
| Polaris 6 with 16 SCA adapters, without lock | R913645 |
| Polaris 6 with 16 SCA pigtails, 2 x 1:8 splitters, with lock | R910922 |
| Polaris 6 with 16 SCA pigtails, 2 x 1:8 splitters, without lock | R913647 |



Polaris 16 (W x H x D) 218.0 mm x 315.0 mm x 112.0 mm / 8.58 in x 12.40 in x 4.41 in

| | |
|------------------------------|---------|
| With Lock | R851085 |
| Without Lock | R851084 |
| Polaris 16 Pole Mounting Set | R878835 |



Polaris 24 (W x H x D) 263.0 mm x 371.0 mm x 150.0 mm / 10.35 in x 14.61 in x 5.91 in

| | |
|------------------------------|---------|
| With Lock | R851087 |
| Without Lock | R851086 |
| Polaris 24 Pole Mounting Set | R878836 |



Polaris 36 (W x H x D) 330.0 mm x 450.0 mm x 150.0 mm / 12.99 in x 17.72 in x 5.91 in

| | |
|------------------------------|---------|
| With Lock | R851083 |
| Without Lock | R851082 |
| Polaris 36 Pole Mounting Set | R878837 |

Customer Premises

Polaris Box Family

Polaris 4, 6 Cable Sealing Elements



IP65 - 3mm-9mm **R820283**



IP65 - 9mm-13mm **R820284**



IP65 - 12x2-3mm **R820286**



IP54 - 3-13mm
(flat drop cable) **R820285**



IP54 - 12x2-2.7mm **R820287**



IP54 - 8x5-8mm **R878849**



IP54 - 4x2-2.7mm
& 3x7mm **R820289**

IP54 - 8x5mm **R820288**



IP55 - Bridge 2x
box **R820290**



Adapter Entry (SC/
LC) **R820291**

Polaris Box 16, 24, 36 Cable entry kit



3mm-5mm **R851090**



4x 4-5mm **R820291**



15x 2-3mm **R851098**



Cover Kit **R851088**

5mm-7mm **R851091**

7mm-9mm **R851092**

9mm-11mm **R851093**

11mm-13mm **R851094**

13mm-14mm **R851095**

14mm-15mm **R851096**

15mm-16mm **R851097**



12x 4-5mm **R872832**

16x 2-3mm Butterfly **R851099**



Blind Element **R851089**

FMTS Splice Trays



FMTS Splice Tray 12HS (1pc)
R895101



FMTS Tray Cover (1pc)
R895103



FMTS Splitter Tray (6pc)
R820097



Labeling Sheet
R830928

Customer Premises

Splitter & Attenuators

Optical Splitter GPON



Features:

- 1310nm, 1550nm, 1310/1550nm, or WDM windows
- Low insertion loss and uniformity
- High reliability through applicable international standards
- Telcordia GR-1209-CORE: Generic Requirements for Passive Optical Components
- Telcordia GR-1221-CORE: Reliability Requirements for Passive Optical Components
- Compact size enabling storage in optical splice trays
- Installation Environment: Internal or External

| Balanced Splitters (IN-OUT) | 1:2 | 1:4 | 1:8 | 1:16 | 1:32 |
|-----------------------------|---------|---------|---------|---------|---------|
| SC/APC - SC/APC 0,9mm | R886295 | R886298 | R886291 | R886290 | R886294 |
| LC/APC - LC/APC 0,9mm | R886296 | R886299 | R886301 | R886293 | R886289 |
| Bare Fiber 0.9mm | R886287 | R886297 | R886300 | R886292 | |

| Splitters Unbalanced | 0.9mm |
|----------------------|---------|
| 1/99 | R886302 |
| 2/98 | R886303 |
| 5/95 | R886304 |
| 10/90 | R886305 |
| 15/85 | R886306 |
| 20/80 | R886307 |
| 30/70 | R886309 |
| 35/65 | R886310 |
| 40/60 | R886311 |
| 45/55 | R886312 |



Attenuators:



| Attenuators | LC/PC | LC/APC | SC/PC | SC/APC |
|-------------|---------|---------|---------|---------|
| 1.0 dB | R886342 | R886335 | R886339 | R886343 |
| 2.0 dB | R886325 | R886336 | R886338 | R886337 |
| 3.0 dB | R886319 | R886316 | R886327 | R886328 |
| 5.0 dB | R886320 | R886315 | R886324 | R886329 |
| 7.0 dB | R886321 | R886317 | R886277 | R886282 |
| 10.0 dB | R886318 | R886313 | R886323 | R886322 |
| 15.0 dB | R886341 | R886314 | R886278 | R886275 |
| 20.0 dB | R886326 | R886340 | R886331 | R886330 |

FO Outlet SCA



FO Outlet SC APC

w/1 adapter + pigtail

R515039

Includes:

- Outlet
- Mounting plate, metal
- 1 SC adapter, green, ceramic, complete
- 1 pigtail SC APC, green, G.657.A red, 0.7 m
- Splice holder for 4 shrink splices
- 2 hinged dust covers, white
- Cable tie
- Installation instructions

Dimensions:

- Height: 88 mm
- Width: 88 mm
- Depth: 22 mm

FO Outlet LCA



FO Outlet LC APC

w/1 adapter + pigtail

R515035

Includes:

- Outlet
- Mounting plate, metal
- 1 LC-Duplex adapter, green, ceramic, complete
- 1 pigtail LC APC, green, G.657.A red, 0.7 m
- Splice holder for 4 shrink splices
- 4 hinged dust covers, white
- Cable tie
- Installation instructions

Dimensions:

- Height: 88 mm
- Width: 88 mm
- Depth: 22 mm

FO Cleaning Accessories



| | |
|---|---------|
| IBC Single fiber 2.5mm cleaner | R260759 |
| IBC Single fiber 1.25mm cleaner | R260761 |
| IBC MPO cleaner | R260582 |
| OPTIPOP R Reel Type Connector Cleaner Kit | R260531 |
| OPTIPOP R Male MPO Cleaner cassette | R260532 |
| Cleaning Sanata wipes Qty 300 | R271951 |
| OPTIPOP R Cleaner refill | R260528 |

Launch Box



R&M's launch box used in a process of OTDR testing. It is placed between the OTDR and the patch panel.

Up to 1 km of fiber, coiled

Fiber types available OS2 (G.657.A1), OM1 (62.5/125um), OM3 & OM4 (50/125um)

Durable Polypropylene case with lid to cover and protect leads when not in use

Interferometer reports of connectors and OTDR trace included with documentation

Available with all common connector types

Launch Box (OS2 G.675.A1), 1Km

| | |
|-----|---------|
| SCU | R273576 |
| SCA | R276444 |
| LCU | R876481 |
| LCA | R277341 |

Fiber Optic Specifications and Recommendations

R&M Fiber Optic Grades



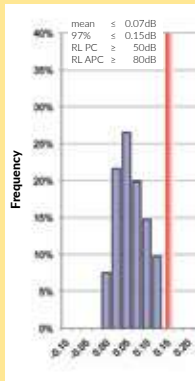
Independent grading for fiber optic connectors

Quality grades for fiber optic connectors mean more reliability for customers. Upgrading and installing optical high-performance networks is in full swing on an international scale. This means the importance of connectors as key components of the passive cabling infrastructure is also increasing. No matter what area, from WAN, metropolitan area and campus network applications up to backbone cabling and subscriber connections, the use of top-quality connectors ensures highest transmission rates, consistent network availability and saves energy to boot (Green Network).

It is therefore indispensable that planners and installers have a sound knowledge of the quality grades for fiber optic connectors.

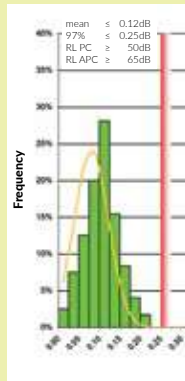
Singlemode-Grade A*

PC and APC - polished



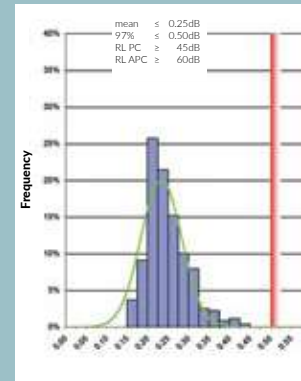
Singlemode-Grade B

PC and APC - polished



Singlemode-Grade C

PC and APC - polished



Technical Data

| Definition IL/RL at R&M | Grade A*/1 | Grade A*/2 | Grade B/1 | Grade B/2 | Grade C/1 | Grade C/2 |
|-----------------------------------|------------|------------|-----------|-----------|-----------|-----------|
| Insertion loss (IL) 97% | ≤ 0.15 dB | ≤ 0.15 dB | ≤ 0.25 dB | ≤ 0.25 dB | ≤ 0.50 dB | ≤ 0.50 dB |
| Insertion loss (IL) typical value | ≤ 0.07 dB | ≤ 0.07 dB | ≤ 0.12 dB | ≤ 0.12 dB | ≤ 0.25 dB | ≤ 0.25 dB |
| Return loss (RL) | ≥ 80 dB | ≥ 50 dB | ≥ 65 dB | ≥ 45 dB | ≥ 60 dB | ≥ 45 dB |
| Typical | ≥ 90 dB | ≥ 55 dB | ≥ 85 dB | ≥ 55 dB | ≥ 80 dB | ≥ 55 dB |
| Laser power, inserted | ≤ 2 W | ≤ 300 mW | ≤ 1 W | ≤ 300 mW | ≤ 500 mW | ≤ 300 mW |
| IEC61300-2-14, 500h, 23° C | | | | | | |

| Definition IL/RL at R&M | Grade Am*/2 | Grade Bm*/3 |
|-----------------------------------|-------------|-------------|
| Insertion loss (IL) 100% | ≤ 0.25 dB | ≤ 0.50 dB |
| Insertion loss (IL) typical value | ≤ 0.10 dB | ≤ 0.15 dB |
| Return loss (RL) | ≥ 45 dB | ≥ 35 dB |

* not defined by standards yet

Singlemode Fiber Specification

Optical Specification

| Designation | | G.657.A1 | G.657.A2 |
|---|------------|-------------------------------------|-------------------------------------|
| Attenuation maximum in cable | 1310Nm | ≤ 0.40 dB / km | ≤ 0.40 dB / km |
| | 1383Nm | ≤ 0.40 dB / km | ≤ 0.40 dB / km |
| | 1550Nm | ≤ 0.25 dB / km | ≤ 0.25 dB / km |
| | 1625Nm | ≤ 0.25 dB / km | ≤ 0.25 dB / km |
| In homogeneity of OTDR trace for any two 1000-meter fiber lengths | | max. 0.1 dB / km | max. 0.1 dB / km |
| Dispersion | 1550Nm | ≤ 18.0 ps / km × Nm | ≤ 18.0 ps / km × Nm |
| | 1625Nm | ≤ 22.0 ps / km × Nm | ≤ 23.0 ps / km × Nm |
| Zero dispersion wavelength, λ ₀ | | 1304 – 1324Nm | 1304 – 1324Nm |
| Zero dispersion slope | | ≤ 0.092 ps / (Nm ² × km) | ≤ 0.092 ps / (Nm ² × km) |
| Point Discontinuity | | ≤ 0.05 dB | ≤ 0.05 dB |
| Cut-off wavelength λ _{cc} | | ≤ 1260Nm | ≤ 1260Nm |
| Mode field diameter | 1310Nm | 9.2 ± 0.4 μm | 8.6 ± 0.4 μm |
| | 1550Nm | 10.4 ± 0.5 μm | 9.6 ± 0.5 μm |
| Polarization mode dispersion (PMD) | cabled | ≤ 0.1 ps / √km | ≤ 0.2 ps / √km |
| | link value | ≤ 0.05 ps / √km | ≤ 0.06 ps / √km |
| Group index of refraction | 1310Nm | 1.467 | 1.467 |
| | 1550Nm | 1.468 | 1.468 |
| Macro bending loss, 10 turns, r = 15mm mandrel | 1550Nm | ≤ 0.1 dB | ≤ 0.03 dB |
| | 1625Nm | ≤ 0.3 dB | ≤ 0.1 dB |
| Macro bending loss, 1 turn, r = 10mm mandrel | 1550Nm | ≤ 0.5 dB | ≤ 0.1 dB |
| | 1625Nm | ≤ 1.5 dB | ≤ 0.2 dB |
| Macro bending loss, 1 turn, r = 7.5mm mandrel | 1550Nm | -- | ≤ 0.5 dB |
| | 1625Nm | -- | ≤ 0.9 dB |

Dimensional Specification

| Designation | G.657.A1 | G.657.A2 |
|--|----------------|----------------|
| Cladding diameter | 125.0 ± 0.7 μm | 125.0 ± 0.7 μm |
| Cladding non-circularity | ≤ 0.7% | ≤ 0.7% |
| Core (MFD) non-circularity | ≤ 6% | ≤ 6% |
| Core - cladding concentricity | ≤ 0.5 μm | ≤ 0.5 μm |
| Primary coating diameter - uncolored | 242 ± 7 μm | 242 ± 7 μm |
| Primary coating diameter - colored | 250 ± 15 μm | 250 ± 15 μm |
| Primary coating non-circularity | ≤ 5% | ≤ 5% |
| Primary coating-cladding concentricity error | ≤ 12.0 μm | ≤ 12.0 μm |

Singlemode Fiber Specification

Mechanical and Environmental Specification

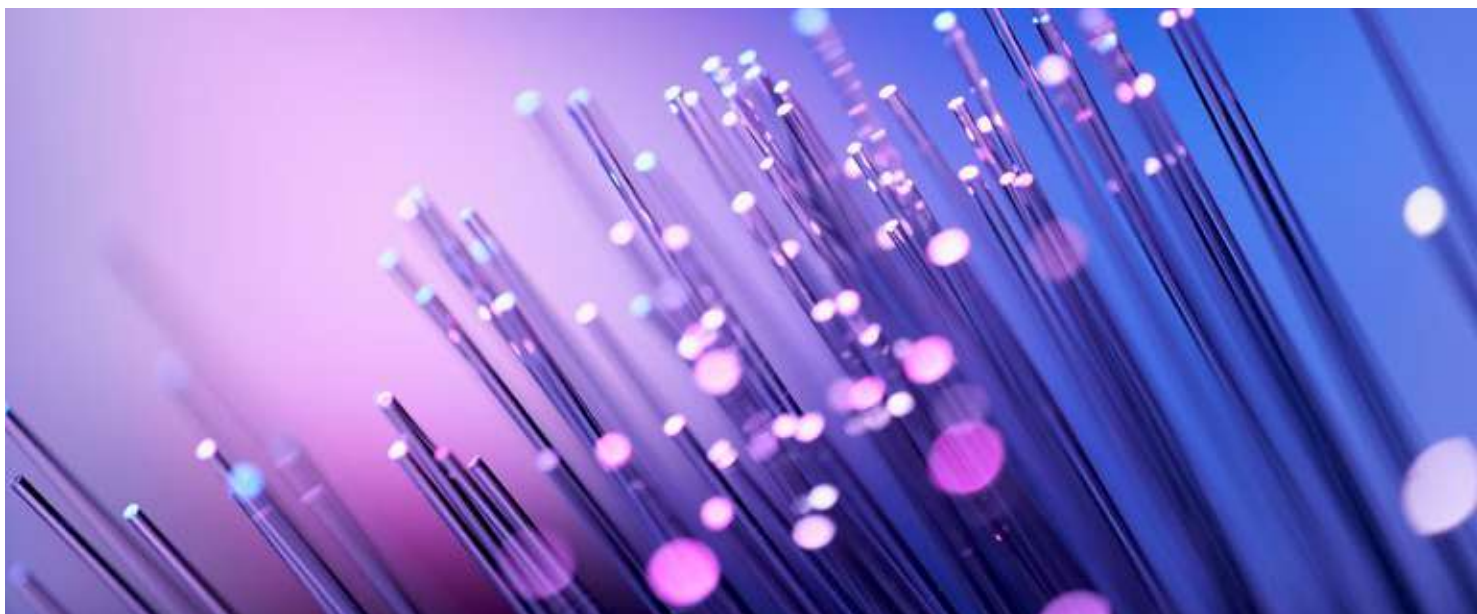
| Designation | | G.657.A1 | G.657.A2 |
|---|-----------------------|-----------------------------------|-----------------------------------|
| Coating material | | dual layer UV curable acrylate | dual layer UV curable acrylate |
| Tensile proof test (fiber elongation $\leq 1\%$) | | ≥ 100 kpsi | ≥ 100 kpsi |
| Operation temperature range -60°C to 85°C | 1310,1550 and 1625 Nm | ≤ 0.5 dB / km | ≤ 0.5 dB / km |
| Water immersion $23^{\circ}\text{C} \pm 2^{\circ}\text{C}$ | 1310,1550 and 1625 Nm | ≤ 0.5 dB / km | ≤ 0.5 dB / km |
| Heat aging | 1310,1550 and 1625 Nm | ≤ 0.5 dB / km | ≤ 0.5 dB / km |
| Damp heat | 1310,1550 and 1625 Nm | ≤ 0.5 dB / km | ≤ 0.5 dB / km |

Standards

| Designation | G.657.A1 | G.657.A2 |
|--|--|---|
| This fiber fulfills the requirements of: | <ul style="list-style-type: none"> • IEC 60793-2-50 Cat. B.1.3 and B6_a1 • ITU Recommendation G.657 table A1 • ITU Recommendation G.652 table D (including older ITU designations A, B and C) • TIA / EIA-492 CAAC | <ul style="list-style-type: none"> • IEC 60793-2-50 Cat. B.1.3, B6a.1, B6a.2 • ITU Recommendation G.657 table A2 / B2 • ITU Recommendation G.652 table D (including older ITU designations A, B and C) • TIA / EIA-492 CAAC |
| When cabled, the fibers fulfil the requirements for use in a number of cabling systems, among them is: | <ul style="list-style-type: none"> • EN 50 173-1: 2011, cat. OS1 + OS2 • ISO / IEC 24702: 2006, cat. OS1 + OS2 • ISO / IEC 11801: 2002, cat. OS1 + OS2 • IEEE 802.3 - 2002 incl. 802.3 Section Four | |
| Testing methods are in accordance with the following standards: | <ul style="list-style-type: none"> • IEC 60793-1-XX | |

R&M's ITU-T G657.A1 fiber is an ITU-T Recommendation G652.D fully compliant optical fiber with enhanced low-loss and bending performances that exceeds the ITU-T Recommendation G.657.A1 standard and still splices the same as the installed base of standard single-mode fibers.

R&M's ITU-T G657.A2 fiber exceeds Recommendation ITU-T G657.A2/B2 and remains compatible and fully compliant with Recommendation ITU-T G.652.D. The optical fiber delivers enhanced macro bending performance while maintaining compatible with current equipment, practices and procedures.



Multimode Fiber Specification

Optical Specification

| Designation | | OM1 | OM2 | OM3 | OM4 | OM5 ¹ | Units |
|--|--------|--------------|--------------|--------------|--------------|------------------|----------|
| Overfilled Modal Bandwidth | 850nm | ≥ 200 | ≥ 500 | ≥ 1500 | ≥ 3500 | ≥ 3500 | MHz x km |
| | 1310nm | ≥ 500 | ≥ 500 | ≥ 500 | ≥ 500 | ≥ 500 | MHz x km |
| Effective Modal Bandwidth | 850nm | | | ≥ 2000 | ≥ 4700 | ≥ 4700 | MHz x km |
| | 953nm | | | | | ≥ 2470 | MHz x km |
| Cabled Fiber Attenuation (maximum) | 850nm | ≤ 3.5 | ≤ 3.0 | ≤ 3.0 | ≤ 3.0 | ≤ 3.0 | dB/km |
| | 1310nm | ≤ 1.5 | ≤ 1.0 | ≤ 1.0 | ≤ 1.0 | ≤ 1.0 | dB/km |
| Numerical aperture | | 0.275 ±0.015 | 0.200 ±0.015 | 0.200 ±0.015 | 0.200 ±0.015 | 0.200 ±0.015 | |
| Group Index of Refraction | 850nm | 1.496 | 1.482 | 1.482 | 1.482 | 1.482 | |
| | 1310nm | 1.491 | 1.477 | 1.477 | 1.477 | 1.477 | |
| Macro bending loss, r = 7.5 mm, 2 turns | 850nm | | ≤ 0.2 | ≤ 0.2 | ≤ 0.2 | ≤ 0.2 | dB |
| | 1310nm | | ≤ 0.5 | ≤ 0.5 | ≤ 0.5 | ≤ 0.5 | dB |
| Macro bending loss, r = 15 mm, 2 turns | 850nm | | ≤ 0.1 | ≤ 0.1 | ≤ 0.1 | ≤ 0.1 | dB |
| | 1310nm | | ≤ 0.3 | ≤ 0.3 | ≤ 0.3 | ≤ 0.3 | dB |
| Macro bending loss, r = 37.5 mm, 100 turns | 850nm | ≤ 0.5 | ≤ 0.5 | ≤ 0.5 | ≤ 0.5 | ≤ 0.5 | dB |
| | 1310nm | ≤ 0.5 | ≤ 0.5 | ≤ 0.5 | ≤ 0.5 | ≤ 0.5 | dB |
| Bending-optimized fiber | | | yes | yes | yes | yes | |

Dimensional Specification

| Designation | OM1, OM2, OM3, OM4, OM5 | Units |
|--------------------------------------|-------------------------|-------|
| Core Diameter | 50 ± 2.5 | μm |
| Core non-Circularity | ≤ 5 | % |
| Core-Cladding Concentricity Error | ≤ 1.5 | μm |
| Cladding Diameter | 125.0 ± 1.0 | μm |
| Cladding non-Circularity | ≤ 1.0 | % |
| Coating Diameter | 242 ± 7 | μm |
| Coating non-Circularity | ≤ 5 | % |
| Coating-Cladding Concentricity Error | ≤ 10 | μm |

Mechanical Specification

| Designation | OM1, OM2, OM3, OM4, OM5 | Units |
|---|-------------------------------------|-------|
| Tensile proof test at fiber elongation = 1 % | ≥ 0.7 (100 kpsi) | GPa |
| Dynamic Tensile Strength | median > 3.8 (550 kpsi) | GPa |
| Dynamic Fatigue, unaged and aged ² | nd ≥ 20 | - |
| Average Coating Strip Force | 1 ≤ F _{avg-strip} ≤ 3 | N |
| Peak Coating Strip Force | 1.3 ≤ F _{peak-strip} ≤ 8.9 | N |

Multimode Fiber Specification

Environmental Specification

| Designation | Induced attenuation | OM1, OM2, OM3, OM4, OM5 |
|--------------------------------|--|--------------------------|
| Temperature Cycling, | $\Delta\alpha \leq 0.1$ dB/km 850/1300nm | -60°C to +85°C |
| Temperature - Humidity Cycling | $\Delta\alpha \leq 0.1$ dB/km 850/1300nm | -10°C to +85°C, 4-98% RH |
| Water Immersion | $\Delta\alpha \leq 0.1$ dB/km 850/1300nm | 30 days; 23°C |
| Dry Heat | $\Delta\alpha \leq 0.1$ dB/km 850/1300nm | 30 days ; 85°C |
| Damp Heat | $\Delta\alpha \leq 0.1$ dB/km 850/1300nm | 30 days; 85°C; 85% RH |

Others

| Designation | OM1, OM2, OM3, OM4, OM5 |
|------------------|-------------------------|
| Coating material | Acrylate |

Standards

| Designation | OM1 | OM2 | OM3 | OM4 | OM5 |
|---------------------|-------------------------|-------------------------|-------------------------|-------------------------|--------------------------|
| IEC / EN 60793-2-10 | Type A1-OM1 | Type A1-OM2 | Type A1-OM3 | Type A1-OM4 | Type A1-OM5 |
| ISO / IEC 11801 | Category OM1 | Category OM2 | Category OM3 | Category OM4 | Category OM5 |
| TIA / EIA 492 | AAAF (formerly AAAA) | AAAF (formerly AAAB) | AAAF (formerly AAAC) | AAAF (formerly AAAD) | AAAF (formerly AA AE) |
| ITU-T | G.651.1 | G.651.1 | G.651.1 | G.651.1 | G.651.1 |

Minimum System Reach – Transmission Distance

| IEEE Standard | OM1 | OM2 | OM3 | OM4 | OM5 |
|--------------------------|--------|--------|--------|--------|--------|
| 100BASE-FX | 2'000m | 2'000m | 2'000m | 2'000m | 2'000m |
| 1000BASE-SX | 275m | 550m | 550m | 550m | 550m |
| 10GBASE-SR | 33m | 82m | 300m | 550m | 550m |
| 25GBASE-SR | | | 70m | 100m | 100m |
| 40GBASE-SR4 ³ | | | 100m | 150m | 150m |
| 100GBASE-SR4 | | | 100m | 100m | 100m |
| 400GBASE-SR4.2 | | | 70m | 100m | 100m |
| 40G-BiDi | | | 100m | 150m | 200m |
| 100G-BiDi | | | 70m | 100m | 150m |
| 40G SWDM4 | | | | 350m | 400m |
| 100G SWDM4 | | | | 100m | 150m |

³ indicated link distances require total connector loss = 1.0 dB, and VCSEL spectral bandwidth of = 0.45 nm

Chemical Resistance

Chemical resistance

As a rule, chemical resistance is only required in heavily polluted or potentially hazardous environments. Knowledge of the effects of chemical exposure on the cabling component is of primary importance for the assessment of the suitable product. Put simply, the combination of the intensity and duration of chemical exposure can be interpreted as „chemical exposure“.

Basically, a distinction is made between 3 types of exposure:

- Exposure to less aggressive chemicals
- Exposure to aggressive chemicals
- Exposure to swelling chemicals

The following table gives an overview of the commercially available sheath materials and shall be seen as a simple orientation aid.

| | Description | Polyolefins flame retardant | Polyethylene | | Polybutylene terephthalate | Polyurethane | Polyamide | Polyvinyl- chloride |
|---------------------|--------------------------|--------------------------------|--------------|------|-------------------------------|--------------|-----------|------------------------|
| | Abbreviation | FRLSZH | LDPE | HDPE | PBT | PUR | PA | PVC |
| Groups of chemicals | Oil | ML | ML | | OK | ML | OK | ML |
| | Petrol /Kerosene | NR | ML | | OK | ML | ML | NR |
| | Salt water | OK | OK | | OK | OK | OK | OK |
| | Aggressive, watery acids | OK | OK | | ML | ML | ML | ML |
| | Diluted, watery acids | OK | OK | | OK | ML | OK | ML |
| | Aggressive, watery lye's | OK | OK | | NR | NR | ML | ML |
| | Diluted, watery lye's | OK | OK | | ML | OK | OK | ML |
| | Acids, less aggressive | OK | OK | | NR | ML | ML | OK |
| | Acids, aggressive | OK | OK | | NR | ML | OK | ML |
| | Soaps | OK | OK | | OK | NR | OK | OK |
| | Solvents, thinners | NR | NR | | NR | NR | NR | NR |

OK: no problem, constant exposure causes no damage
ML: suitable for medium load, some effect after few days of constant exposure
NR: not recommended, immediate damage

Mechanical Properties

Mechanical properties describe its behavior under the action of loads on it. There are many mechanical properties of materials and some key properties related to cable sheath are given below. These properties are mostly of importance during installation.

| Description | Polyolefins flame retardant | Polyethylene | | Polybutylene terephthalate | Polyurethane | Polyamide | Polyvinyl- chloride |
|---------------------|--------------------------------|--------------|------|-------------------------------|--------------|-----------|------------------------|
| Abbreviation | FRLSZH | LDPE | HDPE | PBT | PUR | PA | PVC |
| Abrasion resistance | low | med | good | good | good | good | medium |
| Flexibility | high | med | low | low | high | low | high |
| Hardness | medium | med | hard | hard | soft | hard | soft |

Color Codes

Combustion Properties

Flammability and/or combustion properties come into play any time a part or product will be used in a regulated space or application, such as aircraft, residential living units, public buildings, and so on.

| Description | Polyolefins flame retardant | Polyethylene | | Polybutylene terephthalate | Polyurethane | Polyamide | Polyvinyl- chloride |
|------------------|--------------------------------|--------------|------|-------------------------------|--------------|-----------|------------------------|
| | FRLSZH | LDPE | HDPE | PBT | PUR | PA | PVC |
| Halogen free | yes | yes | | yes | yes | yes | no |
| Flame retardant | yes | no | | no | no | no | yes |
| Smoke emission | low | low | | strong | strong | medium | strong |
| Corrosive gasses | low | no | | no | low | low | high |

Color code for fibers

ANSI/TIA-598

| | | | | | | | | | | | |
|---------------------|-----------------------|----------------------|----------------------|---------------------|----------------------|--------------------|----------------------------|-----------------------|-----------------------|---------------------|--------------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| | | | | | | | | | | | |
| blue | orange | green | brown | gray | white | red | black | yellow | violet | pink | turquoise |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| | | | | | | | | | | | |
| blue ring-marked | orange ring-marked | green ring-marked | brown ring-marked | gray ring-marked | white ring-marked | red ring-marked | transparent ring-marked | yellow ring-marked | violet ring-marked | pink ring-marked | turquoise ring-marked |

Loose-tube color coding

| | | | | | | |
|-----|-------|-------|-------|-------|------|-------|
| 1 | 2 | 3 | 4 | 5 | 6-17 | 18 |
| | | | | | | |
| red | green | white | white | white | ... | white |

Outer jacket color

| | | | | | | | | | | | | |
|-------|-----|-------|------|--------|-------|-------|------|-------|--------|-----------|--------|------|
| B | R | G | B | Y | W | I | G | B | V | T | O | P |
| | | | | | | | | | | | | |
| black | red | green | blue | yellow | white | ivory | gray | brown | violet | turquoise | orange | pink |

System Warranty

Qualified Partner Program (QPP)



The three-level R&M warranty system

R&M guarantees security for the future. As a certified R&M partner, you can pass on this guarantee in three levels.

The five-year product warranty

This guarantees that passive R&Mfreenet components will operate free of errors during the guarantee period and will exceed the requirements of all relevant cabling norms. Anyone who buys passive R&Mfreenet components will benefit from this protection.

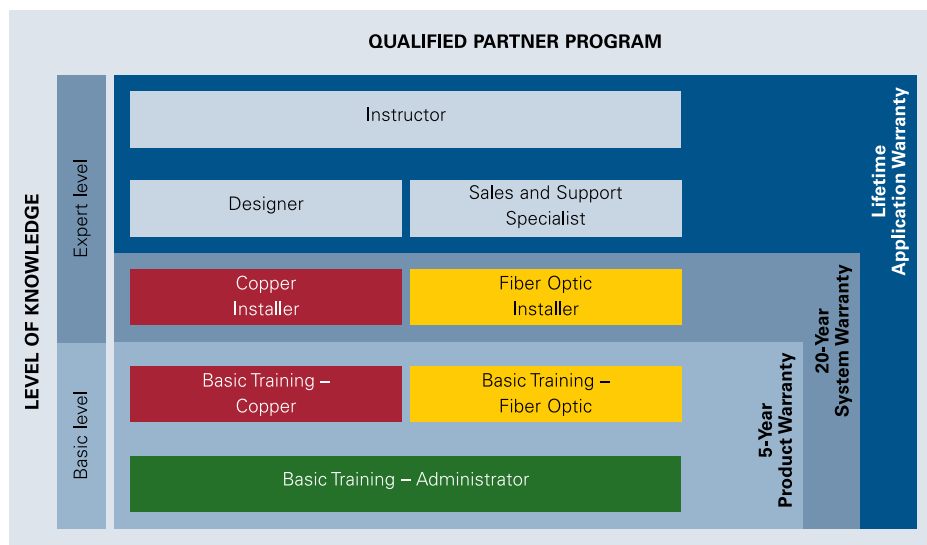
The 25-year R&Mfreenet system warranty

This covers the entire R&Mfreenet cabling system and protects

the end customer from component failures and installation problems. This guarantee is granted if the LAN cabling system consists exclusively of passive R&Mfreenet components and the entire installation is performed by a certified R&Mfreenet installer (or by an entity provided with more training by the QPP [Qualified Partner Program]).

The lifelong application warranty

This warranty requires that the passive R&Mfreenet cabling system be planned by a certified designer. It includes the promise that all protocols supported by industry standards will run on the system for its entire lifetime. No matter what requirements your end customers may stipulate, you can trust R&Mfreenet certified partners.



System Warranty

Qualified Partner Program (QPP)



Planning safety.

We share our know-how of more than 50 years with our customers to pave the way for a perfectly performing network.



Installation safety.

Time pressure and limited space are the reasons why installation times can be long and wrong. R&M systems have guaranteed channel performance and have been developed and tested for practice.



Operation safety.

R&M stands for mechanically and thermally stable design, a prerequisite for years of trouble-free operation of networks.



Expandability safety.

R&M develops backward compatible products that fit into any existing network.



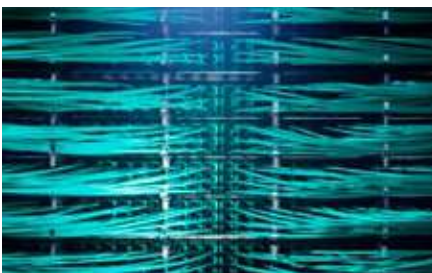
Maintenance safety.

MAC (Move-Add-Change) are a source of mistakes and unplanned downtime. R&M solutions and services combined with high quality products help to prevent from mistakes and to save money.



Compliance safety.

R&M products and processes meet all relevant international regulations and standards:
ISO 9001
ISO 14001
RoHS
REACH



Networks for a lifetime

The market constantly faces new challenges and demands. New environments and needs increased requirements for networks and components in terms of operation and future security. R&M meets these needs by constant innovation and evolution of products and systems. Due to our proximity to our customers worldwide, we create practical and tailored solutions.

Our focus is on maximum planning and cost control across the entire value chain and product life cycle. And that's how you save money over time.

System Warranty

Qualified Partner Program (QPP)



A solution for every network

As a complete supplier with an integrated system approach for fiber optic and copper cabling, R&M works side by side with public and private network operators.

Our joint task is to provide customers with modern broadband infrastructures. For this, R&M provides systems that use building blocks, making the design and installation intuitive and easy. The distribution and connection technology is designed in a modular way and all elements combine. This makes R&M solutions extremely flexible to meet the specific requirements and conditions of the different market segments that serve the huge variety of locations - both indoors and outdoors. R&M offers advanced and cutting edge solutions for demanding FTTX topologies of all types. The system brings together all the factors that network operators need for efficient deployment, reliable operation and competitive service.

Based on a flexible and modular product platform, different cabling and connectivity solutions can be brought together to meet very specific requirements and a wide range of applications. These solutions can handle all cabling and connectivity tasks around typical FTTX applications from the central, through the outside area of the plant to any type of customer installation. Distribution, splice, division and connection requirements or challenges can be easily met by covering all typical network topologies and types of fiber optic cables or routings.



System Warranty

Qualified Partner Program (QPP)

Service & Training

R&M customers always know what they can expect from us. They constantly receive expert responses, quick decisions and professional support. Qualified specialists, available in all sales regions, are responsive and take the initiative to actively support their customers. The integrated service also includes the provision of prefabricated units and components or assemblies that are always tested at the factory.

Consultancy during the network planning phase along with product reviews are professional services you can expect from R&M. Whenever necessary, we develop tailor-made solutions based on our portfolio with our application engineering team.



Professional Partnership

With your decision to work with R&M, you choose a strategic partner that offers much more than innovative cabling solutions. By using R&M products and tailor-made solutions, your networks are flexible and equipped for the future with our consistent modular approach and the scalability of our portfolio - you have many options. Your network can be adapted at any time to new market developments that require changes in conditions or adaptations of the location.

End-to-end compatible systems from R&M simplify planning, assembly and operation and thus contribute to efficient and economical layer 1 infrastructure installations.



Number 1 for Layer 1

The demand for online services continues to grow constantly and along with it the challenges of fiber optic networks. With R&M as your partner and solution provider for FTTX networks, you set a safe path for a competitive future.

R&M offers you modular cabling and connectivity systems designed around the latest technology. It is as simple as it is safe to put it into service and it saves your installation time.

The R&M portfolio of FTTX solutions is suitable for both point-to-point and point-to-multipoint schemes and is also ready for WDM-PON, thus providing the highest level of availability possible.

R&M is your partner for robust, integrated and modular Layer 1 FTTX connectivity systems. We support and advise you on configuring or migrating your network with innovative and customizable solutions around the management, distribution and termination of optical fiber at the exchange, at external plant in the field and at the client's facilities.



***More than just antennas:
5G business models***

The 5G ecosystem offers opportunities for new business models. Local, established and new market players can develop infrastructure solutions and attractive services. R&M supports them with expertise, technology, engineering, and more.

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