

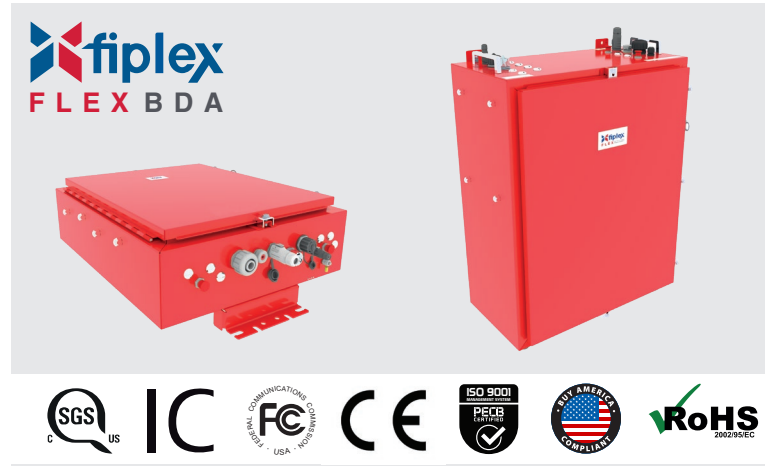
UHF DIGITAL SIGNAL BOOSTERS

450 - 470 MHz

DH14 Series

Product Features

- Channel Selective, software programmable, 32 channels per band
- Fully digital signal boosters, FPGA based
- Auto diagnostic
- Downlink & Uplink squelch, per channel and per time slot
- User adjustable gain control, UL and DL independent, per channel
- Automatic Gain Control, per channel and per time slot
- Weatherproof enclosure, IP67/NEMA4X
- NFPA compliant
- Built in spectrum analyzer
- Preserves far-end communications
- Preserves BTS UL sensitivity
- Compatible with P25 Phase 1 and 2, TETRA, TETRAPOL, NXDN, DMR, Conventional, MPT1327, among others
- IFC & NFPA compliance; UL2524 2nd Edition Listing with SGS, Nationally Recognized Testing Laboratory (NRTL) approved by OSHA for UL2524.



Applications

- Indoor coverage: tunnels and mobile fast-deploy communication units
- Outdoor coverage: oil rigs, stadiums, dense urban areas, rural areas, cliffs

Specification

| Specification | Value |
|--------------------------------|---|
| Type | Digital Signal Boosters |
| Frequency range | UHF: 450-470 MHz |
| Internal Duplexer | Available |
| Number of Channels | 32 channels + 2 BW adjustable per band |
| Available channel filter BW | 150 KHz, 100 KHz, 75 KHz, , 62.5 KHz, 50 KHz, 37.5 KHz, 25 KHz & 12.5 KHz |
| Group delay | Channel Selective 150KHz, 11.5µS Channel Selective 100KHz, 13.5µS Channel Selective 75KHz, 16.0µS Channel Selective 62.5KHz, 18.0µS Channel Selective 50KHz, 21.0µS Channel Selective 37.5KHz, 25.5µS Channel Selective 25KHz, 35.0µS Channel Selective 12.5KHz, 61.5µS or Band selective: 3.5 to 6.5µS, depending on BWA |
| Gain, maximum * | 80 dB +/- 2.0 dB |
| Passband ripple | +/- 3 dB |
| Gain, manual control | 28dB range, digitally controlled in 1dB steps |
| Antenna isolation | Max Gain + 20dB |
| Composite output power, DL * | +30 dBm composite |
| Composite output power, UL * | +24 dBm composite |
| IM and spurious generation | < -13 dBm |
| Simplex option | Configurable per channel |
| Noise figure | 9.0 dB max at maximum gain |
| Impedance | 50 Ω |
| Maximum input power, no damage | 0 dBm (UL) -35dBm (DL) |

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| | |
|-----------------------------------|---|
| Connectors | N(f) as standard |
| RF Input/Output impedance | 50Ω |
| Uplink squelch function | Yes, user selectable, to avoid UL noise when no carriers present, by time slot and by channel (Channel Selective model only) |
| Self diagnostic platform | Microprocessor based |
| Alarms | Yes, amplifiers status, power amplifiers status, power supply failure, battery backup failure, temperature, AGC, RF overload, poor antenna isolation. |
| Local management and supervising | Local access via USB and Ethernet (web browser) |
| Remote management and supervising | Remote access via Ethernet. |
| RoHS compliance | Yes |
| Power Supply | 110VAC 60Hz & +24/-48VDC |
| Power Consumption | 100 W |
| Housing | IP67 / NEMA4X |
| Temperature range | -13° to 131° F • -25° to +55° C |
| Cooling | Natural convection |
| Mounting | Wall mounting |
| MTBF | <50.000 hours |

| MODEL | BAND | BW Duplexer | Port Config | Dimensions |
|-----------------|----------------|--------------|---------------------|------------------|
| DH14CA-AU-ND | UHF 450-470MHz | Non Duplexer | Non Duplexer | 27,2 x 20 x 9 in |
| DH14CA-AU-20 | UHF 450-470MHz | 2MHz BW | Both sides Duplexed | 27,2 x 20 x 9 in |
| DH14EA-AU-40 | UHF 450-470MHz | 4MHz BW | Both sides Duplexed | 30x24x12 in |
| DH14CA-AU-20-DD | UHF 450-470MHz | 2MHz BW | Donor side Only | 27,2 x 20 x 9 in |
| DH14EA-AU-40-DD | UHF 450-470MHz | 4MHz BW | Donor side Only | 30x24x12 in |
| DH14CA-AU-20-SD | UHF 450-470MHz | 2MHz BW | Serving side Only | 27,2 x 20 x 9 in |
| DH14EA-AU-40-SD | UHF 450-470MHz | 4MHz BW | Serving side Only | 30x24x12 in |

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* Value valid for non duplexed units. This value can change depending on the filtering insertion loss of the duplexer.

WARNING: This is NOT a CONSUMER device. It is designed for installation by FCC LICENSEES and QUALIFIED INSTALLERS. You MUST have an FCC LICENCE or express consent of an FCC Licensee to operate this device. Unauthorized use may result in significant forfeiture penalties, including penalties in excess of \$100,000 for each continuing violation.