

CriticalPoint™ Public Safety Bi-Directional Amplifier

UHF BDA

Features

- Supports P25 P1/P2 digital and conventional analog communications simultaneously
- Simplex and internal Duplexing supported
- Up to 32 narrow band filters (Class A)
- Up to 4 wide band filters (Class B)
- Channelized Auto Level Control (ALC) supported (Class A)
- Channelized uplink squelch supported (Class A)
- **NetProtect™** Uplink PA shutdown during no traffic periods to minimize noise being introduced to the network (Class A)
- Built-in mandatory isolation test to prevent BDA oscillation
- Auto shutdown with alarm upon oscillation detection
- Web based GUI for intelligent configuration, SNMP supported
- NFPA 1221 / IFC compliant dry contact alarms
- NFPA 1221 / IFC compliant NEMA 4 enclosure
- **FCC Class A: PX8-RX4122-A, Class B: PX8-RX4122-B**
- **UL 60950-1 & UL 60950-22 Compliant**



Specifications

Electrical		
Frequency Range	MHz	450 - 512
Total Output Power, Uplink	dBm	30
Total Output Power, Downlink	dBm	36 (TX/RX separate)
RF Passbands (RF windows)		Up to 3 *See Note below
Maximum System Gain	dB	95
Gain Adjustment Range (1dB step)	dB	0-30
Pass Band Ripple, p-p	dB	≤3
Uplink Noise Figure	dB	≤7
Intermodulation	dBm	≤ -13
Spurious	dBm	FCC Compliance
Maximum RF Input Level without Damage	dBm	0
Maximum RF Input Level without Overdrive		-10
Input VSWR		≤ 1.5
Impedance	Ω	50

*Note:

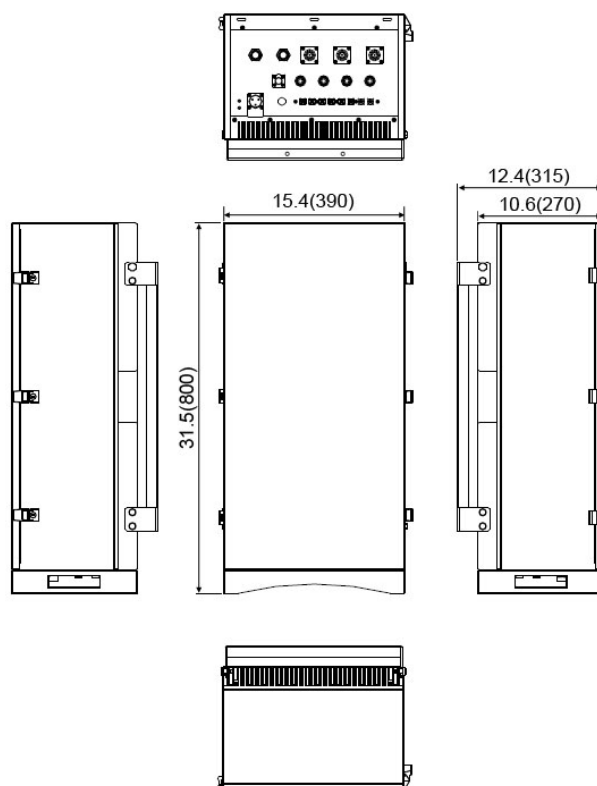
A set of contiguous downlink/uplink channel pairs count as one passband (one window)
Consult with a Comba technical representative for passband and window configurations before ordering

Class A		
Number of Filters		32
Filter Bandwidth / Out-of-Band Suppression / System Group Delay	Bandwidth: 6.25KHz	≥ 60dBc @ filter center + 60KHz, 35us
	Bandwidth: 12.5KHz	≥ 60dBc @ filter center + 65KHz, 35us
	Bandwidth: 25KHz	≥ 50dBc @ filter center + 75KHz, 27us
	Bandwidth: 75KHz	≥ 60dBc @ filter center + 200KHz, 15us
Class B		
Number of Filters		4
Filter Bandwidth		200KHz – 5MHz
System Group Delay	μsec	6.5
Out-of-Band Suppression		≥ 45dBc @ filter edge + 0.6MHz ≥ 60dBc @ filter edge + 1MHz

Mechanical		
Dimensions, H x W x D	in(mm)	31.5x15.4x12.4 (800x390x315)
Weight(without bracket)	lb(kg)	77 (35) without filter, 140 (63.5) with filter
Power Supply	VDC	-40 to -58
	VAC	120
Power Consumption	W	85
RF Connectors		N-Female
Operating Temperature	°F(°C)	-27 to +140 (-33 to +60)
Operating Humidity		≤ 95%
Environmental Class		NEMA 4

Note: Typical specifications at room temperature

Outline Drawing



Part Numbers

Window	Part Number	Class	PSU	Description
Simplex	RXUHF-A36DC-SPX	A	DC	Simplex (TX/RX separate)
Simplex	RXUHF-B36DC-SPX	B	DC	
Simplex	RXUHF-A36AC-SPX	A	AC	
Simplex	RXUHF-B36AC-SPX	B	AC	
1 (A)	RXUHF-A36DC-1WA	A	DC	Passband: 2.0MHz in 450-470MHz or 1.0MHz in 470-512MHz
1 (A)	RXUHF-B36DC-1WA	B	DC	
1 (A)	RXUHF-A36AC-1WA	A	AC	
1 (A)	RXUHF-B36AC-1WA	B	AC	
1 (B)	RXUHF-A36DC-1WB	A	DC	Passband: 2.5MHz in 450-470MHz or 1.5MHz in 470-512MHz
1 (B)	RXUHF-B36DC-1WB	B	DC	
1 (B)	RXUHF-A36AC-1WB	A	AC	
1 (B)	RXUHF-B36AC-1WB	B	AC	
1 (X)	RXUHF-A36DC-1WX	A	DC	1 Window Customized Bandwidth, Confirm with Comba
1 (X)	RXUHF-B36DC-1WX	B	DC	
1 (X)	RXUHF-A36AC-1WX	A	AC	
1 (X)	RXUHF-B36AC-1WX	B	AC	
2 (A)	RXUHF-A36DC-1WA	A	DC	Passband: 2.0MHz in 450-470MHz + 1.0MHz in 470-512MHz or 2.0MHz + 2.0MHz in 450-470MHz, window to window guardband>3.0MHz or 1.0MHz + 1.0MHz in 470-512MHz, window to window guardband>2.0MHz
2 (A)	RXUHF-B36DC-2WA	B	DC	
2 (A)	RXUHF-A36AC-2WA	A	AC	
2 (A)	RXUHF-B36AC-2WA	B	AC	
2 (B)	RXUHF-A36DC-2WB	A	DC	Passband: 2.0 or 2.5MHz in 450-470MHz + 1.0 or 1.5MHz in 470-512MHz or 2.0 or 2.5MHz + 2.0 or 2.5MHz in 450-470MHz, window to window guardband>2.5MHz or 1.0 or 1.5MHz + 1.0 or 1.5MHz in 470-512MHz, window to window guardband>1.5MHz
2 (B)	RXUHF-B36DC-2WB	B	DC	
2 (B)	RXUHF-A36AC-2WB	A	AC	
2 (B)	RXUHF-B36AC-2WB	B	AC	
2 (X)	RXUHF-A36DC-2WX	A	DC	2 Window Customized Bandwidth, Confirm with Comba
2 (X)	RXUHF-B36DC-2WX	B	DC	
2 (X)	RXUHF-A36AC-2WX	A	AC	
2 (X)	RXUHF-B36AC-2WX	B	AC	
3 (A)	RXUHF-A36DC-3WA	A	DC	3 Window Customized Bandwidth, Confirm with Comba
3 (A)	RXUHF-B36DC-3WA	B	DC	
3 (A)	RXUHF-A36AC-3WA	A	AC	
3 (A)	RXUHF-B36AC-3WA	B	AC	