

# CriticalPoint™ Public Safety Bi-Directional Amplifier

## RX-7W22 Class A PS 700/800MHz BDA

### Features

- Digital/programmable utilizing FPGA
- Supports public safety 700/800MHz in single band or dual band version
- Supports P25 P1/P2 digital and conventional analog communications simultaneously
- Supports FirstNet™ LTE band 14
- Single band versions include license to switch from original band to alternate band
- Single band can be upgraded to dual band via license key
- Each band supports up to 32 channels
- 2W output power for each band
- Channelized Auto Gain Control (AGC) / Channelized uplink squelch
- 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 compliant dry contact alarms, NEMA 4X enclosure
- **FCC: PX8RX-7W22-A, IC: 11919A-RX7W22**



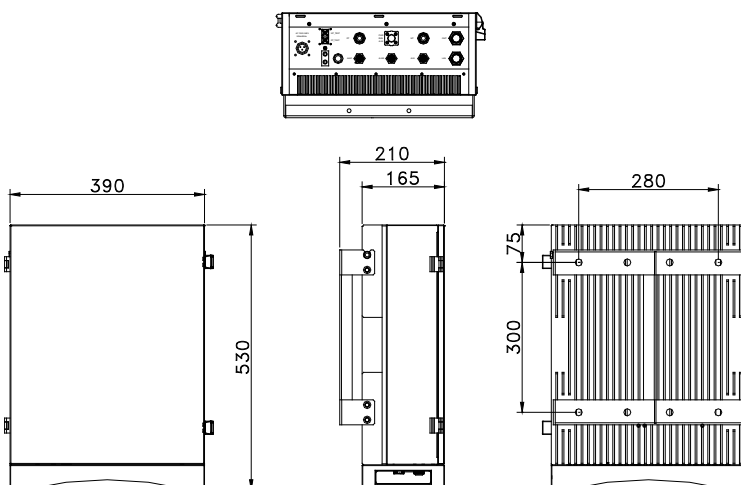
### Specifications

Electrical			700MHz	800MHz
Frequency Range, Uplink	MHz		US: 788-805, CA: 798-806	806-824
Frequency Range, Downlink	MHz		US: 758-775, CA: 768-776	851-869
Channel Bandwidth	KHz		12.5/25/75+10MHz (LTE, US)	12.5/25/75
Number of Channels			US: 32+1 (LTE), CA: 32	32
Total Output Power, Uplink	dBm		27	
Total Output Power, Downlink	dBm		33	33
Maximum System Gain	dB		90	90
Gain Adjustment Range (1dB step)	dB		0-30	0-30
Pass Band Ripple, p-p	dB		≤ 5	≤ 5
Uplink Noise Figure	dB		≤ 5	≤ 5
System Group Delay	Bandwidth: 12.5KHz	μsec	≤ 35	≤ 35
	Bandwidth: 25KHz		≤ 27	≤ 27
	Bandwidth: 75KHz		≤ 15	≤ 15
	Bandwidth: 10MHz (LTE)		≤ 6.5	≤ 6.5
Out-of-Band Suppression	Bandwidth: 12.5KHz	dBc	≥ 80 @ filter center + 75KHz	≥ 80 @ filter center + 75KHz
	Bandwidth: 25KHz		≥ 80 @ filter center + 75KHz	≥ 80 @ filter center + 75KHz
	Bandwidth: 75KHz		≥ 80 @ filter center + 200KHz	≥ 80 @ filter center + 200KHz
	Bandwidth: 10MHz (LTE)		≥ 45 @ filter edge + 0.6MHz ≥ 60 @ filter edge + 1MHz	≥ 45 @ filter edge + 0.6MHz ≥ 60 @ filter edge + 1MHz
Intermodulation	dBm		≤ -13	≤ -13
Spurious	9kHz to 1GHz	dBm	FCC Compliance	FCC Compliance
	1GHz to 12.75GHz	dBm		
Absolute Maximum RF Input Power	dBm		10	10
Input VSWR			≤ 1.5	≤ 1.5
Impedance	Ω		50	50

<b>Mechanical</b>			
Dimensions, H x W x D		in(mm)	20.9 x 15.4 x 8.3 (530 x 390 x 210)
Weight (without bracket)		lb(kg)	50.7 (23)
Power Supply		VAC	100-240/47-63Hz
		VDC	-40 ~ -58
Power Consumption	Single band	W	80
	Dual band	W	100
Enclosure Cooling			Convection
RF Connectors			N-Female
Test Port			SMA, -22dB
Maximum Input for Dry Contact Port			24VDC, 1A / 110VAC, 0.5A
Operating Temperature		°F (°C)	-27 to +140 (-33 to +60)
Operating Humidity			≤ 95%
Environmental Class			NEMA 4X
MTBF		hr	≥ 100,000 @ 77°F

Note: Typical specifications at room temperature,

## Outline Drawing



## Part Numbers

Product Type	P/N	
	AC Version	DC Version
UL Certificate	SGSNA/16/GZ/00003	SGSNA/17/GZ/00076
<b>Class A (US)</b>		
Single band 700MHz	RX7W22-073233AC	RX7W22-07323348
Single band 800MHz	RX7W22-083233AC	RX7W22-08323348
Dual band 700/800MHz	RX7W22-783233AC	RX7W22-78323348
<b>Class A (Canada)</b>		
Single band 700MHz	RX7W22-C73233AC	RX7W22-C7323348
Single band 800MHz	RX7W22-C83233AC	RX7W22-C8323348
Dual band 700/800MHz	RX7W22-CF3233AC	RX7W22-CF323348
<b>License</b>		
Dual Band (700/800MHz) License	RX7W22-L783233	