

PSR-78-9533

Channelized Digital Repeater for Public Safety 700/800 MHz

The PSR-78-9533 is a revolutionary digital public safety repeater designed to protect the lives of first responders and building occupants.

Through the use of digital filtering technology (DSP), the PSR-78-9533 helps eliminate adjacent channel interference to allow band selectivity and support 700 MHz and 800 MHz Public Safety frequencies including FirstNet. Up to two non-contiguous wideband and sixteen non-contiguous narrowband filters can be simultaneously supported in each of the 700 MHz and 800 MHz Public Safety frequencies via ADRF's celebrated web-based GUI, which provides versatility and total control to the user.

The PSR-78-9533 is the best-in-class public safety repeater with FirstNet support and it is fully compliant with International Fire Code (IFC) and National Fire Protection Association (NFPA).



Product Features

- ▶ NFPA 72 2016 code compliant and FirstNet compliant
- ▶ Alarming output to supervised circuits for: antenna, amplifier, AC or DC power supply, battery, and charger failure
- ▶ NEMA 4X compliant enclosure for both indoor and outdoor environments
- ▶ Simultaneously supports FCC Part 90 Class A narrowband and Class B wideband repeater designations
- ▶ Up to 95 dB of gain and up to 33 dBm downlink and 30 dBm uplink output power per band

Product Specifications

PSR-78-9533 (Public Safety 700/800 MHz
Channelized Digital Repeater)



Electronic Specifications

		Downlink	Uplink
Frequency Range	FirstNet + PS 700	758 - 768 MHz 769 - 775 MHz	788 - 798 MHz 799 - 805 MHz
	PS 800	851 - 861 MHz	806 - 816 MHz
Composite Output Power	FirstNet / PS 700 / FirstNet + PS 700	33 dBm	30 dBm
	PS 800	33 dBm	30 dBm
	FirstNet + PS 700 + PS 800	36 dBm (33dBm + 33dBm)	30 dBm
System Gain		95 dB	95 dB
Filter Selection	Wideband	2 (non-contiguous)	
	Narrowband	Up to 16 (non-contiguous) @ PS 700 / PS 800 Up to 32 (non-contiguous) @ PS 700 + PS 800	
Filter Bandwidth	Wideband (MHz)	5, 10	
	Narrowband (kHz)	6.25, 12.5, 25, 200	
Filter Roll-off	Wideband (MHz)	60 dBc @ Filter Bandwidth Edge + 1 MHz	
	Narrowband (kHz)	≥ 60 dBc @ Filter Bandwidth Edge + 3 x Filter BW	
Spurious Emission		FCC Rule Compliant	
Passband Ripple		± 2 dB	
ALC Dynamic Range		≥ 60 dB	
Gain Dynamic Range		≥ 45 dB	
Channel Setting Resolution		0.025 kHz	
Noise Figure @ Max. Gain		≤ 5 dB	
System Group Delay	Wideband	≤ 6us	
	Narrowband	≤ 85us @ 6.25 KHz BW, ≤ 46us @ 12.5 KHz BW, ≤ 28us @ 25 KHz BW, ≤ 12us @ 200 KHz BW	
Power Supply		110 – 240 VAC, 60 Hz (Free Voltage, w/ battery backup function)	
Power Consumption		< 150 W	
Max RF Input Power without Over Drive		-20 dBm	
Enclosure Cooling		Convection	
Max RF Input Power without Damage		+10 dBm	
Impedance		50 Ω	
VSWR		< 1.3 : 1	
Dry Contacts		NFPA 72 2016 Code Compliant	
Remote Alarming / Network Management		Dry Contacts, Web-GUI, SNMP, SNMP Traps (External Wireless Modem Required)	
Humidity		5% – 90% RH Condensed	
Operating Temperature		-40°F to +140°F (-40°C to +60°C)	

Mechanical Specifications

Dimensions (W x D x H)	11.0 x 9.0 x 21.67 in (w/o mount bracket)
Weight	55 lbs (w/o mount bracket)
RF Connector	4.3-10 (Female)
Weather Resistance	IP66

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