

PSR-VU-9537-U1/ PSR-U-9537-U1

Channelized Digital Repeater for VHF/UHF



The PSR-VU-9537-U1 and PSR-U-9537-U1 are new VHF/UHF digital public safety repeaters designed to protect the lives of first responders and building occupants.

Through the use of digital filtering technology (DSP), the PSR-VU-9537-U1 and PSR-U-9537-U1 help eliminate adjacent channel interference to allow band selectivity and supports the VHF or UHF band. Up to 1 wide band and up to 24 non-contiguous narrow bands can be simultaneously supported in either VHF or UHF Public Safety frequencies via ADRF's celebrated web-based GUI, which provides versatility and total control to the user.

The PSR-VU-9537-U1 and PSR-U-9537-U1 are fully compliant with International Fire Code (IFC) and National Fire Protection Association (NFPA) and UL Certified to UL 2524 Second Edition. This ensures that first responders have reliable radio communications in small to large buildings. It is the next generation in ADRF's acclaimed PSR Series Public Safety Repeaters.

Product Features

- Tested and approved under UL 2524, Second Edition as a comprehensive solution including the repeater, annunciator, and a battery backup
- NFPA 72-2013, NFPA 1221-2016/2019, NFPA 1225, and IFC 2015/2018/2021 code compliant
- Alarming output to supervised circuits for: antenna, amplifier, AC or DC power supply, battery, and charger failure including oscillation detection with automatic amplifier shutdown routine
- Oscillation detection feature with automatic amplifier shutdown routine
- NEMA 4 enclosure for both indoor and outdoor environments
- Supports up to 1 wideband and up to 24 non-contiguous narrow bands

Product Specifications

PSR-VU-9537-U1 / PSR-U-9537-U1 Channelized Digital Repeater for VHF/UHF

Electrical Specifications

		PSR-VU-9537-U1	PSR-U-9537-U1
Frequency Range	Downlink	VHF: 136 - 174 MHz UHF: 380 - 512 MHz	380 - 512 MHz
	Uplink	VHF: 136 - 174 MHz UHF: 380 - 512 MHz	380 - 512 MHz
Composite Output Power	Downlink	VHF: 28 dBm UHF: 37 dBm	37 dBm
	Uplink	VHF: 24 dBm UHF: 27 dBm	27 dBm
System Gain	Downlink	VHF: 85 dB UHF: 85 dB (APCO25) 95 dB (LMR450)	85 dB (APCO25) 95 dB (LMR450)
	Uplink	VHF: 85 dB UHF: 85 dB (APCO25) 95 dB (LMR450)	85 dB (APCO25) 95 dB (LMR450)
Simultaneous Filter Support	Wide	1	
	Narrow	Up to 24 (Non-contiguous)	
Passband Filter Bandwidth	Wide	1/2/4/5 MHz	
	Narrow	12.5, 25, 75, 100, 150, 200 and 75 KHz (LD)	
Filter Roll-off	Wide: 65 dBc @ Filter Bandwidth Edge + 500 KHz Narrow: ≥ 55 dBc @ Filter Bandwidth Edge + 3 x Filter BW Narrow (75 LD): ≥ 55 dBc @ Filter Bandwidth Edge + 4 x Filter BW		
Passband Ripple	± 2 dB		
Channel Setting Resolution	0.5 KHz		
Noise Figure @ Max gain	< 3.5 dB w/ out duplexing		
Output ALC Dynamic Range	45 dB		
Gain Dynamic Range	45 dB		
System Group Delay	Wide	≤ 5.5 μs (1 - 5 MHz)	
	Narrow	≤ 56 μs @ 12.5 KHz, ≤ 30 μs @ 25 KHz, ≤ 19 μs @ 75 KHz, ≤ 18 μs @ 100 KHz, ≤ 16 μs @ 150 KHz, ≤ 15 μs @ 200 KHz, and ≤ 17 μs @ 75 KHz LD	
Spurious	FCC Compliant		
AC Power	110 - 240 VAC, 60 Hz (Free Voltage)		
Power Consumption	UHF Only: 216 W VHF Only: 212 W		
Max RF Input Power	-20 dBm (up to +10 dBm without damage)		
Impedance	50 Ω		
VSWR	< 1.5 : 1		
Humidity	10% - 90% Non-Condensing		
Remote Alarm / Network	Dry Contacts Outputs, Web-GUI, SNMP		
Certification	UL 2524 Certified / Listed FCC: Part 90 Class A / Class B		
Annunciator Decibel Level	100 dB @ 1 m		

Mechanical Specifications

Dimensions	Repeater	12.0 x 13.5 x 28.1 in. (w/o mounting bracket)
	Annunciator	5.9 x 2.8 x 6.3 in. (w/o bracket)
Weight	Repeater	74.0 lbs. (w/o ADRF-MPLX)
		80.6 lbs. (w/ 1 ADRF-MPLX)
	Annunciator	87.2 lbs. (w/ 2 ADRF-MPLX)
RF Connector	2.5 lbs. (w/o bracket)	
Weather Resistances	4.3-10 (Female)	
Operating Temperature	NEMA 4	
	-30°C to +60°C (-22 °F to +140 °F)	

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