

VRX1000 vehicle radio extender



Public safety agencies and utilities seeking alternative methods for portable radio coverage enhancement can safely rely on the VRX1000 Vehicle Radio Extender. The Motorola VRX1000 is a compact 3 watts simplex radio extender integrated with Motorola APX™ 8500, APX 7500, APX 6500, APX 5500, APX 4500 and APX 2500 mobile radios.

A scaled down version of the industry-leading 10 W full duplex DVR-LX, the VRX1000 improves portable radio coverage while keeping users connected to conventional and trunked networks. The small size of the VRX1000 allows it to be easily installed in patrol cars and utility trucks.

Key Features and benefits

- Programmable output power: 0.5 - 3 W
- Simplex operation.
- Analog operation with P25 software upgrades available.
- Available in VHF, UHF, 700/800 MHz bands.
- Integrates with remote mount APX 8500, APX 7500, APX 6500, APX 5500, APX 4500 and APX 2500 mobile radios.
- In-Band or Cross-Band configurations.
- Operated through mobile radio control head.

GENERAL SPECIFICATIONS

Dimensions: Height x Width x Depth, Weight 45 x 175 x 160 mm (1.7 x 6.8 x 6.2 in), 2.0 kg (4.4 lb) (cross-band, no filters)

Channel Spacing 12.5 or 25 kHz programmable (25 kHz operation not available in USA) 192

Number of Channels 2047

Number of MSU Entries (Zone + Channel) CTCSS/DCS Programmable per Analog Channel

Power Supply 13.8 V DC $\pm 20\%$, negative ground only

ENVIRONMENTAL

Operating Temperature -30 °C to +60 °C (-22 °F to +140 °F)

Storage Temperature -40 °C to +85 °C (-40 °F to +185 °F)

Protection Against Liquids IP54

DC CURRENT DRAIN (VRX1000 ONLY):

VRX1000 Off 0.01 A Max

VRX1000 Standby 0.8 A Max

VRX1000 Receive 0.8 A Max

VRX1000 Transmit 3.0 A Max

EXTERNAL CONNECTORS

Antenna Mini UHF, 50 Ohms

Mobile Radio DB25

Auxiliary / Options DB15 (Y cable)

DC Power M12 Circular

Computer Interface Mini USB

EQUIPMENT TYPE ACCEPTANCE

	VHF	UHF	700 / 800 MHZ
FCC	LO6-VRX1000	LO6-VRX1000	LO6-VRX1000700800
Industry Canada	2098B-VRX1000	2098B-VRX1000	2098B-VRX10007800
Safety	EN60950-1	EN60950-1	EN60950-1

TRANSMITTER SPECIFICATIONS

	VHF	UHF	700 / 800 MHZ
Frequency Band FCC [MHz]	136-174 MHz	380-406 MHz 406.1-512 MHz	764-775 MHz 851-869 MHz
Frequency Band IC [MHz]	138-174 MHz	406.1-430 MHz 450-470 MHz	768-776 MHz 851-869 MHz
Power Output @ Antenna Port		Programmable 0.5 – 3 W	
Duty Cycle		50% Receive / 50% Transmit	
Max Spurious Output		-20 dBm	
Frequency Stability (-30 °C to +60 °C; +25 °C Ref.)		± 0.75 ppm	
FM Hum and Noise 12.5 / 25 kHz		-34 dB / -40 dB	
Audio Response		+1, -3 dB of 6 dB / octave pre-emphasis characteristic over 300 Hz to 3 kHz	
Audio Distortion		<2%	



RECEIVER SPECIFICATIONS

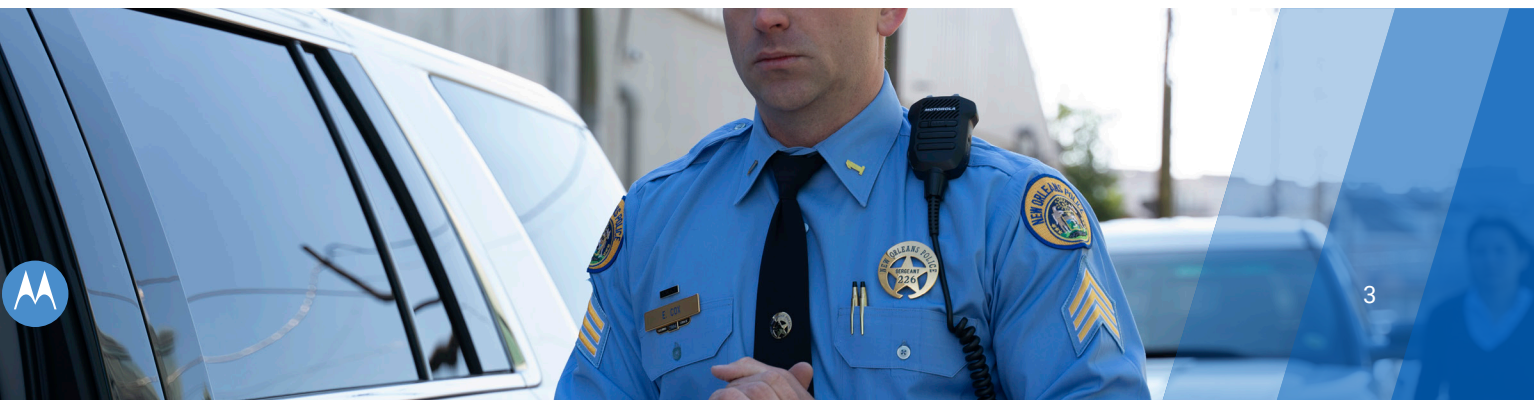
	VHF	UHF	700 / 800 MHz
Frequency Band FCC [MHz]	136-174 MHz	380-406 MHz 406.1-512 MHz	764-775 MHz 851-869 MHz
Frequency Band IC [MHz]	138-174 MHz	406.1-430 MHz 450-470 MHz	768-776 MHz 851-869 MHz
Receiver Sensitivity		Analog 12 dB SINAD: -115 dBm Digital P25 5% BER: -115 dBm	
Frequency Stability (-30 °C to +60 °C; +25 °C Ref.)		±0.75 ppm	
Selectivity 12.5 / 25 kHz		-60 dB / -70 dB	
Intermodulation		-70 dB	
Spurious Rejection		-70 dB	
Analog Mode Deviation (12.5 / 25 kHz)		±2.5 kHz / ±5 kHz	
Frequency Deviation For C4FM (P25)		Low Level: 841-1037 Hz High Level: 2543-3110 Hz	
Analog Mode FM Hum And Noise (12.5 / 25 kHz)		-34 dB / -40 dB	
Audio Output (Repeater Detect Audio)		600 mV RMS nominal, flat response	
Audio Response		+1, -3 dB of 6 dB / octave pre-emphasis characteristic over 300 Hz to 3 kHz	
Audio Distortion		<2%	

MILITARY STANDARDS COMPLIANCE

	PRODUCT
High Temperature	501.6 I - A1 501.6 II (Operational)
Low Temperature	502.6 I - C3 502.6 II (Operational)
Temperature Shock	503.6 - C Procedure I
Rain	506.6 III
Humidity	507.6 Procedure II (Aggravated)
Salt Fog	509.6
Vibration	514.7 - I Category 24
Mechanical Shock	516.7 Procedure I (Function) 516.7 Procedure VI (Bench Handling)

Note: To ensure interference-free performance when Mobile Radio and VRX are both active, there must be at least 30 dB isolation between antennas.

Note: Specifications are typical, measured under nominal conditions and are subject to change without notice.



VRX1000 Vehicle Radio Extender



VRX1000-equipped vehicle extends simplex communications to portable radios from dispatch



VRX1000-equipped vehicle extends simplex communications from portable radios to dispatch

To learn more, visit: www.motorolasolutions.com



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