

# EVX-5300/5400 SERIES

## DIGITAL MOBILE RADIOS

DMR Tier 2 Standard

  
Vertex Standard

eVerge™

SPECIFICATION SHEET - NORTH AMERICA

## Evolve to Better Communication and Value

You can afford to enhance your communications with the digital performance of eVerge™ two-way radios. eVerge™ radios are compact and precision-engineered to deliver value without sacrificing quality — giving you more capabilities and the flexibility you need to communicate at your best.

### Conversion Made Easy with Analog Integration

eVerge™ radios operate in both analog and digital modes and can be used with any existing analog two-way radios.

### Do Digital Right: Stay Compatible and Maximize Efficiency

eVerge™ digital radios operate using the TDMA protocol for spectrum and power efficiency and lower total equipment cost compared to FDMA.

### Better Radio Call Quality

Digital eliminates noise and static from voice transmit to only deliver the intended voice message crisply and clearly. eVerge™ digital radios feature the AMBE+2™ vocoder for enhanced voice quality.

### Better Message Control and Privacy

Control who you call and who gets your message in digital mode. Digital radios each have a unique ID enabling users to select who they need to call or send a text message without including others.

### Better Coverage and Connection Monitoring with ARTS II™

Get ultra-clear audio right up to the edge of the transmit range. And, with Vertex Standard's exclusive Auto-Range Transpond System [ARTS II], you will always know when you are in or out of range with another ARTS II-equipped radio.

### Worker Safety Features

As with all Vertex Standard mobile radios, eVerge™ mobile radios include Emergency alert for enhanced driver safety.

Operators can activate the Lone Worker function when leaving equipment or a vehicle temporarily. If a problem arises while away, the radio switches to Emergency mode to alert help.

### Option Board Expandable for Additional Applications

Both mobiles are designed for future feature expansion and supporting third-party application development such as location tracking with GPS, telemetry, etc.



EVX-5300



EVX-5400



Back

6.5" H x 1.8" W x 6.1" D



Option Board  
Expandability

**DMR**  
DIGITAL MOBILE RADIO ASSOCIATION

## Additional Features

- ▶ 6 Programmable keys
- ▶ 8-Character alpha numeric display [EVX-5400]
- ▶ Programmable tri-color LED
- ▶ Minimum volume control
- ▶ RSSI Indicator [EVX-5400]
- ▶ Direct channel entry [EVX-5400]
- ▶ Lone worker alert
- ▶ Emergency alert
- ▶ DTMF Speed dial
- ▶ Priority scan
- ▶ Follow-me scan
- ▶ Dual watch
- ▶ Public address / horn alert
- ▶ D-Sub 15-pin accessory connector
- ▶ Radio-to-radio cloning

## Analog Mode Features

- ▶ Voice compander
- ▶ Whisper mode
- ▶ CTCSS/DCS encode/decode
- ▶ MDC-1200® encode/decode
- ▶ 2-Tone encode/decode
- ▶ 5-Tone encode/decode
- ▶ DTMF Telephone Interconnect/ANI
- ▶ DTMF Paging
- ▶ Remote stun/kill/revive (5-tone)

## Digital Mode Features

- ▶ Basic privacy
- ▶ Enhanced privacy
- ▶ Text messaging [EVX-5400]
- ▶ All call, Group call, Individual call
- ▶ Escalart
- ▶ Remote monitor
- ▶ PTT ID encode
- ▶ Mixed mode scan
- ▶ One touch access [EVX-5400]
- ▶ 128 Record contact list [EVX-5400]

## Accessories

- ▶ MH-67A8J: Standard microphone
- ▶ MH-75A8J: Keypad microphone [16 keys]
- ▶ MD-12A8J: Desktop microphone
- ▶ MLS-100: External speaker, 12W
- ▶ LF-6: DC Line filter

## EVX-5300/5400 Series Specifications

General Specifications		
Frequency Range	VHF: 136 - 174 MHz	UHF: 403 - 470 MHz / 450 - 512 MHz
Number of Channels and Groups	8/1 [EVX-5300]; 512/32 [EVX-5400]	
Power Supply Voltage	DC 13.6V +/- 20%	
Channel Spacing	25* / 12.5 kHz	
Current Consumption	TX: 11A, RX: 2.5A, Standby: 0.4A	
Operating Temperature Range	-22° F to +140° F [-30° C to +60° C]	
Storage Temperature Range	-40° F to +185° F [-40° C to +85° C]	
Dimension (H x W x D)	6.5 x 1.8 x 6.1 inches [165 x 45 x 155 mm]	
Weight [Approx.]	2.8 lbs [1.25 kg]	
Receiver Specifications		
Measured by TIA/EIA 603C		
Sensitivity	Analog 12 db SINAD: 0.25 uV	
	Digital 1% BER: 0.28 uV	
Adjacent Channel Selectivity	TIA603: 60 dB @ 12.5 kHz, 70 dB @ 25 kHz	
	TIA603C: 45 dB @ 12.5 kHz, 70 dB @ 25 kHz	
Intermodulation	70 dB	
Spurious Rejection	65 dB	
Audio Output	Internal: 4 W @ 20 Ohms	
	External: 12 W @ 4 Ohms < 5% THD	
Hum and Noise	-40 dB @ 12.5 kHz, -45 dB @ 25 kHz	
Conducted Spurious Emission	-57 dBm	
Transmitter Specifications		
Measured by TIA/EIA 603C		
Output Power	VHF: 50 / 25 / 10 W	UHF: 45 / 25 / 10 W
Emission Designator (Analog)	16K0F3E / 14K0F3E / 11K0F3E	
Modulation Limiting	Analog: +/- 5 kHz [25 kHz]; +/- 2.5 kHz [12.5 kHz]	
	Digital (FID): 5% Symbol Deviation: 1745 Hz - 2138 Hz	
Conducted Spurious Emission	70 dB below carrier	
Hum and Noise	-40 dB @ 12.5 kHz, -45 dB @ 25 kHz	
Audio Distortion	3%	
4FSK Digital Modulation	Data: 7K60F1D / 7K60FXD	
	Voice: 7K60F1E / 7K60FXE	
Digital Protocol	ETSI TS 102 361-1, -2, -3	

## Applicable MIL-STD

Standard	Methods/Procedures				
	MIL 810C	MIL 810D	MIL 810E	MIL 810F	MIL 810G
Low Pressure	-	500.2/I	500.3/I	500.4/I	500.5/I
High Temperature	501.1/I,II	501.2/I	501.3/I	501.4/I	501.5/I
Low Temperature	502.1/I	502.2/I, II	502.3/I, II	502.4/I, II	502.5/I, II
Temperature Shock	503.1/I	503.2/II	503.3/I	-	-
Solar Radiation	-	-	505.3/II	505.4/I	-
Rain	506.1/II	506.2/II	506.3/II	506.4/III	506.5/I, III
Humidity	507.1/II	507.2/II	507.3/II	-	-
Salt Fog	-	509.2/I	509.3/I	509.4 / I	509.5/I
Dust	-	-	510.3/I	-	-
Vibration	514.2/VIII, X	514.3/Cat. 10	514.4/Cat. 10	514.5/ Cat. 20, 24	514.6/ Cat. 20, 24
Shock	516.2/I, III, V	516.3/I, IV	516.4/I, IV	516.5/I, IV	516.6/I, IV

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