

# EVX-5300/5400 SERIES

## DIGITAL MOBILE RADIOS

DMR Tier 2 Standard

  
Vertex Standard

eVerge™

SPECIFICATION SHEET

## 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

The EVX-5400 mobiles are designed for future feature expansion and supporting third-party application development such as location tracking with GPS, rolling code encryption, etc.



EVX-5300



EVX-5400



Back

165 x 45 x 155 mm



Option Board  
Expandability

**DMR**  
DIGITAL MOBILE RADIO ASSOCIATION

## Additional Features

- ▶ 6 Programmable keys
- ▶ 8-Character alpha numeric display [EVX-5400]
- ▶ Programmable tri-color LED
- ▶ Voice compander
- ▶ Minimum volume control
- ▶ RSSI Indicator [EVX-5400]
- ▶ Direct channel entry [EVX-5400]
- ▶ CTCSS/DCS encode/decode
- ▶ MDC-1200® encode/decode
- ▶ 2-Tone encode/decode
- ▶ 5-Tone encode/decode
- ▶ Lone worker alert
- ▶ Emergency alert
- ▶ DTMF Speed dial
- ▶ DTMF Paging
- ▶ Remote stun/kill/revive
- ▶ Priority scan
- ▶ Follow-me scan
- ▶ Dual watch
- ▶ Public address / horn alert
- ▶ D-Sub 15-pin accessory connector
- ▶ Radio-to-radio cloning

## Digital Mode Features

- ▶ Enhanced privacy [EVX-5400]
- ▶ Text messaging [EVX-5400]
- ▶ All call, Group call, Individual call
- ▶ Escalert
- ▶ 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		
<b>Frequency Range</b>	VHF: 136 – 174 MHz	UHF: 403 – 470 MHz 450 – 520 MHz
<b>Number of Channels and Groups</b>	8/1 [EVX-5300]; 512/32 [EVX-5400]	
<b>Power Supply Voltage</b>	DC 13.6V +/- 20%	
<b>Channel Spacing</b>	25* / 12.5 kHz	
<b>Current Consumption</b>	TX: 10A, RX: 2.5A, Standby: 0.4A	
<b>Operating Temperature Range</b>	-22° F to +140° F [-30° C to +60° C]	
<b>Dimension (H x W x D)</b>	165 x 45 x 155 mm	
<b>Weight [Approx.]</b>	2.2 kg	
Receiver Specifications <span style="float: right;">Measured by TIA/EIA 603C</span>		
<b>Sensitivity:</b>	Analog 12 db SINAD: 0.25 uV Digital 1% BER: 0.28 uV	
<b>Adjacent Channel Selectivity</b>	TIA603: 60 dB @ 12.5 kHz, 70 dB @ 25 kHz TIA603C: 45 dB @ 12.5 kHz, 70 dB @ 25 kHz	
<b>Intermodulation</b>	70 dB	
<b>Spurious Rejection</b>	65 dB	
<b>Audio Output</b>	Internal: 4 W @ 20 Ohms External: 12 W @ 4 Ohms < 5% THD	
<b>Hum and Noise</b>	-40 dB @ 12.5 kHz, -45 dB @ 25 kHz	
<b>Conducted Spurious Emission</b>	-57 dBm	
Transmitter Specifications <span style="float: right;">Measured by TIA/EIA 603C</span>		
<b>Output Power</b>	VHF: 50 / 25 / 12.5 / 5 W	UHF: 45 / 25 / 12.5 / 5 W
<b>Modulation (Analog)</b>	16K0F3E/11K0F3E	
<b>Modulation Limiting</b>	Analog +/- 5.0 kHz @ 25* kHz, +/- 2.5 kHz @ 12.5 kHz Digital: +/- 2.5 kHz	
<b>Conducted Spurious Emission</b>	70 dB below carrier	
<b>Hum and Noise</b>	-40 dB @ 12.5 kHz, -45 dB @ 25 kHz	
<b>Audio Distortion</b>	< 5% [3% typical]	
<b>Frequency Stability</b>	±1.5 ppm	
<b>4FSK Digital Modulation</b>	Data: 7K60F1D/7K60FXD Voice: 7K60F1E / 7K60FXE	
<b>Digital Protocol</b>	ETSITS 102 361-1, -2, -3	

## Applicable MIL-STD

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