

# EVOLVE TO BETTER

eVerge™ digital mobile radios



Meets the following standards:  
AS/NZS4295, CB Type Approval AS/NZS4365: 2011, ISO9001 and ISO4001.

[www.vertexstandard.com.au](http://www.vertexstandard.com.au)  
[www.vertexstandard.co.nz](http://www.vertexstandard.co.nz)

  
**Vertex Standard**

eVerge™

## 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.

### Worker safety features

Vertex Standard radios include emergency alert to enhance your safety at all times. Activating the Lone Worker function means your radio will automatically switch to emergency mode to alert for help if you do not “check-in” on your radio within pre-set intervals.

### Direct mode

Direct mode enables you to have two communication paths on a single frequency effectively doubling your call capacity without the need for a repeater.

### Transmit Interrupt

When seconds matter, transmit interrupt allows you to halt or “interrupt” any current transmission, in favour of a priority message. Transmit Interrupt functionality ensures your critical messages will connect.

### Site Roaming

Move between multiple sites seamlessly by using the Site Roaming functionality. Manually or automatically initiate Site Roaming to identify the signal of the closest site with the strongest signal strength. EVX radios will dynamically change their pre-programmed home site to the site of the strongest signal in range. This is a great feature for operations with multiple locations or multi-storey buildings.

### Digital, analogue and CB in one

The EVX 534/539/5400 radios have Australian and New Zealand certification for both private and CB/PRS use which means you can switch seamlessly between a private commercial channel or group conversation and the 80 CB/PRS channels available across Australia and New Zealand. Private frequencies licenses may be obtained from your Authorised Vertex Standard channel partner.

### Better radio call quality

Digital radios eliminate noise and static from voice transmit to only deliver the intended voice message, crisply and clearly. eVerge digital radios feature AMBE+2 vocoder to enhance 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. Vertex Standard’s exclusive Auto-Range Transpond System [ARTS II] ensures you will always know when you are in or out of range with another ARTS II-equipped radio.

### Submersible and weatherproof

EVX portables meet international standard IP67 for dust and water protection where fresh water does not harm the radio when submersed to 3 feet for up to 30 minutes.

### Intrinsically Safe option for hazardous locations [applies to portable radios only]

Intrinsic safety is an engineered explosion protection method that is integral to the electrical circuit. EVX portable radios are Intrinsically Safe [IS], meeting the globally recognised UL-913 certification [5th Edition for use in Class I, II, III, Division 1; Groups C, D, E, F, G; Temp T3C hazardous locations.] This certification covers all zones and categories [within hazardous environments] except underground coal mines and areas high in hydrogen. For further details on Intrinsically Safe two-way radios, contact your Authorised Vertex Standard channel partner for a copy of the UL-913 Certification.

## The Vertex Standard Difference

### Universal chargers

Vertex Standard portable two-way radios can be used in the same universal single unit and multi unit chargers (with a compatible UNI battery attached) reducing the equipment you need to stay connected.

### What's in the box?

Vertex Standard portable two-way radios come complete with a:

- ▶ radio
- ▶ antenna
- ▶ belt-clip
- ▶ charger
- ▶ adapter
- ▶ plus choice of high capacity or slim line battery  
[battery options available on selected models only].

Vertex Standard mobile two-way radios come complete with a:

- ▶ microphone
- ▶ power lead
- ▶ mounting bracket with hardware.

### 3 Year Warranty

All Vertex Standard radios are backed with an industry leading three-year warranty.

#### The Vertex Standard Difference

Our number one goal is achieving superior customer satisfaction by delivering products and services that exceed your expectations. Vertex Standard radios are built to last and are backed by an industry-leading 3 year warranty.



## Additional features

- ▶ 3 Programmable keys [EVX-531]
- ▶ 7 Programmable keys [EVX-534]
- ▶ 9 Programmable keys [EVX-539]
- ▶ 6 Programmable keys [EVX-5400]
- ▶ ARTS™ & ARTS II™ [EVX-531/534/539]
- ▶ Programmable tri-colour LED
- ▶ RSSI Indicator [EVX-534/539/5400]
- ▶ Lone worker alert
- ▶ Emergency alert
- ▶ Key lock
- ▶ Voice channel announce
- ▶ Public address/horn alert [EVX-5400]
- ▶ D-Sub 15 pin accessory connector [EVX-5400]
- ▶ Radio-to-radio cloning
- ▶ EIA Rack mount size [EVX-R70]
- ▶ AMBE+2™ Digital vocoder [EVX-R70]
- ▶ 26-pin accessory connector [EVX-R70]

## Analogue mode features

- ▶ Voice compander
- ▶ Whisper mode [EVX-531/534/539]
- ▶ CTCSS/DCS encode/decode
- ▶ MDC-1200@ encode/decode
- ▶ 2-tone encode/decode
- ▶ 5-tone encode/decode
- ▶ DTMF Telephone Interconnect/ANI
- ▶ DTMF Paging [EVX-534/539/5400]
- ▶ Remote stun/kill/revive
- ▶ Voice inversion encryption

## Digital mode features

- ▶ Enhanced privacy [EVX-534/539/5400]
- ▶ Text messaging [EVX-534/539/5400]
- ▶ All call, Group call, Individual call
- ▶ Escalart
- ▶ Remote Monitor
- ▶ PTT ID encode [EVX-531/5400]
- ▶ PTT ID encode/decode [EVX-534/539]
- ▶ Mixed mode scan
- ▶ 128 Record contact list [EVX-534/539/5400]
- ▶ Direct/Dual Capacity mode
- ▶ Transmit Interrupt
- ▶ Site roaming
- ▶ 256 bit encryption

## CB mode feature

- ▶ 80 CB/PRS channels [EVX-534/539/5400 analogue only]

## Accessories

### EVX Series - Portable Accessories

#### Remote Audio Options

- ▶ MH-450S: Small speaker microphone
- ▶ MH-66A4B: Submersible speaker microphone [IS rated accessory]
- ▶ MH- 81A4B: Over-the-head VOX compatible headset [IS rated accessory]
- ▶ VH-215S: Over-the-head single-muff headset

#### Carry Cases

- ▶ Leather case range available in both belt clip and swivel belt loop.

#### Chargers and Battery Options

- ▶ CD-58: Single unit desktop charger for UNI batteries [included]
- ▶ PA-58H: AC adapter for CD-58 [included]
- ▶ VAC-6058: 6 unit desktop charger for UNI batteries
- ▶ VCM-5: Vehicular charger kit for CD-58
- ▶ FBA-41: Alkaline battery case [AA]
- ▶ FNB-V133LI-UNI: 1380 mAh [included option]
- ▶ FNB-V134LI-UNI: 2300 mAh [included option]
- ▶ FNB-V134Li-UNI IS: 2300 mAh [included in IS bundle]

### EVX Series - Mobile Accessories

#### Microphones

- ▶ MH-67A8J: Standard microphone [included]
- ▶ MH-75A8J: 16-keypad microphone
- ▶ MH-53A8J: Heavy duty microphone

#### External Speaker

- ▶ MLS-100: External speaker [12W peak power]
- ▶ MLS-200: External speaker [15W peak power]



# EVX-530 SERIES

Portable Radios



eVerge™

Vertex Standard's eVerge portable radios form part of our DMR family of radios and provide a perfect option for you to transition your fleet of portable radios from analogue to digital.

Enhance communications with the digital performance of eVerge two-way radios. eVerge DMR radios are compact and precision-engineered to deliver value without sacrificing quality, providing more capabilities and flexibility.

## EVX-530 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>	32 / 2 (EVX-531), 512 / 32 (EVX-534/539)	
<b>Power Supply Voltage</b>	7.5 V nominal	
<b>Channel Spacing</b>	25*/20*/12.5 kHz	
<b>Battery Life</b> (5-5-90 duty w/battery saver)	VHF: FNB-V134LI-UNI: 2300 mAh Li-Ion FNB-V133LI-UNI: 1380 mAh Li-Ion	UHF: 15.2 hrs (digital) / 11.5 hrs. (analogue) 9.1 hrs (digital) / 7.0 hrs. (analogue)
<b>IP Rating</b>	IP 67	
<b>Operating Temperature Range</b>	-22° F to +140° F [-30° C to +60° C]	
<b>Dimension (H x W x D)</b>	4.1 x 2.3 x 1.34 inches [106.7 x 58.5 x 34 mm] (w/FNB-V133LI-UNI)	
<b>Weight (Approx.)</b>	9.9 oz [280 g] w/FNB-V133LI-UNI, 11.5 oz [325 g] w/FNB-V134LI-UNI	
Receiver Specifications <small>measured by TIA/EIA 603C</small>		
<b>Sensitivity:</b>	Analogue 12 db SINAD: 0.25 uV Digital 1% BER: 0.28 uV	
<b>Adjacent Channel Selectivity</b>	TIA603: 70/60 dB TIA603C: 70/45 dB	
<b>Intermodulation</b>	65 dB	
<b>Spurious Rejection</b>	70 dB	
<b>Audio Output</b>	500 mW @ 4 Ohms (INT) 350 mW @ 4 Ohms (EXT)	
<b>Hum and Noise</b>	40 dB	
<b>Conducted Spurious Emission</b>	-57 dBm	
Transmitter Specifications <small>measured by TIA/EIA 603C</small>		
<b>Output Power</b>	5.0/2.5/1.0/0.25W	
<b>Modulation Limiting</b>	16K0F3E / 11K0F3E	
<b>Conducted Spurious Emission</b>	70 dB below carrier	
<b>Hum and Noise</b>	40 dB	
<b>Audio Distortion</b>	<5% [3% typical]	
<b>Frequency Stability</b>	±1.5 ppm	
<b>4FSK Digital Modulation</b>	7K60F1D / 7K60F1E	
<b>Digital Protocol</b>	ETSI TS 102 361-1, -2, -3	



EVX-531

EVX-534

EVX-539

## EVX-530 Series Applicable MIL-STD

Standard	Methods/Procedures				
	MIL 810C	MIL 810D	MIL 810E	MIL 810F	MIL 810G
<b>Low Pressure</b>	500.1/I	500.2/I,II	500.3/I,II	500.4/I, II	500.5/I, II
<b>High Temperature</b>	501.1/I,II	501.2/I, II	501.3/I, II	501.4/I, II	501.5/I, II
<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/I	503.3/I	503.4/I	-
<b>Solar Radiation</b>	505.1/I,II	505.2/II Cat. A1	505.3/II Cat. A1	505.4/I, II Cat. A1	-
<b>Rain</b>	506.1/I, II	506.2/I, II	506.3/I, II	506.4/I, III	506.5/I, II
<b>Humidity</b>	507.1/I,II	507.2/II, III	507.3/II, III	507.4/III	507.5/I, III
<b>Salt Fog</b>	509.1/I	509.2/I	509.3/I	509.4 / I	509.5/I
<b>Dust</b>	510.1/I	510.2/I	510.3/I	510.4/I, III	510.5/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

# EVX-5400

Mobile Radio



Vertex Standard's eVerge mobile radio forms part of our DMR family of radios and provides a perfect option for you to transition your fleet of mobile radios from analogue to digital.

Digital technology eliminates noise and static from voice transmit allowing for crisp and clear communication with the eVerge DMR two-way radio. The eVerge mobile radios include emergency alert for enhanced driver safety when in the field.

## EVX-5400 Series Specifications

General Specifications		
Frequency Range	VHF: 136 - 174 MHz	UHF: 403 - 470 MHz 450 - 520 MHz
Number of Channels and Groups	512/32	
Power Supply Voltage	DC 13.6V +/- 20%	
Channel Spacing	25* / 12.5 kHz	
Current Consumption	TX: 10A, RX: 2.5A, Standby: 0.4A	
Operating Temperature Range	-22° F to +140° F (-30° C to +60° 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 (2.2 kg)	
Receiver Specifications		
Measured by TIA/EIA 603C		
Sensitivity:	Analogue 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: 25 / 12.5 / 5 W	UHF: 25 / 12.5 / 5 W
Modulation (Analogue)	16K0F3E/11K0F3E	
Modulation Limiting	Analogue +/- 5.0 kHz @ 25* kHz, +/- 2.5 kHz @ 12.5 kHz Digital: +/- 2.5 kHz	
Conducted Spurious Emission	70 dB below carrier	
Hum and Noise	-40 dB @ 12.5 kHz, -45 dB @ 25 kHz	
Audio Distortion	< 5% [3% typical]	
4FSK Digital Modulation	Data: 7K60F1D/7K60FXD Voice: 7K60F1E / 7K60FXE	
Digital Protocol	ETSI TS 102 361-1, -2, -3	



EVX-5400

## EVX-5400 Series 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

The eVerge EVX-R70 conventional repeater operates in both analogue and digital modes and can be used with any existing analogue two-way radios, making this repeater perfect for your transition to a full digital fleet.

Includes “mixed mode” to dynamically switch between analogue and digital for flexible support.

Get 100% continuous duty at 45 Watts VHF and 40 Watts UHF for easy integration into most repeater sites.

## EVX-R70 Specifications

General Specifications		
Frequency Range	VHF: 136 - 174 MHz	UHF: 403 - 470 MHz 450 - 520 MHz
Number of Channels and Groups	16	
Power Supply Voltage	100 - 240 V AC (13.5 V DC)	
Channel Spacing	25* kHz / 12.5 kHz	
Current Consumption	Standby: 1 A [1 A DC typical] TX Low Power: 3 A [7.5 A DC typical] TX High Power: 4 A [12 A DC typical]	
Operating Temperature Range	-22° F to +140° F [-30° C to +60° C]	
Frequency Stability	±0.5 ppm	
Duty Cycle	100%	
Dimension [H x W x D]	5.2 x 19 x 11.7 inches [132.6 x 482.6 x 296.5 mm]	
Weight [Approx.]	31 lbs. [14 kg]	
Receiver Specifications <small>measured by TIA/EIA 603C</small>		
Sensitivity	Analogue 12 db SINAD: 0.3 µV 0.22 µV typical Digital 5% BER: 0.3 µV	
Adjacent Channel Selectivity	VHF: TIA603 65 dB @ 12.5 kHz, 80 dB @ 25 kHz* TIA603C 50 dB @ 12.5 kHz, 80 dB @ 25 kHz*	UHF: TIA603 65 dB @ 12.5 kHz, 75 dB @ 25 kHz* TIA603C 50 dB @ 12.5 kHz, 75 dB @ 25 kHz*
Intermodulation	VHF: 78 dB	UHF: 75 dB
Spurious Rejection	VHF: 80 dB	UHF: 75 dB
Audio Distortion	3% [typical]	
Hum and Noise	-40 dB @ 12.5 kHz; -45 dB @ 25 kHz*	
Conducted Spurious Emission	-57 dBm	
Transmitter Specifications <small>measured by TIA/EIA 603C</small>		
Output Power	VHF: 25 - 45 W	UHF: 403 - 470 MHz: 25-40 W 450 - 520 MHz: 1 - 40 W
Modulation [Analogue]	16K0F3E / 11K0F3E	
Modulation Limiting [136 - 174 MHz, 403 - 470 MHz]	± 2.5 kHz @ 12.5 kHz ; ± 5.0 kHz @ 25 kHz*	
Conducted Spurious Emission [136 - 174 MHz, 403 - 470 MHz]	-36 dBm < 1 GHz ; -30 dBm > 1GHz	
FM Hum and Noise [136 - 174 MHz, 403 - 470 MHz]	-40 dB @ 12.5 kHz ; -45 dB @ 25 kHz*	
Adjacent Channel Power [136 - 174 MHz, 403 - 470 MHz]	60 dB @ 12.5 KHz; 70 dB @ 25 kHz*	
Audio Distortion	3%	
FM Modulation	12.5 kHz: 11K0F3E 25 kHz*: 16K0F3E	
4FSK Digital Modulation	12.5 KHz Data Only: 7K60FXD 12.4 kHz Data and Voice: 7K60FXE	
Digital Protocol	ETSI TS 102 361-1, -2, -3	



EVX-R70



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eVerge™

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eVerge Range  
BTB/MA747\_09/15