EVX-S24

DIGITAL PORTABLE RADIOS

DMR Tier 2 Standard /TDMA Protocol

Vertex Standard

eVerge™

SPECIFICATION SHEET - NORTH AMERICA

Evolve to Better Communication and Value with our Smallest, Water Submersible Digital Portable Radio

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.

Compact and Discreet

The EVX-S24 is our smallest and lightest digital radio. It is slim and easy to carry so it is ideal for hospitality, education, retail and for any market that values convenience and size.

Water Submersible and Dust Proof

The EVX-S24 meets international standard IP67 for water submersibility and is dust proof. The EVX-S24 is protected from immersion in water up to 3 feet (1 meter) for 30 minutes and offers complete protection from dust.

Conversion Made Easy with Digital to Analog Integration

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

Direct Mode

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

Transmit Interrupt

When seconds matter, transmit interrupt allows an operator with encode capabilities to halt or "interrupt" any current transmission, in favor of a priority message. EVX-S24 is decode only, which allows messages to be interrupted.

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.

Site Search

Move between multiple sites seamlessly by using the Site Search functionality on your EVX-S24 radio. Manually or automatically initiate Site Search to identify the signal of the closest site with the strongest signal strength. The EVX-S24 portable will dynamically change its pre-programmed home site to the site with the strongest signal in range. Great for operations with multiple locations or buildings with multiple floors.

EVX-S24

FACTORY WARRANTY 3 Year

DMR DIGITAL MOBILE RADIO ASSOCIATION

EVX-S24

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Additional Features

- Battery Status indicator (Low Battery Alert)
- Battery Saver
- BCLO
- Time Out Timer
- Key Lock
- AF Minimum Volume
- Lone Worker Alert
- Emergency Alert
- Auto Power Off
- Escalating Alerts
- Low Power
- Whisper Mode
- Multiple Scan Options
- RSSI Indicator

Signaling Features

- CTCSS/DCS Encode/Decode
- 2-Tone, 5-Tone
- DTMF Encode/Decode
- DTMF ANI
- DTMF Paging
- DTMF Speed Dial
- Stun/Kill/Revive (5 Tone and DTMF pager)
- MDC-1200® Features:
  - MDC-1200® ANI
  - MDC-1200® Call Alert
  - MDC-1200® Sel Call
  - MDC-1200® Radio Check
  - MDC-1200® Stun/Revive
- FleetSync® ANI (Encode Only)

Analog Mode Features

- BTLO
- Auto Range Transponding System (ARTS™)
- Voice Inversion Encryption

Digital Mode Features

- All, Group and Private Call
- Basic and Enhanced Privacy
- Radio Check
- Radio STUN/REVIVE
- Remote Monitor (Decode)
- CALL Alert
- Text Message
- Call History
- Simplex Only and Repeater Capable Encryption
- Direct Mode
- Emergency
- Radio Enable / Disable (Decode)
- Scan (Mixed Mode - Analog/Digital Channels)
- Transmit Interrupt (Decode Only)
- Scan (Operator Selectable On/Off)
- Site Search

Accessories

Antennas

- ATU-6A: 400-430 MHz 6.5" (16.51 cm)
- ATU-6B: 420-450 MHz 6.1" (15.49 cm)
- ATU-6C: 440-470 MHz 6.1" (15.49 cm)
- ATU-6D: 450-485 MHz 6" (15.24 cm)
- ATU-20AS: 400-430 MHz 3.15" (8 cm)
- ATU-20CS: 420-450 MHZ 3.15" (8 cm)
- ATU-20DS: 440-470 MHz 3.15" (8 cm)
- ATU-20FS: 450-480 MHz 3.15" (8 cm)
- Super Stubby Antenna Selection*

Battery

- FNB-V142LI: 2300 mAh Li-Ion Battery

Carry Solutions

- LCC-S24: Leather Case, Belt Loop*
- LCC-S24S: Leather Case, Swivel Belt Loop*
- Clip-27: Belt Clip
- Neck Lanyard*

Chargers

- PA-57B: Micro USB AC Charger (US)
- PA-57C: Micro USB AC Charger (EU)
- CD-65: Standard Single Unit Charging Cradle
- CD-66: Enhanced Single Unit Charging Cradle*
- Multi Unit Charger*

Audio Accessories

- MH-89A4B: Earpiece Microphone
- MH-90A4B: Compact Speaker Microphone*
- MH-66F4B: IP57 Submersible Speaker Microphone*
- VH-190 VOX Lightweight Headset, BTH*

Programming Equipment

- CB000262A01: Programming Cable
- CE157: PC Programming Software

Specifications are preliminary and subject to change without notice or obligation.

* Coming soon.

EVX-S24 Specifications

General Specifications	
Frequency Range	UHF: 403 – 470 MHz
Dimension (H x W x D)	3.58 x 2.17 x 1.24 inches (91 x 55 x 31.5 mm)
Weight Approx. with Antenna, Belt Clip	7.6 oz (215 g) with (FNB-V142LI, ATU-20, Belt Clip)
Display	8 character alphanumeric
Channel Spacing	25† / 12.5 kHz
Number of Channels and Groups	256 / 16
Programmable Buttons	4 (Front: 3, Side: 1)
Battery Life (5-5-90 duty with battery saver)	Estimated at 12 hrs (digital) 10 hrs (analog)
IP Rating	67
Power Supply Voltage	3.7 VDC (nominal)
Operating Temperature Range	-22° F to +140° F (-30° C to +60° C)
Frequency Stability	± 1.5 ppm
RF Input-Output Impedence	50 Ohms
Receiver Specifications	measured by TIA/EIA 603
Sensitivity	Analog 12 dB SINAD: 0.25 uV Digital 1 % BER: 0.28 uV
Adjacent Channel Selectivity	TIA603: 70/60 dB (25 kHz / 12.5 kHz) TIA603D: 70/45 dB (25 kHz / 12.5 kHz)
Intermodulation	70 dB
Spurious Rejection	70 dB
Audio Output	500 mW @ 4 Ohms 10 % THD
FM Hum and Noise	45 / 40 dB (25 kHz/ 12.5 kHz)
Conducted Spurious Emission	-57 dBm
Transmitter Specifications	measured by TIA/EIA 603
Output Power	Digital 3 W/1 W/0.5 W, Analog 2 W/1 W/0.5 W
Modulation Limiting	± 5 kHz (25 kHz); ± 2.5 kHz (12.5 kHz)
Conducted Spurious Emission	-36 dBm (≤1 GHz), -30 dBm (>1 GHz)
FM Hum and Noise	45 / 40 dB (25 kHz/ 12.5 kHz)
Audio Distortion	< 5 % @ 1 kHz
Adjacent Channel Power	70 / 60 dB
Analog FM Modulation	16K0F3E (25 kHz), 11K0F3E (12.5 kHz)
4FSK Digital Modulation	12.5 kHz Data: 7K60F1D/7K60FXD 12.5 kHz Voice: 7K60F1E/7K60FXE Combination of 12.5 kHz Voice and Data: 7K60F1 W
Digital Vocoder Type	AMBE+2
Digital Protocol	ETSI102 361-1, -2, -3

† 25 kHz not available for USA

Applicable MIL-STD

	Methods/Procedures				
Standard	**MIL 810C**	**MIL 810D**	**MIL 810E**	**MIL 810F**	**MIL 810G**
Low Pressure	500.1 proc 1	500.2 proc 1	500.3 proc 1	500.4 proc 1	500.5 proc 1/2
High Temperature	501.1 proc 1/2	501.2 proc 1/2	501.3 proc 1/2	501.4 proc 1/2	501.5 proc 1/2/3
Low Temperature	502.1 proc 1	502.2 proc 1/2	502.3 proc 1/2	502.4 proc 1/2	502.5 proc 1/2/3
Temperature Shock	503.1 proc 1	503.2 proc 1	503.3 proc 1	503.4 proc 1	503.5 proc 1
Solar Radiation	505.1 proc 2	505.2 proc 1	505.3 proc 1	505.4 proc 1	505.5 proc 1
Rain	506.1 proc 1/2	506.2 proc 1/2	506.3 proc 1/2	506.4 proc 1/3	506.5 proc 1/3
Humidity	507.1 proc 2	507.2 proc 2	507.3 proc 2	507.4	507.5 proc 2
Salt Spray/Fog	509.1 proc 1	509.2 proc 1	509.3 proc 1	509.4	509.5
Dust	510.1 proc 1	510.2 proc 1	510.3 proc 1	510.4 proc 1	510.5 proc 1
Blowing Sand	–	510.2 proc 2	510.3 proc 2	510.4 proc 2	510.5 proc 2
Vibration	514.2 proc 8/F, W	514.3 proc 1	514.4 proc 1	514.5 proc 1	514.6 proc 1
Shock	516.2 proc 1/2/3/5	516.3 proc 1/4/6	516.4 proc 1/4/6	516.5 proc 1/4/6	516.6 proc 1/4/6