



P25 Mission Critical

VIKING VM400

700-800 MHz • SmartNet®/SmartZone® • P25 PHASE 1 & 2



High performance public safety radio without the extra features required by larger departments. Equipped with industry leading audio, display & advanced capabilities such as Over-the-Intranet programming (OTIP).

FEATURES

Choose operation in either:

Motorola SmartNet®/SmartZone® protocol --- OR ---
P25 Phase 1 trunked/conventional & P25 Phase 2 trunked

- 1024 channels
- P25 Authentication (Link Layer Authentication)
- P25 IP packet data
- MDC-1200 & GE-Star signaling
- Conventional vote scan
- Dash mount
- Remote mount
- Dash mount with remote control head
- Dual control heads (option)
- Internal or external speaker
- Fixed control station
- Encryption
 - ARC4™ software encryption; compatible with Motorola ADP™
 - P25/TIA defined: AES-256
 - DES-OFB
 - VK5000 or Motorola KVL3000/KVL4000 Keyloaders

COMPATIBLE WITH MULTIPLE P25 SYSTEMS

- EFJohnson ATLAS® P25 System
- Motorola® Systems
 - Motorola Astro® 25 - P25 Phase 1 & Phase 2
 - Motorola Astro® SmartNet®/SmartZone®
- Harris VIDA® - P25 Phase 1 & Phase 2
- Airbus (formerly Cassidian) VESTA™ Radio - P25 Phase 1 & Phase 2

ACCESSORIES

Complete line of accessories including microphones, speakers & antennas.

Download the accessory catalog at www.efjohnson.com/products/accessories.

We combine P25 design expertise with recognized quality & reliability along with smarter technology to make KENWOOD Viking radios simple to use & maintain.



Perpetual Software Licensing

Adds greater value to your radios by extending the life of the software into your next hardware platform — you own the software option forever, and your licenses are simple to manage with our cloud-based tool — Vault™.



Armada® Fleet Management

Update your radios in a group rather than one at a time. One template programs both portables & mobiles. Supports either a direct computer connection, Over-the-Air Programming (OTAP), or Over-the-Intranet Programming (OTIP).



TrueVoice™ Noise Cancellation

Software-based noise cancellation automatically filters out noise source frequencies and eliminates the need for extra configuration. Works in analog or digital mode and with any accessory.



Viking VM400 Mobile SPECIFICATIONS

GENERAL	700/800 MHz, 30/35 W
Frequency Range (band splits)	762 - 805 MHz; 806 - 869 MHz
Channel Spacing	Analog: 25 kHz, 12.5 kHz P25 Digital (Phase 1 and 2): 12.5 kHz; supports 2-slot Phase 2 TDMA
Max Frequency Separation	Full Band Split
Display	Backlit ELD, 10 alpha-numeric characters plus Zone, Channel, and Status. Electronically adjustable viewing angle.
Power Supply	<i>Nominal Voltage (negative ground)</i> 13.6 VDC <i>Operating Supply Voltage Range</i> 10.9 - 16.3 VDC <i>Standby Current</i> 1.0 A <i>Receive Current at Rated Audio Power</i> 2.95 A <i>Current at Max Rated Transmit Power</i> 12.5 A
Temperature Range	Operating: -30°C to +60°C; Storage: -40°C to +85°C
Nominal Dimensions (H x W x D) exclusive of mounting, cables, & knobs	2.1" x 7.2" x 8.3" (5.3 cm x 18.3 cm x 21.1cm)
Nominal Weight	6.5 lbs (2.3 kg)
FCC ID:	ATH2425M70
Industry Canada	IC-933B-2425M70
Vocoder	AMBE+2 (version 1.6)
Transmitter	700/800 MHz, 30/35 W; VHF, 50 W
TRANSMITTER	700/800 MHz, 30/35 W
RF Output Power (variable)	15 to 25 W (700 MHz) 15 to 35 W (800 MHz)
Transmitter Frequency Ranges	762 - 775 MHz, 792 - 805 MHz 806 - 824 MHz, 851 - 869 MHz
Maximum Frequency Separation	Full Band Split
Frequency Accuracy (-30°C to +60°C, +25°C ref.)	±1.5 ppm
Modulation Limiting	25 kHz Channels (Analog): ±5 kHz 12.5 kHz Channels (Analog): ±2.5 kHz
Modulation Fidelity (Digital)	<5% C4FM (Phase 1) <5% H-CPM (Phase 2)
Spurious Emissions	75 dB
Audio	<i>Analog Frequency Response</i> +1 dB, -3 dB (Per TIA-603-D) <i>FM Hum and Noise Ratio (25 kHz Analog)</i> 46 dB <i>FM Hum and Noise Ratio (12.5 kHz Analog)</i> 40 dB <i>Distortion</i> 2%
FCC Emission Designators	8K10F1D, 8K10F1E, 8K10F7E, 11K0F3E, 14K0F3E, 16K0F3E
RECEIVER	700/800 MHz, 30/35 W
Receiver Frequency Ranges	792 - 805 MHz 851 - 870 MHz
Maximum Frequency Separation	Full Band Split
Sensitivity	<i>Analog Mode: 12 dB SINAD</i> -119 dBm <i>Digital Phase 1: (5% BER)</i> -119 dBm <i>Digital Phase 2: (5% BER)</i> -119 dBm
Selectivity (Adjacent Channel Rejection)	<i>25 kHz Channels, Analog</i> 75 dBm <i>12.5 kHz Channels, Analog</i> 60 dBm <i>Digital Phase 1</i> 60 dBm <i>Digital Phase 2</i> 60 dBm
Intermodulation	80 dB
Spurious Response Rejection	80 dB
Audio	<i>Analog Frequency Response</i> +1 dB, -3 dB (per TIA-603-D) <i>Hum and Noise Ratio (25 kHz Analog)</i> 46dB <i>Hum and Noise Ratio (12.5 kHz Analog)</i> 40dB <i>Output Power (3Ω load)</i> 15 W <i>Distortion</i> <2%

Environmental Specifications I		
Environment	Mil Spec	810G
	M	P
Low Pressure	500.5	II
High Temp.	501.5	I, II
Low Temp.	502.5	I, II
Temp. Shock	503.5	I (D)
Solar Radiation	505.5	I (A1)
Rain/Blown Rain	506.5	I, III
Humidity	507.5	II
Salt Fog	509.5	NA
Dust and Sand	510.5	I, II
Vibration	514.6	I (4), II
Shock	516.6	I, II, V, VI
M=Method, P=Procedure Also meets equivalent superseded C, D and E standards.		

Encryption Options FIPS VALIDATED 140-2	
Supported Encryption	AES, DES, DES-OFB, ARC4
Encryption Key/Radio	126 Common Key Reference (CKR), 126 Physical Identifier, (PID), Compatible w/ Motorola Key Variable Loader
Encryption Frame Re-sync Interval	P25 CAI 360 MSEC
Encryption Keying	External Key Loader, OTAR
Synchronization	CFB-Cipher Feedback OFB-Output Feedback
Vector Generator	National Institute of Standards and Technology (NIST) Approved random number generator
Encryption Type	Digital
Key Erasure	Keyboard Command
Code Key Initialization	Internal Pseudorandom Generator
Standards	FIPS 46-3, FIPS 81, FIPS 140-2, FIPS 197



Standard Control Head

All specifications are subject to change without notice. Please check the website for the latest version.
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