



XG-25M MOBILE

VHF, UHF, 700/800 MHz

MULTIMODE INTEROPERABLE COMMUNICATIONS

KEY FEATURES

Economical choice for P25 Phase 2 migration

Supports wideband and narrowband communications

Future-ready, software defined architecture

Loud, clear audio without distortion

Ruggedized to MIL-STD-810G and IP54 standards

The economical and feature-rich Harris XG-25M Mobile delivers exceptional audio and secure, reliable mission-critical communications. This P25 Phase 2 capable mobile is an ideal choice for first responders and utilities who want just one radio to manage their migration needs.

Designed for use on P25 and Harris legacy platforms, the XG-25M also supports EDACS®, ProVoice™ and OpenSky® systems. This flexible solution supports wideband and narrowband channels and has a software-defined architecture for in-field upgrades to additional modes including P25 trunking.

An oversized speaker and AMBE+2™ vocoder provide loud, clear audio without distortion in a wide range of emergency scenarios.

The ruggedized XG-25M exceeds durability tests, holding both a MIL-STD-810G certification and IP54 rating for protection against dust and splashing water.

An oversized front-mount control unit display and large, easy-to-read buttons simplifies the XG-25M user experience. Bluetooth® supports seamless connectivity through a variety of accessories. Standard security capabilities include choice of single-key AES or DES.

SPECIFICATIONS FOR: XG-25M MOBILE RADIO-VHF, UHF, 700/800 MHz

GENERAL

Dimensions (includes knobs but not space for mounting bracket and cables)	2.8 H x 7.24 W x 7.9 D in (7.1 H x 18.4 W x 20.0 D cm)
Weight (without brackets)	5.9 lbs (2.6 kg)
Environmental Specifications	
Relative Humidity	90% @ 122° F (+50° C)
Operating Temperature	-22° F to +140° F (-30° C to +60° C)
Storage Temperature	-40° F to +176° F (-40° C to +80° C)
Altitude	
Operational	15,000 ft (4,572 m)
In Transit	50,000 ft (15,240 m)
Electrical	
DC Supply Voltage Operating Range	
Full Performance	13.6 VDC ± 10% (normal range per TIA-603)
Overall Operating Range	13.6 VDC ± 20%
DC Supply Current Requirements	
Transmit (50 W)	15 amps maximum
Receive Standby	1.4 amps maximum
Receive	4.0 amps maximum (with 15 W external speaker output power)
Safety	
RoHS compliant	
Programming	
Field PC Programmable	

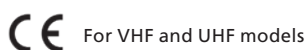
TRANSMITTER

Typical Performance Specifications	VHF	UHF	700 / 800 MHz
Frequency Ranges (MHz)	136-174	378-430	764-776, 794-805, 806-825, 851-870
Rated RF Power (W)	50	50	30-35
Frequency Stability (-30° C to +60° C, +25° C Ref) (ppm)	±1.5	±1.5	±1.5
Frequency Separation (MHz)	38 (full bandwidth)	92 (full bandwidth)	NA
Modulation Deviation (kHz)	5.0 (wideband*) 2.5 (narrowband)	5.0 (wideband*) 2.5 (narrowband)	2.5, 4 or 5 FM
FM Hum and Noise Companion Receiver (dB)	49 (wideband*) 45 (narrowband)	49 (wideband*) 45 (narrowband)	49 (wideband*) 45 (narrowband) 49 (NPSPAC)
Spurious and Harmonics (dBm/dBc)	-43 / -90	-47 / -94	-52 / -97
Audio Response (dB)	Meets TIA-603-C Section 3.2.6	Meets TIA-603-C Section 3.2.6	Meets TIA-603-C Section 3.2.6
Audio Distortion (1 kHz tone)			
@ 3 kHz deviation	1% (wideband*)	1% (wideband*)	1% (800 MHz non-NPSPAC)
@ 2.4 kHz deviation	NA	NA	1% (800 MHz NPSPAC)
@ 1.5 kHz deviation	1% (narrowband)	1% (narrowband)	1% (700 MHz)
Project 25 Modulation Fidelity (%)	<5	<5	<5
Project 25 Adjacent Channel Power (dBc)	>67	>67	>67

*VHF and UHF product is compliant with applicable FCC narrowbanding mandate below 512 MHz.

REGULATORY DATA

Frequency Range (MHz)	RF Output (W)	Frequency Stability (ppm)	FCC Type Acceptance Number	Applicable FCC Rules	Industry Canada Certification Number	Applicable Industry Canada Rules	NTIA Certification Number
136-174	50	±1.5	OWDTR-0075-E	22, 80, 90	3636B-0075	RSS-119, RSS-210	J/F 12/10037
378-470	50	±1.5	OWDTR-0077-E	22, 80, 90	3636B-0077	RSS-119, RSS-210	NA
769-869	35	±1.5	OWDTR-0076-E	90	3636B-0076	RSS-119, RSS-210	NA



Technical specifications are subject to change without notice. Product sales are subject to applicable U.S. export control laws.

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RECEIVER			
Typical Performance Specifications	VHF	UHF	700 / 800 MHz
Frequency Range (MHz)	136-174	378-470	764-776, 851-870
Frequency Separation (MHz)	38 (full bandwidth)	92 (full bandwidth)	NA
Channel Spacing (kHz)	25 (wideband*) 12.5 (narrowband)	25 (wideband*) 12.5 (narrowband)	25 (wideband*) 12.5 (narrowband)
Frequency Stability (-30° C to +60° C, +25 °C Ref) (ppm)	±1.5	±1.5	±1.5
Sensitivity (12 dB SINAD) (µV / dBm)	0.25/-119.0 (wideband*) 0.25/-119.0 (narrowband*)	0.25/-119.0 (wideband*) 0.25/-119.0 (narrowband*)	0.19/-121.5 (700 MHz) 0.19/-121.5 (800 MHz NPSPAC) 0.19/-121.5 (800 MHz non-NPSPAC)
Selectivity			
@ 12.5 kHz (dB)	60	60	60
@ 15 kHz (dB)	60	60	60
@ 25 kHz (dB)	75	75	75
Intermodulation (dB)	>77	>77	>77
Spurious and Image Rejection (dB)	>80	>80	>80
Rated Audio Output			
Internal Speaker	8 ohm rated at 3 W	8 ohm rated at 3 W	8 ohm rated at 3 W
Optional External Speaker	4 ohm rated at 15 W	4 ohm rated at 15 W	4 ohm rated at 15 W
Audio Distortion @ Rated Audio	<3%	<3%	<3%
Project 25 Reference Sensitivity @ 5% BER (µV / dBm)	0.22/-120	0.25/-119	0.22/-120
Project 25 Adjacent Channel Rejection (dB)	>60	>60	>60

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ENVIRONMENTAL STANDARD			
Applicable MIL-STD	Parameter	Methods	Procedure/Categories
MIL-STD-810G*	Low pressure	500.5	1, 2
	High temperature	501.5	1, 2
	Low temperature	502.5	1, 2
	Temperature shock	503.5	1-B
	Solar radiation	505.5	2
	Blowing rain	506.5	1
	Humidity	507.5	2
	Salt fog	509.5	1
	Blowing dust	510.5	1
	Vibration (minimum integrity)	514.6	1, Category 4
	Vibration (basic transportation)	514.6	1, Category 24
	Shock (functional/basic)	516.6	1
	Shock (transit drop)	516.6	4
	TIA-603-C	Vibration stability	Paragraph 2.3.4 and 3.3.4
U.S. Forest Service	Vibration (10-60 Hz)	Paragraph 2.15	
IEC 60529	Dust-tight and water jets	IP54	

*Also meets equivalent superseded MIL-STD-810D, -E and -F.

DIGITAL OPERATION		
Protocol	ProVoice™	P25
Vocoding Method	AMBE + 2™ Enhanced Full Rate	AMBE + 2 Enhanced Full Rate & Enhanced Half Rate
Signaling Rate (kbps)	9.6	Phase 1: 9.6 Phase 2: 12
Modulation	GF5K	Phase 1 TX: C4FM, RX: C4FM & WCQPSK Phase 2 Control Channel TX: C4FM, RX: C4FM & WCQPSK Phase 2 Working Channel TX: HCPM, RX: HDQPSK

ENCRYPTION	
Encryption Algorithms	Voice Encryption: Single-key AES/DES, Multiple-key AES/DES, DES-OFB, Encryption Lite (ARC4)*, 256-bit AES P25, 64-bit DES Control Channel Encryption: 128-bit AES (LLA)
Encryption Keys	128 keys (64 AES, 64 DES)

*Interoperates with commonly available ARC4 encryption algorithms.

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ACCESSORIES

The XG-25M offers accessories that operate under the range of conditions experienced by first responders, utility workers and public service users.

Control Units

The XG-25M comes standard with a CH-25 front-mount control unit. A conversion kit is available for remote mounting. The control unit is a Scan (limited keypad) model with a 4-line, 12-character alphanumeric display. The unit supports P25, 800 MHz EDACS and ProVoice, and OpenSky trunking operation.



CH-25 Control Unit

Microphones

Harris offers a standard microphone and a desktop microphone for use with the XG-25M. These microphones provide the high-quality audio needed by users to keep operations efficient.



Standard Microphone



Desktop Microphone

Additional Accessories Available

Antennas, front mounting kit, bracket, PC programming software and cables are available.

About Harris Corporation

Harris Corporation is a leading technology innovator, solving customers' toughest mission-critical challenges by providing solutions that connect, inform and protect. Harris supports government and commercial customers around the world.

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