



## XG-25M Mobile

VHF, 700/800 MHz

# WHEN COMMUNICATION AND PERFORMANCE MATTER

### **XG-25M: The Feature-rich and Economical Solution for Narrowband P25 Performance**

The XG-25M meets the challenge. Armed with Bluetooth® functionality and ready for operation in the narrowband frequencies, the XG-25M is the economical solution for those who seek out the best in radio value. The XG-25M accomplishes this without sacrificing the functionality that is expected from a Harris radio in the XG family: exceptional audio in a rugged and compact design.

Standard features found on the XG-25M include:

- > Enhanced User Experience – offers a front-mount control unit with an oversized display, substantial internal speaker for improved audio performance, and large easy-to-read buttons
- > AMBE+2™ Vocoder – provides noise cancellation capability and enhances audio quality
- > Bluetooth Functionality – avoid troubles with corded microphones
- > Rugged for Field Use – meets MIL standard for durability



**HARRIS**<sup>®</sup>  
assuredcommunications<sup>®</sup>

The XG-25M uses advanced technology to deliver critical interoperable communications and unique wireless applications to users.

## **FUTURE READY**

The XG-25M is an economical investment that agencies can rely on as transitions occur to P25 technology. The mobile supports P25 conventional and trunked operation, wideband and narrowband channels, and its software-defined architecture allows field upgrading to operating modes such as P25 Phase 2.

## **SUPERIOR AUDIO EXPERIENCE**

The XG-25M delivers the exceptional audio that users have grown to expect from Harris. The large internal speaker provides extremely powerful audio, and the AMBE+2 vocoder optimizes the quality of communications. In high-noise emergency situations, the mobile delivers loud and clear audio, even with sirens blaring and fire engines running. Through the combination of an oversized speaker and the AMBE+2 vocoder, the XG-25M provides one of the best audio experiences available.

## **BLUETOOTH READY**

The XG-25M delivers Bluetooth functionality for a wireless interface to selected accessories. Bluetooth provides freedom of movement with no protruding parts or cumbersome wires or cables, allowing users the flexibility to operate without the use of corded microphones or programming cables if desired.

## **RUGGED DESIGN**

The XG-25M is a member of the family of field-proven, reliable, and rugged mobiles in the Harris portfolio. Durable construction enables the XG-25M to operate in demanding environments. The mobile meets MIL-STD-810G for shock and vibration, dust, salt fog, humidity, rain, solar radiation, low pressure, and temperature extremes and has an Ingress Protection rating of IP54 for dust intrusion and splashing water.

## **EASY USER INTERFACE**

From the oversized display to the large easy-to-read buttons on the front-mount control unit, each aspect of the radio has been developed to provide a better user experience. Simple controls allow users to communicate seamlessly and effectively in a range of surroundings. Since the XG-25M is easy to operate, users may focus attention on the task rather than on radio operation.

## GENERAL SPECIFICATIONS

### Dimensions (H x W x D):

Radio and Control Unit  
(Includes Knobs but not space for  
Mounting Bracket and Cables):  
2.8 x 7.24 x 7.9 in.  
(7.1 x 18.4 x 20.0 cm)

### Weight (Without Bracket):

5.9 lb (2.6 kg)

### DC Supply Voltage Operating Range:

For Full Performance:  
13.6 VDC  $\pm$  10% (Normal  
range per TIA-603)  
Overall Operating Range:  
13.6 VDC  $\pm$  20%

### DC Supply Current

#### Requirements:

Transmit at 50 Watts:  
15 amps maximum  
Receive Standby:  
1.4 amps maximum  
Receive with 15-Watt Ext.  
Speaker Output Power:  
4.0 amps maximum

### Operating Temperature

#### Range:

-22 to +140°F  
(-30 to +60°C)

### Storage Temperature Range:

-40 to +176°F  
(-40 to +80°C)

### Relative Humidity:

90% @ 122°F (+50°C)

### Altitude:

Operational: 15,000 ft  
(4,572 m)  
In Transit: 50,000 ft  
(15,240 m)

### Options and Accessories

Front mount kit, bracket,  
microphone, antennas,  
optional external speaker,  
option cables, and pro-  
gramming cables.

### RoHS compliant

# RUGGED AND FEATURE-RICH MOBILE RADIO

## TRANSMITTER

### TYPICAL PERFORMANCE SPECIFICATIONS

	VHF	700/800 MHz
Frequency Range (MHz):	136-174	764-776, 794-805, 806-825, 851-870
Rated RF Power (W):	10-50	30-35
Frequency Stability (-30 to +60°C; +25°C Ref) (ppm):	$\pm$ 2	$\pm$ 1.5
Frequency Separation (MHz):	38 (full bandwidth)	NA
Modulation Deviation (kHz):	5.0 (wideband*) 2.5 (narrowband)	2.5, 4, or 5 FM
FM Hum and Noise (Companion Receiver) (dB):	49 (wideband*) 45 (narrowband)	44 (700 MHz) 47 (800 MHz NPSPAC) 48 (800 MHz non-NPSPAC)
Spurious and Harmonics (dBm/dBc):	-42/-80	-55/-90
Audio Response (dB):	+1/-3	Meets TIA-603-C Section 3.2.6
Audio Distortion (1 kHz tone):		
@ 3kHz deviation:	1% (wideband*)	1% (800 MHz non-NPSPAC)
@ 2.4 kHz deviation:	NA	1% (800 MHz NPSPAC)
@ 1.5 kHz deviation:	1% (narrowband)	1% (700 MHz NPSPAC)
Project 25 Modulation Fidelity (%):	5	1
Project 25 Adjacent Channel Power (dBc):	67	73

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

## RECEIVER

### TYPICAL PERFORMANCE SPECIFICATIONS

	VHF	700/800 MHz
Frequency Range (MHz):	136-174	764-776, 851-870
Frequency Separation (MHz):	38 (full bandwidth)	NA
Channel Spacing (kHz):	25 (wideband*) 12.5 (narrowband)	12.5, 25
Frequency Stability (-30 to +60°C; +25°C Ref) (ppm):	$\pm$ 1.5	$\pm$ 1.5
Sensitivity (12 dB SINAD) ( $\mu$ V/dBm):	0.25/-119.0 (wideband*), 0.30/-117.5 (narrowband)	0.21/-120.5 (700 MHz) 0.18/-122.0 (800 MHz NPSPAC) 0.19/-121.5 ((800 MHz non-NPSPAC)
Selectivity @ 12.5 kHz (dB):	60	60
@ 15 kHz (dB):	60	60
@ 25 kHz (dB):	75	75
Intermodulation (dB):	75	80
Spurious and Image Rejection (dB):	>80	>80
Rated Audio Output:		500 mW
Internal Speaker:	8 ohm rated at 3 Watts	
Optional External Speaker:	4 ohm rated at 15 Watts	
Audio Distortion:	<3% @ rated power	1.5% @ rated audio output power
Project 25 Reference Sensitivity @ 5% BER ( $\mu$ V/dBm):	0.22/-120.0	0.22/-120
Project 25 Adjacent Channel Rejection (dB):	60	64

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

## ENVIRONMENTAL SPECIFICATIONS

STANDARD	PARAMETER	METHODS & PROCEDURES
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
	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 24
	Vibration (Basic Transportation)	514.6/1, Category 4
	Shock (Functional/Basic)	516.6/1
	Shock (Transit Drop)	516.6/4
	Dust-tight, Powerful Water Jets	IP54
IEC 60529	Vibration (10-60 Hz)	USDA LMR Standard, Section 2.15
U.S. Forest Service	Shock (1 meter drop)	Paragraph 3.3.5.3
TIA-603-C		

\*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	9.6
Modulation:	GFSK	Phase 1 TX: C4FM, RX: C4FM & WCQPSK Phase 2 TX: HCPM, RX: WCQPSK
Encryption Algorithms:	AES (FIPS-140-2 certified) & DES	AES (FIPS-140-2 certified) & DES
Encryption Keys:	128 keys (64 AES, 64 DES)	128 keys (64 AES, 64 DES)

## 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	$\pm$ 2	OWDTR-0075-E	22, 80, 90	3636B-0075	RSS-119, RSS-210	J/F 12/10037
769-869	35	$\pm$ 2	OWDTR-0075-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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