



XG-25P PORTABLE

VHF, UHF, 700/800 MHz

WHEN COMMUNICATION AND PERFORMANCE MATTER

Designed to be budget-friendly but feature-rich with exceptional audio and mission-critical rugged, the XG-25P portable provides a trusted economical communications device for first responders, utility workers, and public service users executing routine day-to-day operations as well as emergencies in their communities. The XG-25P is the next generation high value P25 Phase 2 capable radio for mission-critical communications.

FEATURES

The portable is simple to operate, so users may focus on the task rather than on radio function.

Single-key DES encryption and Encryption Lite are standard. Single-key DES interoperates across the industry. Encryption Lite allows communication with commonly available encrypted radios using a 40-bit key.

The XG-25P exceeds extreme durability tests and is MIL-STD-810G certified.

Optional features are available for Bluetooth™ functionality to interface to wireless audio accessories and FIPS for enhanced security using federally approved 256-bit AES for encrypted communications.

MULTIMODE AND MULTI-PROTOCOL SUPPORT

Designed for users on P25 platforms as well as Harris legacy platforms, the XG-25P supports P25, EDACS®, ProVoice™, and OpenSky® users who desire one radio to manage their migration needs.

SUPERIOR AUDIO EXPERIENCE

Through the combination of an oversized speaker and AMBE+2™ vocoder, the XG-25P provides one of the best audio experiences available on the market. Its large speaker provides extremely powerful audio, and the AMBE+2 vocoder optimizes the quality of communications. The vocoder also controls distortion that may occur from shouting into the microphone.

FUTURE READY

The XG-25P is an economical investment that agencies can rely on as transitions occur to P25 technology. The portable radio supports wideband and narrowband channels (per applicable regulatory standards), and its software-defined architecture allows field upgrading to operating modes such as P25 Phase 2 trunking.

ERGONOMIC PACKAGE

From the keypad buttons to the battery, each aspect of the XG-25P has been developed to provide a better user experience. The knobs and buttons of the radio are designed to be strong enough to avoid incidental change while being managed by users wearing gloves.

GENERAL SPECIFICATIONS

Radio Models

Full Keypad: Dot matrix LCD and DTMF keypad
Partial Keypad: Dot matrix LCD and limited keypad

Dimensions (Without Antenna, Battery, and Knobs)

	Inches	Millimeters
Height:	5.89	149.6
Width:	2.44	62.0
Depth:	1.86	47.2

Weight (Without Antenna and Battery)

	Ounces	Grams
Portable:	9.9	281.5

Housing Colors

Black

Environmental Specifications

Relative Humidity:	90% @ 122°F (+50°C)
Vibration:	5G (per US Forest Service)
Drop Shock:	1.0 meter drop to concrete (per TIA-603-C)

Environmental Specifications (Cont'd)

Ingress Protection:	IP66	
Operating Temperature *:	°F	°C
	-22 to +140	--30 to +60

*Extremely low temperatures adversely affect battery life

Storage Temperature*:	°F	°C
	-40 to +176	-40 to +80

*Store batteries at the following temperatures:

Li-Ion:	-40 to +176	-40 to +80
Li-Polymer:	-22 to +176	-30 to +80
NiMH:	-40 to +176	-40 to +80

Altitude	Feet	Meters
Operational:	15,000	4,572
In Transit:	50,000	15,240

Electrical

Input Voltage: 7.5 VDC (nominal)

Safety

RoHS compliant

TRANSMITTER

Typical Performance Specifications	VHF	UHF	700/800
Frequency Range (MHz):	136-174	378-470	764-776, 794-805, 806-825, 851-870
Rated RF Power (W):	1.0-5.0	5	3
Frequency Stability (-30 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*)	49 (wideband*)	44 (700 MHz)
	45 (narrowband)	44 (narrowband)	47 (800 MHz NPSPAC) 46 (800 MHz non-NPSPAC)
Spurious and Harmonics (dBm/dBc):	-42/-80	-36/73	-55/90
Audio Response (dB):	+1/-3	+1/-3	+1/-3
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 (%):	1	1.5	1.5
Project 25 Adjacent Channel Power (dBc):	71.5	67	72

*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	5.0	±1.5	OWDTR-0072-E	22, 80, 90	3636B-0072	RSS-119, RSS-210	J/F 12/10038
378-470	5.0	±1.5	OWDTR-0109-E	22, 80, 90	3636B-0109	RSS-119, RSS-210	J/F 12/10038
769-869	3.0	±1.5	OWDTR-0073-E	90	3636B-0073	RSS-119, RSS-210	NA

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

RECEIVER

Typical Performance Specifications	VHF	UHF	700/800
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)	12.5, 25, PLL Steps
Frequency Stability (-30 to +60°C, +25°C Ref) (ppm):	±1.5	±1.5	±1.5
Sensitivity (12 dB SINAD) (µV/dBm):	0.25/-119.0 (wideband*) 0.30/-117.5 (narrowband)	0.25/-119.0 (wideband*) 0.30/-117.5 (narrowband)	0.21/-120.5 (700 MHz) 0.21/-120.5 (800 MHz NPSPAC) 0.21/-120.5 (800 MHz non-NPSPAC)
Project 25 Adjacent Channel Rejection @ 12.5 kHz (dB):	62	62	62
Offset Channel Selectivity @ NPSPAC (dB):	NA	NA	25
Selectivity @ 12.5 kHz (dB):	67	60	66 (700 MHz)
@ 15 kHz (dB):	72	NA	NA
@ 25 kHz (dB):	78	72	77 (800 MHz non-NPSPAC)
Intermodulation (dB):	78	75	78
Spurious and Image Rejection (dB):	82	73	82
FM Hum and Noise (dB):	54 (wideband*) 51 (narrowband)	54 (wideband*) 48 (narrowband)	49 (700 MHz) 53 (800 MHz NPSPAC) 54 (800 MHz non-NPSPAC)
Rated Audio Output (mW):	500	500	500
Audio Distortion:	1% @ rated power	1% @ rated power	1% @ rated audio output power
Project 25 Reference Sensitivity @ 5% BER (µV/dBm):	0.22/-120.0	0.22/-120.0	0.22/-120.0

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ENVIRONMENTAL STANDARDS

Standard	Parameter	Methods	Procedures/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	
	Contamination by Fluids	504.1	2	
	Solar Radiation	505.5	2	
	Blowing Rain	506.6	1	
	Humidity	507.4		
	Salt Fog	509.5		
	Blowing Dust	510.5	1	
	Blowing Sand	510.5	2	
	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	
	IEC 60529	Dust-tight, Powerful Water Jets	IP66	
	U.S. Forest Service	Vibration (10-60 Hz)	USDA LMR Standard Section 2.15	
TIA-603-C	Shock (1-meter drop)	Paragraph 3.3.5.3		

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

DIGITAL OPERATION

Protocol	OpenSky® (700/800 MHz)	ProVoice™	P25
Vocoding Method:	AMBE + 2™ Half Rate & Enhanced Half Rate	AMBE + 2 Enhanced Full Rate	AMBE + 2 Enhanced Full Rate & Enhanced Half Rate
Signaling Rate (kbps):	19.2 & 9.6	9.6	9.6
Modulation:	4-Level GFSK & M4FM	GFSK	Phase1 TX: C4FM, RX: C4FM & WCQPSK Phase 2 TX: HCPM, RX: WCQPSK

ENCRYPTION

Encryption Algorithms: AES (FIPS-140-2 certified), DES, Encryption Lite (40-bit)*

Encryption Keys per Radio: Capable of storing 128 keys (64 AES, 64 DES)

*Option included as standard with the radio. Interoperates with commonly available ARC4 encryption algorithms.

BATTERIES

Type	Dimensions (L x W x D)	Weight	Life (@5% Tx, 5% Rx, and 90% standby)	Capacity (mAh)
Li-Ion	4.42 x 2.44 x 0.83 in.	5.1 oz (145g)	10 hours	2400
Li-Polymer	4.42 x 2.44 x 0.83 in.	6.6 oz (187g)	16 hours	3600
NiMH	4.42 x 2.44 x 0.83 in.	9.5 oz (270g)	10 hours	2400

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ACCESSORIES

The XG-25P offers a full complement of accessories that operate under the extreme conditions experienced by first responders. Several are shown below.

Audio Accessories

The XG-25P can be used with a wide variety of audio accessories including speaker microphones, headsets, and covert audio accessories to provide a complete user-gear solution for the industrial, public safety, utility, and transportation markets. Heavy-duty and lightweight headsets are available with in-ear or over-the-ear hearing protection, flexible boom microphones with noise-reduction technology, and standard PTTs. In addition, the XG-25P can be used with Bone Conducting Skull Headsets and Throat Microphone/Headset Kits. Covert audio kits are available in black or beige, and in 2-wire or 3-wire configurations with earpiece, microphone, and PTT.



Speaker Microphone



Tactical Headset



3-Wire Mini-Lapel Microphone

Carrying Cases

Harris offers a versatile line of carrying cases for the XG-25P radio. Options include a standard belt clip and premium belt loop, both of which afford the radio user a low-profile, integrated carrying option. In addition, a premium leather holster is available for attaching to a belt or wearing with the premium leather shoulder strap.



Nylon Carrying Case



Belt Clip



Leather Carrying Case

Adapters

The XG-25P can be used in conjunction with a GPS Adapter. The adapter enables the radio to transmit a user's geographic location to dispatchers to provide quick and accurate position tracking. With a GPS Adapter, there is no need for an external GPS speaker mic.



GPS Adapter

Additional Accessories Available

Antennas, Bluetooth® speaker microphones, Bluetooth covert earpieces, Lithium batteries, PC programming software, and cables are available.

About Harris Corporation

Harris Corporation is a leading technology innovator that creates mission-critical solutions that connect, inform and protect the world. The company's advanced technology provides information and insight to customers operating in demanding environments from ocean to orbit and everywhere in between. Harris has approximately \$8 billion in annual revenue and supports customers in 125 countries through four customer-focused business segments: Communication Systems, Space and Intelligence Systems, Electronic Systems, and Critical Networks.

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