XG-25P PORTABLE
VHF, UHF, 700/800 MHZ

The Harris XG-25P delivers exceptional audio and secure, reliable mission-critical communications. This budget-friendly, feature-rich portable is P25 Phase 2 capable, an ideal choice for organizations who want just one radio to manage their migration needs.

Designed for first responder and utility users on P25 and Harris legacy platforms, the XG-25P 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 new modes and capabilities.

An oversized speaker and AMBE+2™ vocoder combine for crisp, loud audio without distortion despite noisy environments. The ruggedized

XG-25P exceeds extreme durability tests and is MIL-STD-810G certified. Equipped with a simplified interface for ease of use, the portable's knobs and keypad buttons are also highly responsive to gloved-hand operation.

Standard security capabilities include choice of single-key AES and DES encryption.

SUPERIOR AUDIO, P25 PHASE 2 CAPABLE

KEY FEATURES

Economical choice for P25 Phase 2 migration

Supports wideband and narrowband communications

Future-proof with software-defined architecture

Loud, clear audio without distortion

Ruggedized to meet MIL-STD-810G standards

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HARRIS® TECHNOLOGY TO CONNECT, INFORM AND PROTECT™

SPECIFICATIONS FOR: **XG-25P PORTABLE–VHF, UHF, 700/800 MHZ**

GENERAL

Radio Models		
Full Keypad	Dot matrix LCD and DTMF keypad	
Partial Keypad	Dot matrix LCD and limited keypad	
Dimensions (Without antenna, battery, and knobs)		
Height	5.89 (in)	149.6 (mm)
Width	2.44 (in)	62.0 (mm)
Depth	1.86 (in)	47.2 (mm)
Weight (without antenna and battery)		
Portable	9.9 (oz)	281.5 (g)
Housing Colors		
Black		
Environmental Specifications		
Relative Humidity	90% @ 122° F (+50° C)	
Vibration	5 G (per U.S. Forest Service)	
Drop Shock	1.0 meter drop to concrete (per TIA-603-C)	
Ingress Protection	IP66	
Operating Temperature[1]	-22° F to +140° F	-30° C to +60° C
Storage Temperature*	-40° F to +176° F	-40° C to +80° C
*Store batteries at the following temperatures:		
Li-Ion	-40° F to + 176° F	-40° C to +80° C
Li-Polymer	-22° F to + 176° F	-30° C to +80° C
NiMH	-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		
Input Voltage	7.5 VDC (nominal)	
Safety		
RoHS compliant		

[1]Extremely low temperatures adversely affect battery life.

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° 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 (wideband*)	49 (narrowband) 44 (narrowband)	44 (700 MHz) 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)			1% (800 MHz non-NPSPAC) 1% (800 MHz NPSPAC) 1% (700 MHz)
@ 3 kHz deviation	1% (wideband*)	1% (wideband*)	
@ 2.4 kHz deviation	NA	NA	
@ 1.5 kHz deviation	1% (narrowband)	1% (narrowband)	
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-0139-E	22, 80, 90	3636B-0139	RSS-119, RSS-210	J / F 12 / 10038
378-470	5.0	±1.5	OWDTR-0141-E	22, 80, 90	3636B-0141	RSS-119, RSS-210	J / F 12 / 10038
769-869	3.0	±1.5	OWDTR-0140-E	90	3636B-0140	RSS-119, RSS-210	NA

SPECIFICATIONS FOR: **XG-25P PORTABLE—VHF, UHF, 700/800 MHZ**

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 / 15 (narrowband)	25 (wideband*) 12.5 / 15 (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) @15 kHz (dB) @25 kHz (dB)	67 72 78	60 NA 72	66 (700 MHz) NA 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 STANDARD

Standard	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
	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	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 per Radio	Capable of storing 128 keys (64 AES, 64 DES)

*Interoperates with commonly available ARC4 encryption algorithms.

BATTERIES

Type	Dimensions (H 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 (145 g)	10 hours	2400
Li-Polymer	4.42 x 2.44 x 0.83 in	6.6 oz (187 g)	16 hours	3600
NiMH	4.42 x 2.44 x 0.83 in	9.5 oz (270 g)	10 hours	2400

ACCESSORIES

Harris offers a full complement of XG-25P accessories ruggedized for operations in extreme conditions.

Audio Accessories

The XG-25P can be used with a wide variety of audio accessories to provide a complete user-gear solution for industrial, public safety, utility and transportation workers. 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 P-T-Ts. The XG-25P is also compatible with Bone Conducting Skull Headsets and Throat Microphone/Headset Kits. Covert audio kits are available in black or beige and in 2 or 3-wire configurations with earpiece, microphone and P-T-T.

Speaker Microphone   *Tactical Headset*   *3-Wire Mini-Lapel Microphone*

Carrying Cases

Harris versatile, low-profile carrying cases easily integrate with the XG-25P. Options include nylon carrying cases, a standard belt clip, premium belt loop and a premium leather holster with a back clip. 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

Addition of a GPS Adapter allows the XG-25P to transmit the user's geographic location to dispatchers, providing fast, accurate position tracking.

GPS Adapter

Additional Accessories Available

Antennas, Bluetooth® speaker microphones and covert earpieces, PC programming software and cables are also 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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