XL-200P PORTABLE

CONVERGED LTE LAND MOBILE RADIO

The Harris XL-200P is the industry's leading converged multiband LTE, full-spectrum LMR. Capable of operating on VHF, UHF and 700/800 MHz frequencies, this powerful portable merges robust LMR voice with voice and data over cellular, LTE and Wi-Fi®, and is both Verizon Certified and Band 14 ready.

EXCEPTIONAL COMMUNICATIONS IN SEVERE ENVIRONMENTS

KEY FEATURES

- Verizon Certified and Band 14 ready
- Instant recall of received audio replays transmissions to avoid missed calls
- Wi-Fi® connectivity for voice delivery outside coverage areas through Harris BeOn® application
- Optional cell modem for voice and data wherever cellular/LTE is available
- Built-in GPS, Bluetooth®, Active Noise Cancellation, and 4-position A-B-C-D switch standard

Designed from the ground up with input from mission-critical users, the XL-200P is an entirely new radio platform. Its advanced processor, memory and software technologies merge robust LMR voice with voice and data over cellular, LTE and Wi-Fi, for leading-edge connectivity.

The XL-200P is engineered for audio excellence, combining a powerful 1.5/4.0 watt max amplifier and custom speakers with advanced noise cancellation technology to suppress feedback, delivering clear communications in a wide range of noisy environments. Compact and ergonomic, the portable's shape is based on extensive research, resulting in a radio that fits naturally in users' hands. Controls are shaped and arranged for ease of use and optimum performance, including accessory connections.

With its ruggedized aluminum I-beam frame and tough seals, the XL-200P is built to operate in severe environments. This radio meets MIL-STD-810G for durability, including Method 511.5 for explosive atmospheres and Method 504.1 for contamination by fluids, so it can be scrubbed with cleansers and biological sanitizers.

The XL-200P supports a choice of encryption methods for secure communications, including single-key AES.

SPECIFICATIONS FOR: XL-200P PORTABLE FULL-SPECTRUM MULTIBAND RADIO

GENERAL

Radio Models:		
Full Keypad	TFT LCD w/DTMF keypad, navigation cluster, soft keys	
Partial Keypad	TFT LCD w/partial keypad, navigation cluster, soft keys	
Dimensions w/Battery (H x W x D)	5.8 x 2.3 x 1.4 in (148.0 x 60.0 x 36.0 mm)	
Weight	**w/Battery and Antenna** 16.2 oz (464 g)	**w/o Battery and Antenna** 10.4 oz (296 g)
Housing Colors	Midnight Black, High-Visibility Yellow	
Interfaces:		
Front Display	320 x 178 pixels, 1.8 inch transflective LCD, 16-bit color with backlight	
Top Display	128 x 32 pixels, 1.1 inch multi-color backlight, sunlight readable	
Keypad	Backlight, 3 soft keys, 5-way navigation key, full DTMF keypad	
Buttons	Large PTT button, on/off knob, volume knob, red emergency button, 16-position top-mounted rotary knob, 2-position concentric switch, 4-position toggle switch, 3 programmable side buttons	
Tx/Rx Indicator	Multi-colored LEDs	
Channel/Talkgroup Capacity	1,250 total conventional channels and 13,824 total talkgroups	
Radio programming	Firmware, personalities and feature set over Wi-Fi	
Transceiver	**Supported Bands** VHF, UHF, 700/800 MHz and LTE	**Channel Capacity** 12,500 (1,250 per mission plan)
Environmental:		
Relative Humidity	5% @ 140°F (+60°C), 95% @ 122°F (+50°C)	
Vibration	USDA LMR Standard, Section 2.15 and MIL-STD-810G, Test Method 514.6	
Drop Shock	1.5 meter drop to concrete (exceeds TIA-603-D)	
Immersion[1]	2 meters for 4 hours in accordance with MIL-STD-810G/IP68	
Operating Temperature[2]	-22°F to +140°F (-30°C to +60°C)	
Storage Temperature[3]	-40°F to +176°F (-40°C to +80°C)	
Altitude	**Operational** 15,000 feet (4,572 meters)	**In Transit** 50,000 feet (15,240 meters)
Electrical Input Voltage	7.5 VDC (nominal)	
GPS/GNSS Specifications:	P25 standard Tier 2 and Harris in-band	
Channels	52	
Tracking Sensitivity (dBm)	-166 (GPS), -163 (GLONASS)	
Acquisition Sensitivity (dBm)	-146 (GPS)	
Cold Start w/-130 dBm input	<35 seconds	
Hot Start w/-130 dBm input	<1 second	
Safety:		
Hazardous Location Options	Approved for use in the U.S. and Canada in Class I, Division 2 Groups A, B, C and D hazardous locations	
RoHS Compliant		

[1] Optional feature
[2] Extreme low temperatures adversely affect battery life and audio power/ distortion
[3] Store batteries at +25° C ± 5° C

LMR TRANSMITTER

Frequency Bands	VHF*	UHF*	700/800 MHz
Frequency Ranges (MHz)			
Option 1 (U.S.)	136-174	378-522	768-776, 798-806, 806-816, 851-861
Option 2 (International)	136-174	378-522	763-776, 793-806, 806-825, 851-870
Rated RF Power/Talkaround (W)	1-6	1-5	0.5-3
Frequency Stability (-30 to +60°C)	±1.0 ppm	±1.0 ppm	±1.0 ppm
Modulation Limiting (kHz)	2.5, 4, 5 (FM)	2.5, 4, 5 (FM)	2.5, 4, 5 (FM)
Audio Response (dB)	+1/-3	+1/-3	+1/-3
Spurious and Harmonics (dBc)	-80 (FCC Part 90)	-80 (FCC Part 90)	-80 (FCC Part 90)
FM Hum and Noise Companion Receiver (dB):			
@ 25 kHz	70	60	55
@ 12.5 kHz	47	47	45
Audio Distortion (%)	<1.25	<1.25	<1.25
Project 25 Modulation Fidelity (%)	1.0	1.0	1.0
Project 25 Adjacent Channel Power (dBc)	>71	>71	>71

*Full-spectrum multiband VHF and UHF product is compliant with applicable FCC narrowbanding mandate below 512 MHz

REGULATORY DATA

Frequency Range	RF Output	Frequency Stability	FCC Type Acceptance No.	Applicable FCC Rules	Industry Canada Certification No.	Applicable Industry Canada Rules	NTIA Cert. No.
136-174 MHz	6 W	±1.0 ppm	OWDTR-0133-E, OWDTR-0145-E	22, 74, 80, 90	3636B-0133, 3636B-0145	RSS-119	SPS-217 49/1
378-522 MHz	5 W	±1.0 ppm	OWDTR-0133-E, OWDTR-0145-E	22, 74, 80, 90	3636B-0133, 3636B-0145	RSS-119	SPS-217 49/1
768-776 MHz	3 W	±1.0 ppm	OWDTR-0133-E, OWDTR-0145-E	90	3636B-0133, 3636B-0145	RSS-119	
798-806 MHz	3 W	±1.0 ppm	OWDTR-0133-E, OWDTR-0145-E	90	3636B-0133, 3636B-0145	RSS-119	
806-816 MHz	3 W	±1.0 ppm	OWDTR-0133-E	90	3636B-0133	RSS-119	
806-825 MHz	3 W	±1.0 ppm	OWDTR-0145-E	90	3636B-0145	RSS-119	

SPECIFICATIONS FOR: **XL-200P PORTABLE FULL-SPECTRUM MULTIBAND RADIO**

REGULATORY DATA (Continued)

Frequency Range	RF Output	Frequency Stability	FCC Type Acceptance No.	Applicable FCC Rules	Industry Canada Certification No.	Applicable Industry Canada Rules	NTIA Cert. No.
851-861 MHz	3 W	±1.0 ppm	OWDTR-0133-E	90	3636B-0133	RSS-119	
851-869 MHz	3 W	±1.0 ppm	OWDTR-0145-E	90	3636B-0133	RSS-119	
2402-2480 MHz	0.2 W	N/A	OWDTR-0133-E, OWDTR-0145-E	15	3636B-0133, 3636B-0145	RSS-119	
5180-5825 MHz	0.1 W	N/A	OWDTR-0133-E, OWDTR-0145-E	15	3636B-0133, 3636B-0145	RSS-119	

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

LMR RECEIVER

Frequency Bands	VHF	UHF	700/800 MHz
Frequency Ranges (MHz):			
Option 1 (U.S.)	136-174	378-522	768-776, 851-861
Option 2 (International)	136-174	378-522	763-776, 851-870
Channel Spacing (kHz)	25 (wideband*), 12.5 (narrowband), 6.25 equiv (TDMA P25 Phase 2)		
Frequency Stability (-30 to +60°C)	±1.0 ppm	±1.0 ppm	±1.0 ppm
Sensitivity (dBm): **@ 12 dB SINAD**	-122	-121	-121 (700 MHz) -120 (800 MHz)
Project 25 Reference Sensitivity (dBm): **@ 5% BER**	-122	-121	-120.5
Analog Selectivity (dB):			
@ 25 kHz	77	77	74
@ 12.5 kHz	71	70	64
Project 25 Adjacent Channel Rejection (dB)	66.2	62.2	62
Offset Channel Selectivity (dB): **@ NPSPAC**	NA	NA	30
Intermodulation (dB)	80	81	77
Spurious and Image Rejection (dB)	90	87	80
FM Hum and Noise (dB):			
@ 25 kHz	-60	-60	-55
@ 12.5 kHz	-55	-53	-50
Audio Output - Rated/Max (mW)	1500/4000	1500/4000	1500/4000
Audio Distortion @ Rated Power (%)	1.1	1.1	1.1

*Full-spectrum multiband VHF and UHF product is compliant with applicable FCC narrowbanding mandate below 512 MHz

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
	Solar radiation	505.5	1
	Contamination by fluids	504.1	2
	Rain	506.5	1, 3
	Humidity	507.5	2
	Salt fog	509.5	1
	Blowing dust and sand	510.5	1, 2
	Explosive atmosphere	511.5	1
	Immersion in water**	512.5	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
	Shock (bench handling)	516.6	6
IEC 60529	Dust-tight, continuous immersion in water**		IP68

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

CELLULAR BROADBAND

LTE Protocol	3GPP Release 10, Power Class 3 UE with Rx diversity
Public Safety Broadband	Band 14, 788-798 MHz Tx, 758-768 MHz Rx, 5 or 10 MHz BW
Commercial Broadband	Verizon Certified Band 13, 777-787 MHz Tx, 746-756 MHz Rx, 5 or 10 MHz BW
Commercial Broadband	Verizon Certified Band 4, 1710-1755 MHz Tx, 2110-2155 MHz Rx, 5, 10, 15, or 20 MHz BW
Wi-Fi	802.11 b/g/n 2.4 GHz and 5 GHz; supports 24 preconfigured and 8 user configured networks
Bluetooth	Bluetooth 4.0 (128-bit encryption)

DIGITAL OPERATION

Protocol	ProVoice™	P25
Vocoding Method	AMBE +2™ enhanced full rate	AMBE +2 enhanced full rate and enhanced half rate
Signaling Rate (kbps)	9.6	9.6
Modulation	GFSK	Phase 1 Tx: C4FM, Rx: C4FM and WCQPSK
Harris Failsoft operation	Switch to site trunking mode (for Harris infrastructure) or P25 conventional	

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 (128 AES, 64 DES)
Keying	Harris Key Loader, Over-the-Air Rekeying (OTAR), Motorola KVL 3000+/4000
Standards	FIPS 140-2, FIPS 197

BATTERIES

Type	Dimensions (H x W x D)	Weight	Capacity (mAh)
Li-Ion	3.0 x 2.3 x 0.9 inch	4.8 oz (136 g)	3100

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ACCESSORIES

The XL-200P is available with a selection of dependable Harris accessories that operate in a range of environments. Several are shown below.

Headsets

The XL-200P can be used with a wide variety of 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 or remote PTTs. In addition, the XL-200P can be used with Bone Conducting Skull Headsets and Throat Microphone/Headset Kits. Covert audio kits are available in black or beige, 2-wire or 3-wire configurations with ear-piece, microphone and PTT.

3-Wire Mini-Lapel Microphone

Tactical Headset

Carrying Cases

Harris offers a versatile line of carrying cases for the XL-200P full-spectrum multiband 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.

Belt Clip

Leather Carrying Case

Chargers

Harris offers a variety of chargers for the XL-200P: Single-Bay, Multi-Bay and a Vehicular Charger for in-car charging. The chargers are designed to quickly and safely charge battery packs in approximately 1 to 4 hours.

Single-Bay Charger

*Multi-Bay Charger**

*Vehicular Charger**

Additional Accessories Available

Bluetooth speaker microphones, Bluetooth covert earpieces, standard speaker microphones, Lithium Ion battery, PC programming software and cables, other subminiature surveillance accessories, and antennas.

*Accessories unavailable in Brazil

About Harris Corporation

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