



## 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



# 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.

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

<b>Radio Models:</b>	TFT LCD w/DTMF keypad, navigation cluster, soft keys	
Full Keypad	TFT LCD w/partial keypad, navigation cluster, soft keys	
Partial Keypad		
<b>Dimensions w/Battery (H x W x D)</b>	5.8 x 2.3 x 1.4 in (148.0 x 60.0 x 36.0 mm)	
<b>Weight</b>	<b>w/Battery and Antenna</b>	<b>w/o Battery and Antenna</b>
	16.2 oz (464 g)	10.4 oz (296 g)
<b>Housing Colors</b>	Midnight Black, High-Visibility Yellow	
<b>Interfaces:</b>		
Front Display	320 x 178 pixels, 1.8 inch transfective 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	
<b>Radio programming</b>	Firmware, personalities and feature set over Wi-Fi	
<b>Transceiver</b>	<b>Supported Bands</b>	<b>Channel Capacity</b>
	VHF, UHF, 700/800 MHz and LTE	12,500 (1,250 per mission plan)
<b>Environmental:</b>		
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 <sup>1</sup>	2 meters for 4 hours in accordance with MIL-STD-810G/IP68	
<b>Operating Temperature<sup>2</sup></b>	-22°F to +140°F (-30°C to +60°C)	
<b>Storage Temperature<sup>3</sup></b>	-40°F to +176°F (-40°C to +80°C)	
<b>Altitude</b>	<b>Operational</b>	<b>In Transit</b>
	15,000 feet (4,572 meters)	50,000 feet (15,240 meters)
<b>Electrical Input Voltage</b>	7.5 VDC (nominal)	
<b>GPS/GNSS Specifications:</b>		
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	
<b>Safety:</b>		
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		

<sup>1</sup> Optional feature

<sup>2</sup> Extreme low temperatures adversely affect battery life and audio power/ distortion

<sup>3</sup> Store batteries at +25° C ± 5° C

## LMR TRANSMITTER

Frequency Bands	VHF*	UHF*	700/800 MHz
<b>Frequency Ranges (MHz)</b>			
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
<b>Rated RF Power/Talkaround (W)</b>	1-6	1-5	0.5-3
<b>Frequency Stability (-30 to +60°C)</b>	±1.0 ppm	±1.0 ppm	±1.0 ppm
<b>Modulation Limiting (kHz)</b>	2.5, 4, 5 (FM)	2.5, 4, 5 (FM)	2.5, 4, 5 (FM)
<b>Audio Response (dB)</b>	+1/-3	+1/-3	+1/-3
<b>Spurious and Harmonics (dBc)</b>	-80 (FCC Part 90)	-80 (FCC Part 90)	-80 (FCC Part 90)
<b>FM Hum and Noise Companion Receiver (dB):</b>			
@ 25 kHz	70	60	55
@ 12.5 kHz	47	47	45
<b>Audio Distortion (%)</b>	<1.25	<1.25	<1.25
<b>Project 25 Modulation Fidelity (%)</b>	1.0	1.0	1.0
<b>Project 25 Adjacent Channel Power (dBc)</b>	>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**

<b>REGULATORY DATA (Continued)</b>							
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.

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

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<b>ENVIRONMENTAL STANDARD</b>			
Applicable MIL-STD	Parameter	Methods	Procedure/Categories
<b>MIL-STD-810G*</b>	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
<b>IEC 60529</b>	Dust-tight, continuous immersion in water**		IP68

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

\*\*Optional feature

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

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. Learn more at [harris.com](http://harris.com)

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INFORM AND PROTECT™