



XL ONBOARD™ 85 MOBILE

Single-Band 700/800 MHz Mobile Radio

The L3Harris XL Onboard 85M mobile radio is a feature-rich, cost-effective option for reliable, mission-critical communications. With P25 Trunking, Phase 1 and Phase 2 capabilities, this radio is outstanding for first responders and utility customers who need to manage their migration needs with just one device.

The ride is always smoother with a best-in-class radio by your side. The XL Onboard Series P25 radios bring unflinching critical communications to any vehicle in your fleet. Connect in more ways than ever with Wi-Fi, Bluetooth®, and GPS capabilities. Let's go.

RELENTLESSLY RELIABLE

XL Radios run on systems that double down on redundancy, champion open networks and connect seamlessly with P25-compliant organizations.

POINT-TO-POINT SECURE

Our AES-256 encryption provides an end-to-end secure configuration, keeping you safe from threats.

BACKED WITH ALL-IN, 24/7 SUPPORT

Our service packages keep your radios up and running with in-field preventative maintenance and software upgrades.

KEY FEATURES:

- > Interoperability across 700/800 MHz bands
- > Connects in more places with Wi-Fi, Bluetooth and GPS
- > Wi-Fi enabled voice and device management
- > Multiple encryption options for secure communications
- > Modular design for flexible mounting configurations
- > Advanced noise cancellation technology
- > Ruggedized to MIL-STD-810H standards for tough conditions
- > 2.4-inch color display with six programmable buttons and simple menu access

GENERAL

Dimensions (H, W, D): (Height, Width, Depth)	Size: 62mm x 175mm x 238mm (Excluding protrusions)
Weight (including accessories)	6.5 lbs (2.95 kg)
Capacity / Task Capacity	12,500 (1,250 per mission plan; up to 10 mission plans)
Radio Features	Firmware, personalities and feature sets through USB or via Wi-Fi
User Interface	18-bit color LCD 320 pixels x 240 pixels 2.4-inch color LCD with up to 3 lines of text, status bar and menu buttons Three programmable menu/option buttons and three additional programmable buttons Separate volume and channel selector knobs Single DIN sizing One USB Type-C port for microphone
Speaker: Frequency, 15 W	One 15W audio channel on the radio control head and one on the radio body, with less than 3% distortion
Environmental Specifications: Relative Humidity Operating Temperature Storage Temperature Altitude Airframe	90% @ 122°F (+50°C) -22°F to +140°F (-30°C to +60°C) -40°F to +176°F (-40°C to +80°C) -22°F to +140°F (-30°C to 60°C) 15,000 ft (4,572 m) 50,000 ft (15,240 m)
Electrical: Supply Voltage Standby Current Receive Current Current @ 35W TX	10.88 to 16.32 VDC negative ground 1A 2A 10A nominal
GPS/GNSS:	P25 standard TIER 2 and L3Harris in-band
Capacity GNSS Accuracy Time to First Fix	52 2 -165 dBm (GPS), -163 dBm (GLONASS) -146 dBm (GPS) < 35 seconds < 1 second

DIGITAL OPERATION

	P25	Intercom
Modulation	AMBE+2™ Enhanced Full Rate & Enhanced Half Rate	AMBE+2™ Enhanced Full Rate
Sampling Rate (kbps)	9.6	9.6
Modulation	Phase 1 TX: C4FM, RX: C4FM & CQPSK Phase 2 TX: HCPM, RX: HDCQPSK	GFSK
L3Harris Failover	Switch to site Trunking Mode (for L3Harris infrastructure) or P25 Conventional Failsafe for Motorola	

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 Keystore	Number of Encryption Keys per Keystore (up to 5 keystores per radio): 128 AES, 64 DES, 5 LLA, 8 Encryption Lite (ARC4), 4 AES UKEK, 4 DES UKEK
Key Loader	L3Harris Key Loader, P25 Over-the-Air-Rekeying (OTAR), Motorola KVL 3000+/4000/5000
Standards	FIPS 140-2 Level 1, FIPS 197

REGULATORY DATA

Federal Radio	RF Output (W)	Federal Frequency Spacing	FCC T Acc . a c ID	Air Cab FCC R	Intercom Call ID	Air Cab Intercom Call ID
763-776, 793-806	30.0	1.5	OWDTR-0170-E	90	3636B-0170	RSS-119
806-825, 851-870	35.0	1.5	OWDTR-0170-E	90	3636B-0170	RSS-119
External Frequencies	16K0F3E, 16K0F1D, 16K0F1E, 14K0F3E, 14K0F1D, 14K0F1E, 11K0F3E, 11K7F1D, 11K7F1E, 8K40F1D, 8K40F1E, 8K10DXW, 18K5F1W, 12K9F1W					

ACCESSORIES

Microphone: Tough, ergonomic digital microphone enabling noise cancellation.

Keypad Microphone: Rugged microphone equipped with a 12-button keypad and 5-way controller for radio control and noise cancellation in the palm of the user's hand.

XL-RHHC: The XL-Mobile Ruggedized Handheld Controller has the same functions as the XL Onboard control head, with a full-color LCD screen, mobile microphone and alphanumeric keypad in a compact unit.

Desktop Cab: Supports desktop deployment of the XL mobile radio in front-mount, remote mount and control head-only configurations.

External Speakers: Compact and carefully tuned for the human voice, the XL 85M external speakers deliver loud and clear mission-critical audio in an easy-to-mount enclosure.