



XL CONVERGE™ 185Pi

Single-Band UL C1D1 LMR Portable

The XL Converge 185Pi is the standard for reliable communication in hazardous environments. This single-band portable device meets UL Class 1, Division 1 (C1D1) Intrinsic Safety standards, ensuring effective performance in dangerous conditions.

The XL 185Pi is ideal for fire departments, utility companies, mining operations, hazmat responders and oil and gas workers. This advanced radio offers robust connectivity for land mobile radio (LMR) voice and data transmission across VHF, UHF or 700/800 MHz frequencies. Standard features include Wi-Fi® and Bluetooth® capabilities. Designed to meet IP68 standards, the XL 185Pi is resistant to water and dust. Its ergonomic design allows for a comfortable grip, with controls that are shaped for quick and easy operation.

RELENTLESSLY RELIABLE

XL Radios run on systems that double down on redundancy, champion open networks and connect seamlessly with all 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 Benefits:

- > Meets UL C1D1 standards for operation in hazardous environments through intrinsic safety
- > Robust connectivity with VHF, UHF or 700/800 frequency capabilities
- > Exceeds MIL-80 spec standards
- > Crystal clear audio with advanced noise cancellation
- > Long battery life
- > Intuitive and easy to use
- > Ergonomic, glove-friendly design

SPECIFICATIONS FOR XL CONVERGE 185Pi – INTRINSICALLY SAFE LMR

GENERAL		
Radio Models: Full Keypad Partial Keypad	TFT LCD w/DTMF keypad, navigation cluster, soft keys TFT LCD w/partial keypad, navigation cluster, soft keys	
Dimensions w/Battery (H x W x D)	5.8 x 2.3 x 1.6 in (148.0 x 60.0 x 42.0 mm)	
Weight	17.9 oz (507 g) w/Battery and Antenna	10.4 oz (296 g) w/o Battery and Antenna
Housing Colors	Midnight Black, High-Visibility Yellow, High-Visibility Green	
Interfaces: Front Display Top Display Keypad Buttons Tx/Rx Indicator	320 x 178 pixels, 1.8 inch transreflective LCD, 16-bit color with backlight 128 x 32 pixels, 1.1 inch multi-color backlight, sunlight readable Backlight, 3 soft keys, 5-way navigation key, full DTMF keypad 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 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 or 700/800 MHz	Channel Capacity 12,500 (1,250 per mission plan)
Environmental: Relative Humidity Vibration Drop Shock Immersion ¹	5% @ 140°F (+60°C), 95% @ 122°F (+50°C) TIA-603-D (PAR 2.3.4 and 3.3.4) and MIL-STD-810G, Test Method 514.6 1.0 meter drop to concrete (exceeds TIA-603-D) 2 meters for 4 hours in accordance with MIL-STD-810G/IP68	
Operating Temperature²	-22° to +140°F (-30° to +60°C)	
Storage Temperature³	-40° to +176°F (-40° to +80°C)	
Altitude	Operational 15,000 feet (4,572 meters)	In Transit 40,000 feet (12,192 meters)
Electrical Input Voltage	7.5 VDC (nominal)	
GPS/GNSS Specifications: Channels Tracking Sensitivity (dBm) Acquisition Sensitivity (dBm) Cold Start w/-130 dBm input Hot Start w/-130 dBm input	P25 standard Tier 2 and L3Harris In-Band GPS 52 -166 (GPS), -163 (GLONASS) -146 (GPS) <35 seconds <1 second	
Safety: Hazardous Location Options RoHS Compliant	U.S.: Class 1, Division 1, Groups C and D; Class II, Division 1, Groups E, F and G; Class III, Division 1 hazardous locations; Class 1, Division 2, Groups A, B, C and D Canada: Class 1, Division 2, Groups A, B, C and D hazardous locations	

¹ Optional feature

² Extreme low temperatures adversely affect battery life

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/Non-rebanded)	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 @ 12.5 kHz	-70 -47	-60 -47	-55 -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-0144-E	22, 74, 80, 90	3636B-0144	RSS-119	SPS-217 49/1
378-522 MHz	5 W	±1.0 ppm	OWDTR-0144-E	22, 74, 80, 91	3636B-0144	RSS-119	SPS-217 49/1
768-776 MHz	3 W	±1.0 ppm	OWDTR-0146-E & OWDTR-0144-E	90	3636B-0151 & 3636B-0144	RSS-119	NA

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SPECIFICATIONS FOR XL CONVERGE 185Pi – INTRINSICALLY SAFE LMR

REGULATORY DATA (Continued)							
798-806 MHz	3 W	±1.0 ppm	OWDTR-0146-E & OWDTR-0154-E	90	3636B-0146 & 3636B-0154	RSS-119	NA
806-816 MHz	3 W	±1.0 ppm	OWDTR-0154-E	90	3636B-0154	RSS-119	NA
806-825 MHz	3 W	±1.0 ppm	OWDTR-0151-E	90	3636B-0151	RSS-119	NA
851-861 MHz	3 W	±1.0 ppm	OWDTR-0154-E	90	3636B-0154	RSS-119	NA
851-869 MHz	3 W	±1.0 ppm	OWDTR-0151-E	90	3636B-0151	RSS-119	NA
2402-2480 MHz	0.2 W	N/A	OWDTR-0133-E, OWDTR-0145-E, OWDTR-0179-E	15	3636B-0133, 3636B-0145, 3636B-0179	RSS-119	
5180-5825 MHz	0.1 W	N/A	OWDTR-0133-E, OWDTR-0145-E, OWDTR-0179-E	15	3636B-0133, 3636B-0145, 3636B-0179	RSS-119	

LMR RECEIVER			
Frequency Bands	VHF	UHF	700/800 MHz
Frequency Ranges (MHz): Option 1 (U.S.) Option 2 (International)	136-174 136-174	378-522 378-522	768-776, 851-861 763-776, 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 @ 12.5 kHz	77 71	77 70	74 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 @ 12.5 kHz	-60 -55	-60 -53	-55 -50
Audio Output - Rated/Max (mW)	1500 / N/A	1500 / N/A	1500 / 4000
Audio Distortion @ Rated Power (%)	1.1	1.1	1.1

*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

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BROADBAND (Continued)	
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	P25	ProVoice™
Vocoding Method	AMBE+2 enhanced full rate and enhanced half rate	AMBE+2™ enhanced full rate
Signaling Rate (kbps)	9.6	9.6
Modulation	Phase 1 Tx: C4FM; Rx: C4FM and CQPSK Phase 2 Tx: HCPM; Rx: HDCQPSK	GFSK
L3Harris Failsoft Operation	Switch to site trunking mode (for L3Harris infrastructure) or P25 conventional. Conventional Failsoft for Motorola	

ENCRYPTION	
Encryption Algorithms	Voice Encryption: Single-key AES/DES, Multiple-key AES/DES, DES-CFB, Encryption Lite (ARC4), 256-bit AES P25, 64-bit DES Control Channel Encryption: 128-bit AES (LLA)
Encryption Keys per Radio	Capable of storing up to 1,045 keys
Keying	L3Harris Key Loader, P25 Over-the-Air-Rekeying (OTAR), Motorola KVL 3000+/4000/5000
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 1.1 in	6.1 oz (174 g)	3100

ACCESSORIES
The XL-185Pi is available with a selection of dependable C1D1-rated L3Harris accessories that operate in a range of environments.

Chargers
L3Harris offers a variety of chargers for the XL-185Pi: XL Single-Bay+ Charger, 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.



XL Single-Bay+ Charger



Multi-Bay Charger



Vehicular Charger

Additional Accessories Available
Standard speaker microphones, earphones for standard speaker microphones, belt clip, Lithium Ion battery, PC programming software and cables and antennas.

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

XL Converge 185Pi Intrinsicly Safe Land Mobile Radio

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