XL EXTREME™ 400P

Extreme durability. Extreme connectivity.

You don't flinch in the face of danger. Neither should your radio. L3Harris' XL Extreme 400P is now NFPA compliant to keep everyone connected even in the most extreme conditions.

This radio's rock-solid construction is engineered to withstand anything the environment can throw at it. With new hardware designed to the toughest industry standards, the 400P features extreme thermal materials, reinforced seal design, and unique thermal-rated displays and speakers. All new heavy-duty, glove-friendly keypad, knobs, and large emergency button with L3Harris' unique visual zone indication, ambient temperature, and optional in-building location capabilities keep your team in sync when the heat is on. Just like the rest of our XL radios, the XL Extreme 400P is:

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 secure configurations are ironclad, keeping your systems safe from threats.

BACKED WITH ALL-IN, 24/7 SUPPORT

Our service packages get your radios up and running and keep them running with preventative maintenance and automatic software upgrades.

Certified to NFPA 1802 specifications for the most extreme conditions

- Hardware designed to withstand extreme temperatures and environments
- Intuitive, comfortable, and easy to use
- Large glove-friendly keypad, buttons and knobs
- Dual SIM innovation keeps users connected across multiple carriers and private networks
- Ambient temperature sensor
- Loud and clear audio with industry-leading noise cancellation and echo reduction
- Visual zone indication provides quick visual confirmation that all users are on the same group or channel
- Advanced connectivity with secure voice and data encryption
- Includes Wi-Fi and Bluetooth integration

SPECIFICATIONS FOR: XL EXTREME 400 PORTABLE FULL-SPECTRUM MULTIBAND RADIO

GENERAL		
Radio Models: **Extreme Keypad**	 Full heat-resistant DTMF keypad, integrated navigation cluster, and soft keys	
Dimensions w/Battery (H x W x D)	6.6 x 2.5 x 1.7 in (168.0 x 64.0 x 43.7 mm)	
Weight	14.7 oz (418 g)	
Housing Colors	Green and Black	
Interfaces: **Front Display** **Top Display** **Keypad** **Buttons** **Tx/Rx Indicator**	 320 x 178 pixels, 1.8 in transflective LCD, 16-bit color with backlight 128 x 64 pixels, 1.1 in multicolor backlight, sunlight readable Backlight, 3 soft keys, 5-way navigation key SIDE: Large PTT button, 2 programmable side buttons. TOP: Rotary volume control with on/off switch, 2-position rotary concentric switch, 16 position top-mounted rotary switch, 4-position rotary concentric switch, 1 programmable top button, 1 large int'l orange emergency button 2-position concentric switch, 4-position toggle switch, 2 programmable side buttons, programmable top button, multicolored LEDs 1 Multicolored TX/RX indicator, 1 Bluetooth indicator	
Channel/Talkgroup Capacity	1,250 total conventional channels and 13,824 total talkgroups	
Radio programming	Firmware, personalities and feature set over Wi-Fi or LTE	
Transceiver	**Supported Bands** VHF, UHF and 700/800 MHz and LTE (optional)	**Channel Capacity** 12,500 (1,250 per mission plan)
Environmental: **Relative Humidity** **Vibration** **Drop Shock** **Immersion** **Dust Resistance** **Water Resistance**	 5% @ 140°F (60°C), 95% @ 122°F (50°C) USDA LMR Standard, Section 2.15 and MIL-STD-810G, Test Method 514.6 3.0 m drop to concrete (exceeds TIA-603-D) 2 m for 4 hours in accordance with MIL-STD-810G 5 m for 4 hours in accordance with IP68 IP6X IPX8 (5m, 4 hours)	
Heat Rating	NIST Class I, II, III, IV compliant 100C (212° F) 25 minutes 160C (320°F), 15 minutes 260C (500°F), 5 minutes 1700°F (926°C). <1 minute	
Operating Temperature[1]	-22° to 140°F (-30° to 60°C)	
Storage Temperature[2]	-40° to 176°F (-40° to 80°C)	
Altitude	**Operational** 15,000 ft (4,572 m)	**In Transit** 40,000 ft (12,192 m)
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**	 Approved for use in the U.S. and Canada in Class I, Division 2 Groups A, B, C and D hazardous locations	

[1] Extremely low temperatures adversely affect battery life
[2] Store batteries at 77°F ±41°F (25°C ± 5°C)

LMR TRANSMITTER			
Frequency Bands	**VHF***	**UHF***	**700/800 MHz**
Frequency Ranges (MHz)	136-174	378-522	763-776, 793-806, 806-825, 851-870
Rated RF Power/Talkaround (W)	0.5-6	0.5-5	0.5-3
Frequency Stability -22 to 140°F (-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

SPECIFICATIONS FOR: XL EXTREME 400 PORTABLE FULL-SPECTRUM MULTIBAND RADIO

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-0164-E	22, 74, 80, 90	3636B-0164	RSS-119	SPS-217 49/1
378-522 MHz	5 W	+/- 1.0 PPM	OWDTR-0164-E	22, 74, 80, 91	3636B-0165	RSS-119	SPS-217 49/1
768-776 MHz	3 W	+/- 1.0 PPM	OWDTR-0164-E	90	3636B-0166	RSS-119	NA
798-806 MHz	3 W	+/- 1.0 PPM	OWDTR-0164-E	90	3636B-0167	RSS-119	NA
806-816 MHz	3 W	+/- 1.0 PPM	OWDTR-0164-E	90	3636B-0144	RSS-119	NA
851-861 MHz	3 W	±1.0 ppm	OWDTR-0144-E	90	3636B-0144	RSS-119	NA
851-869 MHz	3 W	+/- 1.0 PPM	OWDTR-0164-E	90	3636B-0169	RSS-119	NA
2402-2480	0.2 W	NA	OWDTR-0164-E	15	3636B-0171	RSS-119	NA
5180-5825	0.1 W	NA	OWDTR-0164-E	15	3636B-0172	RSS-119	NA

LMR RECEIVER

Frequency Bands	VHF	UHF	700/800 MHz
Frequency Ranges (MHz):	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** **@ 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 (W)	1.5	1.5	1.5
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 Standards	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
	High Temperature Continuous TX	501.5	2
	Low Temperature Continuous TX	502.5	2
	Temperature shock	503.5	1B
	Contamination by fluids	504.1	2
	Solar radiation (240 Hours)	505.5	1 (cycling)
	Blowing Rain	506.5	1
	Dripping Water Exposure	506.5	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)		
IEC 60529	Dust Tight, 2 meters continuous water immersion, 4 hours		IP68
	IPX6 High Pressure Spray		
USDA LMR Standard	Vibration, U.S. Forest Service		Section 2.15

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ENVIRONMENTAL STANDARD			
TIA-603-D Increased to 1.5 meters.	TIA/EIA 1 Meter Shock (Drop) MODIFIED		Section 3.3.5.3
UL-60950-1	Steel Ball Impact		4.2.5-6
IEC61000-4-2	Electrostatic Discharge		

BROADBAND	
LTE Protocol	3GPP Release 11, Category 12, Power Class 3 UE with support for QoS QCI
North American LTE Option	FCC ID: N7NEM75S 4G LTE Bands: B2, B4, B5, B7, B12, B13, B14, B17, B26, B29, B30, B66 3G Bands: B2, B5 Carrier Certification: FirstNet®, AT&T, Verizon, Telus and Rogers
International LTE Option (In selected countries)	4G LTE Bands: B1, B3, B5, B7, B8, B28 3G Bands: B1, B5, B8 Carrier Certification: Telstra®
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)

HAZARD ZONE	
Parameter	**Method**
Audio Speech Quality	Perceptual Objective Listening Quality Analysis performed and pass after all testing listed below
Vibration Resistance	Vibrated for 3 hours, 1" (25mm) orbital path at 250 rpm
Impact Acceleration	9.8 ft (3m) dropped 8 times
Corrosion	48-hour salt spray. 48-hour 50% humidity chamber
Display Surface Abrasion	2.2lb (1kg) load, for 200 cycles
High Temperature Functionality	500°F (260°C) for 5 minutes
Heat and Flame	203°F (95°C) for 15 minutes, 10 seconds 1742°F (950°C) direct flame
Product Label Durability	Label examination post heat and immersion test, corrosion test, high temperature test
Cable Pullout	35 lbf (156 N) force
Case Integrity	442 lb. (200 kg) compression load, 1 minute, 4 faces
Water Drainage	Water is introduced into all openings, indentations, and grills until water overflows. Speech and data logging is tested.
Tumble	3hrs, 15 RPM, Tumble Test in 46 in (117 cm) Metal Drum (2,700 total rotations)
TIA Transmit Power	Tested for carrier output and RF power output
TIA Carrier Frequency Stability	Tested for frequency stability and operating frequency accuracy
TIA Receiver Sensitivity	Tested for analog and digital reference sensitivity
Power Source Performance	Continuously operated for 8 hours on standard duty cycle 10-10-80 at max rated transmit power
Electronic Temperature Stress	Operated after temperature exposure of -4°F (-20°C) for 4 hours, and 160°F (71°C) for 4 hours
Antenna VSWR Swept Frequency	Antenna performance must be maintained after Drop/Impact, Tumble and Corrosion tests
HazLoc	Class I Division 2, Groups A, B, C, D

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

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	192 Key Programmable for 96 (64 AES, 32 DES) Common Key References (CKR)
Keying	Local Key Loader, Wi-Fi, LTE and Over-The-Air Rekeying (OTAR), Motorola KVL 3000+/4000/5000
Standards	FIPS 140-2 Level 1, FIPS 197

BATTERIES			
Type	**Dimensions (H x W x D)**	**Weight**	**Capacity (mAh)**
Li-Ion	3.94 x 2.52 X 1.22 in (100 x 64 x 31 mm)	7.6 oz (215.4 g)	4200

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XL Extreme 400P NFPA Compliant Radio

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