

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

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, B12, B13, B14, B17, B29*, B30*, B66 3G Bands: B2, B5 Carrier Certification: AT&T, Verizon (future)
International LTE Option (In selected countries)			4G LTE Bands: B1, B3, B5, B7, B8, B28 3G Bands: B1, B5, B8
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	
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	L3Harris 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	100 mm x 64 mm x 31 mm	215.4 g	4000

PRELIMINARY

This device has not been authorized as required by the rules of the Federal Communications Commission. This device is not, and may not be, offered for sale or lease, or sold or leased, until authorization is obtained.

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XL Extreme 400P Full-spectrum Multiband Radio

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L3Harris Technologies is an agile global aerospace and defense technology innovator, delivering end-to-end solutions that meet customers' mission-critical needs. The company provides advanced defense and commercial technologies across air, land, sea, space and cyber domains.



XL EXTREME™ 400P

Rugged and ready for anything

You don't flinch in the face of danger. Neither should your radio. L3Harris' XL Extreme 400P is tailor-made 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 hardware designed to the new NFPA standard, 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



STAY CONNECTED IN THE MOST EXTREME CONDITIONS

KEY BENEFITS

- Hardware designed to withstand extreme temperatures and environments
- Intuitive, comfortable and easy to use
- Large glove-friendly keypad, buttons and knobs
- LTE operation over AT&T® or Verizon® networks
- Ambient temperature sensor
- Loud and clear audio with industry-leading noise cancellation
- 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

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GENERAL		
Radio Models: Full Keypad	TFT LCD w/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 2.5 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	320 x 178 pixels, 1.8 in transfective LCD, 16-bit color with backlight 128 x 32 pixels, 1.1 in multicolor backlight, sunlight readable Backlight, 3 soft keys, 5-way navigation key Large PTT button, on/off knob, volume knob, red emergency button, 16-position top-mounted rotary knob,	
Tx/Rx Indicator	2-position concentric switch, 4-position toggle switch, 2 programmable side buttons, programmable top button, multicolored 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 and 700/800 MHz and LTE (optional)	Channel Capacity 12,500 (1,250 per mission plan)
Environmental: Relative Humidity Vibration Drop Shock Immersion	5% @ 140°F (+60°C), 95% @ 122°F (+50°C) USDA LMR Standard, Section 2.15 and MIL-STD-810G, Test Method 514.6 1.5 m drop to concrete (exceeds TIA-603-D) 2 m for 4 hours in accordance with MIL-STD-810G/IP68, NFPA 1802 8.4 - Vibration, NFPA 1802 8.5 - 3m drop, NFPA 1802 8.14 - Tumble/Vibration, NFPA 1802 8.3 - Heat + Immersion	
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:	P25 standard Tier 2 and L3Harris in-band 52 -166 (GPS), -163 (GLONASS) -146 (GPS)	
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 Extreme low temperatures adversely affect battery life² Store batteries at +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 (-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-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

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REGULATORY DATA (Continued)			
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

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ENVIRONMENTAL STANDARD			
Applicable MIL-STD	Parameter	Methods	Procedure/Categories
MIL-STD-810G	Low pressure	500.5	1, 2
	High temperature	500.5	1, 2
	Low temperature	500.5	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)		
IEC 60529	Dust-tight, continuous immersion in water**		IP68
	Heat and Immersion Leakage Resistance		8.3
	Vibration		8.4
	Impact Acceleration Resistance		8.5
	Corrosion		8.6
	Viewing Surface Abrasion		8.7
	High Temperature Functionality		8.8
	Heat and Flame		8.9
	Case Integrity		8.12
	Water Drainage		8.13
	Tumble/Vibration		8.14
	Electronic Temperature Stress Test		8.19
	Antenna VSWR		8.2