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XL SERIES RADIO SOFTWARE FEATURES

Enhancing functionality and operational efficiency for XL Series radios

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Software features for XL Series radios significantly enhance the value and performance of your mission critical LMR radio equipment, empowering your users with improved communication capabilities, security, efficiency and flexibility.

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AIR INTERFACE

P25 Phase 1 Trunking

Enables P25-compliant Phase 1 FDMA trunking. As described in the TIA-102 standard, P25 Phase 1 operates on narrowband (12.5 kHz) digital channels to provide robust communications between systems and radios.

Feature Code	XL Portable	XL Mobile
PKGPT	✓	✓

P25 Phase 2 Trunking

Enables P25-compliant Phase 2 TDMA trunking (2-slot on 12.5 kHz channel). Leveraging P25 Phase 2 significantly increases efficiency by allowing two voice calls per channel rather than one. This allows agencies to utilize their allocated frequencies more efficiently to provide enhanced interoperability and communication services.

Feature Code	XL Portable	XL Mobile
PL4F	✓	✓

Note: Radio must have P25 Trunking (PL4B) enabled.

P25 TDMA Control Channel

Allows a radio to operate on a P25 Control Channel (CC). P25 CC is an L3Harris system enhancement that enables the CC to operate on a single 2-slot TDMA 12.5 kHz channel. This means that a single frequency pair can support a dedicated slot for the control channel and another slot for voice calls. TDMA CC provides optimized efficiency on a system by improving call capacity and maximizing spectrum utilization.

Feature Code	XL Portable	XL Mobile
PL9N	✓	✓

Note: Radio must have P25 Trunking (PL4B) and P25 Phase 2 TDMA (PL4F) enabled.

EDACS® Trunking

Enables EDACS digital trunking services on 800 MHz systems in 9600 baud wideband.

Feature Code	XL Portable	XL Mobile
PKGED	✓	✓

P25 Phase 1 and EDACS Trunking

Includes the P25 Phase 1 Trunking and EDACS Trunking features in a single package.

Feature Code	XL Portable	XL Mobile
P25ED	✓	✓

DATA INTERFACE

High Velocity Data (HVD) TDMA

A unique L3Harris-only feature that significantly improves data performance when operating on an L3Harris P25 Trunked system by sending data messages on a single 2-slot TDMA 12.5 kHz channel. This effectively doubles the data throughput on a system to provide increased efficiency in data services such as GPS, OTAR, OTAP, telemetry, vehicle reports and Supervisory Control and Data Acquisition (SCADA) applications.

Feature Code	XL Portable	XL Mobile
PL9L	✓	✓

Note: Radio must have P25 Trunking (PL4B) and P25 Phase 2 TDMA (PL4F) enabled.

P25 Mobile Data Terminal (MDT) Data

Enables Mobile Data Terminal (MDT) data for radios operating on a digital system. This enables the transmission of data, including SCADA, telemetry and radio text messages throughout the system.

Feature Code	XL Portable	XL Mobile
PKGPD	✓	✓

Encrypted Data (eData)

A unique L3Harris-only feature providing end-to-end data encryption from a system's application server to a user's device. This robust security layer safeguards mission critical communications from unauthorized interceptions, allowing agencies to confidently coordinate operations, share sensitive information and respond to emergencies without compromising safety or operational effectiveness.

Feature Code	XL Portable	XL Mobile
PL8M	✓	✓

Radio must have Multikey Encryption (PKG8F) enabled and be operating on an L3Harris P25 Trunked system.

In-Band GPS

A unique L3Harris-only feature that embeds radio GPS information within a voice or emergency call, eliminating the need for a separate data call on the system when sharing location information. In-band GPS is designed to provide a faster, more efficient response time when passing location information on a system.

Feature Code	XL Portable	XL Mobile
PL8N	✓	✓

Note: Radios be operating on an L3Harris P25 Trunked system.

Enterprise Wi-Fi

Provides secure and reliable Wi-Fi connectivity to protect sensitive data and network resources with Enterprise Wi-Fi functionality (EAP-TLS). This certificate-based Wi-Fi authentication method enhances network security through digital authentication and ensures a secure and seamless wireless connection between Wi-Fi access points through 802.11r (fast access point roaming).

Feature Code	XL Portable	XL Mobile
PL9X	✓	✓

Note: Radio must have supported Wi-Fi hardware installed.

BROADBAND SERVICES

LTE

Activates LTE capabilities on radios. This allows agencies to leverage the power of public safety LTE to communicate across and extend the footprint of their mission critical network. Agencies can also utilize LTE to remotely program and update their radio fleet using the L3Harris Device Management Solution.

Feature Code	XL Portable	XL Mobile
PL8T	✓	✓

Note: Radio must have supported LTE hardware installed.

XL Virtual™ Push-To-Talk Application

This is a feature exclusive to L3Harris that enables XL Virtual functionality on a radio. XL Virtual is an advanced P25 Push-to-Talk over Broadband (PTToB) application, allowing radios to use LTE and/or Wi-Fi networks to extend an agency's Land Mobile Radio (LMR) services.

Feature Code	XL Portable	XL Mobile
BM-PKGCL-XL	✓	✓

Note: XL Virtual over LTE requires LTE (PL8T) enabled on the radio and an active LTE broadband service.

Mission Critical Push-To-Talk (MCPTT)

Enables use of MCPTT on a radio. MCPTT is a 3GPP Global standard for PTT over LTE. These standards were designed to meet public safety's mission critical communications requirements, ensuring those on the front lines have essential communications capabilities where and when it matters most.

Feature Code	XL Portable	XL Mobile
PL6A	✓	✓

Note: Radio must have LTE (PL8T) enabled and an active LTE broadband service.

Device Management Framework (DMF)

DMF is a cloud-based radio management application that allows agencies to remotely push radio updates to devices through an LTE and/or Wi-Fi network. This streamlines the process of managing a radio fleet and cuts down on the time and cost of programming devices. Provides a yearly subscription to manage radios on the L3Harris Device Management Framework (DMF) application.

Feature Code	XL Portable	XL Mobile
RE-XL002	✓	✓

Note: To use DMF over LTE, radios must have the LTE feature (PL8T) enabled and an active LTE broadband service. For advanced DMF features over Wi-Fi on XL Mobile radios, LTE hardware is required along with access to Wi-Fi. Limited DMF is available over Wi-Fi through the Control Heads.

L3Harris offers the first converged device offering MCPTT and LMR in one industry-leading solution.

SECURITY

Single-Key DES Encryption

Enables DES encryption in the radio and allows the loading of a single DES encryption key into a radio. DES is a symmetric-key, 56-bit encryption technique that provides basic digital voice security.

Feature Code	XL Portable	XL Mobile
PL4U	✓	✓

Note: This feature allows radios support a single AES or DES loaded at a time, not both simultaneously.

Single-Key AES Encryption

Enables AES encryption in the radio and allows a single AES encryption key to be loaded into a radio. AES is the standard encryption for P25 digital voice communications as described in FIPS-197.

Feature Code	XL Portable	XL Mobile
PL9E	✓	✓

Note: This feature allows radios support a single AES or DES loaded at a time, not both simultaneously

AES & DES MultiKey Encryption

Enables both AES and DES encryption in the radio and allows for multiple AES and DES encryption keys to be loaded into a radio. This offers enhanced data security and flexibility in encryption key management, enabling radio users to seamlessly adapt to changing operational requirements.

Feature Code	XL Portable	XL Mobile
PKG8F	✓	✓

Note: The single-key AES or single-key DES features are not required if this feature is enabled.

Data Encryption Standard-Cipher Feedback (DES-CFB)

Allows for DES-CFB encryption keys to be loaded into a radio. DES-CFB is a non-standard voice encryption algorithm for conventional channels and is supported by radios for interoperability with legacy systems.

Feature Code	XL Portable	XL Mobile
PL4D	✓	✓

Everything we design is with the mindset of end-to-end security. As an innovator, L3Harris takes a proactive role in protecting critical systems against today's threats – and those of tomorrow.

Link Layer Authentication (LLA)

Also known as P25 Radio Authentication, LLA provides an additional layer of security on a P25 system through digital authentication. This means the LMR system will authenticate radios before they can operate on the system, and radios will authenticate with the RF Sub System prior to registering. LLA ensures that only trusted and verified users are operating on the radio system and that their radios are communicating to the proper station.

Feature Code	XL Portable	XL Mobile
LLA	✓	✓

Note: Radio must have P25 Trunking (PL4B) enabled.

Encryption Lite

Allows for Encryption Lite (also known as ARC4) encryption keys to be loaded into a radio. Encryption Lite is a non-standard, 40-bit key encryption algorithm that is less secure than P25-approved AES encryption but is supported by radios for interoperability with legacy systems that utilize this encryption format.

Feature Code	XL Portable	XL Mobile
PL8Y	✓	✓

Federal Information Processing Standard (FIPS) 140-2 Level 1

Enables FIPS 140-2 Level 1. FIPS 140-2 is a U.S. government computer security standard used to approve cryptographic modules. Level 1 indicates standards-based encryption is available on the device.

Feature Code	XL Portable	XL Mobile
PL7J	✓	✓

Note: Radio must have Multikey Encryption (PKG8F) enabled

P25 Over-The-Air-Rekeying (OTAR)

Enables secure transmission of encryption keys across a P25 system. This provides a simplified key management process, reduces keyloading times and enhances system security.

Feature Code	XL Portable	XL Mobile
PL5L	✓	✓

Note: Radio must have Multikey encryption enabled and be operating on a P25 system with a Key Management Facility (KMF).

OPERATIONAL ENHANCEMENTS

Conventional Vote Scan

Allows radios to scan frequencies from multiple transmission stations and automatically select or “vote” for the strongest signal to listen to. This allows users to expand their communication range by providing wide area communication capability.

Feature Code	XL Portable	XL Mobile
PL4E	✓	✓

Over-The-Air-Programming (OTAP)

Enables organizations to conveniently program or read radio information over the air across a P25 or EDACS system. This simplifies the radio programming processes and significantly reduces the time and effort associated with updating radios in the field.

Feature Code	XL Portable	XL Mobile
PL5K	✓	✓

RF Safe

Configures radios to operate at a fixed power level of 0.1W across all frequency bands. By limiting the transmission power regardless of the frequency band, this feature ensures compliance with RF power regulations while prioritizing user safety.

Feature Code	XL Portable	XL Mobile
PL8R	✓	N/A

P25 Conventional Failsoft

Allows continued communications on performance-degraded P25 Trunked networks when they experience trunking failures and must revert to conventional operation. This provides continued communications when the system experiences failure conditions.

Feature Code	XL Portable	XL Mobile
PL9F	✓	✓

Note: Radio must have P25 Trunking (PL4B) enabled.

VIDA® ID

VIDA ID offers a unique means for agencies to provision their radio fleet on an L3Harris system. By leveraging VIDA ID, organizations can assign a specific radio configuration to an individual user. That user can then access their specific radio configuration by simply logging into any registered device on the system. That same configuration can be modified and updated remotely as necessary.

Feature Code	XL Portable	XL Mobile
PL9K	✓	✓

P25 Trunked Multi-System Scanning

Enables the creation of custom scan lists that combine a home P25 trunked system group with other neighboring trunked system groups and conventional system channels. This feature allows users to seamlessly monitor multiple communication networks for enhanced situational awareness and operational flexibility. Adjustable scan rates and durations provide control over canning performance to meet specific needs. The feature is available as an optional purchase.

Feature Code	XL Portable	XL Mobile
PL6C	✓	✓

Advanced Safety

Provides an additional set of features to enhance user safety during mission critical operations. Features include Two-Action Power Off, Out-of-Range Indication, RSM Failure Detection, ESM Over-Temperature Alert, Low Battery Indicator, Bluetooth Paired Indicator and Display Backlight Customization.

Feature Code	XL Portable	XL Mobile
PL6B	✓	N/A

Note: Available only on XL Converge 200P, 185P, 150P and XL Extreme 400P radios.

Wideband

Enables the use of wideband (25KHz) channel operation. Agencies must have prior approval or be non-FCC regulated to use the feature.

Feature Code	XL Portable	XL Mobile
SP2V	✓	✓

Max User Alias Capacity

Expands a radio's user alias capacity from 255 to 5000, allowing for greater flexibility to meet operational requirements.

Feature Code	XL Portable	XL Mobile
PL9G	✓	✓

Max Zone Capacity

Enhances radio flexibility by increasing ZONES from 50 to 250 and Groups/Channels per ZONE from 64 to 1250, optimizing communication efficiency for diverse operational needs.

Feature Code	XL Portable	XL Mobile
PL9Z	✓	✓

National Interoperability Field Operations Guide (NIFOG) Provisioning

Provisions radios with a compatible NIFOG configuration. NIFOG is a technical reference for emergency communications planning and for radio technicians responsible for radios that will be used in disaster response. This configuration contains a set of LMR frequencies that are often used in disasters or other incidents where radio interoperability is required.

Feature Code	XL Portable	XL Mobile
FW2X	✓	N/A

P25T Two Tone Paging

The P25T Two-Tone Paging feature enhances communication by enabling two-tone paging signals over P25 trunked radio systems. This allows emergency services to send customized alerts to specific groups, ensuring timely information delivery while minimizing unnecessary notifications. The user-friendly system prioritizes alerts with distinct tones and ensures interoperability with P25 systems. Additionally, it provides a cost-effective solution by combining communication and alerting in one device, maximizing your investment value. Available as optional purchase.

Feature Code	XL Portable	XL Mobile
PL6K	✓	✓

Feature coming soon.

APPLICATION INTERFACE

Advanced Control Head Networking

Integrates with XL Mobile via XL-Link interface over a Wide Area Network (WAN), enabling seamless real-time interactions with vehicular control heads (VCH) from any location. This ensures flexibility, efficiency and safety in operation.

Feature Code	XL Portable	XL Mobile
PL9M	N/A	✓

XL-Link

A unique L3Harris-only feature which allows an external device or application to connect to and leverage the power and functionality of an XL Mobile radio. Through XL-Link, a connected device or application can monitor, pull data reports and control a mobile radio in real time. This allows an organization to develop tailored communications solutions to meets the needs of their operating environment.

Feature Code	XL Portable	XL Mobile
PL9U	N/A	✓

Advanced Back-up Radio (ABR)

A unique L3Harris-only feature which allows dispatchers to leverage an XL Mobile radio's connection to the P25 system to continue dispatch operations in the event their console loses connection to the network. When connection is lost, ABR will automatically transition the console to operate on the P25 system's network, providing uninterrupted dispatch operations.

Feature Code	XL Portable	XL Mobile
ABR	N/A	✓

User Safety to ICS

A unique L3Harris-only feature which allows a radio to connect to the Incident Command Solution. Connected radios facilitate incident command by providing status alerts such as radio ID, unit ID, voice notification, emergency alerts, out of range status, low battery capacity, PAR acknowledgement and over temperature alerts.

Feature Code	XL Portable	XL Mobile
PL9V	✓	N/A

Incident Command Solution (ICS) Operation on Fireground Gateway Mobile (FGM)

A unique L3Harris-only feature that enables ICS functionality in the FGM. The FGM is an XL Mobile radio connected to the Two47™ Incident Command application that can be used to enhance on scene situational awareness, improve decision making, monitor first responder health and streamline communication on the scene of an incident.

Feature Code	XL Portable	XL Mobile
ICS	N/A	✓

XL-Bridge Feature Summary

The XL-Bridge is a robust DFSI solution that ensures continuous mission-critical communication and interoperability. Along with the Encompass Gateway, it offers a cost-effective path to expand communication using XL Onboard technology. It connects systems using P25 trunked, P25 conventional and Analog conventional technology, providing a flexible, scalable and budget-friendly gateway. Fast deployment via Ethernet cable makes it a plug-and-deploy solution, ideal for seamless communication infrastructure.

Feature Code	XL Portable	XL Mobile
PL6H	N/A	✓

Note: Available only for XL Onboard™ 200M and 185M mobile radios. Must be paired with Advanced Control Head Networking feature PL9M.

SERVICE OPTIONS

One-Year Extended Warranty

Adds a one-year extension on top of the standard two-year warranty for new radios. This option provides a total three-year warranty for new radios.

Feature Code	XL Portable	XL Mobile
Y1EWP	✓	✓

Two-Year Extended Warranty

Adds a two-year extension on top of the standard two-year warranty for new radios. This option provides a total four-year warranty for new radios.

Feature Code	XL Portable	XL Mobile
Y2EWP	✓	✓

Three-Year Extended Warranty

Adds a three-year extension on top of the standard two-year warranty for new radios. This option provides a total five-year warranty for new radios.

Feature Code	XL Portable	XL Mobile
Y3EWP	✓	✓

NOTE: Extended warranty does not apply to accessory products.

FEATURES MATRIX

Air Interface

Feature Name	Feature Code	400P	200P	185P	150P	95P	45P	200M	185M	85M
P25 Phase 1 Trunking	PKGPT	✓	✓	✓	✓	✓	✓	✓	✓	✓
P25 Phase 2 Trunking	PL4F	✓	✓	✓	✓	✓	✓	✓	✓	✓
P25 TDMA Control Channel	PL9N	✓	✓	✓	✓	✓	✓	✓	✓	✓
EDACS Trunking	PKGED		✓	✓				✓	✓	✓
P25 Phase 1 & EDACS® Trunking Package	P25ED	✓	✓	✓		✓		✓	✓	✓

Data Interface

Feature Name	Feature Code	400P	200P	185P	150P	95P	45P	200M	185M	85M
HVD TDMA*	PL9L	✓	✓	✓	✓	✓	✓	✓	✓	✓
P25 MDT Data	PKGPD	✓	✓	✓	✓	✓	✓	✓	✓	✓
Encrypted Data (eData)*	PL8M	✓	✓	✓		✓	✓	✓	✓	✓
In-Band GPS*	PL8N	✓	✓	✓	✓	✓	✓	✓	✓	✓
Enterprise Wi-Fi	PL9X	✓	✓	✓				✓	✓	

Broadband Services

Feature Name	Feature Code	400P	200P	185P	150P	95P	45P	200M	185M	85M
LTE	PL8T	✓	✓	✓	✓			✓	✓	
XL Virtual® PTT App*	BM-PKGCL-XL	✓	✓	✓	✓	✓	✓	✓	✓	
MCPTT	PL6A	✓	✓	✓	✓			✓	✓	
DMF	RE-XL002	✓	✓	✓	✓	✓	✓	✓	✓	✓

Security

Feature Name	Feature Code	400P	200P	185P	150P	95P	45P	200M	185M	85M
Single-Key DES Encryption	PL4U	✓	✓	✓	✓	✓	✓	✓	✓	✓
Single-Key AES Encryption	PL9E	✓	✓	✓	✓	✓	✓	✓	✓	✓
AES & DES Multikey Encryption	PKG8F	✓	✓	✓		✓		✓	✓	✓
DES-CFB	PL4D	✓	✓	✓		✓		✓	✓	✓
LLA	LLA	✓	✓	✓	✓	✓	✓	✓	✓	✓
Encryption Lite	PL8Y	✓	✓	✓	✓	✓	✓	✓	✓	✓
FIPS 140-2 Level 1	PL7J	✓	✓	✓		✓		✓	✓	✓
P25 OTAR	PL5L	✓	✓	✓		✓		✓	✓	✓

Operational Enhancements

Feature Name	Feature Code	400P	200P	185P	150P	95P	45P	200M	185M	85M
Conventional Vote Scan	PL4E	✓	✓	✓	✓	✓	✓	✓	✓	✓
OTAP	PL5K	✓	✓	✓	✓	✓	✓	✓	✓	✓
RF Safe	PL8R	✓	✓	✓						
P25 Conventional Failsoft	PL9F	✓	✓	✓	✓	✓	✓	✓	✓	✓

Operational Enhancements Continued

Feature Name	Feature Code	400P	200P	185P	150P	95P	45P	200M	185M	85M
VIDA® ID	PL9K	✓	✓	✓	✓	✓	✓	✓	✓	✓
Advanced Safety	PL6B	✓	✓	✓	✓					
Wideband	SP2V	✓	✓	✓	✓	✓	✓	✓	✓	✓
Max User Alias Capacity	PL9G	✓	✓	✓		✓	✓	✓	✓	✓
Max Zone Capacity	PL9Z	✓	✓	✓		✓	✓	✓	✓	✓
NIFOG Provisioning	FW2X	✓	✓	✓	✓	✓	✓			
P25Trunked Multi-System Scanning feature	PL6C	✓	✓	✓	✓	✓	✓	✓	✓	✓
Two Tone Paging (Coming soon)	PL6K	✓	✓	✓	✓	✓	✓	✓	✓	✓

Application Interface

Feature Name	Feature Code	400P	200P	185P	150P	95P	45P	200M	185M	85M
XL-Link*	PL9U							✓	✓	✓
ABR*	ABR							✓	✓	✓
ICS Operation on FGM*	ICS							✓	✓	
User Safety to ICS*	PL9V	✓	✓	✓	✓	✓	✓			
Advanced Control Head Networking	PL9M							✓	✓	
XL-Bridge	PL6H							✓	✓	

Service Options

Feature Name	Feature Code	400P	200P	185P	150P	95P	45P	200M	185M	85M
1 Year Extended Warranty	Y1EWP	✓	✓	✓	✓	✓	✓	✓	✓	✓
2 Year Extended Warranty	Y2EWP	✓	✓	✓	✓	✓	✓	✓	✓	✓
3 Year Extended Warranty	Y3EWP	✓	✓	✓	✓	✓	✓	✓	✓	✓

Standard Features

Feature Name	Feature Code	400P	200P	185P	150P	95P	45P	200M	185M	85M
P25 Conventional	N/A	✓	✓	✓	✓	✓	✓	✓	✓	✓
Analog Conventional	N/A	✓	✓	✓	✓	✓	✓	✓	✓	✓
Bluetooth	N/A	✓	✓	✓	✓	✓	✓	✓	✓	✓
Advanced Noise Cancellation and Echo Reduction	N/A	✓	✓	✓	✓	✓	✓	✓	✓	✓
Voice Annunciation & Call Playback	N/A	✓	✓	✓	✓	✓	✓	✓	✓	✓
GPS Location (Tier 1 & Tier 2)	N/A	✓	✓	✓	✓	✓	Opt.	✓	✓	✓
Wi-Fi Programming	N/A	✓	✓	✓	✓	✓	Opt.	✓	✓	✓
Wi-Fi Client	N/A	✓	✓	✓	✓	✓	Opt.	Opt.	Opt.	✓
Wi-Fi HotSpot	N/A	✓	✓	✓	✓			Opt.	Opt.	
Man Down	N/A	✓	✓	✓	✓	✓	✓			
P25 Preferred Roaming feature	N/A	✓	✓	✓	✓			✓	✓	

*Unique feature available exclusively from L3Harris

FAST. FORWARD.

XL Series Radio Software Features Catalog

L3Harris Technologies is the Trusted Disruptor in the defense industry. With customers' mission-critical needs always in mind, our employees deliver end-to-end technology solutions connecting the space, air, land, sea and cyber domains in the interest of national security. Visit L3Harris.com for more information.

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