

## TM9400 MOBILE

### P25 Phase 2 Capable Radio

L3Harris TM9400 mobiles are high-performing, flexible and robust radios, designed for intuitive operation in challenging environments around the world.

This P25-compliant mobile radio eases migration to more spectrally efficient communications with multiple modes of operation, including analog, analog simulcast IP, 12.5 kHz P25 Phase 1 FDMA conventional/trunked, P25 Phase 2 TDMA trunked and LSM (CQPSK) decode capability.

Each TM9400 features Lone Worker, a covert microphone and stealth emergency

modes as standard, ensuring safe, secure and effective communications on the move. Operational security is further enhanced with end-to-end encryption, a key fill device and Over-the-Air-Rekeying.

The TM9400 allows first responders to work the way best suited for their unique needs and missions, with multiple configuration options and programmable function keys.



OPERATIONAL EFFICIENCY  
AND EFFECTIVENESS FOR  
TODAY AND TOMORROW

#### KEY BENEFITS

- > Operation in VHF, UHF and 700/800 MHz frequency bands
- > Reduced migration risk with the multiple modes of operation
- > Efficient operations with AES encryption, voice and data, simulcast support and pre-set status messages
- > Flexible expansion via an options slot for additional capabilities
- > Rugged build with an IP54 rating, water-resistant control head, and exceeding relevant MIL-STD-810G



## FEATURES AND BENEFITS

### DELIVERS ON P25 STANDARDS

Benefit from the spectral efficiency, multi-vendor interoperability, security, migration and data capability demanded by P25 standards.

- > TIA-102 P25 CAP tested and certified, providing multi-vendor interoperability
- > 12.5 kHz P25 Phase 1 FDMA and 6.25 kHz equivalent P25 Phase 2 TDMA capable
- > Product compliances satisfy FCC 2015 and 2017 ultra narrowbanding mandates
- > FCC and IC compliances include P25 Phase 2 emission designator (8K10F1W)

### DESIGNED FOR DEMANDING ENVIRONMENTS

Designed with users to ensure effective everyday operations.

- > IP54 rated: protected against dust and splashing water
- > Exceeds MIL-STD-810G
- > Large four-line LCD with icons to display key parameters
- > Configurable to suit your needs: dual head and remote mount (6 m and 12 m options)
- > Four programmable function keys on the standard mobile head
- > Programmable orange emergency key

### HIGH-PERFORMING VOICE COMMUNICATIONS

Robust design delivers clear, mission-critical voice communications.

- > Analog, P25 Phase 1 conventional/trunked and P25 Phase 2 trunked
- > Automatic dual mode between analog and P25 Phase 1 conventional
- > Programmable power level options
- > Option to operate with dual-band functionality
- > AMBE+2™ enhanced vocoder reduces background noise in demanding environments
- > Voting ensures priority selection of the channel with optimum receive quality
- > Dynamic regrouping and super-group operation for mission-critical workforce management
- > Increased channel capacity with up to 2,000 channels
- > Scanning modes include: priority, dual priority, editable, zone, background scan

### KEEPING YOUR PEOPLE SAFE

- > Supports end-to-end encryption, including AES
- > Lone worker, covert microphone and stealth emergency mode as standard
- > Radio inhibit and uninhibit to allow management of radios during vehicle servicing
- > Trunked failsoft reverts to conventional operation during trunked network failure

### EFFECTIVE OPERATIONS WITH VOICE AND DATA

- > Support for a variety of simulcast modes such as LSM and C4FM
- > Pre-set status messages
- > P25 data such as emergency GPS location
- > Conventional and trunked IP data
- > Location services over a conventional network
- > Software configurable, including feature upgrades through software licenses

### EFFICIENT, SECURITY-FOCUSED MANAGEMENT

- > The TM9400 management facilities and applications allow you to efficiently manage your radio fleet.
- > OTAR (Over-the-Air-Rekeying)
- > EnableProtect Key Fill Device for quick, reliable encryption key programming
- > Programming application for efficient fleet programming
- > EnableProtect's Advanced System Key (ASK) allows administrators to authorize and restrict subscriber units on their network

### TM9400 ACCESSORIES

- > Digital and analog interfaces allow a range of accessory options for the TM9400

## SPECIFICATIONS FOR: TM9400 MOBILE - P25 PHASE 2 CAPABLE RADIO

GENERAL*	
Frequency Stability	±0.5ppm (-22°F to +140°F/-30°C to +60°C)
Channel/Zones	1,000 channels/50 zones (2,000 channels/100 zones optional enhancement with software license)
Talkgroups	50 talkgroups, up to 1,000 members total (2,000 members optional enhancement with software license)
Scan Groups	300 with up to 50 members each, maximum of 2,000 members total
Power Supply	10.8-16 VDC
Active Standby Current	0.15 A
Channel Spacing	12.5/15/20/25/30 kHz
Frequency Increment	2.5/5/6.25
Dimensions (D x W x H): Control Head Radio Body - 25 W Radio Body - 30/35/50 W	1.38 in x 7.24 in x 2.8 in (35 mm x 184 mm x 71 mm) 6.9 in x 6.3 in x 2.1 in (175 mm x 160 mm x 52 mm) 7.7 in x 6.3 in x 2.1 in (195 mm x 160 mm x 52 mm)
Weight - lb (kg): Control Head Radio Body - 25 W Radio Body - 30/35/50 W	0.73lb (0.33 kg) 2.6lb (1.2 kg) 3.1lb (1.4 kg)
Operating Temperature	-22°F to +140°F (-30°C to +60°C)
Water and Dust Protection	IP54
RF Connector	50 ohm BNC or mini UHF
Interface Connectors	3 interface connectors with serial ports
Signaling Options (Analog)	MDC1200 encode and decode, 2-tone decode, PL (CTCSS), DPL (DCS)

TRANSMITTER*				
Frequency Band:	VHF	VHF	UHF	700/800MHz
Transmit Power	25 W, 12 W, 5 W, 1 W	50 W, 25 W, 15 W, 10 W	25 W, 12 W, 5 W, 1 W 40 W, 25 W, 15 W, 10 W	<806 MHz: 30 W, 15 W, 5 W, 2 W >806 MHz: 35 W, 15 W, 5 W, 2 W
Transmit Frequency Ranges	136-174 MHz	136-174 MHz	400-470 MHz: 450-520 MHz	762-870 MHz
Transmit Current	5.5A max.	10.5A max	(25 W, 12 W, 5 W, 1 W) <6 A (40 W, 25 W, 15 W, 10 W) <10.5A	10A max
Modulation Limiting: 12.5/15 kHz Channel 25/30 kHz Channel	±2.5 kHz ±5 kHz	2.5 kHz ±5 kHz	2.5 kHz ±5 kHz	±2.5 kHz ±5 kHz
FM Hum and Noise: 12.5 kHz Channel 25 kHz Channel	-45 dB -48 dB	-45 dB -48 dB	-40 dB -45 dB	-40 dB -45 dB
Radiated/Conducted Emissions	-85 dBc	-80 dBc	-80 dBc	-80 dBc
Audio Response (Analog)	+1/-3 dB	+1/-3 dB	+1/-3 dB	+1/-3 dB
Audio Distortion (Analog)	1.5% @ 1 kHz, 60% deviation			
Duty Cycle	25 W: 2 min Tx, 4 min Rx for 8 hrs @ +140°F (+60°C) 35/50 W: 1 min Tx, 4 min Rx for 8 hrs @ +140°F (+60°C) 5 W: continuous @ +104°F (+40°C)			

## SPECIFICATIONS FOR: TM9400 MOBILE - P25 PHASE 2 CAPABLE RADIO

RECEIVER*			
Frequency Band:	VHF	UHF	700/800MHz
Receive Frequency Ranges	136–174 MHz	400-470 MHz 450-520 MHz	762-776 MHz 850-870 MHz
Sensitivity (analog): 12dB SINAD	0.2 2uV (-120 dBm)	0.22 uV (-120 dBm)	0.28uV (-118 dBm)
Sensitivity (P25): 5% BER	0.22uV (-120 dBm)	0.22uV (-120 dBm)	0.22uV (-120 dBm)
Inter-Modulation Rejection (P25 TIA-102)	76 dB	75 dB	75 dB
Adjacent Channel Rejection: 12.5 kHz (P25) TIA-102 25 kHz TIA-603 (2-tone)	60 dB 73 dB	60 dB 70 dB	60 dB 70 dB
Spurious Response Rejection (P25) TIA-102	80 dB	80 dB	80 dB
Residual Audio Noise Ratio (P25) TIA-102	45 dB	45 dB	45 dB
FM Hum and Noise: 12.5 kHz Channel 25 kHz Channel	-45 dB -48 dB	-40 dB -45 dB	-40 dB -45 dB
Audio Distortion (3 W Rated Audio)	1.5% at 1 kHz 60% modulation		
Optional External Speaker Output	10 W (into 4 ohm)		

MILITARY STANDARDS 810C, D, E, F AND G		
Applicable MIL-STD Method:	Method	Procedure
Low Pressure	500.5	2
High Temperature	501.5	1, 2
Low Temperature	502.5	1, 2
Temperature Shock	503.5	1
Solar Radiation	505.5	1
Rain	506.5	1, 3
Humidity	507.5	2
Salt fog	509.5	1
Dust	510.5	1
Vibration	514.6	1
Shock	516.6	1, 5, 6

Specifications are subject to change without notice and shall not form part of any contract. They are issued for guidance purposes only. All specifications shown are typical.

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