

L3HARRIS TM9300

DMR Mobile Radio

L3Harris TM9300 mobiles are engineered to deliver critical communications using the Digital Mobile Radio (DMR) standards for workers in demanding occupations, including utilities, mining, transport and oil and gas industries.

With clear audio and GPS location capabilities, the TM9300 increases communications clarity while keeping operators tracked and connected. Ruggedized to withstand extreme conditions, the radios have a tough, die-cast metal chassis with an IP54-rated casing to protect from dust and water. Each TM9300 is capable of four different modes to simplify the migration process: Analog Conventional, MPT-1327, DMR Tier 2, and DMR Tier 3.

These encryption-supported DMR solutions are capable of four different communication standard modes, enhancing interoperability and giving organizations an easier path to migration. There are a range of models and accessories available, along with several frequencies and multiple power options suitable for a wide spectrum of working environments.



FEATURING: The mobile handheld control head accessory



RUGGEDIZED, MULTIMODE RADIO

KEY BENEFITS

- > Enhanced user safety through Lone Worker function, clear audio and priority access for emergency calls
- > Engineered for use in demanding environments with IP54 rating
- > Secured communication via AES and DES encryption algorithms
- > Operation in VHF, 220 MHz, UHF, 700/800 MHz and 900 MHz frequency bands
- > Multimode radio supports operation on conventional analog FM, MPT 1327, DMR Tier 2 and DMR Tier 3 systems



FEATURES AND BENEFITS*

ENHANCED WORKER SAFETY

- > Standard Lone Worker feature enhances safety of users in remote locations
- > Clear voice quality enhances clarity of communications
- > Emergency calls have priority access to the network and are integrated with a GPS location solution
- > Predefined status messages for fast response in common situations

ENHANCED SECURITY FEATURES

- > Terminals in DMR mode must be authenticated on the network before they are given access
- > Stun and Revive temporarily denies lost or stolen radios from accessing the network
- > Trunked operation supports individual and private calls within designated groups
- > Optional AES and DES encryption ensures privacy of conversations

RUGGEDIZED PERFORMANCE IN DEMANDING ENVIRONMENTS

- > Graphical single or dual control head supports local or remote operation. A handheld control head is also available
- > Tough, die-cast metal chassis with IP54 rated casing for protection from dust and splashing water

EFFICIENT VOICE COMMUNICATIONS

- > This single, quad mode terminal operates in trunked and conventional DMR, MPT 1327 and analog conventional FM networks
- > Roaming between MPT 1327 and trunked DMR networks
- > Roaming between conventional FM and conventional DMR networks
- > Group calls allow communications within individual teams without interruption from irrelevant traffic
- > Increased capacity supports up to 2,000 channels
- > Analog capabilities include priority and dual priority, editable, zone and background scan
- > PSTN dialing allows users to make phone calls on DMR systems with telephone interconnect
- > Shared menu structure with 9300 terminals

EXTENDED DATA SERVICES

- > Embedded data for location
- > Short data messages for location, status and text
- > Packet data over traffic channels for workforce management, telemetry, SCADA and customer-specific applications

BROAD PORTFOLIO OF ACCESSORIES

- > Audio solutions include microphones, speakers and a remote kit for in-vehicle, hands-free operation.
- > Flexible mounting options via numerous vehicle installation kits
- > Programming and service kits simplify configuration and set up

COLOR OPTIONS FOR FAST IN-FIELD WORKGROUP IDENTIFICATION

- > TM9300 mobile handheld control heads are available in black, yellow, green and red

* Not all features are supported in all modes of operation. Feature comparison tables are available in the product catalog.

SPECIFICATIONS FOR: TM9300 DMR MOBILE RADIO

| GENERAL | |
|--|--|
| Frequency Stability | ±0.5 ppm (-22° to 140°F/-30° to 60°C) |
| Conventional Mode: | |
| Networks | 26 |
| Channels / Zones | 1,500 channels / 26 zones |
| Scan Groups | 300 with up to 50 members each |
| Trunked Mode: | |
| Networks | 4 |
| Talkgroups | 512 talkgroup lists |
| Zones and work groups | 1,000 zones, 1,000 work groups |
| Dimensions: | |
| Body - in (mm) | Height: 25 W: 2.1 (52), 30 W / 35 W / 50 W: 2.1 (52) Width: 25 W: 6.3 (160), 30 W / 35 W / 50 W: 6.3 (160) Depth: 25 W: 6.9 (175), 30 W / 35 W / 50 W: 7.7 (195) |
| Graphical Control Head - in (mm) | Height: 2.8 (71), Width: 7.24 (184), Depth: 1.38 (35) |
| Weight - lb (kg): | |
| Body | 25 W: 2.6 (1.2), 30 W / 35 W / 50 W: 3.1 (1.4) |
| Control head | 0.73 (0.33) |
| Channel Spacing (kHz) | 6.25e, 12.5, 15, 20, 25, 30 |
| Frequency Increment/Channel Step (kHz) | 2.5, 3.125, 5, 6.25 |
| Operating Temperature | -22° to 140°F (-30° to 60°C) |
| Water and Dust Protection | IP54 |
| ESD Rating | +/-4 kV contact discharge and +/-8 kV air discharge |
| Rated Audio | 3 W (internal speaker) |
| Power Supply | DC: 10.8-16 VDC, AC: desk top PSU - 100 – 130 V or 200 – 250 V |
| Digital Protocol | DMR: ETSI TS 102 361 |
| Signaling Options (Analog) | MDC1200, encode and decode, 2-tone decode, PL (CTCSS), DPL, (DCS), Selcall |
| Vocoder Type | AMBE+2™ |
| Packet Data | ½ rate, ¾ rate, full rate, single slot |

| TRANSMITTER | | | | |
|---|--|---|------------------------------|------------------------------|
| Frequency Bands | VHF | UHF | 700/800 MHz ⁴ | 900 MHz |
| Frequency Ranges (MHz) | 136-174 174-225 ² | 320-380 ² (G1) 378-470 ³ 400-470 (H5) 450-520 (H7) | 757-870 | 896-941 |
| Output Power (W): | | | | |
| 25 W models | 25, 12.5, 5, 1 | 25, 12, 5, 1 | NA | NA |
| High power models | 50, 25, 15, 10 | 40, 20, 15, 10 | 35/30, 25, 10, 2 | 30, 15, 5, 2 |
| Input Current (A): | | | | |
| Standby current | 0.1 | 0.1 | 0.1 | 0.1 |
| 25 W models | 5.5 | 5.5 | NA | NA |
| High power models | 10.5 | 9.0 | 7.0 | 6.5 |
| FM Hum and Noise (Analog): | | | | |
| 12.5 kHz (dB) | -40 | -40 | -40 | -40 |
| 25 kHz ¹ (dB) | -45 | -45 | -45 | -40 |
| Adjacent Channel Power - Static (Analog): | | | | |
| @ 12.5 kHz offset (dB) | -60 | -60 | -60 | -60 |
| @ 25 kHz ¹ offset (dB) | -70 | -70 | -70 | -60 |
| Adjacent Channel Power - Static (DMR): | | | | |
| 12.5 kHz ETS 300-113 (dB) | 60 | 60 | 60 | 60 |
| Conducted/Radiated Emissions (W/dBm) | 25/-36 50/-20 | 25/-36 40/-20 | 30/20 35/20 | 30/-20 |
| Audio Response - Analog (dB) | +1/-3 | +1/-3 | +1/-3 | +1/-3 |
| Audio Distortion (Analog) | 2.5% @1 kHz 60% deviation | 2.5% @1 kHz 60% deviation | 2.5% @ 1kHz 60% deviation | 2.5% @1 kHz 60% deviation |
| Duty Cycle | 25 W: 2 min Tx, 4 min Rx for 8 hrs @ 140°F (+60°C) 5 W: continuous @ 104°F (+40°C) 30/35/40/50 W: 1 min Tx, 4 min Rx for 8 hrs @ 140°F (+60°C) | | | |

¹ Wideband operation is not available in the USA in some bands. ² 25 W model only, ³ 40 W model only, ⁴ Supports 700 A-Block frequencies (757-758 MHz Tx & Rx; 787-788 MHz Tx)

SPECIFICATIONS FOR: TM9300 DMR MOBILE RADIO

| RECEIVER | | | | |
|---|---------------------------------|--|--------------------------|--------------------|
| Frequency Bands | VHF | UHF | 700/800 MHz ⁴ | 900 MHz |
| Frequency Ranges (MHz) | 136-174 217-225 ¹ | 320-380 (G1) 400-470 (H5) 450-520 (H7) | 757-776 850-870 | 896-941 |
| Sensitivity (Analog) 12 dB SINAD (dBm/μV) | -120/0.22 | -120/0.22 | -120/0.22 | -120/0.22 |
| Sensitivity (DMR) 5% BER | -119/0.25 | -119/0.25 | -119/0.25 | -119/0.25 |
| Intermodulation Rejection (dB): | | | | |
| EIA603D | 76 | 70 | 75 | 75 |
| ETS 300-113 | 70 | 70 | 70 | 70 |
| Spurious Response Rejection (dB): | | | | |
| EIA603D | 80 | 75 | 70 | 80 |
| ETS 300-113 | 70 | 70 | 70 | 70 |
| FM Hum and Noise - Analog (dB): | | | | |
| 12.5 kHz | -40 | 1-40 | -40 | -40 |
| 25 kHz | -45 | -45 | -45 | -40 |
| Conducted Spurious Emissions (dB) | -57 | -57 | -57 | -57 |
| Selectivity - Analog (dB): | | | | |
| 12.5 kHz EIA603D (2 Tone) | 52 | 50 | 150 | 50 |
| 25 kHz EIA603D (2 Tone) | 73 | 70 | 70 | — |
| 12.5 kHz ETS 300-086 | 62 | 60 | 60 | 60 |
| 25 kHz ETS 300-086 | 73 | 70 | 70 | — |
| Optional External Speaker Output | 10 W (into 4 Ohms) | 10 W (into 4 Ohms) | 10 W (into 4 Ohms) | 10 W (into 4 Ohms) |
| Audio Distortion (rated audio) | 2% | 2% | 2% | 2% |

| MILITARY STANDARDS 810C, D, E, F AND G | | | | | |
|--|--------|-----------|---------------------------|--------|-----------|
| Applicable MIL-STD Method | Method | Procedure | Applicable MIL-STD Method | Method | Procedure |
| Low Pressure | 500.5 | 2 | Humidity | 507.5 | 2 |
| High Temperature | 501.5 | 1, 2 | Salt Fog | 509.5 | 1 |
| Low Temperature | 502.5 | 1, 2 | Dust | 510.5 | 1 |
| Temperature Shock | 503.5 | 1 | Vibration | 514.5 | 1 |
| Solar Radiation | 505.5 | 1 | Shock | 516.5 | 1, 5, 6 |
| Rain | 506.5 | 1, 3 | N/A | N/A | N/A |

| REGULATORY DATA | | | |
|------------------------------------|--|----------------|--|
| | USA | Canada | |
| VHF (136-174 MHz) (217-225 MHz) | CFR 47 N/A | RSS-119 N/A | |
| UHF (320-380 MHz) | N/A | N/A | |
| UHF (400-470 MHz) | CFR 47 | RSS-119 | |
| UHF (450-520 MHz) | CFR 47 | RSS-119 | |
| 700/800 MHz | CFR 47 | RSS-119 | |
| 900 MHz | CFR 47 | RSS-119 | |
| Emissions Designators | 11K0F3E, 16K0F3E ¹ , 6K60F2D, 7K80F2D, 9K60F2D ¹ , 10K8F2D ¹ , 7K60FXW, 7K60FXD | | |

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

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