



## FUTURE-PROOF TECHNOLOGY WITH MULTIMODE CAPABILITIES

### KEY FEATURES

Globally recognized Intrinsically Safe rating

Manages migration risks with portable operations—DMR Tier 3 and Tier 2, MPT 1327 and conventional analog FM

Digital Mobile Radio (DMR) compliance for greater choice and interoperability

AES encryption, voice and data, pre-set status messages and internal GPS for safe and efficient operations

Engineered for demanding environments with IP67 rating and water-shedding grille

# TP9300 IS PORTABLE

## INTRINSICALLY SAFE (IS) DMR TIER 3 AND TIER 2 RADIO

The Harris TP9300 IS reduces migration risks while delivering safe performance in hazardous conditions. Multimode operations including DMR Tier 3 and Tier 2, MPT 1327 and conventional analog FM, expand user choice and interoperability.

Built to last, the TP9300 IS meets global Intrinsically Safe specifications and exceeds MIL standard for the most rugged applications. The DMR Portable has an IP67 rating for water and dust protection and a water-shedding grille to ensure voice clarity and volume are maintained in wet environments.

Workforce safety and management is enhanced with man down alerts, GPS positioning and data messaging for status, location and texts. And, the TP9300 IS portable is made in the internationally recognized blue color for instant identification in the field.



## FEATURES AND BENEFITS

### Future-proof multimode portable

The TP9300 IS portable operates in four modes, delivering exceptional functionality and value in one device.

The TP9300 IS provides:

- Roaming between MPT 1327 and DMR Tier 3 trunked networks
- Roaming between Conventional FM and DMR Tier 2 Conventional networks
- Individual calls provide privacy between individuals
- Group calls allow separate teams to communicate without having to listen to irrelevant traffic
- Increased channel capacity supporting up to 2,000 channels
- Analog capability includes Priority and Dual Priority, Editable, Zone and Background Scan
- PSTN dialing allows a user to make phone calls on DMR systems that support telephone interconnect
- Shared menu structure between 9300 terminals
- Trunked operation allows for individual and private calls within designated groups

### Worker safety is ensured with globally recognized Intrinsically Safe rating system

The TP9300 IS portable is designed and tested to meet global IS standards, ensuring safe operation in hazardous environments.

- The battery circuitry is fully encapsulated
- The radio circuit has a stored energy limitation, which prevents internal sparking or overheating in the unlikely event of a circuit failure
- Component and conductor spacing and protective coatings prevent short circuits caused by dust or atmospheric contamination

### Internationally recognized IS color

The TP9300 IS model is made in the internationally recognized blue color for Intrinsically Safe portables, ensuring instant recognition in the field.

### Engineered for demanding environments with IP67 rating

- MIL standard specifications for the most rugged applications
- IP67 rating for water and dust protection
- 16-key keypad
- Four programmable function keys including emergency key

- Antenna is easily locatable in dark or restrictive environments
- Recessed lens provides screen protection
- Impact-protected corners provide shock absorbing durability
- Water-shedding grille ensures voice clarity and high audio volume is maintained in wet environments

### Complete package with accessories portfolio

- Intrinsically Safe audio accessories including speaker-microphones, headsets and earpieces
- Intrinsically Safe Li-Ion battery
- Intrinsically Safe compatible battery charger
- Data services improve organizational efficiencies
- Integrated GPS to monitor your workforce
- Short data messages for location, status and text
- Packet data over traffic channels for workforce management, Telemetry, SCADA and customer specific applications

**SPECIFICATIONS FOR: TP9300 IS PORTABLE - INTRINSICALLY SAFE [IS] DMR TIER 3 AND TIER 2 RADIO**

**GENERAL**

|   |  |
|---|--|
| Frequency Stability                                     | ±0.5ppm (-22°F to 140°F / -30°C to 60°C)   |
| Channel/Zones   | 1,000-2,000 channels/50-100 zones  |
| Talkgroups  | 26 talkgroup lists comprised of up to 1,000-2,000 members each                     |
| Scan Groups   | 300 with up to 50 members each, maximum of 2,000 members total                     |
| Dimensions (H x W x D):<br>with Li-Ion 2300 mAh battery | 5.35in x 2.56in x 1.77in (136mm x 65 mm x 45mm) excluding knobs                    |
| Weight:<br>with Li-Ion 2300mAh battery                  | 13.93oz (395g) with no antenna<br>15.17oz (430g) with IS battery + antenna         |
| Radio Operating Temperature Range                       | -20°C to 60°C (-4°F to 140°F)*   |
| Water and Dust Protection                               | IP67   |
| ESD Rating  | +/- 4kV contact discharge and +/-8kV air discharge                                 |
| Frequency Increment/Channel Step                        | 2.5kHz, 3.125kHz, 5kHz and 6.25kHz   |
| Digital Protocol (DMR)                                  | ETSI / TS 102 361  |
| Signaling Options (Analog)                              | MDC1200, encode and decode, 2-tone decode, PL (CTCSS), DPL (DCS), Selcall (5-tone) |
| Vocoder Type  | AMBE +2™   |
| Packet Data   | Rate, ¾ rate, full rate, single slot   |

**TRANSMITTER**

| Frequency Bands            | VHF            | UHF              | 700/800MHz   |
|----------------------------|----------------|------------------|--------------|
| Transmit Frequency Ranges  | 136-174MHz     | 380-470MHz       | 762-870MHz   |
| Output Power (IIA)         | 5W, 3W, 2W, 1W | 4W, 2.5W, 2W, 1W | 2.5W, 2W, 1W |
| Output Power (IIC)         | 1W             | 1W               | 1W           |
| FM Transmit Deviation      | ±2.5kHz        | 2.5kHz           | ±2.5kHz      |
| 12.5kHz / 25kHz channels*  | ±5kHz          | ±5kHz            | ±5kHz        |
| FM Hum and Noise (Analog): |                |                  |              |
| 12.5kHz channel            | -40dB          | -40dB            | -40dB        |
| 25kHz channel              | -45dB          | -45dB            | -45dB        |
| Conducted Emissions        | -36dBm <1GHz,  | -36dBm <1GHz     | -20dBm       |
| Radiated Emissions         | -30dBm >1GHz   | -30dBm >1GHz     | 20dBm        |
| Audio Response (Analog)    | +1/-3dB        | +1/-3dB          | +1/-3dB      |
| Audio Distortion (Analog)  | 2.5%           | 2.5%             | —            |

**RECEIVER**

| Frequency Band:              | VHF                              | UHF                              | 700/800MHz                       |
|------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Receive Frequency Ranges     | 136-174MHz                       | 380-470MHz                       | 762-776MHz<br>850-870MHz         |
| Channel Spacing*             | 6.25kHz, 12.5kHz, 25kHz          | 6.25kHz, 12.5kHz, 25kHz          | 6.25kHz, 12.5kHz, 25kHz          |
| Sensitivity:                 |                                  |                                  |                                  |
| Analog (12dB SINAD)          | -120dBm (0.22 µV)                | -120dBm (0.22 µV)                | -120dBm (0.22 µV)                |
| Digital (PDMR) 5% BER        | -119dBm (0.25 µV)                | -119dBm (0.25 µV)                | -119dBm (0.25 µV)                |
| Intermodulation Rejection    | 75dB (TIA603D)<br>65dB (ETS 300) | 75dB (TIA603D)<br>65dB (ETS 300) | 75dB (TIA603D)<br>65dB (ETS 300) |
| Selectivity (Analog) 2-Tone: |                                  |                                  |                                  |
| 12.5kHz                      | 50dB (TIA603D)                   | 50dB (TIA603D)                   | 50dB (TIA-603D)                  |
| 25kHz                        | 70dB (TIA603D)                   | 70dB (TIA-603D)                  | 70dB (TIA-603D)                  |
| Selectivity (Analog) 1-Tone: |                                  |                                  |                                  |
| 12.5kHz                      | 52dB (ETS 3000-086/TIA603C)      | 50dB (ETS 3000-086/TIA603C)      | 60dB (ETS 3000-086/TIA603C)      |
| 25kHz                        | 73dB (ETS 3000-086/TIA603C)      | 70dB (ETS 3000-086/TIA603C)      | 70dB (ETS 3000-086/TIA603C)      |
| Spurious Response Rejection  | 70dB (TIA603D)                   | 70dB (TIA603D)                   | 70dB (TIA603D)                   |
| FM Hum and Noise:            |                                  |                                  |                                  |
| Narrowband                   | -40dB                            | -40dB                            | -40dB                            |
| Wideband                     | -45dB                            | -45dB                            | -45dB                            |
| Rated Audio Power (internal) | 0.5W                             | 0.5W                             | 0.5W                             |
| Audio Response (Analog)      | +1/-3dB (TIA603D)                | +1/-3dB (TIA603D)                | +1/-3dB (TIA603D)                |
| Audio Distortion (Analog)    | 2%                               | 2%                               | 2%                               |

**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      |

## MILITARY STANDARDS 810C, D, E, F AND G (CONTINUED)

| Applicable MIL-STD Method: | Method | Procedure  |
|----------------------------|--------|------------|
| Humidity                   | 507.5  | 2          |
| Salt Fog                   | 509.5  | 1          |
| Dust                       | 510.5  | 1          |
| Immersion                  | 512.5  | 1          |
| Vibration                  | 514.6  | 1          |
| Shock                      | 516.6  | 1, 4, 5, 6 |

## BATTERY

|   | Analog     | DMR      |
|---|------------|----------|
| Li-Ion 2300 mAh Battery Shift Life (5/5/90) | 11.5 hours | 15 hours |

## CHARGER

Charger Options (Li-Ion) IS compatible desktop single charger

## REGULATORY DATA

|                  | USA    | Canada  | Europe  | Australia/New Zealand |
|------------------|--------|---------|---|-----------------------|
| VHF (136-174MHz) | CFR 47 | RSS-119 | EN300-086, EN300-113, EN300-219, EN300-489, EN60950 | AS/NZ4295             |
| UHF (380-470MHz) | CFR 47 | RSS-119 | EN300-086, EN300-113, EN300-219, EN300-489, EN60950 | AS/NZ4295             |
| 700/800MHz       | CFR 47 | RSS-119 | NA  | NA                    |

## IS COMPLIANCE\*

|                  | Output Power | USA                                      | Brazil                   | Canada                                  | Europe                          | Australia/NZ          |
|------------------|--------------|--|--------------------------|---|---------------------------------|-----------------------|
| VHF (136-174MHz) | 1-5W         | Class I Zone 1<br>AEx ib IIA T4... T3 Gb | —                        | Class I Zone 1<br>Ex ib IIA T4... T3 Gb | II 2 G Ex ib IIA<br>T4... T3 Gb | Ex ib IIA T4... T3 Gb |
|                  |              | Class I Div 2<br>Group D                 | —                        | —                                       | —                               | —                     |
|                  | 1W           | Class I Zone 1<br>AEx ib IIC T4... T3 Gb | —                        | Class I Zone 1<br>Ex ib IIC T4... T3 Gb | II 2 G Ex ib IIC<br>T4... T3 Gb | Ex ib IIC T4... T3 Gb |
| UHF (380-470MHz) | 1-4W         | Class I Zone 1<br>AEx ib IIA T4... T3 Gb | —                        | Class I Zone 1<br>Ex ib IIA T4... T3 Gb | II 2 G Ex ib IIA<br>T4... T3 Gb | Ex ib IIA T4... T3 Gb |
|                  |              | Class I Div 2<br>Groups D                | —                        | —                                       | —                               | —                     |
|                  | 1W           | Class I Zone 1<br>AEx ib IIC T4... T3 Gb | —                        | Class I Zone 1<br>Ex ib IIC T4... T3 Gb | II 2 G Ex ib IIC<br>T4... T3 Gb | Ex ib IIC T4... T3 Gb |
| 700/800MHz       | 1-2.5W       | Class I Zone 1<br>AEx ib IIA T4... T3 Gb | Ex ib IIA<br>T4... T3 Gb | Class I Zone 1<br>Ex ib IIA T4... T3 Gb | —                               | Ex ib IIA T4... T3 Gb |
|                  |              | Class I Div 2<br>Groups D                | —                        | —                                       | —                               | —                     |
|                  | 1W           | Class I Zone 1<br>AEx ib IIC T4... T3 Gb | Ex ib IIC<br>T4... T3 Gb | Class I Zone 1<br>Ex ib IIC T4... T3 Gb | —                               | Ex ib IIC T4... T3 Gb |

\* Subject to compliance and ambient temperature: T4 -20°C < Ta < +50°C, T3 -20°C < Ta < +60°C. Level of compliance subject to approval.

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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