



## 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 delivers 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 meets MIL-SPEC standards for the most rugged applications. This 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.

- 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

### Intrinsically Safe rated

The TP9300 IS Portable is designed and tested to meet global IS standards, which allows for 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 blue—the internationally recognized color for Intrinsically Safe portables, ensuring instant recognition in the field.

### Engineered for demanding environments

- MIL-SPEC standards IP67 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 for shock absorbing durability
- Water-shedding grille ensures voice clarity and high audio volume is maintained in wet environments

### Portfolio of accessories available

- 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

\*Battery is "IP67 rated"

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

**GENERAL**

Frequency Stability	±0.5 ppm (-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): with Li-Ion 2300 mAh battery	5.35 x 2.56 x 1.77 in (136 x 65 x 45 mm) excluding knobs
Weight:	13.93 oz (395 g) with no antenna
with Li-Ion 2300 mAh battery	15.17 oz (430 g) with IS battery + antenna
Radio Operating Temperature Range	-20° C to 60° C (-4° F to 140° F)*
Water and Dust Protection	IP67, IP65
ESD Rating	±4 kV contact discharge and ±8 kV air discharge
Frequency Increment / Channel Step (kHz)	2.5, 3.125, 5 and 6.25
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	700/800 MHz
Transmit Frequency Ranges (MHz)	136–174	380–470	762–870
Output Power (W) IIA	5, 3, 2, 1	4, 2.5, 2, 1	2.5, 2, 1
Output Power (W) IIC	1	1	1
FM Transmit Deviation (kHz)	±2.5	2.5	±2.5
12.5 kHz / 25 kHz channels*	±5	±5	±5
FM Hum and Noise (Analog):			
12.5 kHz channel (dB)	-40	-40	-40
25 kHz channel (dB)	-45	-45	-45
Conducted Emissions (dBm/GHz)	-36/<1	-36/<1	-20
Radiated Emissions (dBm/GHz)	-30/>1	-30/>1	20
Audio Response–Analog (dB)	+1/-3	+1/-3	+1/-3
Audio Distortion (Analog)	2.5%	2.5%	—

**RECEIVER**

Frequency Bands	VHF	UHF	700/800 MHz
Receive Frequency Ranges (MHz)	136–174	380–470	762–776 850–870
Channel Spacing* (kHz)	6.25, 12.5, 25	6.25, 12.5, 25	6.25, 12.5, 25
Sensitivity (Analog):			
12 dB SINAD (uV/dBm)	0.22/-120	0.22/-120	0.22/-120
Sensitivity (Digital):			
PDMR @ 5% BER (uV/dBm)	0.25/-119	0.25/-119	0.25/-119
Intermodulation Rejection (dB)	75 (TIA603D) 65 (ETS 300)	75 (TIA603D) 65 (ETS 300)	75 (TIA603D) 65 (ETS 300)
Selectivity (Analog) 2-Tone (dB):			
12.5 kHz	50 (TIA603D)	50 (TIA603D)	50 (TIA-603D)
25 kHz	70 (TIA603D)	70 (TIA-603D)	70 (TIA-603D)
Selectivity (Analog) 1-Tone (dB):			
12.5 kHz	52 (ETS 3000-086/TIA603C)	50 (ETS 3000-086/TIA603C)	60 (ETS 3000-086/TIA603C)
25 kHz	73 (ETS 3000-086/TIA603C)	70 (ETS 3000-086/TIA603C)	70 (ETS 3000-086/TIA603C)
Spurious Response Rejection (dB)	70 (TIA603D)	70 (TIA603D)	70 (TIA603D)
FM Hum and Noise (dB):			
Narrowband	-40	-40	-40
Wideband	-45	-45	-45
Rated Audio Power–Internal (W)	0.5	0.5	0.5
Audio Response–Analog (dB)	+1/-3 (TIA603D)	+1/-3 (TIA603D)	+1/-3 (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 (136-174 MHz)	CFR 47	RSS-119	EN300-086, EN300-113, EN300-219, EN300-489, EN60950	AS/NZ4295
UHF (380-470 MHz)	CFR 47	RSS-119	EN300-086, EN300-113, EN300-219, EN300-489, EN60950	AS/NZ4295
700/800 MHz	CFR 47	RSS-119	NA	NA

## IS COMPLIANCE\*

	Output Power	USA	Canada	Europe	Australia/NZ
VHF (136-174 MHz)	1-5 W	Class I Zone 1, AEx ib IIA T4... T3 Gb Class I Div 2, Group A, B, C, D Class II, Div 2, Group E, F, G Class III, Div 1	Class I Zone 1, Ex ib IIA T4... T3 Gb Class I Div 2 Group A, B, C, D Class II, Div 2, Group E, F, G Class III, Div 1	II 2 G Ex ib IIA T4... T3 Gb	Ex ib IIA T4... T3 Gb
	1 W	Class I Zone 1, AEx ib IIC T4... T3 Gb Class I Div 2, Group A, B, C, D Class II, Div 2, Group E, F, G Class III, Div 1	Class I Zone 1, Ex ib IIC T4... T3 Gb Class I Div 2 Group A, B, C, D Class II, Div 2, Group E, F, G Class III, Div 1	II 2 G Ex ib IIC T4... T3 Gb	Ex ib IIC T4... T3 Gb
UHF (380-470 MHz)	1-4 W	Class I Zone 1, AEx ib IIA T4... T3 Gb Class I Div 2, Groups A, B, C, D Class II, Div 2, Group E, F, G Class III, Div 1	Class I Zone 1, Ex ib IIA T4... T3 Gb Class I Div 2 Group A, B, C, D Class II, Div 2, Group E, F, G Class III, Div 1	II 2 G Ex ib IIA T4... T3 Gb	Ex ib IIA T4... T3 Gb
	1 W	Class I Zone 1, AEx ib IIC T4... T3 Gb Class I Div 2, Group A, B, C, D Class II, Div 2, Group E, F, G Class III, Div 1	Class I Zone 1, Ex ib IIC T4... T3 Gb Class I Div 2 Group A, B, C, D Class II, Div 2, Group E, F, G Class III, Div 1	II 2 G Ex ib IIC T4... T3 Gb	Ex ib IIC T4... T3 Gb
700/800 MHz	1 - 2.5 W	Class I Zone 1, AEx ib IIA T4... T3 Gb Class I Div 2, Groups A, B, C, D Class II, Div 2, Group E, F, G Class III, Div 1	Class I Zone 1, Ex ib IIA T4... T3 Gb Class I Div 2 Group A, B, C, D Class II, Div 2, Group E, F, G Class III, Div 1	—	Ex ib IIA T4... T3 Gb
	1 W	Class I Zone 1, AEx ib IIC T4... T3 Gb Class I Div 2, Groups A, B, C, D Class II, Div 2, Group E, F, G Class III, Div 1	Class I Zone 1, Ex ib IIC T4... T3 Gb Class I Div 2 Group A, B, C, D Class II, Div 2, Group E, F, G Class III, Div 1	—	Ex ib IIC T4... T3 Gb

\* Ambient Temperature: T4 -20° C < Ta < +50° C, T3 -20° C < Ta < +60° C. Level of compliance subject to approval.

### About Harris Corporation

Harris Corporation is a leading technology innovator, solving customers' toughest mission-critical challenges by providing solutions that connect, inform and protect. Harris supports government and commercial customers around the world.

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