tait
POWERED

TM9300 MOBILE
DIGITAL MOBILE RADIO (DMR)

RUGGEDIZED
MULTIMODE
MOBILE RADIO

Designed for voice and data communications, the Harris TM9300 mobile radio offers a secure and reliable digital communications solution based on the DMR standard.

Harris TM9300 DMR mobiles are efficient voice and data communications solutions for use in demanding occupations, including utilities, mining, transport, fire and emergency response, oil and gas. These encryption supported DMR radios are capable of four different communication standard modes, giving users enhanced interoperability and an easier path to migration.

With crystal-clear digital audio quality and GPS location capabilities, each TM9300 improves communications clarity and increases worker safety and efficiency. There are a range of models and accessories available, and several frequencies and multiple power options for reliable communications in a wide spectrum of working environments.

KEY FEATURES

Operation in VHF, UHF, 700/800 MHz and 900 MHz frequency bands

Conventional analog FM, MPT 1327, DMR Tier 2 (conventional) and DMR Tier 3 (trunked)

Engineered for use in demanding environments with IP54 rating

Range of configurable models and accessories, including optional, easy to install handheld control heads

Crystal-clear audio quality

HARRIS® TECHNOLOGY TO CONNECT, INFORM AND PROTECT™

FEATURES AND BENEFITS*

TM9300 features to improve workforce safety

- Lone worker as standard
- Crystal-clear voice so the operator and user will understand the message
- Emergency calls have priority access to the network, and can be integrated with a GPS location solution

Improve your organizations efficiency

- Text messaging for enhanced and unambiguous communications
- Pre-defined status messages for a fast response in common situations

Privacy feature:

- Trunked operation allows for individual and private calls within designated groups
- Optional 56-bit DES encryption ensures privacy of conversations

Facilities to improve network security

- When operating in DMR mode, all terminals must be authenticated on the network before they are given access
- Stun and Revive are implemented to temporarily deny a specific mobile access to the network

Designed to perform in demanding environments

- Graphical control head, capable of local or remote operation. The remote configuration can also support a single or dual head
- Handheld control head option, either local or remote operation
- Tough die-cast metal chassis with IP54 rated casing, giving protection against dust and splashing water

Voice communications delivering on operational needs

- Quad mode terminal offering Trunked DMR, conventional DMR, MPT 1327 and analog conventional FM in one device
- Roaming between MPT 1327 and trunked DMR networks
- Roaming between conventional FM and conventional DMR networks
- Individual calls provide privacy between individuals
- Group calls allow separate teams to communicate amongst themselves 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
- Crystal-clear voice quality
- Shared menu structure between 9300 terminals

Complete package with accessories portfolio

- Audio accessories are available including microphones, speakers and a remote kit for hands-free operation in the car
- Variety of power supply units are available for your region and your specific application
- Vehicle installation kits for different mounting options
- Programming and service kits for ease of configuration and set up

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

Color options

- TM9300 mobiles are available with black, yellow or green control heads
- TM9300 mobile handheld control heads are available in black, yellow, green and red
- These color options make it easier for workgroups to identify their equipment in the field

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

SPECIFICATIONS FOR: **TM9300 MOBILE – DIGITAL MOBILE RADIO (DMR)**

GENERAL

Frequency Stability	±0.5ppm (-22°F to 140°F/-30°C to 60°C)
Channels/Zones	1,000 - 2,000 channels/50-100 zones
Talkgroups	26 talkgroup lists 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: Body - in (mm)	Height: 25W: 2.1 (52), 30W/35W/50W: 2.1 (52) Width: 25W: 6.3 (160), 30W/35W/50W: 6.3 (160) Depth: 25W: 6.9 (175), 30W/35W/50W: 7.7 (195)
Graphical Control Head - in (mm)	Height: 2.8 (71), Width: 7.24 (184), Depth: 1.38 (35)
Weight - lb (kg): Body Control head	 25W: 2.6 (1.2), 30W/35W/50W: 3.1 (1.4) 0.73 (0.33)
Channel Spacing	6.25/12.5/15/20/25/30kHz
Frequency Increment/Channel Step	2.5/3.125/5/6.25kHz
Operating Temperature	-22°F to 140°F (-30°C to 60°C)
Water and Dust Protection	IP54
ESD Rating	+/-4kV contact discharge and +/-8kV air discharge
Rated Audio	3W (internal speaker)
Power Supply	DC: 10.8-16VDC, AC: desk top PSU - 100 to 130V or 200 to 250V
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

	VHF	UHF	700/800MHz	900MHz
Frequency Ranges	136-174MHz	320-380MHz (G1) 400-470MHz (H5) 450-520MHz (H7)	757-870MHz	896-941MHz
Output Power: 25W models High power models	 25W, 12.5W, 5W, 1W 50W, 25W, 10W, 2W	 25W, 12W, 5W, 1W 40W, 20W, 15W, 10W	 NA 35/30W, 15W, 5W, 2W	 NA 30W, 15W, 5W, 2W
Input Current: Standyby current 25W models High power models	 0.1A 5.5A 10.5A	 0.1A 5.5A 9A	 0.1A NA 7A	 0.1A NA 6.5A
FM Hum and Noise (Analog): 12.5kHz 25kHz2	 -40dB -45dB	 -40dB -45dB	 -40dB -45dB	 -40dB
Adjacent Channel Power - Static (Analog): @ 12.5kHz offset @ 25kHz offset2	 -60dB -70dB	 -60dB -70dB	 -60dB -70dB	 -60dB
Adjacent Channel Power - Static (DMR): ETS 300-113	 12.5kHz: 60dB	 12.5kHz: 60dB	 12.5kHz: 60dB	 12.5kHz: 60dB
Conducted/Radiated Emissions	25W: -36dBm 50W: -20dBm	25W: -36dBm 40W: -20dBm	30/35W: -20dBm	30W: -20dBm
Audio Response (Analog)	+1/-3dB	+1/-3dB	+1/-3dB	+1/-3dB
Audio Distortion (Analog)	2.5% @1kHz, 60% deviation	2.5% @1kHz, 60% deviation	2.5% @1kHz, 60% deviation	2.5% @1kHz, 60% deviation
Duty Cycle	25W: 2min Tx, 4min Rx for 8 hrs @ 140°F (+60°C) 5W: continuous @ 104°F (+40°C) 30/35/40/50W: 1min Tx, 4min Rx for 8 hrs @ 140°F (+60°C)			

RECEIVER

	VHF	UHF	700/800MHz	900MHz
Frequency Ranges	136-174MHz	320-380MHz (G1) 400-470MHz (H5) 450-520MHz (H7)	757-776MHz 850-870MHz	935-941MHz
Sensitivity (Analog) 12dB SINAD	-120dBm (0.22µV)	-120dBm (0.22µV)	-120dBm (0.22µV)	-120dBm (0.22µV)
Sensitivity (DMR) 5% BER	-119dBm (0.25µV)	-119dBm (0.25µV)	-119dBm (0.25µV)	-119dBm (0.25µV)
Intermodulation Rejection: EIA603D ETS 300-113	 76dB 70dB	 70dB 70dB	 75dB 70dB	 75dB 70dB

RECEIVER (CONTINUED)

	VHF	UHF	700/800MHz	900MHz
Spurious Response Rejection:				
EIA603D	80dB	75dB	70dB	80dB
ETS 300-113	70dB	70dB	70dB	70dB
FM Hum and Noise (Analog)	12.5kHz: -40dB 25kHz: -45dB	12.5kHz: -40dB 25kHz: -45dB	12.5kHz: -40dB 25kHz: -45dB	12.5kHz: -40dB
Conducted Spurious Emissions	-57dBm	-57dBm	-57dB	-57dB
Selectivity (Analog):				
EIA603D (2 Tone)	12.5kHz: 52dB 25kHz: 73dB	12.5kHz: 50dB 25kHz: 70dB	12.5kHz: 50dB 25kHz: 70dB	12.5kHz: 50dB
ETS 300-086	12.5kHz: 62dB 25kHz: 73dB	12.5kHz: 60dB 25kHz: 70dB	12.5kHz: 60dB 25kHz: 70dB	12.5kHz: 60dB
Optional External Speaker Output	10W (into 4ohms)	10W (into 4ohms)	10W (into 4ohms)	10W (into 4ohms)
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	NA	NA	NA

REGULATORY DATA

	USA	Canada	Europe [2]	Australia/New Zealand [2]
VHF (136-174MHz)	CFR 47	RSS-119	EN300-086, EN300-113, EN300-219, EN301-489, EN60950	AS/NZS4295
UHF (320-380MHz)	NA	NA	EN300-086, EN300-113, EN300-219, EN301-489, EN60950	NA
UHF (400-470MHz)	CFR 47	RSS-119	EN300-086, EN300-113, EN300-219, EN301-489, EN60950	AS/NZS4295 AS/NZS4365
UHF (450-520MHz)	CFR 47	RSS-119	NA	AS/NZS4295 AS/NZS4365
700/800MHz	CFR 47	RSS-119	NA	NA
900MHz	CFR 47	RSS-119	NA	NA
Emissions Designators	11K0F3E, 16K0F3E [1], 6K60F2D, 7K80F2D, 9K60F2D [1], 10K8F2D [1], 7K60FXW, 7K60FXD			

[1] Wideband operation is not available in the USA in some bonds.

[2] 25 Watt models only.

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.

About Harris Corporation: Harris Corporation is a leading technology innovator that creates mission-critical solutions that connect, inform and protect the world. The company's advanced technology provides information and insight to customers operating in demanding environments—from ocean to orbit and everywhere in between. Harris has approximately $7.5 billion in annualized revenue and supports customers in more than 100 countries through four customer-focused business segments: Critical Networks, Space and Intelligence Systems, Electronic Systems and Communication Systems.

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