TM9315 MOBILE

DIGITAL MOBILE RADIO (DMR)

MULTIMODE MOBILE RUGGEDIZED FOR HARSH CONDITIONS

The Harris TM9315 Mobile offers flexible, multimode operation including conventional analog, MPT1327, DMR conventional and DMR trunked.

Engineered for use in demanding environments, this rugged radio is IP54 rated for protection against dust and water.

Users have the choice of 100 presets for channel or talkgroup selections with support for individual or private calls within groups. Embedded noise reduction technologies ensure always-clear communications and voice privacy is enhanced with optional 56-bit DES encryption. Organizations also have options for GPS hardware and software for up-to-the-moment worker location services.

A range of custom accessories are available including audio supplies, power units, mounting kits and programming and a service guide for ease of configuration and setup.

KEY FEATURES

- Quad-mode operation in conventional analog, MPT1327, DMR conventional and DMR trunked
- Ruggedized with IP54 rating
- 100 channel/talkgroup capacity
- Clear communications enhanced through digital noise reduction technology
- Options for 56-bit AES encryption and GPS hardware and software
- Range of custom accessories and programming kits



FEATURES AND BENEFITS*

Enhances workforce safety

- Digital technology improves audio quality and reduces background noise to ensure clear communications
- Emergency calls have rapid access to the network
- GPS capable (software/hardware option) radio ensures you always know where your workforce is located
- Lone worker

Improves efficiencies

- 100 channel/talkgroup capacity
- Trunked operation allows individual and private calls within designated groups
- Supports up to four trunked networks (MPT standard, DMR Tier 3 as a software option)
- Up to 100 call presets per trunked network

Improves network security

- Optional 56-bit DES encryption ensures privacy of conversations
- Stun and Revive allows users to temporarily deny a specific mobile access to the network
- When operating in DMR mode, all terminals must be authenticated on the network before they are given access

Designed to perform in demanding environments

- High-power external speaker option
- Rugged standard microphone
- Tough die-cast metal chassis with IP54 rated casing protects against dust and splashing water

Advanced communications capabilities

- Quad mode terminal offering, conventional DMR Tier 2, conventional FM, MPT 1327 and trunked DMR (software option)
- Roaming between conventional FM and conventional DMR networks
- Roaming between MPT 1327 and trunked DMR networks
- Group calls allow separate teams to communicate without interference from irrelevant traffic
- Channel capacity supports up to 100 channels
- Digital simplex mode
- Analog capability includes foreground scan, CTCSS and DCS
- Shared programming structure between 9300 terminals

Complete package with accessories portfolio

- Audio accessories include microphones and external speakers
- Variety of power supply units available for different regions and specific applications
- Vehicle installation kits for different mounting options
- Programming and service kits ease configuration and set up

Smart features

- Low standby power consumption
- Wide power control 1:25 ratio (25W)
- Duty 33% transmit 2 minute Tx 4 minute Rx (25W)
- CCDI control over conventional channels
- RAP control for trunked networks
- Control of digital outputs by status messages

Data services

- Short data messages for location
- CCDI connectivity for short data and control messages in conventional mode
- RAP connectivity for short data and control messages in trunked mode

* Not all features are supported in all modes of operation.

SPECIFICATIONS FOR: **TM9315 MOBILE - DIGITAL MOBILE RADIO (DMR)**

GENERAL

Frequency Stability	±0.5ppm (-22°F to 140°F/-30°C to 60°C)
Channels/Talkgroups	100 selected combinations of channel and talk group
Scan Groups	100 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)
Control Head - in (mm)	Height: 2.0 (51), Width: 6.9 (175), Depth: 1.38 (35)
Weight - lb (kg):	
Body	25W: 2.6 (1.2), 30W, 35W, 50W: 3.1 (1.4)
Control head	0.4 (0.18)
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), 10W (external 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)	PL (CTCSS), DPL (DCS), Selcall, T99, MDC1200, MPT 1327
Vocoder Type	AMBE+2™
Packet Data	½ rate, ¾ rate, full rate, single slot

TRANSMITTER

	VHF	UHF	800MHz	900MHz
Frequency Ranges	136-174MHz	400-470MHz (H5) 450-520MHz (H7)	806-870MHz	896-941MHz
Output Power:				
25W models	25W, 12.5W, 5W, 1W	25W, 10W, 5W, 1W	NA	NA
High power models	50W, 25W, 15W, 10W	40W, 20W, 15W, 10W	35W, 25W, 10W, 2W	30W, 15W, 5W, 2W
Input Current:				
Standyby current	0.1A	0.1A	0.1A	0.1A
25W models	5.4A	5.4A	NA	NA
High power models	10.5A	9.0A	8.0A	8.0A
FM Hum and Noise (Analog):				
12.5kHz	-40dB	-40dB	-40dB	-40dB
25kHz[2]	-45dB	-45dB	-45dB	
Adjacent Channel Power - Static (Analog):				
@ 12.5kHz offset	-60dB	-60dB	-60dB	-60dB
@ 25kHz offset[2]	-70dB	-70dB	-70dB	
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% @1 kHz, 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	800MHz	900MHz
Frequency Ranges	136-174MHz	400-470MHz 450-520MHz	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	76dB	70dB	75dB	75dB
ETS 300-113	70dB	70dB	70dB	70dB

RECEIVER (CONTINUED)

	VHF	UHF	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):	12.5kHz: 52dB 25kHz: 73dB	12.5kHz: 50dB 25kHz: 70dB	12.5kHz: 50dB 25kHz: 70dB	12.5kHz: 50dB
EIA603D (2 Tone)				
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			

REGULATORY DATA*

	USA	Canada	Europe [3]	Australia/New Zealand [3]
VHF (136-174MHz)	CFR 47	RSS-119	EN300-086, EN300-113, EN300-219, EN301-489, EN60950	AS/NZS4295
UHF (400-470MHz)	CFR 47	RSS-119	EN300-086, EN300-113, EN300-219, EN301-489, EN60950	AS/NZS4295 AS/NZS4365[1]
UHF (450-520MHz)	NA	NA	NA	AS/NZS4295 AS/NZS4365
700/800MHz	CFR 47	RSS-119	NA	NA
900MHz	CFR 47	NA	NA	NA
Emissions Designators	11K0F3E, 16K0F3E[2], 6K60F2D, 7K80F2D, 9K60F2D[2], 10K8F2D[2], 7K60FXW, 7K60FXD			

[1] The UHF band radios are approved for use in Citizen Band in Australia and New Zealand when programed to meet the requirements of AS/NZS4365. Harris cannot guarantee full performance to the published specifications when the 400-470MHz band radio is operating at the CB frequencies.

[2] Wideband operation is not available in the USA

[3] 25 watt models only

*The Australia/New Zealand approvals are available. For other jurisdictions please contact your local Harris representative.

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: Communication Systems, Space and Intelligence Systems, Electronic Systems and Critical Networks.

Non-Export Controlled Information

tait communications

HARRIS® TECHNOLOGY TO CONNECT, INFORM AND PROTECT™

Tait Limited facilities are certified for ISO9001:2008 (Quality Management System), ISO14001:2004 (Environmental Management System) and ISO18001:2007 (Occupational Health and Safety Management System) for aspects associated with the design, manufacture and distribution of radio communications and control equipment, systems and services. In addition, all our Regional Head Offices are certified to ISO9001:2008.