

# TM9356 DUAL BAND MOBILE

## SPECIFICATIONS



# Tait DMR, a smart investment, made to evolve.

The TM9356 mobile provides dual frequency band capability for DMR Tier 2 and conventional analog solutions. The TM9356 enables you to make and receive calls on either VHF or UHF radios from a single control head.

For analog operation, the TM9356 can also be configured as a crossband repeater.

Choose either the large control head with built-in 3W speaker, or the handheld control head option. 10W or 15W loudspeakers are available for either option.

Improve workforce safety with smart features such as Location Services, Tait GeoFencing, and Lone Worker functionality.



### FEATURES AND BENEFITS\*

#### TM9356 features to improve workforce safety

- Lone Worker as standard
- Tait GeoFencing Automated Location Controlled Behavior
- Crystal-clear voice so the operator and user will understand the message
- Emergency calls can be integrated with a GNSS (GPS & GLONASS) location solution
- Blast Alarms and Audible Alerts in DMR modes

#### Tait GeoFencing Automation

- Radios can automatically take a range of actions based on location, such as change modes, send messages, hazardous area alert, activate lone worker features, or activate radio I/Os to turn lights on
- Independent of the network, dispatch, or any other software applications

#### Improve your organization's efficiency

- Text messaging for enhanced and unambiguous communications
- Pre-defined status messages for fast notification and response in common situations
- Optional location services and Tait GeoFencing capability

#### Easy, flexible installation

- Install one control head to operate two radio bodies
- Remote kits allow the control head and radio bodies to be installed in separate locations (for example, install radio bodies under the seat, in a glove box, or in the trunk)
- Graphical Control head with External Speaker or built-in 3W speaker, or Hand Held Control Head with External Speaker

#### Designed to perform in demanding environments

- Wide power control 1:25 ratio (25W)
- Duty 33% transmit 2 minute TX 4 minute RX (25W)

- Engineered for use in demanding environments with tough die-cast metal chassis, MIL-STD 810G and IP54 rated casing, giving protection against dust, water, salt, humidity, vibration and shock

#### Voice communications delivering on operational needs

- VHF and UHF dual band capability
- Make and receive calls on either VHF or UHF radios from a single control head. Important calls won't be missed - with dual receive functionality, both radio bodies independently scan their channels at the same time - communications received by either radio body will be brought to the foreground
- Crossband repeater can be configured for analog operation - communications received on one frequency band can be instantly transmitted on the other frequency band\*\*
- Dual mode provides DMR Tier 2 conventional digital and conventional FM analog operation
- Roam between conventional FM analog and DMR Tier 2 digital networks
- Open DMR standard provides choice and interoperability
- Increased channel capacity with support of up to 1,500 channels
- Scanning modes include: priority, dual priority, zone, and background scan - groups are editable
- Individual calls provide privacy between individuals
- Optional DES or AES encryption for operation in digital mode.
- Shared menu structure between all 9300 devices

#### Flexible and Easy to Use

- Channel Authorization for DMR Tier 2 and Tier 3 gives users confidence their call will be heard
- Proceed to Talk Tone available in all modes, for consistent operation

#### Easy fleet management

- The industry-leading Tait EnableFleet configuration management system gives you visibility and control of your fleet from a single secure source, making it faster, easier and more affordable to update and optimize the performance of your fleet

#### Data Services

- Embedded data for location
- Short data messages for location, status and text
- Internal and external GNSS options available to improve efficiency and safety (please refer to product catalog)
- Control of digital outputs by status messages
- CCDI connectivity to the mobile for short data and control messages in conventional mode
- RAP connectivity to the mobile for short data and control messages in trunked mode
- IP data in digital trunked mode

#### Color Options

- TM9356 mobile Hand Held Control heads are available in black, yellow, green and red, and Large Control Heads in black, yellow, and green
- Different color options make it easier for workgroups to identify their equipment in the field

#### Complete package with options and 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

\* Not all features are supported in all models or modes of operation. Contact Tait or an authorized channel partner for more details.

\*\*Some band combinations may not be supported for Crossband operation. Contact Tait or an authorized channel partner for more details

# TM9356

## SPECIFICATIONS



### GENERAL

Frequency stability	±0.5ppm (-22°F to 140°F/-30°C to 60°C)
Networks	26
Channels/zones	1,500 channels / 100 zones
Scan groups	300 with up to 50 members each
Dimensions - inches (mm)	
Each radio body	Height 25W: 2.1 (52), 30W/35W/40W/50W: 2.1 (52) Width 25W: 6.3 (160), 30W/35W/40W/50W: 6.3 (160) Depth 25W: 6.9 (175), 30W/35W/40W/50W: 7.7 (195)
Graphical control head	Height: 2.8 (71), Width: 7.24 (184), Depth: 1.38 (35)
Weight - lb (kg)	
Each radio body	25W: 2.6 (1.2), 30W/35W/40W/50W: 3.1 (1.4)
Graphical control head	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 or external speaker
Power supply	DC: 10.8-16VDC
Digital Protocol	DMR: ETSI TS 102 361-1, -2, -3, -4
Signaling options (Analog)	MDC1200, encode and decode, Two tone decode, PL (CTCSS), DPL, (DCS), Selcall
Vocoder type	AMBE +2™

TRANSMITTER**	VHF	UHF	700/800MHZ #
Frequency range	136-174MHz (B1) 174-225MHz (C0)²	320-380MHz (G1)* 378-470MHz (HK)* 400-470MHz (H5) 450-520MHz (H7)	757-870MHz (K5)
Output power			
25W Radio bodies	25W, 10W, 5W, 1W	25W, 10W, 5W, 1W	NA
High Power radio bodies	50W, 25W, 15W, 10W	40W, 20W, 15W, 10W	35/30W, 25W, 10W, 2W
Input current			
Standby Current	0.1A	0.1A	0.1A
25W Models	<5.5A	<6A	NA
High Power models	<10.5A	<10.5A	<10.5A
FM Hum and noise (Analog)			
12.5kHz	-40dB	-40dB	-40dB
25kHz ¹	-45dB	-45dB	-45dB
Adjacent channel power - static (Analog)			
@ 12.5kHz offset	-60dB	-60dB	-60dB
@ 25kHz offset ¹	-70dB	-70dB	-70dB
Adjacent channel power - static (DMR)			
ETS 300-113	12.5kHz: 60dB	12.5kHz: 60dB	12.5kHz: 60dB
Conducted/radiated emissions	25W: -36dBm 50W: -20dBm	25W: -36dBm 40W: -20dBm	30/35W: -20dBm
Audio response (Analog)	+1/-3dB	+1/-3dB	+1/-3dB
Audio distortion (Analog)	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)		

¹Wideband operation is not available in the USA in some bands.

\*\*Contact your local Tait representative for more information.

# Supports 700 A-Block frequencies (757-758MHz Tx & Rx; 787-788MHz Tx)

² 25W model only.

³ 25W model only.

\* 40W model only.

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RECEIVER**	VHF	UHF	700/800MHZ #
Frequency range	136-174MHz (B1) 174-225MHz (C0)	320-380MHz (G1) 378-470MHz (HK) 400-470MHz (H5) 450-520MHz (H7)	757-776MHz & 850-870MHz (K5)
Sensitivity (typical)			
Analog (12dB SINAD)	-120dBm (0.22µV)	-120dBm (0.22µV)	-120dBm (0.22µV)
DMR (1% BER (ETS300-113))	-119dBm (0.25µV)	-119dBm (0.25µV)	-119dBm (0.25µV)
DMR (5% BER)	-123dBm (0.16µV)	-123dBm (0.16µV)	-123dBm (0.16µV)
Intermodulation rejection			
EIA603E	76dB	70dB	75dB
ETS 300-113	70dB	70dB	70dB
Spurious response rejection			
EIA603E	80dB	75dB	70dB
ETS 300-113	70dB	70dB	70dB
FM hum and noise (Analog)	12.5kHz: -40dB 25kHz: -45dB	12.5kHz: -40dB 25kHz: -45dB	12.5kHz: -40dB 25kHz: -45dB
Conducted spurious emissions	-57dBm	-57dBm	-57dBm
Selectivity (Analog)			
EIA603E (2 Tone)	12.5kHz: 52dB 25kHz: 73dB	12.5kHz: 50dB 25kHz: 70dB	12.5kHz: 50dB 25kHz: 70dB
ETS 300-086	12.5kHz: 62dB 25kHz: 73dB	12.5kHz: 60dB 25kHz: 70dB	12.5kHz: 60dB 25kHz: 70dB
Optional external speaker output	10W (into 4ohms)	10W (into 4ohms)	10W (into 4ohms)
Audio distortion (rated audio)	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	Sand & Dust	510.5	1, 2
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 (FCC)	CANADA (ISED)	EUROPE /UK(CE) <sup>3</sup> E-MARK	AUSTRALIA/NEW ZEALAND (AS/NZ) <sup>3</sup>
VHF (136-174MHz)	✓	✓	✓	✓
VHF (174-225MHz)	✓	-	-	✓ <sup>4</sup>
UHF (320-380MHz)	-	-	✓	-
UHF (378-470MHz)	✓	✓	✓	✓ <sup>2</sup>
UHF (450-520MHz)	✓	✓	✓	✓ <sup>2</sup>
700/800MHz	✓	✓	-	-

<sup>1</sup> Wideband operation is not available in the USA in some bands.

<sup>2</sup> The UHF band radios are approved for use in Citizen Band in Australia and New Zealand when programmed to meet the requirements of AS/NZS4365. Tait cannot guarantee full performance to the published specifications when the 378-470MHz and 400-470MHz band radios are operating at the CB frequencies.

<sup>3</sup> 25 Watt models only.

<sup>4</sup> New Zealand only

\*\*Contact your local Tait representative for more information.

# Supports 700 A-Block frequencies (757-758MHz Tx & Rx; 787-788MHz Tx)

### TAIT DMR SOLUTION

Backed by our proven radio network expertise, the TM9356 mobile is part of our larger DMR offering. The Tait DMR solution consists of terminals, infrastructure, applications, services and integration with third party interfaces to ensure that your organization can reap all the benefits of the spectrally-efficient DMR standard in a mission critical environment.

Tait has taken every care in compiling this specification sheet, but we're always innovating and therefore changes to our models, designs, technical specification, visuals and other information included in this specification sheet could occur. For the most up-to-date information and for a copy of our terms and conditions please visit our website [www.taitcommunications.com](http://www.taitcommunications.com).

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Tait International Limited facilities are certified for ISO 9001:2015 (Quality Management System), ISO 14001:2015 (Environmental Management System) and ISO 45001:2018 (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 ISO 9001.

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### Authorized Partners

