

# Reliable and smart mobiles for business critical communications.

Designed for mission-critical environments, Tait DMR offers a secure and reliable digital communications solution based on the DMR standard.

The TM9315 mobile offers conventional DMR and Analog FM operation. Its rugged design delivers straight forward voice communications in demanding environments.



## KEY FEATURES

- ▶ Dual-mode mobile, supporting DMR Tier 2 and Analog conventional operation
- ▶ Roaming between FM Conventional and DMR Tier 2 Networks
- ▶ Open DMR standard provides choice and interoperability
- ▶ Engineered for use in demanding environments with IP54 rating
- ▶ Audio clarity provided by noise reducing digital technology
- ▶ High quality audio
- ▶ A range of accessories including hands free microphones and GPS antennas
- ▶ GPS capable to improve efficiency and safety
- ▶ Support for digital encryption
- ▶ 25W and high power versions



## FEATURES AND BENEFITS

### TM9300 features to improve workforce safety

- ▶ Digital technology improves audio quality and reduces background noise to ensure clear communications
- ▶ High quality voice ensuring the operator and users will understand the message
- ▶ Emergency calls have rapid access to the network
- ▶ GPS capable (software/hardware option) radio ensures that you always know where your workforce is.

### Improve your organization's efficiency

- ▶ 100 channel/talk-group capacity gives considerable flexibility
- ▶ GPS capable (hardware/software option) functionality allows efficient allocations of resources to incidents

### Facilities to improve network security

- ▶ Optional 56bit DES encryption ensures privacy of conversations
- ▶ Stun and Revive are implemented to temporarily deny a specific mobile access to the network.

### Designed to perform in demanding environments

- ▶ High power external speaker option

- ▶ Rugged standard microphone
- ▶ Tough die-cast metal chassis with IP54 rated casing, giving protection against dust and splashing water.

### Voice communications delivering on operational needs

- ▶ Dual mode terminal offering, Conventional DMR tier 2 and conventional FM
- ▶ Roaming between Conventional FM and Conventional DMR networks
- ▶ Group calls allow separate teams to communicate amongst themselves without having to listen to irrelevant traffic
- ▶ Channel capacity with support of up to 100 channels
- ▶ Digital simplex mode
- ▶ Analog capability, includes foreground scan, CTCSS and DCS
- ▶ High quality voice
- ▶ Shared programming structure between 9300 terminals.

### Complete package with accessories portfolio

- ▶ Audio accessories are available including microphones and external speakers

- ▶ 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.

### 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 channels and some functionality
- ▶ Control of digital outputs by status messages.

### Data services

- ▶ Short data messages for location
- ▶ CCDI connectivity to the mobile can be used for short data and control messages.

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

## GENERAL

Frequency stability	±0.5ppm (-22°F to 140°F/-30°C to 60°C)
Channels/talk groups	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: 21 (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)
2 digit 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
Air interface standard	DMR: ETSI TS 102 361
Signalling options (Analog)	PL (CTCSS), DPL (DCS)
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)	806-870MHz	896 - 941MHz
Output power		450-520MHz (H7)		
25W Models	25W, 12.5W, 5W, 1W	25W, 12W, 5W, 1W	NA	NA
High Power Models	50W, 25W, 10W, 2W	40W, 20W, 15W, 10W	35W, 15W, 5W, 2W	30W, 15W, 5W, 2W
Input current (Typical)				
Standby current	0.10A	0.10A	0.10A	0.10A
25W Models	5.4A	5.4A	NA	NA
High Power models	10.5A	9A	8A	8A
FM hum and noise (Analog)				
12.5kHz	-40dB	-40dB	-40dB	-40dB
25kHz <sup>2</sup>	-45dB	-45dB	-45dB	
Adjacent channel power - static (Analog)				
12.5kHz	-60dB	-60dB	-60dB	-60dB
25kHz <sup>2</sup>	-70dB	-70dB	-70dB	
Adjacent channel power - static (Analog) 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	+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	800MHz	900MHz
Receive frequency range	136-174MHz	400-470MHz	850-870MHz	935 - 941MHz
Sensitivity (analog) 12dB SINAD	-120dBm (0.22 $\mu$ V)	-120dBm (0.22 $\mu$ V)	-120dBm (0.22 $\mu$ V)	-120dBm (0.22 $\mu$ V)
Sensitivity (DMR) 5% BER	-119dBm (0.25 $\mu$ V)	-119dBm (0.25 $\mu$ V)	-119dBm (0.25 $\mu$ V)	-119dBm (0.25 $\mu$ V)
Intermodulation rejection				
EIA603D	76dB	70dB	75dB	75dB
ETS 300-113	70dB	70dB	70dB	70dB
Spurious response rejection				
EIA603D	80dB	75dB	70dB	70dB
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	-57dBm	-57dBm
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 810 C, 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	514.6	1
Solar radiation	505.5	1	Shock	516.6	1,5,6
Rain	506.5	1.3			

## REGULATORY DATA \*

	USA	Canada	Europe <sup>3</sup>	Australia/New Zealand <sup>3</sup>
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 <sup>1</sup>
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, 16K0F3E2, 6K60F2D, 7K80F2D, 9K60F2D2, 10K8F2D2, 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. Tait 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 Tait representative.

### TAIT DMR SOLUTION

Backed up by our proven radio network expertise, the TM9300 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.

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.

\*Contact your local Tait representative for more information.

For further information please check with your nearest Tait office or authorized dealer. The word "Tait" and the Tait logo are trademarks of Tait Limited.

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

### Authorized Partners



Quality ISO 9001

Environment ISO 14001

HEALTH + SAFETY OHSAS 18001