TM**9300**
SPECIFICATIONS

Reliable and smart mobiles for mission critical communications.

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

The TM9300 mobiles offer conventional and trunked DMR operation as well as full MPT 1327, and conventional FM functionality in one device.

KEY FEATURES

- Future proof multi-mode mobiles (DMR trunked, DMR Conventional, MPT 1327 and conventional analog FM)
- Roaming between MPT and DMR Tier 3 networks
- Handheld Control Head (HHCH) is very easy to install as there is a small cat6 cable between the radio and control head
- 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
- Crystal-clear audio quality
- A range of configurable models and accessories are available to suit various applications
- Packet Data over Traffic channels
- GPS capable to improve efficiency and safety
- Encryption supported
- Optional control head colors available

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FEATURES AND BENEFITS*

TM9300 features to improve workforce safety

- Lone Worker as standard
- Crystal-clear voice so the operator and users 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 56bit DES encryption ensures privacy of conversations

Facilities to improve network security

- When operating in DMR Tier 3 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
- Hand Held 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 devise
- 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 with support of up to 2,000 channels
- Analog capability, includes Priority and Dual Priority, Editable, Zone and Background Scan
- PSTN dialling 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 and 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

Data Services

- Embedded data for location
- Short data messages for location, status and text
- Packet data over traffic channels for work force Management, Telemetry, SCADA and customer specific applications

Color Options

- TM9300 mobiles are available with black, yellow or green control heads.
- TM9300 mobile Hand Held 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.

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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
Talk groups	26 talk group 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	
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)
Graphical control head – in (mm)	Height: 2.8 (71), Width: 7.24 (184), Depth: 1.38 (35)
Weight lb (kg)	
Body	25W: 2.6 (1.2), 30W/35W/50W: 3.1 (1.4)
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)
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
Signaling options (Analog)	MDC1200, encode and decode, Two 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	400-470MHz (H5) 450–520MHz (H7)	762-870MHz	896-941MHz
Output power				
25W Models	25W, 12.5W, 5W, 1W	25W, 12W, 5W, 1W	NA	NA
High Power models	50W, 25W, 10W, 2W	40W, 20W, 15W, 10W	35/30W, 15W, 5W, 2W	30W, 15W, 5W, 2W
Input current				
Standby Current	0.15A	0.15A	0.15A	0.15A
25W Models	5.5A	5.5A	NA	NA
High Power models	10.5A	9A	8A	8A
FM Hum and noise (Analog)				
12.5kHz	-40dB	-40dB	-40dB	-40dB
25kHz[2]	-45dB	-45dB	-45dB	
Adjacent channel power – static (Analog)				
12.5kHz	-60dB	-60dB	-60dB	-60dB
25kHz[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% @ 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)			

*Configuration excludes LCD heater in control head.

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RECEIVER

	VHF	UHF	700/800MHz	900MHz
Receive frequency range	136-174MHz	400-470MHz 450-520MHz	762-776MHz and 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
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 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	514.6	1
Solar radiation	505.5	1	Shock	516.6	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	RSS-119	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. 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.

Authorized Partners

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.
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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

Quality ISO 9001 | Environment ISO 14001 | HEALTH + SAFETY OHSAS 18001

