TM**9455**
SPECIFICATIONS

Instant, reliable communications is just the beginning.

First responders around the world trust Tait for multi-agency coordination in the most challenging environments.

The flexible TM9400 mobiles offer both analog and digital modes including P25 Phase 2 and strong encryption management capability.

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

Supercharge the performance of your TM9400 with a range of options including Bluetooth, WiFi OTAP and voice recording through to full LTE broadband and edge computing capabilities. [1]

A range of control head options are available for TM9400 mobiles. [2]

TCH6: High Resolution Color Display, Built-in Keypad, Remote Mount

15W Rugged External Speaker

TCH4: High Resolution Color Display, Built-in 4W Speaker, Remote Mount

TCH3: High Resolution Color Display, Built-in 4W Speaker, Local Mount

Large Control Head and Hand Held Control Head options including red, yellow and green casing options

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P25 open standards

- Benefit from the spectral efficiency, multi-vendor interoperability, security, data and migration capabilities of the P25 standards
- TIA-102 P25 CAP tested and certified, providing multi-vendor interoperability
- 12.5kHz P25 Phase 1 FDMA and 6.25kHz equivalent P25 Phase 2 TDMA capable
- FCC and IC compliances including P25 Phase 2 emission designator (8K10F1W)

Keeping your people safe

- Supports end-to-end encryption, including FIPS 140-2 Level 2 certified module for AES (see NIST website for certificate) and supports DES and ARC4 for interoperability
- Lone Worker, stealth emergency mode as standard with covert microphone in some control head options
- Tait GeoFencing option for automated location based behavior
- Radio inhibit and uninhibit to allow management of radios during vehicle servicing
- Trunked failsoft reverts to conventional operation during trunked network failure
- Blast Alarms and Audible Alerts on P25 conventional and Selcall channels

Highly flexible and designed for demanding environments

- Rugged design exceeds MIL-STD-810G tests for humidity, salt fog, vibration, shock and solar radiation and is IP54 rated for protection against dust and splashing water
- Control head options include high definition color screen and Hand Held Control Head
- Remote mount options 19ft and 40ft (6m and 12m) options
- Dual head options
- Refer to Control Head Options brochure for more information

High-performance voice communications capabilities

- Future proof multi-mode flexibility offering analog, P25 Phase 1 conventional/trunked and P25 Phase 2 trunked
- Automatic dual mode between analog and P25 Phase 1 conventional
- Clear communication with P25 AMBE+2 enhanced digital vocoder and digital noise suppression
- Voting ensures priority selection of the channel with optimum receive quality
- Dynamic regrouping and supergroup operation for mission-critical workforce management
- Analog and P25 Two-Tone Paging can be used to trigger pre-programmed actions
- Large channel capacity with up to 4,000 channels
- Programmable power level options
- Scanning modes include: priority, dual priority, in-zone, Talkgroup scanning, and background scan
- Last over repeat capability to hear missed calls when TU2000M3 option is fitted
- Bluetooth Audio available when TU2000M3 option is fitted

Effective operations with voice and data

- Support for a variety of simulcast modes such as LSM and C4FM
- Pre-set status messages
- P25 data such as GNSS location
- Internal and external GNSS options available (refer to product catalog)
- Conventional and trunked IP data
- Location services options for conventional and trunked networks

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

Efficient, security-focused management

- OTAR (Over-the-air Rekeying)
- Tait EnableProtect Key Fill Device (KFD) for quick, reliable encryption key programming
- Tait EnableProtect Advanced System Key to allow administrators to authorize and restrict subscriber units on their network
- Over-the-air-programming (OTAP) with the Tait EnableFleet configuration management system delivers software and firmware changes over the Tait P25 Trunked radio network or WiFi, (when optional TU2000M3 is fitted) making it faster, easier and more affordable to update and optimize the performance of radios in your fleet

TM9400 Options and Accessories

- Enable any combination of Bluetooth audio, WiFi OTAP, Last Over Repeat and On Board Voice Recording capabilities with the TU2000M3 Option Board
- Options board space for Tait-developed or third-party options boards
- Digital and analog interfaces allow a range of accessory options for the TM9400
- A range of audio accessories are available including microphones, speakers and installation options
- Refer to Tait Mobile Options and Accessories catalog for more information

Color Options

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

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GENERAL	
Frequency stability	±0.5ppm (-22°F to +140°F/-30°C to +60°C)
Channels/zones	4,000 channels/100 zones
Talk groups	50 talk groups, up to 2,000 members total
Scan groups	300 with up to 50 members each
P25 Encryption (via Key Fill Device or OTAR)	FIPS 140-2 Level 2 certified module for AES (see NIST website for certificate here). Legacy DES and ARC4 for interoperability. FIPS module dependent on TM9400 hardware version
WLAN (WiFi) Option	2.4GHz 802.11b/g/n 20MHz, 5GHz 802.11a/n 20/40MHz [1]
Bluetooth® Option	Supported [1]
Power supply	10.8-16VDC
Active standby current	0.15A
Channel spacing	12.5/15/20/25/30kHz
Frequency increment	2.5/3.125/5/6.25
Dimensions (DxWxH)	
Control head (TCH4/TCH6)	2.8 x 7.0 x 2.0in (72 x 178 x 52mm)
Radio body - 25W	6.9 x 6.3 x 2.1in (175 x 160 x 52mm)
Radio body - 30/35/50W	7.7 x 6.3 x 2.1in (195 x 160 x 52mm)
Weight	
Control head (TCH4/TCH6)	0.62lb (0.28kg)
Radio body - 25W	2.6lb (1.2kg)
Radio body - 30/35/50W	3.1lb (1.4kg)
Supported Languages	English (default), German, French, Spanish, Portuguese, Czech, Polish, Bulgarian
Operating temperature	-22°F to +140°F (-30°C to +60°C)
Water and dust protection	IP54
RF connector	50 ohm BNC or mini UHF
Interface connectors	3 programmable interface connectors providing serial ports and GPIO lines for radio and accessory control, and audio connectivity
Signaling options (analog)	MDC1200 encode and decode, Two Tone decode, PL (CTCSS), DPL (DCS), Selcall

TRANSMITTER	VHF	UHF	700/800MHZ
Frequency range	136-174MHz	378-470MHz (HK)⁺ 400-470MHz (H5)¤ 450-520MHz (H7)	762–870MHz
Transmit power	25W, 10W, 5W, 1W 50W, 25W, 15W, 10W	25W, 10W, 5W, 1W 40W, 20W, 15W, 10W	<806MHz: 30W, 25W, 10W, 2W >806MHz: 35W, 25W, 10W, 2W
Transmit current	25W, 10W, 5W, 1W <5.5A 40W, 20W, 15W, 10W <10.5A	(25W, 10W, 5W, 1W <6A 40W, 20W, 15W, 10W <10.5A (<7A)^	10A max
Modulation limiting			
12.5/15kHz channel	±2.5kHz	±2.5kHz	±2.5kHz
25/30kHz channel	±5kHz	±5kHz	±5kHz
FM Hum and noise (Analog)			
12.5kHz channel	-45dB	-40dB	-40dB
25kHz channel [3]	-48dB	-45dB	-45dB
Radiated and conducted emissions	25W, 10W, 5W, 1W -85dBc 40W, 20W, 15W, 10W -80dBc	-80dBc	-80dBc
Audio response (Analog)	+1/-3dB	+1/-3dB	+1/-3dB
Audio distortion (Analog)	1.5% @ 1kHz, 60% deviation		
Duty cycle	25W: 2min Tx, 4min Rx for 8 hrs @ +140°F (+60°C) 35/50W: 1min Tx, 4min Rx for 8 hrs @ +140°F (+60°C) 5W: continuous @ +104°F (+40°C)		

⁺ 40W model only.
^ 40W HK model only.
¤ 25W model only.

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RECEIVER	VHF	UHF	700/800MHZ
Frequency range	136–174MHz	378-470MHz 400-470MHz [3] 450-520MHz	762-776MHz 850-870MHz
Sensitivity (Analog)			
12dB SINAD	0.22uV (-120dBm)	0.22uV (-120dBm)	0.28uV (-118dBm)
Sensitivity (P25)			
5% BER	0.22uV (-120dBm)	0.22uV (-120dBm)	0.22uV (-120dBm)
Intermodulation rejection (P25 TIA-102)	76dB	75dB	75dB
Adjacent channel rejection			
12.5kHz (P25) TIA-102	60dB	60dB	60dB
25kHz TIA-603 (2-tone)	73dB	70dB	70dB
Spurious response rejection (P25) TIA-102	80dB	80dB	80dB
Residual audio noise ratio (P25) TIA-102	45dB	45dB	45dB
FM hum and noise			
12.5kHz channel	-45dB	-40dB	-40dB
25kHz channel [3]	-48dB	-45dB	-45dB
Audio distortion (3W rated audio)	1.5% at 1kHz 60% modulation		
Optional external speaker output	15W		

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	514.6	1
Solar radiation	505.5	1	Shock	516.6	1,5,6
Rain	506.5	1,3			

REGULATORY DATA	USA (FCC)	CANADA (ISED)	EUROPE /UK(CE) [4]	E-MARK	AUSTRALIA/NEW ZEALAND (AS/NZ) [4]
VHF (136-174MHz)	✔	✔	✔	✔	✔
UHF (378-470MHz & 400-470MHz)	✔	✔	✔	✔	✔ [5]
UHF (450-520MHz)	✔	✔	-	-	✔ [5]
700/800MHz	✔	✔	-	-	-

Please note: Not all features are supported in all models or modes of operation - Contact your local Tait representative for more information.
[1] Requires TU2000 option board to be fitted - please refer to TAIT AXIOM Mobile documentation for more information.
[2] Please refer to the Mobile Control Heads brochure for more information.
[3] Wideband operation is not available in the USA in some bands.
[4] 25 Watt models only.
[5] The 25W 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 400-470MHz band radios is operating at the CB frequencies.

TAIT P25 PHASE 2 SOLUTION

Backed up by our proven radio network expertise, the TM9400 Mobile Radio is part of our larger P25 Phase 2 offering. This 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 P25 standard.

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.

For further information please check with your nearest Tait office or authorized dealer.

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.

Authorized Partners

Quality Management ISO 9001

Environment Management ISO 14001:2015

Occupational Health & Safety Management ISO 45001:2018

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