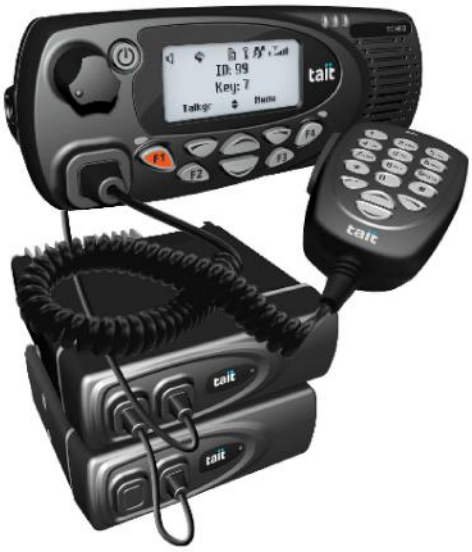
TM**9456**
SPECIFICATIONS

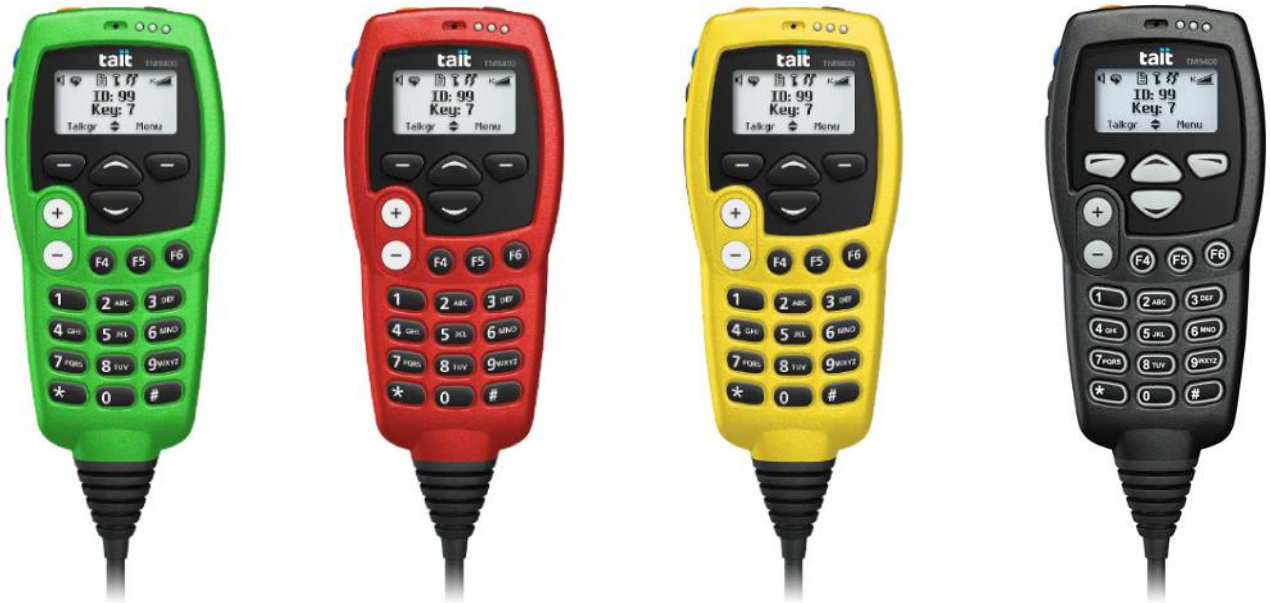
Instant, reliable communications is just the beginning.



The TM9456 mobile provides dual frequency band capability for P25 conventional, P25 trunked and conventional analog solutions. The TM9456 enables you to make and receive calls on either VHF or UHF radios from a single control head.

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.

First responders around the world trust Tait for multi-agency coordination in the most challenging environments. Improve workforce safety with smart features such as Location Services*, Tait GeoFencing, and Lone Worker functionality.



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

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FEATURES AND BENEFITS

Delivers on the P25 standards

Benefit from the spectral efficiency, multi-vendor interoperability, security, migration and data capability demanded by 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
- Product compliances satisfy FCC 2015 and 2017 ultra-narrowbanding mandates
- FCC and IC compliances include P25 Phase 2 emission designator (8K10F1W)

Designed for demanding environments

- 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.
- Duty 33% transmit 2 minute TX 4 minute RX (25W)

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 built-in 3W speaker, or Hand Held Control Head with External Speaker

High-performing voice communications

- Robust design delivers clear, mission-critical voice communications
- Multi-mode flexibility offering analog, P25 Phase 1 conventional/ trunked and P25 Phase 2 trunked
- Roam between VHF and UHF networks
- Dual receive to monitor calls on either band
- Programmable power level options
- AMBE+2 enhanced vocoder reduces background noise in demanding environments
- Voting ensures priority selection of the channel with optimum receive quality
- Dynamic regrouping and supergroup operation for mission-critical workforce management
- Increased channel capacity with up to 2,000 channels

Keeping your people safe

- Programmable orange emergency key
- Supports end-to end digital encryption, including AES
- Lone Worker, covert microphone and stealth emergency mode as standard
- Radio inhibit and uninhibit to allow management of radios during vehicle servicing
- Trunked failsoft reverts to conventional operation during trunked network failure

Effective operations with voice and data

- Support for a variety of simulcast modes such as LSM and C4FM
- Pre-set status messages
- Location services
- Conventional and trunked IP data

Efficient, security-focused 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
- Tait Enable Protect Key Management Facility to deliver OTAR (Over-the-air Rekeying)
- Tait EnableProtect Key Fill Device (KFD) for quick, reliable encryption key programming
- Tait EnableProtect Advanced System Key allows administrators to authorize and restrict subscriber units on their network

Color Options

- TM9456 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.

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

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GENERAL*	
Frequency stability	±0.5ppm (-22°F to +140°F/-30°C to +60°C)
Channels/zones	1,000 channels/50 zones (2,000 channels/100 zones optional enhancement with software license)
Talk groups	1000 talk groups, up to 1,000 members total (2,000 members optional enhancement with software license)
Scan groups	300 with up to 50 members each, maximum of 2,000 members total
Power supply	10.8-16VDC
Active standby current	0.15A
Channel spacing	12.5/15/20/25/30kHz
Frequency increment	2.5/5/6.25
Dimensions (DxWxH)	
Control head	1.38 x 7.24 x 2.8in (35 x 184 x 71mm)
Each Radio body - 25W	6.9 x 6.3 x 2.1in (175 x 160 x 52mm)
Each Radio body - 30/35/50W	7.7 x 6.3 x 2.1in (195 x 160 x 52mm)
Weight	
Control head	0.73lb (0.33kg)
Each Radio body - 25W	2.6lb (1.2kg)
Each Radio body - 30/35/50W	3.1lb (1.4kg)
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 interface connectors with serial ports
Signaling options (analog)	MDC1200 encode and decode, Two Tone decode, PL (CTCSS), DPL (DCS)

TRANSMITTER*	VHF	UHF	700/800MHZ
Frequency range	136-174MHz	378-470MHz [+] 400-470MHz: 450-520MHz	762–870MHz
Transmit 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	<806MHz: 30W, 25W, 10W, 2W >806MHz: 35W, 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
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	-48dB	-45dB	-45dB
Radiated and conducted emissions			
25W Models	-85dBc	-80dBc	-80dBc
High Power Models	-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)		

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

[+] 40W model only

*Contact your local Tait representative for more information.

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RECEIVER*	VHF	UHF	700/800MHZ
Frequency range	136–174MHz	378-470MHz 400-470MHz 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 [1]	-48dB	-45dB	-45dB
Audio distortion (3W rated audio)	1.5% at 1kHz 60% modulation		
Optional external speaker output	10W (into 4 ohm)		

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	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 [2]
UHF (450-520MHz)	CFR 47	RSS-119	NA	AS/NZS4295 AS/NZS4365[2]
700/800MHz	CFR 47	RSS-119	NA	NA
900MHz	CFR 47	RSS-119	NA	NA
Emissions Designators**	11K0F3E, 16K0F3E[1], 6K60F2D, 7K80F2D, 9K60F2D[1], 10K8F2D[1], 7K60FXW, 7K60FXD			

*Contact your local Tait representative for more information.
[1] Wideband operation is not available in the USA in some bands.
[2] 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.
[3] 25 Watt models only.

TAIT P25 SOLUTIONS

Backed up by our proven radio network expertise, the TP9456 base station/repeater 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.taitradio.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 BS OHSAS 18001:2007 (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 ISO 9001.

Authorized Partners

Quality Management ISO 9001

Environment Management ISO 14001:2015

Occupational Health & Safety Management ISO 45001:2018

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