

# More efficient networks. More possibilities.

The Tait TP9400 may be the smallest P25 Phase 2-capable portable but it is uncompromising in meeting the demands of those serving our communities. With analog, 12.5kHz P25 Phase 1 FDMA conventional/trunked and 6.25kHz equivalent P25 Phase 2 TDMA trunked and LSM (CQPSK) decode capability in a single device, you can transition to a more spectrally efficient solution in a time frame that suits you.

The TP9400 portable enables first responder effectiveness and safety with internal GPS\*, Bluetooth® wireless technology\*, IP67 protection and AES encryption.



## KEY FEATURES

- ▶ Manage migration risk with a multi-mode portable - analog, P25 Phase 1 conventional/trunked and upgradable to P25 Phase 2 for enhanced interoperability
- ▶ P25 Phase 2 TDMA for increased capacity
- ▶ P25 standards compliance for greater choice and interoperability
- ▶ Smaller and lighter, Li-Ion premium battery gives 12hr shift life
- ▶ AES encryption, voice and data, pre-set status messages and internal GPS for safe and efficient operations
- ▶ Engineered for demanding environments with IP67 rating and new water-shedding grille
- ▶ Optional colors available. Red, yellow, orange and hi-visibility green



## 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

- ▶ Designed with users to ensure effective every-day operation
- ▶ Exceeds relevant MIL-STD-810G
- ▶ IP67 sealing protects to one meter of water for 30 minutes
- ▶ Water shedding grille assists voice clarity and volume in wet environments
- ▶ Shock absorbing
- ▶ Impact-protected corners
- ▶ Large four-line LCD with icons to display key parameters
- ▶ 4 and 16 keypad options
- ▶ Four programmable function keys and three-way selector

### Color Options

- ▶ Tait TP9400 portables are available in black, red, orange, yellow, and high-visibility green
- ▶ These color options make it easier to identify equipment in the field

### High-performing, voice communications

Robust design delivers clear, mission-critical voice communications.

- ▶ Analog, P25 Phase 1 conventional/trunked and P25 Phase 2 trunked
- ▶ Automatic dual mode between analog and P25 Phase 1 conventional
- ▶ Unique microphone design coupled with 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
- ▶ Scanning modes include: priority, dual priority, editable, zone, and background scan
- ▶ Range of analog signalling functionality, i.e. MDC1200 encode and decode, Two Tone decode, PL (CTCSS), DPL (DCS)

### Improve workforce safety

- ▶ Programmable emergency key is easily accessible and highly visible
- ▶ on the radio
- ▶ Man Down and Lone Worker
- ▶ as standard
- ▶ Inbuilt GPS transmits location over your conventional voice network
- ▶ Radio inhibit and uninhibit to allow management of misplaced or stolen radios
- ▶ Supports end-to-end encryption, including AES encryption
- ▶ 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
- ▶ P25 data such as emergency
- ▶ GPS location
- ▶ Conventional and trunked IP data
- ▶ Location services over a conventional network

### Efficient, security-focused management

The TP9400 management facilities and applications allow you to efficiently manage your radio fleet.

- ▶ Over-the-air Rekeying (OTAR)
- ▶ EnableProtect Key Fill Device (KFD) for quick, reliable encryption key programming
- ▶ Programming application for efficient fleet operation
- ▶ EnableProtect Advanced System Key allows administrators to authorize and restrict subscriber units on their network

### TP9400 Accessories

- ▶ Audio: speaker-microphones, earpieces and surveillance kits
- ▶ Chargers: in-vehicle, single fast and 6-way multi-chargers
- ▶ Range of Li-ion battery capacities to match your operational needs

## 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	50 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
Dimensions (DxWxH)	
with Li-Ion standard battery	1.61 x 2.56 x 5.35in (41 x 65 x 136mm) - excluding knobs
with Li-Ion standard battery	1.77 x 2.56 x 5.35in (45 x 65 x 136mm) - excluding knobs
Weight	
with Li-Ion standard battery	11.46oz (325g) - no antenna
with Li-Ion standard battery	13.12oz (372g) - no antenna
Channel spacing	12.5/15/20/25/30kHz
Frequency increment	2.5/5/6.25
Operating temperature	-22°F to +140°F (-30°C to +60°C)
Water and dust protection	IP67
Rated audio	0.5W
Speaker rating	2W
Signaling options (analog)	MDC1200 encode and decode, Two Tone decode, PL (CTCSS), DPL (DCS)

## TRANSMITTER\*

Frequency band	VHF	UHF	700/800MHz
Transmit frequency ranges	136-174MHz	400-470MHz 450-520MHz	762-870MHz
Output power	5W, 3W, 2W, 1W	4W, 2.5W, 2W, 1W	3W, 2.5W, 2W, 1W
Modulation limiting			
12.5/15kHz channel	±2.5kHz	±2.5kHz	±2.5kHz
25/30kHz channel	±5kHz	±5kHz	±5kHz
FM hum and noise			
12.5kHz channel	-45dB	-40dB	-43dB
25kHz channel	-48dB	-45dB	-49dB
Radiated and conducted emissions	-75dBc	-72dBc	-75dBc
Audio response (analog)	+1/-3dB	+1/-3dB	+1/-3dB
Audio distortion (analog)	1% @ 1kHz, 60% deviation	1.5%	1.5%

## RECEIVER\*

Frequency band	VHF	UHF	700/800MHz
Receive frequency ranges	136-174MHz	400-470MHz 450-520MHz	762-776MHz 851-870MHz
Sensitivity (analog)			
12dB SINAD	0.22uV (-120dBm)	0.22uV (-120dBm)	0.22uV (-121dBm)
Sensitivity (P25)			
5% BER	0.22uV (-120dBm)	0.22uV (-120dBm)	0.22uV (-121dBm)
Intermodulation rejection (P25) TIA-102	75dB	75dB	75dB
Adjacent channel rejection			
12.5kHz (P25) TIA-102	60dB	60dB	60dB
25kHz TIA-603 (2-tone)	73dB	70dB	75dB
Spurious response rejection (P25) TIA-102	75dB	80dB	70dB
Residual audio noise ratio (P25) TIA-102	45dB	45dB	45dB
Audio distortion (rated audio)	1.5%	1.5%	1.5%
FM hum and noise			
12.5kHz channel	-45dB	-40dB	-50dB
25kHz channel	-48dB	-45dB	-55dB

## MILITARY STANDARDS 810C, D, E, F and G

Applicable MIL-STD	Method	Procedure
Low pressure	500.5	2
High temperature	501.5	1, 2
Low temperature	502.5	1, 2
Temperature shock	503.5	1
Solar radiation	505.5	1
Rain	506.5	1, 3
Humidity	507.5	2
Salt fog	509.5	1
Dust	510.5	1
Immersion	512.5	1
Vibration	514.5	1
Shock	516.5	1, 4, 5, 6

## BATTERY

Battery shift life: Li-Ion premium	12 hours (5/5/90)
Battery shift life: Li-Ion standard	9 hours (5/5/90)

## CHARGER

Charger options (Li-Ion)	Fast desktop single charger, 6-way multi charger, vehicle charger
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\*\* These chargers are not available for sale in Brazil

## TAIT P25 PHASE 2 SOLUTION

Backed up by our proven radio network expertise, the TP9400 portable 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.

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.

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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.

