TP9400
SPECIFICATIONS

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
- Future proofed with software-upgradability to 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

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
- Software upgrade to P25 Phase 2
- Compliance platform for FCC 2015 and 2017 ultra-narrowbanding deadlines

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

High-performing voice communications

Robust design delivers clear, mission-critical voice communications.

- Analog, P25 Phase 1 conventional/ trunked and P25 Phase 2-capable
- 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 super-group 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 signaling 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)
- Key Fill Device (KFD) for quick, reliable encryption key programming
- Programming application for efficient fleet operation
- Tait Advanced System Key (TASK) 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

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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	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 premium 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 premium 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**	**700/800MHz**
Transmit frequency ranges	136–174MHz	762–870MHz
Output power	5W, 3W, 2W, 1W	3W, 2.5W, 2W, 1W
Modulation limiting		
12.5/15kHz channel	±2.5kHz	±2.5kHz
25/30kHz channel	±5kHz	±5kHz
FM hum and noise (analog)		
12.5kHz channel	-45dB	-40dB
25kHz channel	-48dB	-45dB
Radiated and conducted emissions	-75dBc	-70dBc
Audio response (analog)	+1/-3dB	+1/-3dB
Audio distortion (analog)	1.5% @ 1kHz, 60% deviation	1.5%

RECEIVER†

Frequency band	**VHF**	**700/800MHz**
Receiver frequency ranges	136–174MHz	762–776MHz 851–870MHz
Sensitivity (analog)		
12dB SINAD	0.22µV (-120dBm)	0.28µV (-118dBm)
Sensitivity (P25)		
5% BER	0.22µV (-120dBm)	0.22µV (-120dBm)
Intermodulation rejection (P25) TIA-102	75dB	75dB
Adjacent channel rejection		
12.5kHz TIA-102	60dB	60dB
25kHz TIA-603 (2-tone)	73dB	70dB
Spurious response rejection (P25)	75dB	70dB
Residual audio noise ratio (P25) TIA-102	45dB	45dB
Audio distortion (rated audio)	1.5%	1.5%
FM hum and noise		
12.5kHz channel	-45dB	-40dB
25kHz channel	-48dB	-45dB

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	514.6	1
Shock	516.6	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

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 takes advantage of the benefits of the spectrally-efficient P25 standard.