

Tait DMR, a smart investment, made to evolve.

Achieve more with your radio network. The most flexible devices and networks, with smart voice and data applications. TP9500 portables enhance the user experience with a color screen, louder, clearer audio, and more ergonomic controls, all built Tait Tough for critical communications. WiFi connectivity can be used for easy, advanced fleet management.

KEY FEATURES

Exceptional Audio

- DMR AMBE+2 enhanced digital vocoder
- Digital noise suppression software
- Dual-mic active noise cancellation
- Large, powerful 3W speaker

Connectivity Options

- Conventional Analog
- MPT Trunking
- DMR Tier 2 Conventional
- DMR Tier 3 Trunking
- WiFi OTAP capability
- Bluetooth® audio

Enhanced Worker Safety

- Programmable Emergency Key
- Man Down and Lone Worker modes
- Integrated GPS
- Location Services and GeoFencing options

Enhanced User Experience

- Large high resolution color screen
- Ergonomic design, user friendly controls
- Fleet management software

Built Tait Tough

- IP65 & IP68 Dust and Waterproof
- Shock absorbing corner protection
- Drop test exceeds MIL-STD-810G
- Water shedding grille





FEATURES AND BENEFITS

Enhanced user experience

The TP9500 is designed for ease of use in tough environments

- Large, high resolution color screen for increased clarity of messaging
- Loud, powerful 3W speaker to hear over background noise
- Dual mic active noise cancellation removes background noise in analog and digital modes
- Accessory Active Noise cancellation to enhance transmit audio clarity
- Ergonomic, user friendly design and easy to use controls
- Bluetooth® connectivity for wireless voice accessories
- Four programmable function keys and three-way selector
- Tailor your experience with wide range of accessory options

DMR smart voice and data

Benefit from the spectral efficiency, multi-vendor interoperability, security, migration and data capability of DMR open standards

- Text messaging for enhanced and unambiguous communications
- Short data messages for location, status and text
- Packet data over traffic channels for work force management and customer specific applications

Extensive network capabilities

- Future proof quad mode radio offering Trunked DMR, Conventional DMR, MPT 1327 and analog conventional FM in one device
- Roaming between MPT 1327 and DMR Tier 3 trunked networks
- Roaming between Conventional FM and DMR Tier 2 Conventional networks
- Individual calls for private discussions
- A range of call types for individual and group communication without the distraction of irrelevant traffic
- Increased channel capacity with up to 1,500 channels
- Scanning modes include: priority, dual priority, editable, zone, and background scan
- PSTN dialling allows a user to make phone calls on DMR systems that support telephone interconnect
- Trunked operation allows for individual and private calls within designated groups
- Pre-set status messages
- Conventional and trunked IP data

Personalization Options

- Custom label printing tools
- Coloured radio front panels for easy identification

Improve workforce safety

- Programmable emergency key is easily accessible and highly visible
- Man Down and Lone Worker
- Integrated GPS option for Location Services
- Tait GeoFencing option for automated location based behavior

Tait EnableFleet industry leading configuration management system

- Total visibility of your fleet from a secure, central point of control
- Wired connection or Over-the-air-programming (OTAP) to update configuration and software files
- OTAP via DMR trunked networks
- WiFi OTAP capability, independent of LMR mode (analog or digital, conventional or trunked)

Secure Communications

- Radio inhibit and uninhibit to allow management of misplaced or stolen radios
- DMR trunked networks authenticate all radios before they are given access
- Supports end-to-end encryption, including DES, ARC4, or AES
- Tait EnableProtect Advanced System Key ensures only authorized personnel can access radio software and configuration

GENERAL INFORMATION

Conventional Mode

Networks	26
Channels/zones	1,500 channels / 26 zones
Scan groups	300 with up to 50 members each

Trunked Mode

Networks	4
Talk groups	512 talk group lists
Zones and work groups	1,000 zones, 1,000 work groups
Bluetooth®	Supported
Encryption	
ARC4	Supported (DMR Tier 2)
DES	Supported (DMR Tier 2 and Tier 3)
AES	Supported (DMR Tier 2 and Tier 3)
OTAP*	Supported (DMR Tier 3)
Dimensions (DxWxH)	
With Li-Ion Slimline battery	1.61 x 2.56 x 5.71in (41 x 65 x 145mm) excluding knobs
With Li-Ion Performance battery	1.77 x 2.56 x 5.71in (45 x 65 x 145mm) excluding knobs
Weight	
With Li-Ion Slimline battery	11.75oz (333g) – no antenna
With Li-Ion Performance battery	13.02oz (369g) – no antenna
Water and dust protection	IP68 & IP65
Channel Spacing ¹	6.25/12.5/15/20/25/30kHz
Frequency increment/channel step	2.5/3.125/5/6.25kHz
Frequency stability	±0.5ppm (-22°F to 140°F/-30°C to 60°C)
Radio Operating temperature	-22°F to 140°F (-30°C to 60°C)
Audio Output	3W
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 ³
Frequency range	136-174MHz (B1)	378-470MHz (HK) 450-520MHz (H7)	757-870MHz (K5)
Output power	5W, 3W, 2W, 1W	4W, 2.5W, 2W, 1W	3W, 2.5W, 2W, 1W
FM hum and noise (Analog)			
12.5kHz channel	-40dB	-40dB	-40dB
25kHz ¹	-45dB	-45dB	-45dB
Conducted/radiated emissions	-36dBm	-36dBm	-36dBm
Audio response	+1/-3dB	+1/-3dB	+1/-3dB
Audio distortion (Analog @1kHz, 60% mod)	2%	2%	2%
Modulation limiting			
12.5/15kHz channel	±2.5kHz	±2.5kHz	±2.5kHz
25/30kHz channel	±5kHz	±5kHz	±5kHz

RECEIVER	VHF	UHF	700/800MHz ³
Frequency range	136-174MHz (B1)	378-470MHz ² (HK) 450-520MHz (H7)	757-776MHz and 850-870MHz (K5)
Sensitivity			
Analog 12dB SINAD (TA-603)	-120dBm (0.22µV)	-120dBm (0.22µV)	-120dBm (0.22µV)
DMR 5% BER (ETS300-113)	-119dBm (0.25µV)	-119dBm (0.25µV)	-119dBm (0.25µV)
Audio distortion (rated audio)	1.5%	1.5%	1.5%

* Contact Tait for advice on WiFi OTAP capability

¹ Wideband operation is not available in the USA in some bands

² The UHF band radios are may also operate and are approved for use in Citizen Band in Australia and New Zealand

³ Supports 700 A-Block frequencies (757-758MHz Tx & Rx, 787-788MHz Tx). 700MHz operation subject to regional regulations

TP9500

SPECIFICATIONS



RECEIVER (CONT.)*	VHF	UHF	700/800MHZ ³
FM hum and noise (Analog)			
12.5kHz channel	-45dB	-40dB	-40dB
25kHz channel	-48dB	-45dB	-45dB
Intermodulation rejection			
Analog EIA603D	75dB	75dB	75dB
DMR ETS 300-113	70dB	70dB	70dB
Adjacent channel rejection			
12.5kHz (DMR)	60dB	60dB	60dB
25kHz TIA-603 (2-tone)	73dB	70dB	65dB

*Rated audio (for performance testing) 0.5W

MILITARY STANDARDS 810 G

Applicable MIL-STD	Method	Procedure	Applicable MIL-STD	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	Immersion	512.5	1
Solar radiation	505.5	1	Vibration	514.6	1
Rain	506.5	1,3	Shock	516.6	1, 4, 5, 6

BATTERY⁴

DMR Mode Shift Life (5/5/90)		
Li-Ion Performance		18 hours
Li-Ion Slimline		14 hours
Analog Mode Shift Life (5/5/90)		
Li-Ion Performance		14 hours
Li-Ion Slimline		11 hours

REGULATORY DATA⁵

	USA	CANADA	EUROPE	AUSTRALIA/NEW ZEALAND
VHF (136-174MHz)	CFR 47	RSS-119	RED: 2014-53-EU	AS/NZS4295
UHF (378-470MHz)	CFR 47	RSS-119	RED: 2014-53-EU	AS/NZS4295
				AS/NZS4365 ²
UHF (450-520MHz)	CFR 47	RSS-119	RED: 2014-53-EU	AS/NZS4295
				AS/NZS4365 ²
700/800MHz	CFR 47	RSS-119	NA	NA

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. Radio performance may differ to published specifications when operating on CB channels

³ Supports 700 A-Block frequencies (757-758MHz Tx & Rx, 787-788MHz Tx)

⁴ Battery performance is dependant on temperature and operational configuration

⁵ Intended compliance data

TAIT DMR SOLUTION

Backed up by our proven radio network expertise, the TP9500 is part of our larger DMR offering. The Tait DMR solution consists of radios, 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.

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.

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Tait International Limited offices and 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. Tait Managed Services are certified for ISO 27001:2013 (Information Security Management System).

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