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
TP9500
SPECIFICATIONS

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 workforce 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 dialing 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
• Black, red, yellow, orange, and hi-visibility green color options for easy identification in the field

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

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Not all features are supported in all models or modes of operation. Contact Tait or an authorized channel partner for more details.
## 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**
- ARQ: 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: 161 x 2.56 x 5.71 in (41 x 65 x 145mm) excluding knobs
- With Li-Ion Performance battery: 177 x 2.56 x 5.71 in (45 x 65 x 145mm) excluding knobs

**Weight**
- With Li-Ion Slimline battery: 11.75 oz (333g) – no antenna
- With Li-Ion Performance battery: 13.02 oz (368g) – no antenna

**Supported Languages**
- English (default), German, French, Spanish, Portuguese, Czech, Russian

**Water and dust protection**
- IP68 & IP65

**Channel Spacing**
- 6.25/7.5/15/20/25/30kHz

**Frequency increment/channel step**
- 2.5/5/12.5/15/20/25kHz

**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 1, 2, 3, 4

**Signaling options (Analog)**
- MDC1200, encode and decode, Two tone decode, PL (CTCSS), DPL (DCS), Selcall

**Vocoder type**
- AMBE +2™

**Packet Data**
- ½ Rate, N Rate, Full rate, Single Slot

### TRANSMITTER

<table>
<thead>
<tr>
<th>VHF</th>
<th>UHF</th>
<th>700/800MHZ</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Frequency range</strong></td>
<td>136-174MHz (B1)</td>
<td>378-470MHz (0-K)</td>
</tr>
<tr>
<td><strong>Output power</strong></td>
<td>5W, 3W, 2W, 1W</td>
<td>4W, 2.5W, 2W, 1W</td>
</tr>
<tr>
<td><strong>FM hum and noise (Analog)</strong></td>
<td>-60dB</td>
<td>-60dB</td>
</tr>
<tr>
<td>25kHz channel</td>
<td>-65dB</td>
<td>-65dB</td>
</tr>
<tr>
<td><strong>Conducted/radiated emissions</strong></td>
<td>-36dBm</td>
<td>-36dBm</td>
</tr>
<tr>
<td><strong>Audio response</strong></td>
<td>1V/3dB</td>
<td>1V/3dB</td>
</tr>
<tr>
<td><strong>Audio distortion (Analog @1kHz, 60% mod)</strong></td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Modulation limiting</strong></td>
<td>±2.5kHz</td>
<td>±2.5kHz</td>
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### RECEIVER

<table>
<thead>
<tr>
<th>VHF</th>
<th>UHF</th>
<th>700/800MHZ</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Frequency range</strong></td>
<td>136-174MHz (B1)</td>
<td>378-470MHz² (K1)</td>
</tr>
<tr>
<td><strong>Sensitivity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analog 12dB SINAD (TA-603)</td>
<td>-120dBm (0.22μV)</td>
<td>-120dBm (0.22μV)</td>
</tr>
<tr>
<td>DMR 1% BER (ET/S300-113)</td>
<td>-119dBm (0.23μV)</td>
<td>-119dBm (0.23μV)</td>
</tr>
<tr>
<td><strong>Audio distortion (rated audio)</strong></td>
<td>1.5%</td>
<td>1.5%</td>
</tr>
</tbody>
</table>

* 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 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

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## TP9500 SPECIFICATIONS

### RECEIVER (CONT)*

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<thead>
<tr>
<th></th>
<th>VHF</th>
<th>UHF</th>
<th>700/800MHz 1</th>
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</thead>
<tbody>
<tr>
<td>FM hum and noise (Analog)</td>
<td>-40dB</td>
<td>-40dB</td>
<td>-40dB</td>
</tr>
<tr>
<td>12.5kHz channel</td>
<td>-40dB</td>
<td>-40dB</td>
<td>-40dB</td>
</tr>
<tr>
<td>25kHz channel</td>
<td>-40dB</td>
<td>-40dB</td>
<td>-40dB</td>
</tr>
<tr>
<td>Intermodulation rejection</td>
<td>75dB</td>
<td>75dB</td>
<td>75dB</td>
</tr>
<tr>
<td>Analog EIA603D</td>
<td>70dB</td>
<td>70dB</td>
<td>70dB</td>
</tr>
<tr>
<td>DMR ETS 300-113</td>
<td>70dB</td>
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<td>70dB</td>
</tr>
<tr>
<td>Adjacent channel rejection</td>
<td>60dB</td>
<td>60dB</td>
<td>60dB</td>
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<tr>
<td>12.5kHz (DMR)</td>
<td>75dB</td>
<td>70dB</td>
<td>65dB</td>
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<tr>
<td>25kHz T/A-603 (2-tone)</td>
<td>73dB</td>
<td>70dB</td>
<td>65dB</td>
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*Rated audio (for performance testing) 0.5W

### MILITARY STANDARDS 810 G

<table>
<thead>
<tr>
<th>Applicable MIL-STD</th>
<th>Method</th>
<th>Procedure</th>
<th>Applicable MIL-STD</th>
<th>Method</th>
<th>Procedure</th>
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<tbody>
<tr>
<td>Low pressure</td>
<td>5005</td>
<td>2</td>
<td>Humidity</td>
<td>5075</td>
<td>2</td>
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<tr>
<td>High temperature</td>
<td>5015</td>
<td>1.2</td>
<td>Salt fog</td>
<td>5095</td>
<td>1</td>
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<tr>
<td>Low temperature</td>
<td>5025</td>
<td>1.2</td>
<td>Sand &amp; Dust</td>
<td>5105</td>
<td>1.2</td>
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<tr>
<td>Temperature shock</td>
<td>5035</td>
<td>1</td>
<td>Immersion</td>
<td>5125</td>
<td>1</td>
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<tr>
<td>Solar radiation</td>
<td>5055</td>
<td>1</td>
<td>Vibration</td>
<td>5146</td>
<td>1</td>
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<tr>
<td>Rain</td>
<td>5065</td>
<td>1.3</td>
<td>Shock</td>
<td>5166</td>
<td>1, 4, 5, 6</td>
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</tbody>
</table>

### BATTERY*

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 DATA 2

<table>
<thead>
<tr>
<th></th>
<th>USA</th>
<th>CANADA</th>
<th>EUROPE</th>
<th>AUSTRALIA/NEW ZEALAND</th>
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</thead>
<tbody>
<tr>
<td>UHF (38-470MHz)</td>
<td>CFR 47</td>
<td>RSS-119</td>
<td>RED: 2014-53-EU</td>
<td>AS/NZS4295</td>
</tr>
<tr>
<td>UHF (450-520MHz)</td>
<td>CFR 47</td>
<td>RSS-119</td>
<td>RED: 2014-53-EU</td>
<td>AS/NZS4365*</td>
</tr>
<tr>
<td>700/800/MHz</td>
<td>CFR 47</td>
<td>RSS-119</td>
<td>NA</td>
<td>AS/NZS4365*</td>
</tr>
</tbody>
</table>

3 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 (767-768MHz: 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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