# TP9300
## SPECIFICATIONS

**tait** communications

# 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.**

**Built Tait Tough, the flexible TP9300 portables offer conventional and trunked DMR operation as well as full MPT 1327, and analog conventional FM in one device.**

**Improve workforce safety with smart features such as Location Services, Tait GeoFencing, and Man Down functionality.**

TP9360

TP9310

TP9310

TP9355

TP9360

**TAIT TOUGH**
The Toughest Radios in the Industry

**DMR**
DIGITAL MOBILE RADIO ASSOCIATION

## FEATURES AND BENEFITS

### Flexible and Easy to Use

- Clear communication with DMR AMBE+2 enhanced digital vocoder and digital noise suppression software
- 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

### Tait Tough – Designed to perform

- Water-shedding grill maintains transmitted voice clarity and high audio volume in wet environments
- IP65 & IP68 dust and water proof
- Display screen protected by recess*
- Drop test exceeds MIL-STD-810G
- Shock absorbing corner protection

### Extensive network capabilities

- Future proof quad mode portable 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 with 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
- 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
- Emergency calls have priority access to trunked networks
- Intrinsically Safe options available (refer to TP9361 specifications)

### 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

### Secure communications

- Radio inhibit and uninhibit to allow management of misplaced or stolen radios
- DMR trunked networks authenticate all portables 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

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

^In-vehicle and 6 way multi-chargers are not available for sale in Brazil.

# TP**9300**
## SPECIFICATIONS

| GENERAL INFORMATION | TP9310 | TP9355/TP9360 |
|---|---|---|
| **Conventional Mode** | | |
| Networks | 1 | 26 |
| Channels/zones | 48 channels / 3 zones | 1,500 channels / 26 zones |
| Scan groups | 16 with up to 50 members each | 300 with up to 50 members each |
| **Trunked Mode** | | |
| Networks | 4 | 4 |
| Talk groups | 16 talk groups | 512 talk group lists |
| Zones and work groups | 3 zones, 48 work groups | 1,000 zones, 1,000 work groups |
| Bluetooth | Not supported | Supported |
| Encryption | | |
| ARC4 | Supported (DMR Tier 2) | Supported (DMR Tier 2) |
| DES | Not supported | Supported (DMR Tier 2 and Tier 3) |
| AES | Not supported | Supported (DMR Tier 2 and Tier 3) |
| OTAP | Supported (DMR Tier 3) | Supported (DMR Tier 3) |
| 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 high-capacity 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 high-capacity battery | 13.12oz (372g)  – 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) | |
| Operating temperature | -22°F to 140°F (-30°C to 60°C) | |
| ESD rating | +/-4kV contact discharge and +/-8kV air discharge | |
| Rated audio | 0.5W | |
| Speaker rating | 2W | |
| 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 [#] | |
|---|---|---|---|---|
| Frequency range | 136-174MHz<br>174-225MHz | 320-380MHz<br>378-470MHz<br>450-520MHz | 757-870MHz | |
| 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) | 2.5% @1kHz,<br>60% Deviation | 2.5% @1kHz,<br>60% Deviation | 2.5% @1kHz,<br>60% Deviation | |
| Modulation limiting [1] | 12.5/15kHz channel and 25/30kHz channel | | | |

| RECEIVER** | VHF | UHF | 700/800MHZ [#] | |
|---|---|---|---|---|
| Frequency range | 136-174MHz<br>174-225MHz | 320-380MHz<br>378-470MHz<br>450-520MHz | 757-776MHz<br>850-870MHz | |
| Sensitivity (analog) 12dB SINAD | -120dBm(0.22μV) | -120dBm (0.22μV) | -120dBm (0.22μV) | |
| Sensitivity (DMR) 5% BER | -119dBm (0.25μV) | -119dBm (0.25μV) | -119dBm (0.25μV) | |
| Intermodulation rejection | | | | |
| EIA603D | 75dB | 75dB | 75dB | |
| ETS 300-113 | 70dB | 70dB | 70dB | 70dB |

**Contact your local Tait representative for more information.
[1]  Wideband operation is not available in the USA in some bands
[#] Supports 700 A-Block frequencies (757-758MHz Tx & Rx, 787-788MHz Tx)

# TP**9300**

## SPECIFICATIONS

| RECEIVER (CONT.)** | VHF | UHF | 700/800MHZ # |
|---|---|---|---|
| FM hum and noise (Analog) | 12.5kHz: -40dB<br>25kHz:  -45dB | 12.5kHz: -40dB<br>25kHz:  -45dB | 12.5kHz: -40dB<br>25kHz:  -45dB |
| Selectivity (Analog) | | | |
|   EIA603D (2 Tone) | 12.5kHz: 52dB<br>25kHz: 73dB | 12.5kHz: 50dB<br>25kHz: 70dB | 12.5kHz: 50dB<br>25kHz: 70dB |
|   ETS 300-086 | 12.5kHz: 62dB<br>25kHz: 73dB | 12.5kHz: 62dB<br>25kHz: 73dB | 12.5kHz: 60dB<br>25kHz: 70dB |
| Optional external speaker output | 0.5W (into 16ohm balanced speaker) | 0.5W (into 16ohm balanced speaker) | 0.5W (into 16ohm balanced speaker) |
| Audio distortion (rated audio) | 2% | 2% | 2% |

## MILITARY STANDARDS 810C, D, E, F AND 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 |

| BATTERY | 136-174MHz | 378-470MHz | 450-520MHz | 700/800MHz |
|---|---|---|---|---|
| DMR Mode Shift Life (5/5/90) | | | | |
|   Li-Ion Premium | 19 hours | 19 hours | 18 hours | 18 hours |
|   Li-Ion Standard | 15 hours | 15 hours | 14 hours | 14 hours |
| Analog Mode Shift Life (5/5/90) | | | | |
|   Li-Ion Premium | 15 hours | 15 hours | 14 hours | 14 hours |
|   Li-Ion Standard | 12 hours | 12 hours | 11 hours | 11 hours |

| REGULATORY DATA[2] | USA | CANADA | EUROPE | AUSTRALIA/NEW ZEALAND |
|---|---|---|---|---|
| VHF (136-174MHz) | CFR 47 | RSS-119 | EN300-086, EN300-113, EN300-219 EN301-489, EN60950 | AS/NZS4295 |
| VHF (174-225MHz) | NA | NA | EN300-113, EN301-489, EN60950 | NA |
| UHF (320-380MHz) | NA | NA | EN300-086, EN300-113, EN300-219 EN301-489, EN60950 | NA |
| UHF (378-470MHz) | CFR 47 | RSS-119 | EN300-086, EN300-113, EN300-219 EN301-489, EN60950 | AS/NZS4295<br>AS/NZS4365[2] |
| UHF (450-520MHz) | CFR 47 | RSS-119 | EN300-086, EN300-113, EN300-219 EN301-489, EN60950 | AS/NZS4295<br>AS/NZS4365[2] |
| 700/800MHz | CFR 47 | RSS-119 | NA | NA |
| Emission 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 radio is operating at the CB frequencies
# Supports 700 A-Block frequencies (757-758MHz Tx & Rx, 787-788MHz Tx)

### TAIT DMR SOLUTION

Backed up by our proven radio network expertise, the TP9300 is part of our larger DMR offering. The Tait DMR 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 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 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

Bluetooth®

DMR