

Tough terminals for mission critical communications

Tait DMR is a highly reliable, modern, digital radio solution that is designed for mission critical environments. Tait DMR offers a digital communications solution based on the DMR standard.

The TP9300 portables offer conventional and trunked DMR operation as well as full MPT 1327, and analog conventional FM in one device.

TP9300 portables support Location Services and Man Down functionality, and are IP68 dust/waterproof rated for tough conditions. AES encryption is also an option for the TP9355/60 portables.



FEATURES AND BENEFITS*

Improve workforce safety with the following TP9300 features

- Man Down and Lone Worker are standard
- Integrated GPS enables you to locate your workforce
- Wireless audio accessories utilizing Bluetooth technology for TP9355 and TP9360 portables*
- Crystal-clear communications enabling all personnel to understand each other - Active Noise Cancellation is available for DMR calls
- Programmable orange emergency key at base of antenna for ease of location in dark or restrictive environments
- Emergency calls have priority access to trunked networks
- Intrinsically Safe options available (refer to TP9361 specifications)

Improve your organizations' efficiency

- GPS location allows efficient allocation of resources to events
- Text messaging for enhanced and unambiguous communications
- Pre-defined status messages for fast notification and response in common situations
- Over-the-air-programming (OTAP) with the industry-leading EnableFleet configuration management system delivers software and firmware changes over the Tait DMR Tier 3 radio network, making it faster, easier and more affordable to update and optimize the performance of the radios in your fleet*

Designed to perform

- Water-shedding grill maintains transmitted voice clarity and high audio volume in wet environments
- IP68 dust-proof and immersible
- IP65 water jet protection
- Display screen protected by recess*
- Shock absorbing impact protected corners

User Interface

- 4 programmable function keys including emergency key
- Keypad and display options with common menu structure
- Zone selector switch to provide easy access to more programmable features
- Black, red, yellow, orange, and hi-visibility green color options for easy identification in the field

Voice Communications Delivery on Operational Needs

- Quad mode terminal 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 provide privacy between individuals
- Group calls allow separate teams to communicate amongst themselves without having to listen to irrelevant traffic
- Analog scan capability includes Priority and Dual Priority, Editable, Zone and Background Scan
- PSTN dialling allows a user to make phone calls on DMR systems that support telephone interconnect

Privacy features

- Trunked operation allows for individual and private calls within designated groups
- Optional DES encryption, ARC4 encryption, or AES encryption*

Facilities to improve network security

- DMR trunked networks authenticate all terminals before they are given access
- Stun and Revive are implemented to temporarily deny a specific portable access to the network
- EnableProtect Advanced System Key option for programming security

Complete package with accessories portfolio

- Audio accessories including speaker- microphones, headsets and earpieces
- Choice of chargers, including in-vehicle, single fast chargers, and 6 way multi-chargers[^]
- Standard and high capacity Li-Ion batteries available
- Wide selection of carry cases and accessories

Data Services

- Embedded data for location
- Short data messages for location, status and text
- Packet data over traffic channels for work force management and customer specific applications

* 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.

TP9300

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 | Not supported | 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 # | 900MHZ |
|----------------------------------|---|--|------------------------------|------------------------------|
| Frequency range | 136-174MHz 174-225MHz | 320-380MHz 378-470MHz 450-520MHz | 757-870MHz | 896 - 941MHz |
| Output power | 5W, 3W, 2W, 1W | 4W, 2.5W, 2W, 1W | 3W, 2.5W, 2W, 1W | 3W, 2.5W, 2W, 1W |
| FM hum and noise (Analog) | | | | |
| 12.5kHz channel | -40dB | -40dB | -40dB | -40dB |
| 25kHz ¹ | -45dB | -45dB | -45dB | NA |
| Conducted/radiated emissions | -36dBm | -36dBm | -36dBm | -36dBm |
| Audio response | +1/-3dB | +1/-3dB | +1/-3dB | +1/-3dB |
| Audio distortion (Analog) | 2.5% @1kHz, 60% Deviation | 2.5% @1kHz, 60% Deviation | 2.5% @1kHz, 60% Deviation | 2.5% @1kHz, 60% Deviation |
| Modulation limiting ¹ | 12.5/15kHz channel and 25/30kHz channel | | | |

| RECEIVER** | VHF | UHF | 700/800MHZ # | 900MHZ |
|---------------------------------|--------------------------|--|--------------------------|------------------|
| Frequency range | 136-174MHz 174-225MHz | 320-380MHz 378-470MHz 450-520MHz | 757-776MHz 850-870MHz | 935 – 941MHz |
| Sensitivity (analog) 12dB SINAD | -120dBm(0.22µV) | -120dBm (0.22µV) | -120dBm (0.22µV) | -120dBm (0.22µV) |
| Sensitivity (DMR) 5% BER | -119dBm (0.25µV) | -119dBm (0.25µV) | -119dBm (0.25µV) | -119dBm (0.25µV) |
| Intermodulation rejection | | | | |
| EIA603D | 75dB | 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)

TP9300

SPECIFICATIONS



| RECEIVER (CONT.)** | VHF | UHF | 700/800MHZ # | 900MHZ |
|--|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| FM hum and noise (Analog) | 12.5kHz: -40dB 25kHz: -45dB | 12.5kHz: -40dB 25kHz: -45dB | 12.5kHz: -40dB 25kHz: -45dB | 12.5kHz: -40dB NA |
| Selectivity (Analog) EIA603D (2 Tone) | 12.5kHz: 52dB 25kHz: 73dB | 12.5kHz: 50dB 25kHz: 70dB | 12.5kHz: 50dB 25kHz: 70dB | 12.5kHz: 50dB NA |
| ETS 300-086 | 12.5kHz: 62dB 25kHz: 73dB | 12.5kHz: 62dB 25kHz: 73dB | 12.5kHz: 60dB 25kHz: 70dB | 12.5kHz: 60dB NA |
| Optional external speaker output | 0.5W (into 16ohm balanced speaker) | 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% | 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 | 900MHz |
|---------------------------------|------------|------------|------------|------------|----------|
| DMR Mode Shift Life (5/5/90) | | | | | |
| Li-Ion Premium | 19 hours | 19 hours | 18 hours | 18 hours | 18 hours |
| Li-Ion Standard | 15 hours | 15 hours | 14 hours | 14 hours | 14 hours |
| Analog Mode Shift Life (5/5/90) | | | | | |
| Li-Ion Premium | 15 hours | 15 hours | 14 hours | 14 hours | 14 hours |
| Li-Ion Standard | 12 hours | 12 hours | 11 hours | 11 hours | 11 hours |

REGULATORY DATA²

| | USA | CANADA | EUROPE | AUSTRALIA/NEW ZEALAND |
|------------------------|---|---------|---------------------------------|---------------------------------------|
| VHF (136-174MHz) | CFR 47 | RSS-119 | EN300-086, EN300-113, EN300-219 | AS/NZS4295 |
| VHF (174-225MHz) | NA | NA | EN300-113, EN301-489, EN60950 | NA |
| UHF (320-380MHz) | NA | NA | EN300-086, EN300-113, EN300-219 | NA |
| UHF (378-470MHz) | CFR 47 | RSS-119 | EN300-086, EN300-113, EN300-219 | AS/NZS4295 AS/NZS4365 ² |
| UHF (450-520MHz) | CFR 47 | RSS-119 | EN300-086, EN300-113, EN300-219 | AS/NZS4295 AS/NZS4365 ² |
| 700/800MHz | CFR 47 | RSS-119 | NA | NA |
| 900MHz | CFR 47 | RSS-119 | NA | NA |
| Emission Designators** | 11K0F3E, 16K0F3E ⁴ , 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.

