

TP9361 Intrinsically Safe

SPECIFICATIONS



Designed for maximum safety in the field and enhanced usability

Intrinsically Safe Tait DMR portables are engineered to operate safely in hazardous environments, ensuring your people have communications they can depend on while they get the job done.

The Tait TP9361 portable provides reliable clear audio when it matters most while providing the benefits of a DMR digital platform.

This intrinsically safe portable offers inbuilt GPS, as well as DMR conventional, DMR trunked, full MPT 1327 and conventional FM operation.



KEY FEATURES

- Intrinsically Safe portable designed to meet stringent International safety standards
- Future proof multi-mode portable (DMR Tier 2 and Tier 3, MPT 1327 and conventional analog FM)
- Provides choice and interoperability using open standard DMR protocol
- Supporting worker safety with man down alerts and built in GPS positioning
- Internationally recognized color for intrinsic safety
- Built to last Tait Tough portables engineered for demanding environments with IP67 rating and exceeding MIL standard specification
- Complete package with accessories portfolio
- Data Services improve organizational efficiencies

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FEATURES AND BENEFITS*

Future proof multi-mode portable

The Tait TP9361 IS portable operates in 4 modes—DMR Tier 3 and Tier 2, MPT 1327 and conventional analog FM—delivering exceptional functionality and value in one device.

The TP9361 provides:

- 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.
- Increased channel capacity with support of up to 2,000 channels.
- Analog 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.
- Shared menu structure between 9300 terminals.
- Trunked operation allows for individual and private calls within designated groups.

Worker safety is ensured with globally recognized Intrinsically Safe ratings systems

The TP9361 portable is designed and tested to meet global IS standards, ensuring safe operation in hazardous environments.

- The battery circuitry is fully encapsulated.
- The radio circuit has a stored energy limitation, which prevents internal sparking or overheating in the unlikely event of a circuit failure.
- Component and conductor spacing and protective coatings prevent short circuits caused by dust or atmospheric contamination.

Internationally recognized IS color

- The TP9300 IS model is made in the internationally recognized blue color for Intrinsically Safe portables, ensuring instant recognition in the field.

Engineered for demanding environments with IP67 rating

- MIL standard specifications for the most rugged applications.
- IP67 rating for water and dust protection.
- 16 key keypad.
- Programmable orange emergency key at base of antenna for ease of location in dark or restrictive environments.
- Recessed lens provides screen protection.
- Impact protected corners provide shock absorbing protection.
- Water shedding grille assists voice clarity and high audio volume is maintained in wet environments.

Complete package with accessories portfolio

- Intrinsically Safe audio accessories including speakermicrophones, headsets and earpieces.
- Intrinsically Safe Li-Ion battery.
- Intrinsically Safe compatible battery charger.
- Data Services improve organizational efficiencies
- Integrated GPS ensures that you always know where your workforce is.
- Short data messages for location, status and text.
- Packet data over traffic channels for work force management, Telemetry, SCADA and customer specific applications.

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GENERAL

| | |
|---|--|
| Frequency stability | ±0.5ppm (-22°F to 140°F / -30°C to 60°C) |
| Channels/zones | 1,000 – 2,000 channels/50 – 100 zones |
| Talk groups | 26 talk group lists comprised of up to 1,000 – 2,000 members each |
| Scan groups | 300 with up to 50 members each, maximum of 2,000 members total |
| Dimensions (DxWxH) - With Li-Ion 2300 mAh battery | 1.77 x 2.56 x 5.35in (45 x 65 x 136mm) excluding knobs |
| Weight - With Li-Ion 2300 mAh battery | 13.93oz (395g) – no antenna, 15.17oz (430g) with IS battery and antenna |
| Radio Operating temperature range | -20°C to 60°C (-4°F to 140°F) † |
| Water and dust protection | IP67 & IP65 |
| ESD rating | +/- 4kV contact discharge and +/-8kV air discharge |
| Frequency increment/channel step | 2.5/3.125/5/6.25kHz |
| Digital protocol | DMR: ETSI TS 102 361 |
| Signalling options (Analog) | MDC1200, encode and decode, Two tone decode, PL (CTCSS), DPL (DCS), Selcall (5 - tone) |
| Vocoder type | AMBE +2™ |
| Packet Data | ½ Rate, ¾ Rate, Full rate, Single Slot |

† Subject to Compliance, Ambient Temperature: T4 -20°C < Ta < +50°C, T3 -20°C < Ta < +60°C

| TRANSMITTER | VHF | UHF | 700/800MHZ |
|--|-------------------------------|--|--------------|
| Frequency range | 136-174 MHz | 320-380 MHz (G1) 380-470 MHz (HB) 450-520 MHz (H7) | 762-870 MHz |
| Output power (IIA) | 5W, 3W, 2W, 1W | 4W, 2.5W, 2W, 1W | 2.5W, 2W, 1W |
| Output power (IIC) | 1W | 1W | 1W |
| FM Transmit Deviation (12.5kHz / 25kHz channels) * | 2.5 / 5kHz | 2.5 / 5kHz | 2.5 / 5kHz |
| FM hum and noise (analog) | | | |
| 12.5kHz channel | -40dB | -40dB | -40dB |
| 25kHz channel ¹ | -45dB | -45dB | -45dB |
| Conducted/radiated emissions | -36dBm <1GHz, -30dBm >1GHz | -36dBm <1GHz, -30dBm >1GHz | -20dBm |
| Audio response | +1/-3dB | +1/-3dB | +1/-3dB |
| Audio distortion (Analog) | 2.5% | 2.5% | 2.5% |

| RECEIVER | VHF | UHF | 700/800MHZ |
|--|------------------------------|--|------------------------------|
| Frequency range | 136-174MHz | 320-380 MHz (G1) 380-470 MHz (HB) 450-520 MHz (H7) | 762-776 & 850-870 MHz |
| Channel Spacing * | 6.25/12.5/25kHz | 6.25/12.5/25kHz | 6.25/12.5/25kHz |
| Analog Sensitivity 12dB SINAD | -120dBm (0.22 µV) | -120dBm (0.22 µV) | -120dBm (0.22 µV) |
| Digital Sensitivity (PDMR) 5% BER | -119dBm (0.25 µV) | -119dBm (0.25 µV) | -119dBm (0.25 µV) |
| Intermodulation rejection (TIA603D) | 75dB | 75dB | 75dB |
| Intermodulation rejection (ETS 300) | 65dB | 65dB | 65dB |
| Selectivity (Analog) | | | |
| TIA603D (2 Tone) | 12.5kHz: 50dB 25kHz: 70dB | 12.5kHz: 50dB 25kHz: 70dB | 12.5kHz: 50dB 25kHz: 70dB |
| ETS 3000-086 & TIA603C 1 Tone | 12.5kHz: 52dB 25kHz: 73dB | 12.5kHz: 50dB 25kHz: 70dB | 12.5kHz: 60dB 25kHz: 70dB |
| FM hum and noise (Narrowband / Wideband) | -40dB / -45dB | -40dB / -45dB | -40dB / -45dB |
| Spurious Rejection (TIA603D) | 70dB | 70dB | 70dB |
| Conducted Emissions (TIA603D) | 70dB | 70dB | 70dB |
| Rated Audio (Internal) | 0.5W | 0.5W | 0.5W |
| Audio Response (TIA603D) | +1/-3dB | +1/-3dB | +1/-3dB |
| Audio Distortion (Rated audio) | 2% | 2% | 2% |

CHARGER AND BATTERY

| | |
|---|--|
| Charger options (Li-Ion) | IS compatible desktop and vehicle chargers |
| Battery shift life (DMR mode, standard config) | Li-Ion 2300 mAh 15 hours (5/5/90) |
| Battery shift life (Analog mode, standard config) | Li-Ion 2300 mAh 11.5 hours (5/5/90) |

* Wideband operation subject to FCC regulations

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

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SPECIFICATIONS



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 | 516.5 | 1,4,5,6 |

| REGULATORY DATA | USA | CANADA | EUROPE | AUSTRALIA/NEW ZEALAND |
|------------------|--------|---------|---|------------------------------------|
| VHF (136-174MHz) | CFR 47 | RSS-119 | EN300-086, EN300-113, EN300-219, EN300-489, EN60950 | AS/NZ4295 |
| UHF (320-380MHz) | NA | NA | EN300-086, EN300-113, EN300-219, EN300-489, EN60950 | NA |
| UHF (380-470MHz) | CFR 47 | RSS-119 | EN300-086, EN300-113, EN300-219, EN300-489, EN60950 | AS/NZ4295, AS/NZS4365 ² |
| UHF (450-520MHz) | NA | NA | NA | AS/NZ4295, AS/NZS4365 ² |
| 800 MHz | CFR 47 | RSS-119 | NA | NA |

| IS COMPLIANCE * | OUTPUT POWER | USA | CANADA | EUROPE | AUSTRALIA/NZ |
|------------------|--------------|--|---|-----------------------------|----------------------|
| VHF (136-174MHz) | 1-5 W | Class I Zone 1, AEx ib IIA T4...T3 Gb Class I Div 2, Group A, B, C, D Class II, Div 2, Group E, F, G Class III, Div 1 | Ex ib IIA T4...T3 Gb Class I Div 2, Group A, B, C, D Class II, Div 2, Group E, F, G Class III, Div 1 | II 2 G Ex ib IIA T4...T3 Gb | Ex ib IIA T4...T3 Gb |
| | 1 W | Class I Zone 1, AEx ib IIC T4...T3 Gb Class I Div 2, Group A, B, C, D Class II, Div 2, Group E, F, G Class III, Div 1 | Ex ib IIC T4...T3 Gb Class I Div 2, Group A, B, C, D Class II, Div 2, Group E, F, G Class III, Div 1 | II 2 G Ex ib IIC T4...T3 Gb | Ex ib IIC T4...T3 Gb |
| UHF (320-380MHz) | 1-4 W | | | II 2 G Ex ib IIA T4...T3 Gb | |
| | 1 W | | | II 2 G Ex ib IIC T4...T3 Gb | |
| UHF (380-470MHz) | 1-4 W | Class I Zone 1, AEx ib IIA T4...T3 Gb Class I Div 2, Group A, B, C, D Class II, Div 2, Group E, F, G Class III, Div 1 | Ex ib IIA T4...T3 Gb Class I Div 2, Group A, B, C, D Class II, Div 2, Group E, F, G Class III, Div 1 | II 2 G Ex ib IIA T4...T3 Gb | Ex ib IIA T4...T3 Gb |
| | 1 W | Class I Zone 1, AEx ib IIC T4...T3 Gb Class I Div 2, Group A, B, C, D Class II, Div 2, Group E, F, G Class III, Div 1 | Ex ib IIC T4...T3 Gb Class I Div 2, Group A, B, C, D Class II, Div 2, Group E, F, G Class III, Div 1 | II 2 G Ex ib IIC T4...T3 Gb | Ex ib IIC T4...T3 Gb |
| UHF (450-520MHz) | 1-4 W | | | | Ex ib IIA T4...T3 Gb |
| | 1 W | | | | Ex ib IIC T4...T3 Gb |
| 800MHz | 1-2.5 W | Class I Zone 1, AEx ib IIA T4...T3 Gb Class I Div 2, Group A, B, C, D Class II, Div 2, Group E, F, G Class III, Div 1 | Ex ib IIA T4...T3 Gb Class I Div 2, Group A, B, C, D Class II, Div 2, Group E, F, G Class III, Div 1 | | Ex ib IIA T4...T3 Gb |
| | 1 W | Class I Zone 1, AEx ib IIC T4...T3 Gb Class I Div 2, Group A, B, C, D Class II, Div 2, Group E, F, G Class III, Div 1 | Ex ib IIC T4...T3 Gb Class I Div 2, Group A, B, C, D Class II, Div 2, Group E, F, G Class III, Div 1 | | Ex ib IIC T4...T3 Gb |

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.

* Ambient Temperature: T4 -20°C < Ta < +50°C, T3 -20°C < Ta < +60°C

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 or check with your nearest Tait office or authorized dealer.

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