

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 conventional FM in one device.

The portable has inbuilt GPS, Bluetooth® wireless technology and IP67 protection.



KEY FEATURES

- ▶ Future proof multi-mode portables. (DMR trunked, DMR Conventional, MPT 1327 and conventional analog FM)
- ▶ Roaming between MPT and DMR Tier 3 trunked networks
- ▶ Roaming between FM Conventional and DMR Tier 2 Conventional Networks.
- ▶ Open DMR standard provides choice and interoperability
- ▶ Engineered for demanding environments with IP67 rating
- ▶ Increased voice usability with integrated Bluetooth wireless technology connectivity
- ▶ Encryption supported
- ▶ Integrated GPS to improve efficiency and safety
- ▶ Text messaging and status calls to enhance your communications environment
- ▶ Crystal-clear audio quality
- ▶ Available in a range of models and configurable to suit your application
- ▶ Optional colors available. Red, Yellow, Orange, and Hi-Visibility Green
- ▶ Intrinsically Safe options available



FEATURES AND BENEFITS*

Improve workforce safety with the following TP9300 features

- ▶ Man Down and Lone Worker as standard
- ▶ Integrated GPS will ensure that you always know where your workforce is
- ▶ Wireless audio accessories utilizing Bluetooth technology
- ▶ Crystal-clear communications enabling all personnel to understand each other
- ▶ Emergency calls have priority access to the network

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

Privacy features

- ▶ Trunked operation allows for individual and private calls within designated groups
- ▶ Optional 56 bit DES encryption, or ARC4 encryption

Designed to perform

- ▶ Water-shedding grill maintains transmitted voice clarity and high audio volume in wet environments
- ▶ IP67 water and dust protection
- ▶ 4 programmable function keys including emergency key

- ▶ Programmable orange emergency key at base of antenna for ease of location in dark or restrictive environments
- ▶ Zero, four and sixteen key options
- ▶ Recessed lens provides screen protection
- ▶ Impact protected corners provide shock absorbing protection
- ▶ Intrinsically Safe options available

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
- ▶ 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
- ▶ Optional continuous channel control knob
- ▶ Shared menu structure between all 9300 terminals

Facilities to improve network security

- ▶ In DMR trunked mode all terminals must be authenticated on the network before they are given access
- ▶ Stun and Revive are implemented to temporarily deny a specific portable access to the network

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, Telemetry, SCADA and customer specific applications

Color Options

- ▶ Black, red, yellow, orange, and hi-visibility green for easy identification in the field

* Not all features are supported in all modes of operation. Feature comparison tables are available in the full product catalog.

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 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
Options	Black keypad, 3-way zone selector
Channel Spacing	6.25/12.5/15/20/25/30kHz
Frequency increment/channel step	2.5/3.125/5/6.25kHz
Operating temperature	-22°F to 140°F (-30°C to 60°C)
Water and dust protection	IP67
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 ranges	136-174MHz	320-380MHz (G1) 400-470MHz (H5) 450-520MHz (H7)	762-870MHz	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)				
25kHz ¹	-45dB	-45dB	-45dB	NA
12.5kHz channel	-40dB	-40dB	-40dB	-40dB
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	12.5/15kHz channel and 25/30kHz channel			

RECEIVER**

	VHF	UHF	700/800MHz	900MHz
Frequency ranges	136-174MHz	320-380MHz (G1) 400-470MHz (H5) 450-520MHz (H7)	762-776MHz and 851-870MHz	935 – 941MHz
Sensitivity (analog) 12dB SINAD	-120dBm(0.22µV)	-120dBm (0.22µV)	-120dBm (0.22µV)	-120dBm (0.22µV)
Sensitivity (PDMR) 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
FM hum and noise (Analog)				
12.5kHz: -40dB	12.5kHz: -40dB	12.5kHz: -40dB	12.5kHz: -40dB	12.5kHz: -40dB
25kHz: -45dB	25kHz: -45dB	25kHz: -45dB	25kHz: -45dB	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%

**Contact your local Tait representative for more information.

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	Dust	510.5	1
Temperature shock	503.5	1	Immersion	512.5	1
Solar radiation	505.5	1	Vibration	514.5	1
Rain	506.5	1,3	Shock	516.5	1,5,6

BATTERY

Charger options (Li-Ion) Fast desktop single charger, 6-way multi chargers, vehicle charger

Battery	Li-Ion premium	Li-Ion standard
DMR Mode Shift Life (5/5/90)	15 hours	11.5 hours
Analog Mode Shift Life (5/5/90)	12 hours	9 hours

REGULATORY DATA

	USA	Canada	Europe	Australia/New Zealand
VHF (136-174MHz)	CFR 47	RSS-119	EN300-086, EN300-113, EN300-219 EN301-489, EN60950	AS/NZS4295
UHF (320-380MHz)	NA	NA	EN300-086, EN300-113, EN300-219 EN301-489, EN60950	NA
UHF (400-470MHz)	CFR 47	RSS-119	EN300-086, EN300-113, EN300-219 EN301-489, EN60950	NA
UHF (450-520MHz)	CFR 47	RSS-119	EN300-086, EN300-113, EN300-219 EN301-489, EN60950	AS/NZS4295 AS/NZS4365
700/800MHz	CFR 47	RSS-119	NA	NA
900MHz	CFR 47	RSS-119	NA	NA
Emission Designators	11K0F3E, 16K0F3E1, 6K60F2D, 7K80F2D, 9K60F2D1, 10K8F2D1, 7K60FXW, 7K60FXD,			

1 Wideband operation is not available in the USA

2 The UHF band radios are approved for use in Citizen Band in Australia and New Zealand when programed to meet the requirements of AS/NZS4365. Tait cannot guarantee full performance to the published specifications when the 400-470MHz radio is operating at the CB frequencies.

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.

Specifications are subject to change without notice and shall not form part of any contract. They are issued for guidance purposes only. All specifications shown are typical.

The word "Tait" and the Tait logo are trademarks of Tait Limited.

Tait Limited facilities are certified for ISO9001:2008 (Quality Management System), ISO14001:2004 (Environmental Management System) and ISO18001:2007 (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 ISO9001:2008

