

# Improved efficiency and enhanced usability

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 Tier 3 trunking standard.

The TP9300 portables offer trunked DMR operation as well as full MPT 1327 and analog conventional functionality in one device. It can roam seamlessly between all of these networks. The portable has inbuilt GPS, *Bluetooth*<sup>®</sup> wireless technology, IP67 protection and Radio Frequency Identification (RFID).



## KEY FEATURES

- ▶ Future proof multi-mode portable (DMR, MPT 1327, Analog conventional)
- ▶ When operated in TDMA mode and fitted with a 2500mAh battery it offers a 16 hour shift life
- ▶ Full adherence to DMR standards providing choice and interoperability
- ▶ Engineered for a demanding environment with IP67 rating
- ▶ Increased usability with integrated *Bluetooth* wireless technology connectivity
- ▶ 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

## FEATURES AND BENEFITS

### Improve workforce safety with the following TP9300 features:

- Man Down and Lone Worker as standard
- The second time slot can be used for reverse channel signaling to ensure that emergency calls always get through.
- Integrated GPS will ensure that you always know where your workforce is
- Wireless accessories utilizing *Bluetooth* technology
- Crystal-clear voice ensuring the operator and user will understand the message
- Status messaging activated with one touch of a button for quick and easy notifications

### 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 a fast response in common situations

### Privacy feature:

- Trunked operation allows for individual and private calls within designated groups

### Designed to perform in demanding environments:

- Extended 16 hour shift life when operated in DMR mode
- Water shedding grille ensures voice clarity and high audio volume is maintained in wet environments
- IP67 sealing
- 4 and 16 keypad options
- 3 programmable function keys
- 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

### Voice communications delivering on operational needs:

- Analog conventional, MPT 1327 and DMR
- Automatic roaming from MPT 1327 to DMR
- 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
- Scanning modes include: Priority and Dual Priority, Editable, Zone and Background Scan
- PSTN dialing allows a user to make phone calls on DMR systems that support telephone interconnect (a software licence is required)
- Crystal-clear voice quality
- Optional endless channel knob to allow faster movement through a large number of channels
- Shared menu structure between 9300 terminals

### Facilities to improve network security:

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

### Complete package with accessories portfolio:

- Audio accessories including speaker-microphones, headsets and earpieces
- Professional *Bluetooth* wireless technology accessories are available to work in the most demanding environments
- Chargers including in-vehicle, single fast chargers, and 6 way multi-chargers
- Standard Li-Ion 2000mAh and optional Li-Ion 2500mAh batteries available
- Various carry cases are available



TRANSMITTER		
	VHF	700/800MHz
Output power	5W, 3W, 2W, 1W	3W, 2.5W, 2W, 1W
Tx current consumption	5W: <1.9A	3W: <1.7A
FM hum and noise (Analog)		
25/30kHz channel	-40dB	-37dB
20kHz channel	-38dB	-35dB
12.5/15kHz channel	-34dB	-31dB
Adjacent channel power - static (Analog)		
ETS 300-086 & EIA 603D	12.5kHz: <60dBc 20kHz: <70dBc 25kHz: <70dBc	12.5kHz: <50dBc 20kHz: <60dBc 25kHz: <60dBc
Adjacent channel power, 12.5kHz - static (DMR)		
ETS 300-113	60dBc	N/A
Transient adjacent channel power (Analog)		
ETS 300-086	12.5kHz: <50dBc 20kHz: <60dBc 25kHz: <60dBc	N/A
Transient adjacent channel power (DMR)		
ETS 300-113	50dBc	N/A
Conducted emissions (Analog)		
ETS 300-086 & EIA603D	-36dBm	-13dBm
Conducted emissions (DMR)		
ETS 300-113	-36dBm	-13dBm
Radiated emissions		
ETS 300-113, FCC	-36dBm	-20dBm
Audio response (Analog)		
12.5/15kHz	300-2,550Hz +1/-3dB	
25/30kHz	300-3,000Hz +1/-3dB	
Audio distortion (Analog)	<5% @ 1kHz, 60% deviation	
Transmit rise time	<1.2ms	
Spurious emissions into VSWR	Emissions <-20dBm @ VSWR <6:1, -22°F to 140°F (-30°C to 60°C), supply voltage at ± 10%	

RECEIVER		
	VHF	700/800MHz
Sensitivity - static (Analog) EIA-603D	-117dBm	-117dBm
Sensitivity - static (Analog) ETS300-086	+6.0dBuV (equivalent to -107dBm)	+6.0dBuV (equivalent to -107dBm)
Sensitivity - static (DMR) ETS300-113	+3.0dBuV (equivalent to -110dBm)	+3.0dBuV (equivalent to -110dBm)
Intermodulation rejection (Analog) EIA603D	70dB	70dB
Intermodulation rejection (Analog) ETS300-086	65dB	65dB
Intermodulation rejection (DMR) ETS300-113	65dB	65dB
Spurious response rejection (Analog) EIA-603D	-70dB	-70dB
Spurious response rejection (DMR) EIA-603D	-70db	-70dB
FM hum and noise (Analog)		
12.5kHz channel	34dB	31dB
20kHz channel	38dB	35dB
25/30kHz channel	40dB	37dB
Radiated spurious emissions EIA603	100-500uV/m (freq dependant)	
Radiated spurious emissions ETS300-086	-57dBm	
Conducted spurious emissions	-57dBm	
Selectivity (Analog) EIA603D	NB: 45dB, MB: 65dB, WB: 70dB	
Selectivity (Analog) ETS300-113	NB: 60dB, MB: 70dB, WB: 70dB	
Selectivity (DMR) ETS300-113	60dB	
Residual audio noise ratio (TIA/EIA 102)	45dB	
Optional external speaker output	1/2W (into 8ohm balanced speaker)	
Blocking (Analog) EIA603D	80dB	
Blocking (Analog) ETS300-086	84dB	

**GENERAL**

Frequency Ranges	Frequency Band†	
VHF	136-174MHz	
700/800MHz	<b>Transmit</b>	<b>Receive</b>
	762-776MHz	762-776MHz
	792-825MHz	
	851-870MHz	851-870MHz
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 2000mAh battery	1.61 x 2.56 x 5.35in (41 x 65 x 136mm) to top of plate	
with Li-Ion 2500mAh battery	1.77 x 2.56 x 5.35in (45 x 65 x 136mm) to top of plate	
Weight		
with Li-Ion 2000mAh battery	11.46oz (325g) - no antenna	
with Li-Ion 2500mAh battery	13.12oz (372g) - no antenna	
Channel spacing	6.25/12.5/15/20/25/30kHz	
Frequency increment/channel step	2.5/3.125/5/6.25Hz	
Operating temperature	-22°F to 140°F (-30°C to 60°C)	
Sealing	IP67 and IP65	
ESD rating	+/-4kV contact discharge and +/-8kV air discharge	
Rated audio	> 0.5W	
Air interface standard	DMR: ETSI TS 102 361-1	
Signaling options (Analog)	MDC1200, encode and decode, Two tone decode, PL (CTCSS), DPL (DCS), Selcall	

**MILITARY STANDARDS 810C, D, E, F and G**

Applicable MIL-STD	Method	Procedure
Low pressure	500.4	2
High temperature	501.4	1, 2
Low temperature	502.4	1, 2
Temperature shock	503.4	1
Solar radiation	505.4	1
Rain	506.4	1, 3
Humidity	507.4	1
Salt fog	509.4	1
Dust	510.4	1
Vibration	514.5	1
Shock	516.5	1, 4

**BATTERY**

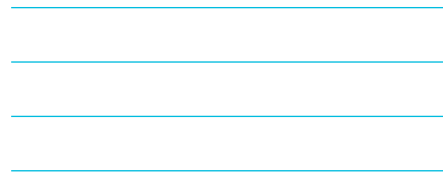
Battery shift life Li-Ion 2500mAh	16 hours (5/5/90, TDMA, basic radio operation)
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**CHARGER**

Charger Options (Li-Ion)	Fast desktop single charger, 6-way multi charger, vehicle charger
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**TAIT DMR SOLUTION**

Backed up by our proven radio network expertise, the TP9300 portable 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.



Authorized Partners
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† Please note that not all frequency bands are available in all markets. For further information please check with your nearest Tait office or authorized dealer.