

Ultra-narrowband solutions for mission critical networks.

The Tait TB9300 is our trunked IP connected DMR digital base station, building on the leadership role that we established with our MPT TB8100. The TB9300 provides 6.25kHz equivalent operation and is fully compliant with the DMR Tier 3 trunking standard.

The TB9300 is a true spectrally efficient solution, allowing you to gain greater capacity, and future proof your investment. It also gives you deployment and operational efficiencies through capabilities such as remote network management and IP connectivity.



KEY FEATURES

- ▶ Native trunked base station/repeater
- ▶ Future proofed with 6.25kHz equivalent technology (2 x TDMA channels in one 12.5kHz channel)
- ▶ Adherence to the DMR Tier 3 standard with proven interoperability tests
- ▶ Full IP connectivity allows efficient scaling and design of your network
- ▶ Extensive range of remote management and monitoring capabilities with a security focus
- ▶ Designed and MIL-STD tested for reliability, combined with features to mitigate network outages
- ▶ Built from the TB8100 base station/repeater pedigree



FEATURES AND BENEFITS

The TB9300 is at the heart of the Tait mission-critical DMR system

- ▶ Flexible network design through IP connectivity and linking
- ▶ Individual and group calling to suit operational requirements

Delivers on the goals driving the DMR standards

- ▶ Designed and tested with the DMR Tier 3 standard to provide customers with choice of vendor and equipment
- ▶ 6.25kHz equivalent 2-slot TDMA capability for both voice and data
- ▶ Tested using the IOP certification program developed by the DMR Association, providing confidence of multi-vendor interoperability

Digital communications delivering on operational needs

- ▶ Easy migration from analog networks to DMR with extensive re-use capabilities reducing cost
- ▶ Transfer data and voice across a packet-switched infrastructure using standard IP communications
- ▶ Voice over IP (VoIP) support
- ▶ Quality of Service (QoS) assignments for voice and signaling to allow optimal network packet routing

Designed to support cost effective deployment and operation

- ▶ Compact module design minimizes rack space required
- ▶ Extensive re-use of existing analog modules when migrating from Tait MPT TB8100/TB8200

Resiliency enhances safety and communication in challenging environments

- ▶ Rugged construction with efficient heatsinks and a front-to-rear fan-forced cooling system
- ▶ Rated for continuous full output power
- ▶ Designed to exceed MIL-STD-810 F
- ▶ Continuity of operation with smart AC/DC management
- ▶ Shares the same proven 4U form-factor and module packaging as the Tait TB8100
- ▶ Re-uses the power management unit and power amplifier
- ▶ Support for up to two base station software releases giving the ability to roll-back software updates
- ▶ Network Design services are available to ensure delivery of a robust network with the capacity and coverage that you require

Future-proofed to protect your investment

- ▶ Modular design allows cost effective deployment, maintenance and upgrade
- ▶ Software configurable, including feature upgrades through software licenses
- ▶ Software upgradable to add new features and functionality to ensure that your DMR solution is maintained and updated with the ever-changing needs of your market and environment.

Flexibility to provide options for managing risk during migration and expansion

- ▶ Range of DC and AC power supply options – 12V, 24V, 48V DC and 110-240VAC
- ▶ Configurable as a single channel 100W or 50W unit, or a dual channel 50W unit

Efficient management with a focus on security

- ▶ Remote network management utilizing built-in secure https web server and SNMP support
- ▶ Alarm monitoring and management, via IP, with 12 digital inputs that can be remotely monitored
- ▶ Detailed alarm reporting allows monitoring of key base station/repeater parameters
- ▶ Inbuilt diagnostics to allow technicians to remotely confirm optimal operation and identify network faults
- ▶ Enhanced security through password protection and access level control on web server
- ▶ Multiple user accounts
- ▶ Audit and system logs retained
- ▶ Remote software downloads
- ▶ Ability to configure up to 1,000 channels makes for efficient deployment
- ▶ The front panel includes LCD display and navigation buttons giving greater access through an on-screen menu.
Note – this can be disabled to meet your organizational security policies.

GENERAL**

Frequency Ranges	Frequency Band
VHF	Reciter 148–174MHz PA 136-174MHz
Frequency stability	±0.5ppm
Channels	1,000
Dimensions (DxWxH)	15.8 x 19 x 7in (400 x 483 x 177mm) 4U rack space
Weight lb (kg)	Single 50W: 41lb (21kg) Single 100W: 47lb (22kg) Dual 50W: 61lb (28kg)
Frequency increment/channel step	2.5/3.125kHz (or multiples of)
Operating temperature	-22°F to 140°F (-30°C to 60°C)
Power Supply	
DC	12V, 24V, 48V (+ve or -ve earth)
AC	110-240V (with power factor correction)
ESD rating	+/-4kV contact discharge and +/-8kV air discharge
Air interface standard	DMR: ETSI TS 102 361
External frequency reference	10MHz/12.8MHz (auto detect)

TRANSMITTER**

Output power	Programmable 5-50W			
50W	Programmable 10-100W			
100W				
Tx current consumption	12VDC	24VDC	48VDC	110-240VAC
Tx @ 50W	10A(120W)	5.4A(130W)	2.6A(125W)	138VA
Tx @ 100W	19.2A(230W)	10.3A(247W)	4.9A(235W)	239VA
Adjacent channel power 12.5kHz static (DMR) ETS 300-113	60dB			
Transient adjacent channel power (DMR) ETS 300-113	50dB			
Transmit rise time	2ms			
Duty cycle	100%			

RECEIVER**

Sensitivity - static (DMR) ETS 300-113	-122dBm @ 5% BER
Intermodulation rejection (DMR) ETS 300-113	80dB @ 5% BER 78dB @ 1% BER
Spurious response rejection (DMR) EIA603D	90dB
Radiated spurious emissions EIA603D	< -57dBm EIRP to 1GHz
Conducted spurious emissions	< -90dBm to 1GHz
Selectivity (DMR) ETS 300-113	> = 85dB @ 5% BER
Blocking	> 113dB

MILITARY STANDARDS 810C, D, E and F

Applicable MIL-STD

Low pressure
High temperature
Low temperature
Humidity
Vibration
Shock

Method

Altitude: 4570 meters (15000 feet): MIL-STD-810F 500.4, Proc2
86°F (60°C) (Sea level - Max temperature derated at 5.4°F (3°C)/1000m)
-22°F (-30°C)
95% Relative humidity thru temp Cycle: IEC 60068-2-30
3 Axis, Sine sweep 10-60Hz: TIA_EIA 603B, 3.3.4.3
20g, 11ms pulse width, 3 Shocks in each principal axis: TIA_EIA 603B, 3.3.5.2

TAIT DMR SOLUTION

Backed up by our proven radio network expertise, the TB9300 base station/repeater 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

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

*All frequency bands and channel spacings may not be available in all markets. For further information please check with your nearest Tait office or authorized dealer.

*Additional frequency bands will be available in future releases.

The word "Tait" and the Tait logo are trademarks of Tait Ltd. Tait is an ISO 9001: 2008 and ISO 14001: 2004 certified supplier.



ISO 9001
ISO 14001

