

High performing, tough, slimline DMR Base Station/Repeater.

Tait introduces a software flexible, rugged Base station/Repeater for DMR Tier 3 and DMR Tier 2 systems, MPT-IP, or Analog repeaters. The TB7300 integrates seamlessly with the proven Tait 9300 series high performance Base Station.



A slim, 1U design forms part of an intelligent building block of an end-to-end network solution, which includes Base Station, Terminals and Tait network management software applications.

KEY FEATURES

- Economical slim 1U design
- Four operating modes: DMR Tier 2 and Tier 3, MPT-IP, and Analog
- Software flexible migration path between platforms
- Exceptional receiver performance
- IP linked node solution for multi-site network capability
- Remote network management and monitoring
- SNMP Management Capability
- TaitEnable application suite compatible
- Tait DMR Access and Express solution compatible
- 50 Watt output power (VHF) 100% Duty Cycle
- 40 Watt output power (UHF) 100% Duty Cycle
- 13.8VDC Input power typical
- AES encryption capable

FEATURES AND BENEFITS

Conveniently compact

The slim 1U TB7300 is easy to transport and install; an ideal choice when space for RF equipment is limited.

- Operates as an analog or DMR repeater
- Economical solution with real estate savings

High Performance

- Base station/Repeater with a high performance Base Station receiver
- Small form factor 1U
- Output power selection from 2W to the maximum transmit power
- Tait Tough quality and performance

A future-defensive investment

The TB7300 is a cost-effective base station/repeater that can operate in:

- DMR Tier 2 mode, with two available voice channels, or
- DMR Tier 3 single-site trunking mode for even better resource management
- MPT-IP analog trunked mode.
- Analog conventional mode. Repeater only.

You can change from operation to another, providing you with the upgrade flexibility should this be required in the future.

Future Proof

- Powerful processing engine, designed to meet future needs
- Road mapping and regular firmware updates
- Easy remote updating

Integrated solution component

The Tait TB7300 is an element of global network architecture, and part of a TN9300 system. It supports all major expected features including:

- The TaitEnable suite
- The 9300 series equipment
- All Tait DMR partner solutions (dispatch consoles/voice recorders, location solutions, multi-network connectivity and many others)

Secure communications

- Optional 56 bit DES encryption, ARC4 encryption, or AES encryption

Network Data Services

- Supports current and future data services
- Embedded location data
- Short data messages for location, status and text
- Packet data for workforce management, Telemetry, SCADA and customer specific applications

Extensive Diagnostics

- Spectrum Monitor
- SNMP Management Capability
- Web UI driven for both RF and Network

Power Consumption

- Reduced power demand
- Very efficient in the Tait Tier 2 Multi-site System with Tait terminals

TB7300

SPECIFICATIONS

GENERAL

Frequency range	Frequency Band
VHF	148 - 174 MHz (B3), 50W
UHF	400-470MHz (H5), 40W 470-520MHz (H3), 40W
Frequency stability	+/- 0.5 ppm
Channels	1,000
Dimensions (DxWxH)	15.8 x 19 x 1.7in (400 x 483 x 44mm) 1U Rack Space
Weight	VHF 50W 14.8lb (6.7kg)
Frequency increment/channel step	VHF 2.5/3.125kHz (or multiples of), UHF 5/6.25kHz
Operational temperature	-22° to 140°F (-30° to 60°C)
Power Supply DC	13.8V Typical (11 - 15 VDC range)
Power Consumption	
Standby	0.83A, 11.5W @ 13.8V
Tx @ 50W	9.6A, 133W @ 13.8V
ESD rating	+/-4kV contact discharge and +/-8kV air discharge
External frequency reference	10MHz/12.8MHz (auto detect)
Packet data	1/2 Rate, 3/4 Rate, Full rate, Single Slot
Connections	Transmitter N Type (Female) Receiver BNC (Female) External Reference Input BNC (Female) Network Ethernet Port Power Supply Input Block
Support Solution	Tait DMR Tier 2 single site, Tait DMR Tier 2 Multi-site Tait DMR Tier 3 Access and Express, Analog repeater only

TRANSMITTER

Output power	Programmable 2 - 50W (VHF) Programmable 2 -40W (UHF)
Adjacent channel power 12.5kHz static (DMR) ETS 300-113	60dB
Transient adjacent channel power (DMR) ETS300-113	Complies with EN300 113-1 v1.7.1 & EN300 113-2 v1.5
Duty Cycle	100%

TB7300

SPECIFICATIONS

RECEIVER	VHF	UHF
Sensitivity* - static (DMR) ETS 300-113		
Typical	-122dBm (0.18uV) @ 5% BER	-122dBm (0.18uV) @ 5% BER
Guaranteed	-120dBm (0.22uV) @ 5% BER	-120dBm (0.22uV) @ 5% BER
Intermodulation rejection (DMR) ETS 300-113	80dB @ 5% BER 78dB @ 1% BER	80dB @ 5% BER 78dB @ 1% BER
Spurious response rejection (DMR) EIA603D	90dB	90dB
Radiated spurious emissions (DMR) EIA603D	<- 57dBm EIRP to 1GHz	<- 57dBm EIRP to 1GHz
Conducted spurious emissions	<- 90dBm to 1GHz	<- 90dBm to 1GHz
Selectivity (DMR) ETS 300-113	> = 85dB @ 5% BER	> = 85dB @ 5% BER
Blocking	> 113dB	> 113dB

*Typical Sensitivity is measured at the frequency on which the receiver is tuned. Contact your local Tait representative for more information.

REGULATORY DATA	USA	CANADA	EUROPE	AUSTRALIA/NEW ZEALAND
VHF (148-174MHz)	CFR 47 CASTBDB3G	RSS-119	EN300-113, EN301-489, EN60950	AS/NZS4768
UHF (400-470MHz, 470-520MHz)			EN300-113, EN301-489, EN60950	AS/NZS4768

TAIT DMR SOLUTION

Backed up by our proven radio network expertise, the TB7300 is part of our larger 9300 Series Analog/DMR offering. The Tait Analog/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.

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

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.



Quality
ISO 9001



Environment
ISO 14001



Health &
Safety
OHSAS
18001

