

TB7300 BASE STATION

SLIMLINE DMR CAPABLE REPEATER

SMALL AND SLIMLINE PROFILE, EXCEPTIONAL PERFORMANCE

KEY FEATURES

Operation in VHF (148-174 MHz) and UHF (400-470 MHz) frequency bands

Compact, scalable network design with IP connectivity for space-constrained areas

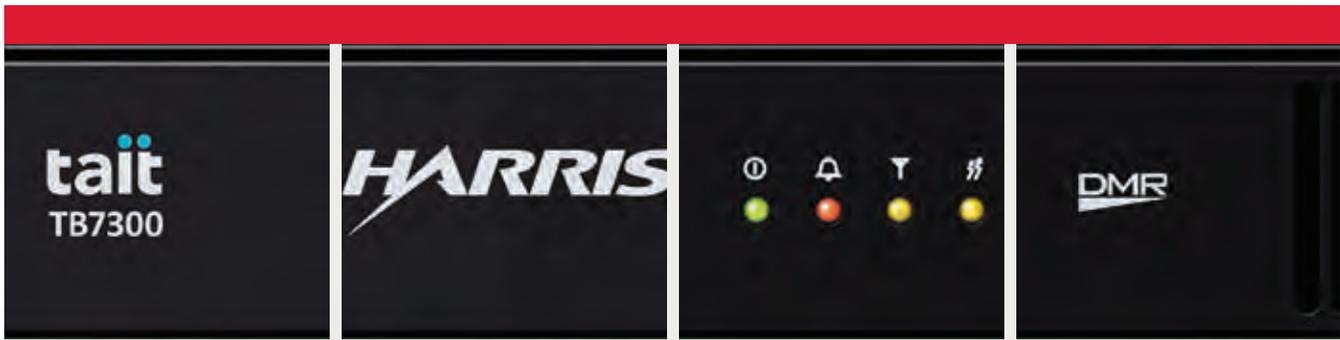
Adherence to the DMR Tier 2 and Tier 3 standards

MIL-STD designed and tested for reliability to mitigate network outages

The Harris TB7300 is a Base Station/Repeater for DMR Tier 3 or DMR Tier 2 systems and analog repeaters. This rugged solution delivers exceptional receiver performance and is engineered for easy transportation and installation. It's an ideal choice for compact areas, fitting into a single 1RU space within an industry standard 19-inch width equipment rack.

The Slimline DMR Base Station/Repeater seamlessly integrates with the Harris 9300 series Base Station. The system functions as an IP-linked node, supporting multi-site networking and offers a flexible migration path between DMR Tier 3 trunked networks and Conventional DMR Tier 2 applications. Plus, the TB7300 is equipped with a powerful processing engine designed to meet future needs through road mapping and regular firmware updates.

The TB7300 includes extensive remote diagnostic features while requiring minimal power consumption. Workforce safety and management are also enhanced through embedded location data, status messaging, remote network management and monitoring.



FEATURES AND BENEFITS

Small size, big performance

The slim 1RU TB7300 is easy to transport and install, ideal for use when space for RF equipment is limited.

- Small form factor 1RU design
- Base Station/Repeater with a high-performance base station receiver
- Operates as an analog or DMR repeater
- Output power selection from 2W to the maximum transmit power
- Maximizes power efficiencies when used with the Harris Tier 2 multi-site system with Harris terminals

Future-proof investment

The TB7300 is a cost-effective base station/repeater with multiple operational capabilities, including:

- DMR Tier 2 mode, with two available voice channels

- DMR Tier 3 single-site trunking mode for improved resource management
- Analog conventional mode and repeater only
- Ability to change from one mode of operation to another, providing flexibility in future upgrades
- Powerful processing engine, designed to meet future needs
- Road mapping and regular firmware updates
- Easy remote updating

Integrated solution

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

- Enable Suite
- 9300 series equipment
- All Harris DMR partner dispatch consoles/voice recorders, location solutions, multi-network connectivity and many other products

Network data services

Supports current and future data services, including:

- Short data messages for location, status and text
- Packet data for workforce management, telemetry, SCADA and customer-specific applications
- Advanced diagnostics through spectrum monitor, SNMP management capability and web UI for both RF and networks

SPECIFICATIONS FOR: TB7300 BASE STATION - SLIMLINE DMR CAPABLE REPEATER

| GENERAL | | |
|------------------------------|--|-------------------|
| Frequency Bands | VHF-B3 | UHF-H5 |
| Frequency Ranges | 148-174MHz 50W | 400-470MHz 40W |
| Frequency Stability | ±0.5ppm | |
| Channels/Zones | 1,000 | |
| Dimensions (D x W x H) | 1.7in x 19in x 15.8in (44mm x 483mm x 400mm) 1U rack space | |
| Weight - lb (kg) | 14.8lb (6.7kg) | |
| Channel Spacing | 12.5kHz analog, DMR, 2 channels of TDMA 6.25kHz equivalent | |
| Frequency Increment | VHF 2.5/3.125kHz | UHF -5/6.25kHz |
| Operating Temperature | -22°F to 140°F (-30°C to 60°C) | |
| Power Supply | 13.8V Typical (11 - 15 VDC range) | |
| ESD Rating | +/-4kV contact discharge and +/-8kV air discharge | |
| External Frequency Reference | 10MHz/12.8MHz (auto detect) | |
| Packet Data | DMR: ½ rate, ¾ 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 | |

| TRANSMITTER* | | |
|---|--|--------------------------------|
| Adjacent Channel Power (12.5kHz static) | 60dB (ETS 300-113) | |
| Transient Adjacent Channel Power | ETS 300-113 (complies with EN 300 113-1 v1.7.1 and EN 300-113-2 v.1.5.1) | |
| Transmit Power Rating | VHF 50W: Programmable 2-50W | UHF 40W: Programmable 2-40W |
| Duty Cycle | 100% | |

| TX POWER CONSUMPTION* | | | |
|-----------------------|---------------|-------------|--|
| Power Source (13.8V) | | | |
| Tx Standby @ 50W | 0.83A (11.5W) | 9.6A (133W) | |

| RECEIVER | | |
|---|------------------------|--|
| Frequency Bands | VHF | UHF |
| Frequency Ranges | 136-174MHz | 320-380MHz (50W only) 400-440MHz 440-480MHz 470-520MHz (H7) |
| Sensitivity* (DMR) ETS 300-113 @ 5% BER | | |
| Typical | -122dBm (0.18µV) | -122dBm (0.18µV) |
| Guaranteed | -120dBm (0.22µV) | -120dBm (0.22µV) |
| Inter-modulation Rejection: (DMR) ETS 300-113 @ 5% BER (DMR) ETS 300-113 @ 1% BER | 80dB 78dB | 80dB 78dB |
| Spurious Response Rejection (DMR) EIA603D | 90dB | 90dB |
| Radiated Spurious Emissions (DMR) EIA603D | <-57dBm (EIRP to 1GHz) | <-57dBm (EIRP to 1GHz) |
| Conducted Spurious Emissions | <-90dBm/1GHz | <-90dBm/1GHz |
| Selectivity: (DMR) ETS 300-113 @ 5% BER | >=85dB | >=83dB |
| Blocking | >113dB | >113dB |

| REGULATORY DATA | | | | |
|------------------|--------|---------|-------------------------------|-----------------------|
| | USA | Canada | Europe | Australia/New Zealand |
| VHF (138-174MHz) | CFR 47 | RSS-119 | EN300-113, EN301-489, EN60950 | AS/NZS4768 |
| UHF (400-470MHz) | — | — | EN300-113, EN301-489, EN60950 | AS/NZS4768 |

* Typical Sensitivity is measured at the frequency on which the receiver is tuned.

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.

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