



# 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.



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TB7300

**HARRIS**



**DMR**

## 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-ready 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
- Analog line (supporting 4 wire E&M) in analog mode for RF linking connection and local console support
- 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	80dB	80dB
(DMR) ETS 300-113 @ 1% BER	78dB	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.

**About Harris Corporation:**

Harris Corporation is a leading technology innovator, solving customers' toughest mission-critical challenges by providing solutions that connect, inform and protect. Harris supports government and commercial customers around the world.

Learn more at [harris.com](http://harris.com).

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