



FLEXIBLE DUAL-MODE FOR SEAMLESS MIGRATION

KEY FEATURES

Operation in VHF, UHF and
700/800 MHz frequency bands

Scalable network design with
IP connectivity

Advanced capacity and interoperability
with adherence to P25 standards

Extensive remote management and
monitoring options with a focus
on security

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

TB9100 BASE STATION

P25 CAPABLE REPEATER/RECEIVER

The Harris TB9100 delivers flexible, dual-mode operation to help users easily migrate from analog to P25 digital. A modular design, combined with intuitive programming software, makes this Base Station/Repeater an ideal P25 solution for conventional, trunked and simulcast mission-critical networks.

Its clean design and industry-standard interface provide easy connectivity to the rest of the network system. A front-loading 4U subrack simplifies system expansion and module replacements.

Operational efficiencies are enhanced with software-based programming capabilities, allowing users to add custom applications as well as configure and update the system. IP connectivity supports remote diagnostic analysis and performance monitoring, plus the ability to program alerts and alarms. Continuity of service is ensured with smart AC/DC switching.

SPECIFICATIONS FOR: TB9100 BASE STATION - P25 CAPABLE REPEATER/RECEIVER

GENERAL			
Frequency Bands	VHF	UHF	700/800MHz
Frequency Ranges	136-174MHz	380-520MHz	762-870MHz
Frequency Increment	0.125kHz	—	—
Channel Spacing	12.5kHz, 20kHz, 25kHz		
Electronic Switching Range	≥2% of the center frequency (e.g., 10MHz @ 500MHz)		
External Frequency Reference	10MHz or 12.8MHz		
Frequency Stability	±0.5ppm (-22°F to 140°F/-30°C to 60°C)		
Channels/Network Capacity	255		
Dimensions (H x W x D):			
Subrack (only)	7in x 19in x 15.2in (177.8mm x 482.6mm x 386mm)		
Subrack with front panel	7in x 19in x 16.1in (177.8mm x 482.6mm x 409mm)		
Weight - lb (kg) with AC/DC PMU	Single 5/50W 47.0lb (21.5kg)	Dual 100W 50.2lb (22.8kg)	
Operating Temperature	-22°F to 140°F (-30°C to 60°C)		
Environment Standards	MIL-STD-810C, D, E and F		
Power Supply	AC 88-264V (PFC)	DC 12V, 24V, 48V (Nominal +ve or -ve earth)	

AUDIO		
	Input	Output
Audio Interfaces	600Ω Balanced Microphone	600Ω Balanced Monitor Speaker
Audio Interface Levels:		
300-3,400Hz	-20dBm to 0dBm (nominal)	-20dBm to 6dBm (nominal)
67-300Hz	-20dBm to -14dBm (nominal)	-20dBm to -14dBm (nominal)
Audio Response (Analog)	+0.5/-2.0dB rel. 1kHz (300-3,000Hz)	
Audio Distortion (Analog)	<3% typical	

TRANSMITTER			
Frequency Bands	VHF	UHF	700/800MHz
Adjacent Channel Power:			
Analog 20/25kHz	<-70dB (EIA)	—	—
Analog 12.5kHz	<-60dB (EIA)	—	—
Digital 12.5kHz	<-60dB (IS-102)	—	—
P25 Modulation Fidelity	<3% (TIA-102A)	—	—
Modulation Limiting:			
12.5kHz channel	±2.5kHz	—	—
20kHz channel	±4kHz	—	—
25kHz	±5kHz	—	—
Transmit Rise Time	≤2.5ms	—	—
Transmit Power Rating	Single 1/5W Base Station System Single 5/50W Base Station System Single 10/100W Base Station System		
FM Hum and Noise (300Hz–3kHz):			
12.5kHz and 20kHz channels	-49.0dB (ANSI/TIA)		
25kHz channel	51.5dB (ANSI/TIA)		
Conducted/Radiated Emissions	<-36dBm (9KHz to 1GHz)	<-36dBm (9KHz to 1GHz)	<-20dBm (9KHz to 9GHz) <-30dBm (1GHz)
Emissions Designator	11K0F3E, 16K0F3E, 6K60F2D, 9K60F2D, 8K10F1E, 10K10F1E, 8K10F7E, 10K0F7E, 8K10F1D, 10K10F1D, 8K10F7D, 10K0F7D		

TX POWER CONSUMPTION						
	12V Pa	12V PMu	24V PMu	48V PMu	110VaC	240Vac
Tx Standby @ 5W	0.81A	1.2A	0.63A	0.3A	—	—
Tx @ 50W	2.2A	2.7A	1.4A	0.65A	49VA	118VA
Tx @ 100W	9.2A	10.0A	5.4A	2.6A	138VA	177VA
	—	19.2A	10.3A	4.9A	239VA	262VA

RECEIVER

Sensitivity:

Analog (12dB SINAID)	<0.25 μ V (-119.0dBm)
Digital (TIA/EIA-102)	0.21 μ V (-120.5dBm) @ 5% BER

Inter-modulation Rejection	80dB (ETSI)
	85dB (ANSI/TIA)

Selectivity:

Analog (EIA-603)	60dB
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Digital Adjacent Channel Rejection	60dB TIA 102A + ETSI 300-113 (across all bands)
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Spurious Response Rejection	\geq 100dB (ANSI/TIA)
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Radiated Spurious Emissions	<-57dBm (EIRP to 1GHz)
	<-47dBm (EIRP above 1GHz)

Conducted Spurious Emissions	<-90dBm (EIRP to 1GHz)
	<-70dBm (EIRP above 1GHz)

REGULATORY DATA

For complete regulatory information please refer to the TB9100 Specifications Manual.

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 that creates mission-critical solutions that connect, inform and protect the world. The company's advanced technology provides information and insight to customers operating in demanding environments—from ocean to orbit and everywhere in between. Harris has approximately \$7.5 billion in annualized revenue and supports customers in more than 100 countries through four customer-focused business segments: Critical Networks, Space and Intelligence Systems, Electronic Systems and Communication Systems.

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