

Intelligence, flexibility and high performance.

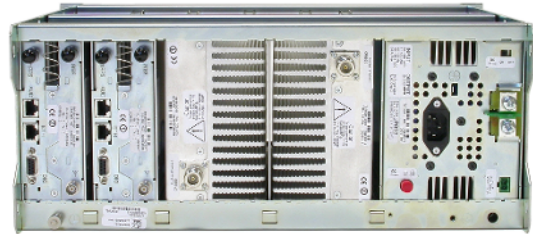
The TB9100 base station is intelligent and flexible, offering dual mode to ease migration with seamless FM or P25 switching.

The modular design combined with intuitive programming software make the Tait P25 TB9100 base station an ideal solution for conventional, trunked and simulcast.



KEY FEATURES

- Ideal for P25 trunked, simulcast and conventional networks
- Tested in a Department of Homeland Security-recognized P25 Compliance Assessment Program lab
- Supports P25 open standard DES and AES encryption
- Dual mode operation for ease of analog-to-digital migration
- Remote programming and software licenses reduce the need for site visits and hardware upgrades
- Smart AC/DC switching to ensure continuity of service
- Built-in test equipment provides self-monitoring with local and remote logging of alarms
- Digital console interfaces are provided for IP-connected consoles (DFSI for P25 conventional and CSSI for P25 trunked)
- An analog line interface (4-wire + E&M) allows connection to legacy analog consoles



Above: Dual 50W systems with AC/DC Power Management Unit.

FEATURES AND BENEFITS

Interoperability and versatile

Fully P25-compliant, the TB9100 can be configured as a repeater or as a base station in a digital P25, analog FM or mixed-mode radio network.

Totally flexible Task Manager

Routines and code can be written quickly and easily allowing fast development and delivery of value-adding custom applications.

Convenient Windows-based software programming

Change over 150 parameters with intuitive drop downs, tick boxes and other easy-to-master software commands. Tait Customer Service Software makes the TB9100 easy to configure and upgrade.

IP connection for ease of diagnostics

No special equipment will be needed to ensure total control of your base station. Connect and configure alerts and alarms, monitor performance and administer the site remotely.

Integrated VoIP networking with voting

Network your TB9100s using VoIP with built-in centralized voting while eliminating hardware.

Clean back panel design with industry-standard interface enables easy connectivity to the rest of the system and third party vendors.

Front-loading modules slip into the 4U subrack, making building the system, replacing a module or accessing a system interface board fast and simple. TB9100 modules include:

- Reciter - contains the receiver and exciter
- Power Amplifier - available as 5W, 50W and 100W modules
- Power Management Unit - can be AC and/or DC powered, and includes an auxiliary power supply
- Network Board - provides access to multiple interfaces
- Subrack, front panel and control panel

GENERAL

	VHF	UHF	700/800MHz			
Operational frequency+	136-174MHz	380-520MHz	762-870MHz			
Electronic switching range	±2% of the center frequency (e.g. 10MHz @ 500MHz)					
Channel/network capacity	255					
Channel spacing	12.5kHz, 20kHz, 25kHz					
Channel increment	0.125kHz					
Dimensions						
HxWxD (subrack only)	7in (177.8mm) x 19in (482.6mm) x 15.2in (386mm)					
HxWxD (including front panel)	7in (177.8mm) x 19in (482.6mm) x 16.1in (409mm)					
Weight (with AC and DC PMU)						
5/50W base station system (single channel)	47.0lb (21.5kg)					
100W base station system	50.2lb (22.8kg)					
Operational temperature	-22°F to 140°F (-30°C to 60°C)					
Description	Modular base station/Repeater/Receiver					
Frequency stability	±0.5ppm (-22°F to 140°F/-30°C to 60°C)					
External Reference	10MHz or 12.8MHz					
Power Consumption	12V Pa	12V PMu	24V PMu	48V PMu	110VaC	240Vac
Standby Tx @ 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
Supply Requirements						
Mains	88 to 264V (PFC Power Factor Correction)					
DC	12V, 24V, 48V (Nominal +ve or -ve earth)					
Adjacent Channel Power						
Analog 20/25kHz	<-70dB (EIA)					
Analog 12.5kHz	<-60dB (EIA)					
Digital 12.5kHz	<-60dB (IS-102)					
Environment Standards	Applicable MIL-STD-810 C, D, E and F tests					

AUDIO

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

RECEIVER

Analog sensitivity (12dB SINAD)	<0.25uV (-119.0dBm)	
Digital sensitivity (TIA/EIA-102)	0.21uV (-120.5dBm) @ 5% BER	
Spurious Emissions	Radiated	Conducted
	<-57dBm EIRP to 1GHz <-47dBm EIRP above 1GHz ≥100dB [ANSI/TIA]	<-90dBm to 1GHz <-70dBm above 1GHz
Spurious Response	80dB [ETSI] 85dB [ANSI/TIA]	
Intermodulation		
Selectivity (EIA 603)	VHF/UHF	700/800MHz
	85dB (NB), 90dB (WB)	79dB (NB), 84dB (WB)
Digital Adjacent Channel Rejection	60dB TIA 102A + ETSI 300 -113 (across all bands)	

