

Proven performance and reliability.

The TB8100 is a highly flexible base station/repeater, ideal for any analog application: a simple conventional repeater, POCSAG paging transmitter, duplex radio link, simulcast or MPT 1327 trunked system.



KEY FEATURES

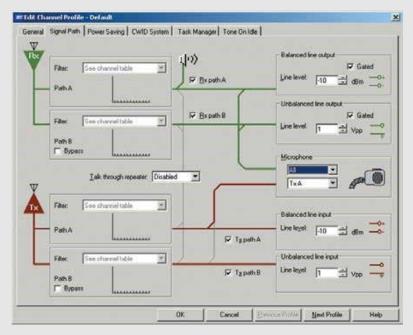
- 255 channels with up to 16 CTCSS or DCS sub-audible tones per channel, as a community repeater without additional equipment*
- ▶ Covers key frequency bands from 136MHz to 941MHz
- The TB8100 can house two repeaters, or a repeater link in the same sub rack providing an alternative method of connecting repeaters.
- ► Tone on idle and CWID
- System interface options include Isolated Audio, Isolated Audio E&M, TaitNet MPT Trunked, TaitNet RS232 and TaitNet Ethernet
- ▶ Ethernet system interface option enables IP management of communications system
- ▶ Fast key-up time of <2ms
- ▶ Monitor and manage 150 parameters, including 43 alarm parameters remotely
- Computer Controlled Interface (CCI) protocol allows external computer equipment to remotely monitor and control a TB8100 base station
- ▶ Power Save option has receive power as low as 50MW, ideal for solar sites**
- Built-in spectrum analyzer measures received signal levels across the selected band

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^{*}Advanced Profiles option required.

^{**} With 12V PA option





Comprehensive and intuitive software can be used to change configuration quickly and easily.

FEATURES AND BENEFITS

Complete remote operation

With its many remote monitoring options the TB8100 is ideal for isolated sites. Users can manage more than 150 parameters remotely with TB8100 Service Kit software.

Advanced diagnostics

Monitor your entire network from a central location with the TB8100 alarm reporting option. This means you do not need to manually connect to each base station to check it, minimizing maintenance time and costs.

Tough design

Specified to operate continuously at full power, at up to 15,000ft (4,572m) and in temperatures as high as 140°F (60°C). Large heatsinks mean that no spacing is required between base stations.

Excellent RF specifications

Outstanding specifications for selectivity, sensitivity and adjacent channel interference make the TB8100 ideal for use in high-noise environments.

Flexible software

The Advanced Profiles option gives you precise control over your channel configuration and access to the most advanced base station features.

Transition to digital

A common hardware platform makes it a smooth transition from the TB8100 to digital technologies, including P25 and DMR (Digital Mobile Radio).

Tait solution

Combined with Tait terminals and TaitNet infrastructure products, Tait offers customized communication solutions, all working seamlessly with the intelligent, flexible TB8100 base station/repeater.



Clean back panel design with industrystandard interfaces enables easy connectivity to the rest of the system and third party vendors.

Pictured: dual 50W system with AC/DC Power Management Unit.

Front-loading modules slip into the 4U subrack, making building the system, replacing a module or accessing a system interface board fast and simple. TB8100 modules include:

- ▶ Reciter contains the receiver and exciter.
- ▶ VHF and UHF capability within the same sub rack.
- ▶ Power Amplifier available as 5W. 50W and 100W modules.
- ▶ Power Management Unit provides AC and/or DC power, and includes an auxiliary power supply.
- ▶ System Interface provides access to multiple interfaces.
- ▶ Subrack, Front panel and Control panel.

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TB8100 SPECIFICATIONS



GENERAL						
	Operational Fr	equency		PA		
	136-156MHz			136-174MHz		
/HF	148-174MHz					
	174-193MHz			174–225MHz		
	193-225MHz					
	380–420MHz 380–520MHz					
JHF	400–440MHz					
	440–480MHz					
	470–520MHz					
700/800MHz	762–776/850–8	\ /		760-870MHz		
	792–824MHz (I					
900MHz	896-902MHz (F 927–941MHz (*	,	1	850–941MHz		
lectronic Switching Range	≥2% of centre frequency (eg: 10MHz @ 500MHz)					
Channel/Network Capacity	255					
Channel Spacing	12.5/20/25kHz					
Channel Increment	VHF 2.5KHz and 3.125KHz, other bands 5KHz and 6.25KHz					
Dimensions (WxDxH)	19 x 15 x 7in (4	80 x 390 x 180mm) 4	U Rack Space			
	Single 5/50W: 47.4lb (21.5kg)					
Veight	Single 100W: 50lb (22.8kg)					
	Dual 5/50W: 63lb (28.6kg)					
Operational Temperature	-22° to 140°F (-30° to 60°C)					
Description	Modular base station/repeater/receiver					
System Types	Conventional FM, MPT 1327 Trunked, QS2 Simulcast and others					
requency Stability	±0.5ppm					
xternal Reference	10MHz or 12.8MHz					
Power Consumption*	12VDC	24VDC	48VDC	110VAC	240VAC	
Standby (20ms Receiver Cycling)	720mA	360mA	170mA			
Sleep (200ms Receiver Cycling)	400mA	200mA	98mA			
Deep Sleep (1s Receiver Cycling)	109mA	61mA	31mA			
Tx @ 5W**	2.6A	1.3A	0.61A	47VA	118VA	
Tx @ 50W**	10A	5.4A	2.6A	138VA	177VA	
Tx @ 100W**	19.2A	10.3A	4.9A	239VA	262VA	
Supply Requirements						
Mains	88 to 264V (wit	n power factor correct	ion)			
DC	12V, 24V, 48V (Nominal +ve or -ve earth) 12v PA is -ve earth only with PMU					
Options	Optional coax r	elay kit				

^{*} Power consumption is dependent on the status of the licensed power save software features and the selected settings for Tx key time, Rx cycling.

** Transmit tests without fans operating.

*** 9H0 does not have 95A

**** Also 852-854MHz and 928-930MHz Tx/Rx on both sub bands.

All parameters are measured in accordance with TIA/EIA 603 procedures unless otherwise specified.

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TB8100



Audio Input Types	Input	Output	
	600Ω Balanced	600Ω Balanced	
	Unbalanced	Unbalanced	
	Microphone	Monitor Speaker	
udio Interface Level	Balanced -20 to +10dBm	Balanced -20 to +10dBm	
r nominal 60% deviation)	Unbalanced 0.3Vpp to 3Vpp	Unbalanced 0.3Vpp to 3Vpp	
ıdio Response Bandwidth	300Hz to 3.4kHz		
udio Response	Flat or de-emphasized		
udio Distortion	≤3% at -70dBm		
Audio Filtering Characteristics	Flat or de-emphasized		
	Full band or speech band		
	Sub audible band only		
	Filters can be applied independently to each of the input sources		

TRANSMITTER					
Modulation Limiting	±2.5KHz (NB), ±4KHz (MB*), ±5KHz (WB)				
Transmit Rise Time	2ms				
Transmit Power Rating	100W Continuous 50W Continuous 5W Continuous	(programmable from 10W to 100W) (programmable from 5W to 50W) (programmable from 1W to 5W)			
	VHF/UHF	800mHz			
FM Hum and Noise	-50dB (NB), 55dB (W	VB) -50dB (NB), 53dB (WB)			
Conducted/Radiated Emissions	-36dBm to 1GHz	-20dBm to 9GHz			

RECEIVER				
Sensitivity	0.25 _µ V (-119dBm)			
Spurious Response	≥100dB			
	VHF/UHF	800mHz		
Intermodulation	80dB (NB), 85dB (WB)	80dB (NB), 85dB (WB)		
Selectivity	85dB (NB), 90dB (WB)	79dB (NB), 84dB (WB)		
Ultimate Signal to Noise	45dB (NB), 53dB (WB)	43dB (NB), 47dB (WB)		

 $^{^{\}ast}$ Mid bandwidth is only available in 380-520MHz.

To operate Tx deviation >2.5KHz in 150-174&421-470MHz a software feature license must be enabled.

Authorized Partners

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.

*Contact your local Tait representative for more information.

For further information please check with your nearest Tait office or authorized dealer.

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Tait Limited facilities are certified for ISO9001:2008 (Quality Management System), ISO14001:2004 (Environmental Management System) and ISO18001:200 (Occupational Health and Safety Management System) fc 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 ISO9001:2008.





