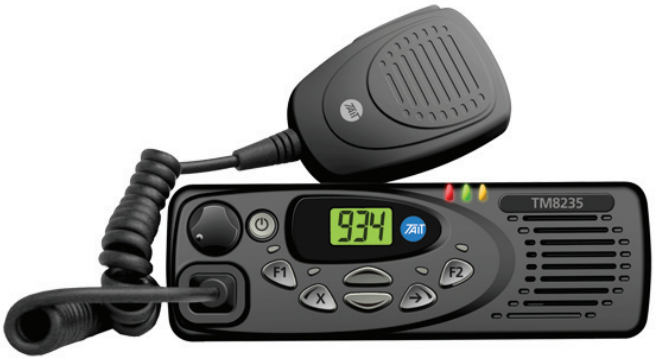
TAIT radio communications

TM8235

SPECIFICATIONS



TM8235 DUAL MODE MOBILE RADIO

The TM8235 is a reliable and easy-to-use full fleet access MPT 1327 radio with conventional channel mode - representing a cost-effective and versatile communications solution.

Intuitive interface

- Easy-to-read LCD display enables three-digit dialling for large fleet access (0-999)
- Programmable function keys
- Optional keypad microphone for enhanced dialling capability

Flexible communications

- 100 conventional channels with built-in CTCSS and DCS
- Built-in MAP27 interface as standard
- 100 preset calls - programmable to PSTN and PABX numbers as well as conventional channels
- Multiple network capability - up to four different trunked networks
- Voice inversion scrambling
- Fast change over from conventional to MPT 1327

Advanced system integration capabilities

- Multiple auxiliary ports and expansive internal options area
- Direct Connect GPS

Fast switch between modes

Because the automated switch between trunked and conventional modes takes place in 1.5 seconds, precious time is saved in possible emergency situations.

Engineered to be tough

The TM8235 exceeds stringent reliability specifications, including MIL-STD 810 C, D, E, F and IP54.

Software feature upgrades

The Software Feature Enabler (SFE) allows users to upgrade with additional functionality at any stage by simply purchasing the appropriate software license key.

Improved data integrity

The application of Digital Signal Processor (DSP) technology optimises RF performance and ensures fast and reliable data processing.

Ease of integration

The system integrator has maximum design flexibility with multiple ports for auxiliary connectors and a large options board area. The comprehensive third party developer's kit provides integrators with hardware and software tools to facilitate customisation.

AVL support

The TM8235 supports a standard polling vehicle location format and a direct connect port for an external GPS receiver – allowing for the development of a complete AVL solution.

TM8235 Specifications

General

	Band	Operational Frequency	Transmit Power+
VHF	A4	66–88MHz	25W
	B1	136–174MHz	25W
	B1	136–174MHz	50W
	C0	174–225MHz	25W
	D1	216–266MHz	25W
UHF	G2	350–400MHz	40W
	H5	400–470MHz	25W
	H5	400–470MHz	40W
	H6	450–530MHz	25W
	H7	450–520MHz	40W

		Transmit	Receive	
700/800MHz	K5	762–776MHz	762–776MHz	
		792–825MHz		35W (>806MHz)
		850–870MHz	850–870MHz	30W (<806MHz)

Frequency Stability	±1.5ppm
Channel/Network Capacity	4 MPT 1327 Trunked Networks 100 Conventional Channels (simplex or semi-duplex) 10 Scan/Vote Groups
Power Supply	10.8–16VDC
Channel Spacing	12.5/20/25kHz
Channel Increment	7.5/12.5/15/20/25/30kHz
Dimensions (DxWxH)	
25W	175 x 160 x 51mm (6.9 x 6.3 x 2.0in)
30/35/40/50W	195 x 160 x 51mm (7.7 x 6.3 x 2.0in)
Weight	
25W	1.3kg (45.9oz)
30/35/40/50W	1.5kg (53oz)
Operational Temperature	-30°C to +60°C (-22°F to +140°F)
Sealing	IP54
RF Connector	50 ohm BNC or Mini UHF
Interface Connectors	3 Interface Connectors with Serial Ports
Internal Speaker Output	>3W

Military Standards 810 F*

Applicable MIL-STD	Method	Procedure
Low Pressure	500.4	2
High Temperature	501.4	1, 2
Low Temperature	502.4	1, 2
Temperature Shock	503.4	1
Solar Radiation	505.4	1
Rain	506.4	3
Humidity	507.4	1
Salt Fog	509.4	1
Dust	510.4	1
Vibration	514.4	1
Shock	516.5	1, 6

* ALSO MEETS EQUIVALENT SUPERSEDED MIL-STD 810 C, D & E.

Transmitter

	VHF/UHF (TIA/EIA)	700/800MHz (TIA/EIA)
Output Power		
25W	25W, 12W, 5W, 1W	
30W		30W, 15W, 5W, 2W
35W		35W, 15W, 5W, 2W
40W UHF	40W, 20W, 15W, 10W	
50W VHF	50W, 25W, 15W, 10W	
Modulation Limiting		
12.5kHz	±2.5kHz	±2.5kHz
20kHz	±4kHz	±4kHz
25kHz	±5kHz	±5kHz
FM Hum and Noise		
12.5kHz	-38dB	-33dB
20kHz	-41dB	-38dB
25kHz	-43dB	-40dB
Conducted/Radiated Emissions	-36dBm < 1GHz -30dBm > 1GHz	< -30dBm to 8GHz
Audio Response Bandwidth	300Hz–3kHz	300Hz–3kHz
Audio Response	Flat or pre-emphasised	Flat or pre-emphasised
Audio Distortion	< 3% at 1kHz 60% deviation	< 3% at 1kHz 60% deviation
Transmit Rise Time	20ms	20ms
Duty Cycle		
25W	33%	
30/35W		20%
40/50W	20%	

Receiver

	VHF/UHF (TIA/EIA)	700/800MHz (TIA/EIA)
Sensitivity	<-118dBm (0.28 µV) for 12dB SINAD	-120dBm (0.22µV) for 12dB SINAD <-116dBm (0.35µV) for 20dB SINAD
Intermodulation	75dB	82dB
Selectivity		
12.5kHz	65dB	67dB
20kHz	70dB	75dB
25kHz	75dB	79dB
Spurious Responses	75dB	> 90dB**
Hum and Noise		
12.5kHz	-40dB	-44dB
20kHz	-41dB	-47dB
25kHz	-43dB	-48dB
Audio Response Bandwidth	300Hz–3kHz	300Hz–3kHz
Audio Response	Flat or de-emphasised	Flat or de-emphasised
Audio Distortion	< 3% at 1kHz 60% deviation	< 3% at 1kHz 60% deviation

**Meets class A except 1/2 IF at bottom 4MHz of 700MHz sub-band (69dB) and TOP 4MHz of 800MHz sub-band (66dB).

TELARC ISO 9001 REGISTERED

TELARC CERTIFIED ENVIRONMENTAL MANAGEMENT SYSTEM

All values quoted are typical. Specifications are subject to change without notice and shall not form part of any contract. They are issued for guidance purposes only. Some features are enabled but can depend on network deployed. + Please note that not all frequency bands and power outputs are available in all markets. For further information please check with your nearest Tait authorised dealer or at www.taitworld.com.

AUTHORISED DEALER