



TM8235 DUAL MODE MOBILE RADIO

The TM8235 is a reliable and easy-to-use full fleet access MPT 1327/1343 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 dialing 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
- Type 99 (2-tone) decode
- Voice inversion scrambling

Advanced system integration capabilities

- Multiple auxiliary ports and expansive internal options area
- Direct Connect GPS
- Optional third party developers kit

TM8235

SPECIFICATIONS

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 optimizes 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 customization.

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	
	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	
	700/800MHz	K5	Transmit 762-776MHz 792-825MHz 850-870MHz	Receive 762-776MHz 850-870MHz
			30W (<806MHz)	35W (>806MHz)
900MHz ⁺	L3	896-941MHz	935-941MHz 30W	
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 30/35/40/50W			
Weight	6.9 x 6.3 x 2.0in (175 x 160 x 51mm)			
	7.7 x 6.3 x 2.0in (195 x 160 x 51mm)			
Operational Temperature	45.9oz (1.3kg)			
	53oz (1.5kg)			
Sealing	IP54			
RF Connector	50 ohm BNC or Mini UHF			
Interface Connectors	3 Interface Connectors with Serial Ports			

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

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-emphasized	Flat or pre-emphasized
Audio Distortion	< 3% at 1kHz 60% deviation	< 3% at 1kHz 60% deviation
Transmit Rise Time	10ms	10ms
Duty Cycle		
25W		
30/35W		20%
40/50W	20%	

Receiver**

	VHF/UHF (TIA/EIA)	700/800MHz (TIA/EIA)
Sensitivity	0.28 µV (<-118dBm) for 12dB SINAD	0.22µV (-120dBm) for 12dB SINAD 0.35µV (<-116dBm) 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-emphasized	Flat or de-emphasized
Audio Distortion	< 3% at 1kHz 60% deviation	< 3% at 1kHz 60% deviation

Regulatory Data

	Frequency	FCC Description	IC Description
25W	136-174	CASTMAB1C	737A-TMAB1C
	216-266	CASTMAD1C	
	400-470	CASTMAH5C	737A-TMAH5C
	450-530	CASTMAH6C	737A-TMAH6C
35W	806-869	CASTMAK5D	737A-TMAK5D
40W	400-470	CASTMAH5D	
	450-520	CASTMAH7D	
50W	136-174	CASTMAB1D	



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1-800-890-8248 CAN

* Also meets equivalent superseded MIL-STD 810 C, D & E.

** Meets class A except where indicated.

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

* Pending approval. Please contact Tait for further information.

All values quoted are typical. Tait is your complete supplier of radio communications equipment offering mobile, portable and infrastructure solutions. Tait is renowned for its flexibility, responsiveness and commitment to producing innovative world-class mobile radio communications products.

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