TM8235
SPECIFICATIONS

Flexible, reliable and user friendly.

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.

KEY FEATURES

- Easy-to-read LCD display shows three-digit dialling for large fleet access (0-999)
- Programmable function keys
- Optional keypad microphone for enhanced dialing capability
- 100 conventional channels with built-in CTCSS and DCS
- Built-in MAP27 interface as standard
- Data capable - supports 1200/2400 baud FFSK as standard
- Internal high speed data modem (12kbps on NB channels/19.2 kbps on WB channels) (software option)
- 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 changeover from conventional to MPT 1327
- Type 99 (2-tone) decode
- Lone Worker function to improve worker safety
- Multiple auxiliary ports and expansive internal options area
- Optional third-party developer's kit

Fast switch between modes

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

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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
		Transmit	**Receive**	
700/800MHz	K5	762–776MHz 792–825MHz 850–870MHz	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	 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)
Weight 25W 30/35/40/50W	 45.9oz (1.3kg) 53oz (1.5kg)
Operational Temperature	-22°F to +140°F (-30°C to +60°C)
Sealing	IP54
RF Connecter	50 ohm BNC or Mini UHF
Interface Connecters	3 Interface Connecters with Serial Ports

TRANSMITTER

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

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RECEIVER**

	VHF/UHF (TIA/EIA)	700/800MHz (TIA/EIA)
Sensitivity	0.28µV (<-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

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

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	

Authorized Partners

* 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).

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.

Specifications are subject to change without notice and shall not form part of any contract. They are issued for guidance purposes only.

+Please note that not all frequency bands and power outputs are available in all markets. For further information please check with your nearest Tait office or authorized dealer.

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ISO 9001
ISO 14001

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