



## TM8252 DUAL MODE DATA RADIO

The TM8252 is a dual mode MPT 1327/conventional data radio providing ultimate flexibility for system integration. With an expansive internal options area, this data radio is one of the most customisable mobile radios available.

### Flexible communication

- 1500 conventional channels available via CCDI (Computer Controlled Data Interface)
- Built-in MAP27 support
- Data capable - supports 1200/2400 baud FFSK as standard
- Internal high speed data modem (12 kbps on NB channels/19.2 kbps on WB channels) (software option)
- Full Selcall functionality
- DTMF encoder
- Low standby power consumption
- Multiple network capability
- Lone Worker function to improve worker safety

### Advanced system integration capabilities

- Multiple auxiliary ports
- Programmable inputs/outputs and audio tap points
- Third-party control head capable
- 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 emergency situations.

### Engineered to be tough

The TM8252 meets 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

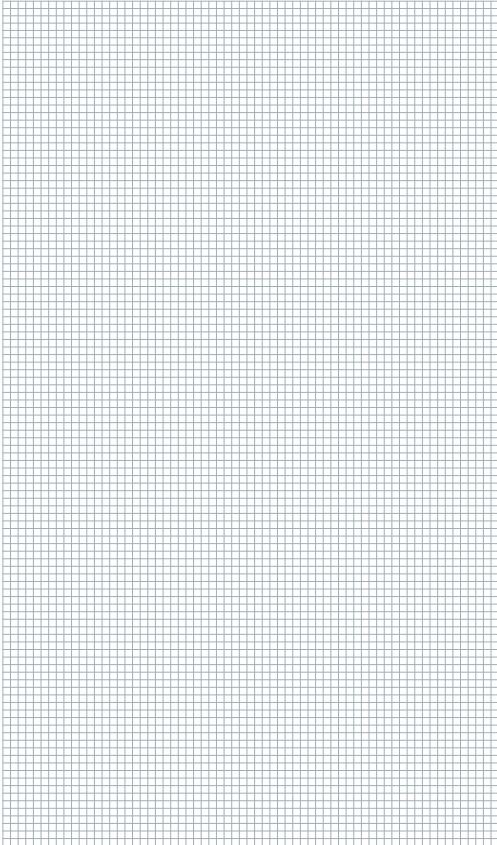
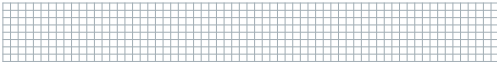
The application of Digital Signal Processor (DSP) technology optimises RF performance and ensures fast and reliable data processing.

### 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 TM8252 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.



ISO 9001  
ISO 14001

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. <sup>+</sup> 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](http://www.taitworld.com).

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# TM8252 Specifications

## General

	Band	Operational Frequency	Transmit Power <sup>+</sup>	
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	
	700/800MHz	K5	<b>Transmit</b> 762-776MHz 792-825MHz	<b>Receive</b> 762-776MHz 850-870MHz 35W (>806MHz) 30W (<806MHz)
Frequency Stability	±1.5ppm			
Channel/Network Capacity	4 MPT 1327 Trunked Networks 1500 Conventional Channels			
Power Supply	10.8 - 16VDC			
Channel Spacing	12.5/20/25kHz			
Channel Increment	7.5/12.5/15/20/25/30kHz			
Dimensions (DxWxH)	175 x 160 x 52mm (6.9 x 6.3 x 2.1in) 195 x 160 x 52mm (7.7 x 6.3 x 2.1in)			
Weight	25W 1.2kg (42.3oz) 30/35/40/50W 1.4kg (49.4oz)			
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			

## 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	1, 3
Humidity	507.4	1
Salt Fog	509.4	1
Dust	510.4	1
Vibration	514.5	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	-36dB
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 (0.28µV) 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).