TM**8105**
SPECIFICATIONS

Flexible, reliable and user friendly.

The TM8105 provides ultimate flexibility for system integration. With an expansive internal options area, this data radio is one of the most customizable mobile radios available.

KEY FEATURES

- Flexible communications
- 100 conventional channels available via CCDI (Computer Controlled Data Interface)
- Data capable - supports 1200/2400 baud FFSK data as standard
- Type 99 (2-tone) decode
- Internal high speed data modem (12 kbps on NB channels/19.2 kbps on WB channels) (software option)
- Four RF power levels
- Full Selcall functionality
- DTMF encoder
- Low standby power consumption (<80mA)
- MDC 1200 encode (software option)
- Emergency mode, stun and revive
- Advanced system integration capabilities
- Multiple auxiliary ports
- Programmable inputs/outputs and audio tap points
- Third party control head capable
- Direct connect GPS
- Optional third party developers kit

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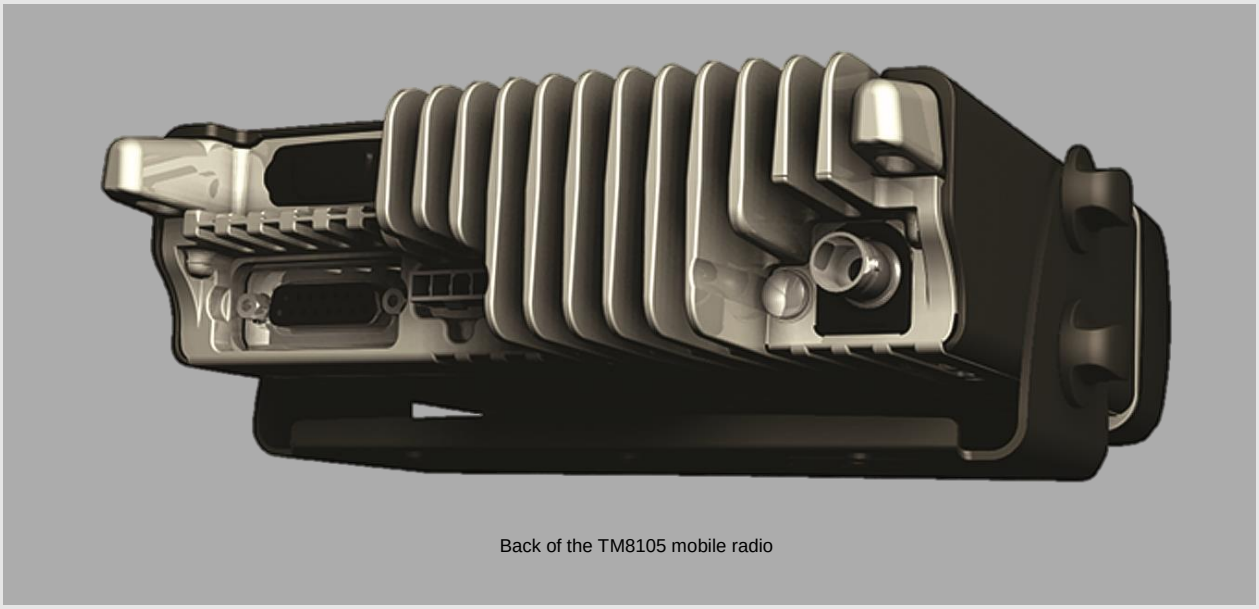

Back of the TM8105 mobile radio

FEATURES AND BENEFITS

Engineered to be tough

The TM8105 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.

AVI support

The TM8105 supports a standard polling vehicle location format and a direc 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	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	30W (<806MHz)
		792–825MHz		35W (>806MHz)
		850–870MHz	850–870MHz	
900MHz	L3	896–941MHz	935–941MHz	30W

Frequency Stability	±1.5ppm
Channel/Network Capacity	100 Channels (simplex or semi-duplex) Up to 100 channels available via CCDI
Power Supply	10.8–16VDC
Channel Spacing	12.5/20/25kHz
Channel Increment	7.5/12.5/15/20/25/30kHz
Dimensions (WxDxH)	
25W	6.9 x 6.3 x 2.0in (175 x 160 x 51mm)
30/35/40/50W	7.7 x 6.3 x 2.0in (195 x 160 x 51mm)
Weight	
25W	42.3oz (1.2kg)
30/35/40/50W	49.4oz (1.4kg)
Operational Temperature	-22ºF to +140ºF (-30ºC to +60ºC)
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	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-emphazised	Flat or pre-emphazised
Audio Distortion	< 3% at 1kHz 60% deviation	< 3% at 1kHz 60% deviation
Transmit Rise Time	10ms	10ms
Duty Cycle		
25W	33%	
30/35W		20%
40/50W	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 Response	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	514.5	1
Shock	516.5	1, 6

REGULATORY DATA

	Frequency	FCC Description	IC Description
25W	136-174	CASTMAB1A	737A-TMAB1A
	216-266	CASTMAD1A	
	400-470	CASTMAH5A	737A-TMAH5A
	450-530	CASTMAH6A	737A-TMAH6A
35W	806-869	CASTMAK5B	737A-TMAK5B
40W	400-470	CASTMAH5B	
	450-520	CASTMAH7B	
50W	136-174	CASTMAB1B	

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.

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.

TELARC REGISTERED Quality ISO 9001

TELARC REGISTERED Environment ISO 14001

HEALTH & SAFETY verification BS 18001 Certified

