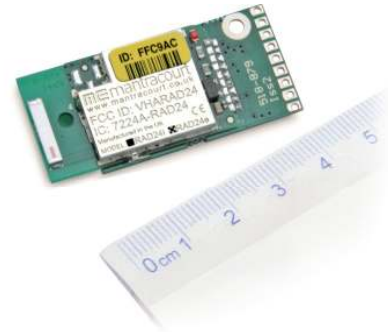


Wireless Telemetry Potentiometer Acquisition Module

Features



- Miniature acquisition module for potentiometer related measurement
- Creates wireless potentiometer measurement
- Exceptionally low power for long battery life
- Transmits on license free 2.4GHz
- Remote 'on' and 'off' to preserve battery life
- 100 / 200m range depending on Antenna
- Simple configuration and calibration via PC using Free Telemetry Toolkit Software
- User calibration to provide any standard engineering unit output for given input



Introduction

The T24-RA radio potentiometer acquisition module is a high performance PCB designed for collection and processing of related measurement. The module measures the resistance and periodically transmits it. Between transmissions the device is optionally placed in a power saving sleep mode to conserve batteries.

Miniature in size, the PCB transmits on license-free 2.4GHz, avoiding local radio interference to ensure data integrity and security.

Data is provided in real time at variable speeds with a direct line of sight range of 100 or 200 meters which can be extended with the use of high gain antenna's and repeaters.

The module's transmit to a range of receivers including handheld indicators, digital displays, analogue and serial outputs, PC display and wireless printer (please see separate sheets) and has various powering options.

Also available in IP rated enclosures.
See T24-ACM, T24-ACMi and T24-ACMm.

Specifications

General Radio

	Min	Typical	Max	Units
Licence		Licence Exempt		
Modulation method		MS (QPSK)		
Radio type		Transceiver (2 way)		
Data rate		250		K bits/sec
Radio Frequency	2.4000		2.4835	GHz
Power		1		mw
Range RAD24i (Integrated antenna)			100 (400)	Metres (feet) *
Range RAD24e (External antenna)			200 (650)	Metres (feet) *
Channels (DSSS)		16		

*Maximum range achieved in open field site with the T24 acquisition module at a height of 3 metres (9.8 feet) above ground and T24-HS held at chest height pointing towards the acquisition module. Specification at 3V supply at 25 °C

T24-RA - Embedded Potentiometer Acquisition Module

Measurement	Min	Typical	Max	Units
Sensor Excitation Voltage	2.4	2.5	2.6	VDC
Input Range	500		100,000	Ohms
Accuracy		0.01		% of full scale
Electrical	Min	Typical	Max	Units
Power Supply Voltage	2.1	3.0	3.6	VDC
Power Supply Ripple			50	mV ac pk-pk
Power Supply current	Min	Typical	Max	Units
Normal Mode (Non Low Power Mode)		35	65	mA
Standby / Low Power Mode		5	40	uA
Environmental	Min	Typical	Max	Units
Operating Temperature Range	-40		+85	°C
Storage Temperature	-40		+85	°C
Humidity	0		95	%RH
Physical				
PCB Dimensions	16.8 x 37.5 x 6.5mm			

Module Transmits & Receives giving:

1. Full error detection and correction
2. Ability to switch to low power modes
3. Calibration & configuration via radio telemetry
4. Ability to be switched from sleep to operating mode via radio
5. Calibration stored within the module
6. Remote battery check
- 7.

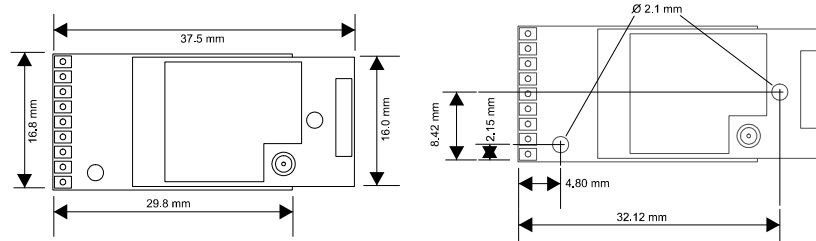
Product Order Codes

T24-RAi Wireless Potentiometer Acquisition PCB with internal antenna.
 T24-RAe Wireless Potentiometer Acquisition PCB with fitting for external antenna.

For more up to date information visit our website
www.mantracourt.co.uk/products/wireless-telemetry

Mechanical Dimensions

T24-RA -PCB Module



Approvals

CE, Complies with EMC directive. 2004/108/EC
 The Radio Equipment and Telecommunications Terminal Equipment (R&TTE) Directive, 1999/5/EC.



Industry Canada Industrie Canada



Designed Manufactured & Supported in the UK

In the interests of continued product development, Mantracourt Electronics Limited reserves the right to alter product specifications without prior notice.