

► Remote Monitor and Controller

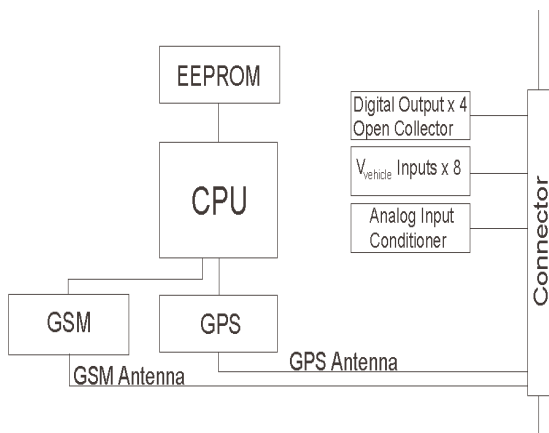
The Remote Monitor and Controller (RMC) provides an integrated solution for monitoring and controlling any electrical or electronic device by means of remote communications using SMS and GPRS.

A Global Positioning System (GPS) module is optional.

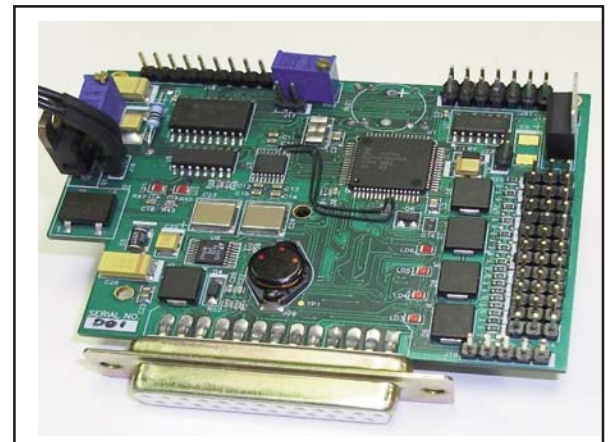
Architecture

The RMC incorporates a Global System for Mobile Communication (GSM) module, autonomous data logging to onboard non-volatile memory, digital/analogue input and digital output, real-time clock and watchdog protection. All RMC functions can be accessed using an Application Program Interface (API).

A suite of sensors provides to the RMC, after which the onboard microcontroller receives the resulting digital data, performs various calculations and transmit the data to a central collection point or to any other enabled device such as data server, personal computer or cellular telephone.



RMC Architecture



Remote Monitor and Controller

Features

- GSM V2.5 (GPRS with built-in TCP/IP stack, SMS and CSD communication options)
- up to 4 Mbit of EEPROM for the logging user or onboard data
- a powerful API providing flexible access to all onboard monitoring, control and tracking functions
- sophisticated reporting functions

Applications

- photovoltaic monitoring and control
- wind turbine generator monitoring and control
- electric and solar geyser monitoring and control
- diesel/electric generator monitoring and control
- UPS monitoring and control
- vehicle tracking
- position tracking
- irrigation pivot control
- agricultural fertiliser application control
- remote data logging using GPRS/SMS/CSD
- remote control using GPRS/SMS/CSD
- stand-alone data logging and control

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Specifications	
Serial Interface	RS232-compatible asynchronous transfer with modem control signals
GSM Module	GPRS, SMS and CSD
GSM Data Format	Serial API
EEPROM	8 kbit for event and data logging (up to 4 Mbit optional)
Analogue Inputs	12
Digital Inputs	8
Digital Outputs	4
Local Alarm Output (Buzzer)	1
Dimensions	100 mm x 80 mm x 30 mm
Power Requirements	6,6 V to 24 V; 24 W
MTBF	> 130 000 hours (MIL-HDBK-217F, Ground Benign)
MTTR	< minutes
Supporting Software	Sample serial API user application software (C/C++ source code)

GPS Option	
GPS Receiver	L1 frequency, C/A Code, 16 Channels
GPS Data Format	NMEA 0183, UBX
DGPS Data Format	RTCM SC-104
GPS Update Rate	4 Hz
GPS Accuracy	Position (Standalone) : 2,5 m CEP; 5,0 m SEP Position (with DGPS) : 2,0 m CEP; 3,0 m SEP CEP : Circular Error Probability
Operating Limits	Altitude < 18 000 m, Velocity < 515 m/s, if GPS option is fitted. Either limit may be exceeded, but not both - COCOM (Coordinating Committee on Export Controls) restrictions apply.

Environmental Specifications	
Temperature - Operating - Storage	-20 C to +70 C -40 C to +85 C
Humidity	0% - 90%
Vibration - Sine - Random	2 g (peak) 10 Hz to 100 Hz 0,04 g ² /Hz at 15 Hz to 2 kHz