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ESIS
Industrial Electronics

ETM9140-1 3G Intelligent Terminal

The ETM9140-1 3G Intelligent terminal is designed for demanding industrial applications needing additional self monitoring functionality or IOs for alarm, monitoring or data logging applications.

The units are very compact and come with an RJ45 IO port, DB9 serial (RS232) and RJ 12 power input.

The units can; send SMS or IP alarms based on the state of analogue or digital inputs, log analogue or pulse inputs (data sent by IP) and monitor system information such as signal strength. In addition the units can switch digital outputs and an optional relay board is available for this purpose.

Wide operating range
Digital, Analogue or Pulse Inputs
SMS or IP Alarms
Data logging
TCP/IP Stack
Low power

Applications include:

- SMS alarm and control
- Pulse logging of rain gauges, water or electrical meters
- Automated meter reading
- ON/OFF control, eg irrigation pump

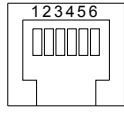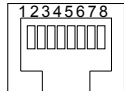| Product	ETM9140-1
Frequency Range	2G & 3G Quad-Band UMTS 800/850/900/1900/2100 MHz Quad-Band GSM/GPRS 850/900/1800/1900MHz
Dimensions - mm	105 x 56 x 25
Weight - g	100
Power Supply	+6VDC to +35VDC
Power Consumption	
Nameplate Power Consumption	600mA
Typ. Power Consumption 12 VDC - Transmitting	<250mA
Typ. Power Consumption 12 VDC - Idle	<35mA
Typ. Power Consumption 12 VDC - Sleep Mode	0.4mA
Operating Temperature Range	-20°C to +70°C
Data Transmission[1]	
- HSDPA	DL: max 14.4 Mbit/s UL: max 5.76 Mbit/s
- UMTS	DL: max 7.2 Mbit/s UL: max 2.0 Mbit/s
- EDGE	Class 12
- GPRS	Class 12
- CSD	✔
- SMS	✔
- TCP/IP	✔
Interfaces	
- RS232 Serial	9DF
- Power Connector	RJ12
- Antenna Connector	FME M
- I/O Connector	RJ45
I/O's	
- Configurable Digital Inputs	I/O 1 thru 7: LL<0.5V, HL>2.0V, Max Input ±50VDC
- Configurable Digital Outputs	I/O's 1 thru 7: LL0V, HL3V,0.1mA
- Pulse Inputs (for logging)[2]	I/O's 1, 2 & 3
- Configurable Analogue Inputs	I/O's 3,4,5,6,7: 0-2.5VDC
- Switched Power on IO7 (programmable)	✔
Logging Capability	
- Approx Logging Capacity	3000/n (where n is the number of inputs logged)
- Minimum Log Interval	1 minute
- Available Log Types	Analogue 0-2500mV (scalable) Pulse (Count) Pulse (Frequency)
Progammable Sleep Mode Available	✔
Wake up PIN for Sleep Mode	Pin 4 On RJ12 Power Input

Notes:
1. Note actual data rates limited by Serial Port Speed
2. Pulse inputs on I/O Pins 2 & 3 appear in the log file as I/O's 8 & 9.

RJ12 Connector - Power Supply

PIN	Function	Looking at Modem Socket
1	Power Supply (+6 to +35VDC)	
2	Not Used	1 2 3 4 5 6
3	Flash Download	
4	DTR (can be used as wake-up pin)	
5	Not Used	
6	GND	

RJ45 Connector – I/O

PIN	Function	Looking at Modem Socket
1	Digital I/O / Pulse Counting	
2	Digital I/O / Pulse Counting (I/O8)	
3	Digital I/O / Pulse Counting (I/O9) / Analogue Input	1 2 3 4 5 6 7 8
4	Digital I/O / Analogue Input	
5	Digital I/O / Analogue Input	
6	Digital I/O / Analogue Input	
7	Digital I/O / Analogue Input	
8	GND	

105.0

25.0

6.0

SIM Access from Bottom of Unit

9.5

56.0

10.5

6.0

Approx. 110mm

RJ45
I/O Connector

RJ12
Power Input

9DF RS232
Serial Connector

FME M
Antenna Connector

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