

miriAD

2000

Telemetry Module



Telemetry

Control

SCADA

Alarm Monitoring

The MiriAD 2000 telemetry modules represent an extremely powerful and versatile state-of-the-art product which finds application in all data acquisition and control systems. The units are designed to operate over a wide temperature range and to function reliably in harsh industrial environments. The MiriAD 2000 modules are based on the 32 bit proven processing power of the Motorola 68000 series microprocessors.

Digital and Analog I/O

Pulse Counters

Serial Interfaces to 38.4Kb

Internal Radio to 4.8Kb

Ladder Diagram interface

Data-logging

Dial up modem connectivity

GSM connectivity

SMS Messaging

External Landline Interface

Protocol Conversion

Real Time Clock

Built in Radio Diagnostics

Win 95/98, NT software

The MiriAD 2000 combines many features in a single compact package offering physical I/O, serial interfaces and multiple communications facilities in the same unit. This enables the unit to be connected to discrete field I/O as well as provide a serial interface to third party devices at the same time. The I/O is designed to accommodate a wide range of input signals. The digital inputs can range from either 10-50 Volts or from 70-130 Volts AC or DC. Pulsed inputs are also accommodated. The digital outputs come in either relay or solid state form with the relay option providing 2 form A and 2 form C outputs handling 5 amps at 240VAC. Solid state outputs are configurable in either isolated or common emitter form. There are 8 analog channels in total which are configurable as all inputs or up to four output channels. The analog input range is on-board configurable.

The product supports a number of industrial standard communication protocols as well as providing the facility to incorporate custom requirements for special applications. This allows for the integration of different third party devices and protocols into the same communications network.

Communications networking is available via the built-in data radio. Alternatively, external radios, landlines, optical fibres, Ethernet, GSM or the PSTN can be used. The MiriAD 2000 has a built-in fast data radio which can provide radio networking at up to 4.8kb via an on-board FFSK modem. Various radio frequency options are available to accommodate different band plans. A Windows programming package and internal radio diagnostics are another feature of the MiriAD 2000. A dial-up facility is also available via an on-board PCMCIA modem or external dial up or GSM modems.. The MiriAD 2000 can act either as a master or slave unit. Each telemetry module also has the inherent ability to store and forward data.

On-board logic functions provide the facility for local control and data processing via a Ladder Diagram programming interface. Function blocks include Boolean logic, Timers, Counters, Data Move & Bit Shifting, Arithmetic and Maths (including floating point) and custom function blocks are also available for functions such as flow, linear scaling, rate calculations, averaging etc. The in-built 4Mbit Flash RAM also allows local data-logging of I/O and variables periodically or on event.

16 Digital Inputs

There are two ranges of input voltage available : -

10 - 50 Volts AC/DC	Impedance 10k
50 -130 Volts AC/DC	Impedance 47k

All inputs are optically isolated to 2.5kV

Pulse Inputs

All Digital Inputs can operate as pulse counters. The first input is referred to the supply common and acts as a fast pulse counter.

Input #1	Counter to 5kHz. into 4k7
Inputs 2 - 16	Counter to 5hz.

8 Analog Inputs

The Analog Inputs are configurable as either : -

4 - 20mA / 1 - 5 Volts	Resolution - 12 bits
0 - 20 mA / 0 - 5 Volts	Accuracy - 0.1%
0 - 1 Volt	Linearity - 0.1%

4 Digital Outputs

The Digital Outputs can be configured as either : -

Isolated Relays	2 form A
	2 form C
	5 Amps @ 30VDC or 240VAC

Isolated or common ground transistors.	Current - 100mA Vcc max. - 35VDC Isolation 2.5kV.
--	---

4 Analog Outputs

The last four analog channels can be configured as outputs in 4 - 20mA form : -

Max. load resistance - 250 ohms
Resolution - 16 bits
Accuracy - 0.1%
Linearity - 0.1%

Please note that the Analog Output facility is an optional extra and is not included in the standard model.

miri
technologies

P.O. Box 1116, Wangara, Western Australia, 6947
30 Buckingham Drive, Wangara, Western Australia, 6065
Email : miri@miri.com.au
Web : <http://www.miri.com.au>
Tel : (61 8) 9409 8998 Fax : (61 8) 9409 9229

Communications

Internal Radio

450 - 460MHz band
471MHz band
800 - 900MHz band

Modulation is FFSK 2400 or 4800 baud.
Others frequency bands available on request.

External Radio

4 wire FFSK interface 2400 or 4800 baud
or RS232 interface to 38.4 kb

RS232 Port

RS232 interface to 38.4kb via any supported protocol.

PCMCIA port

Supports : - Dial-up Modem
Additional Serial Interface card

Protocols

The MiriAD 2000 supports many standard third party products and protocols including : -

Allen Bradley AB5 & SLC500 (DF1)
DNP3
GE Fanuc CCM
Greenspan Smart Sensor
Koyo 205, 305, 405.
Modbus
SDI-12
Simatic 305,405
TI 305, 405, 505.
TI Task Codes (545)

Custom requirements may be accommodated on request.

General

Power Supply

10.5 - 15 Volts DC (24VDC available)
200mA idling current (including data radio)
1.5A max. peak current on transmit.

Operating Temperature range

-10 to +70 degrees C.

Dimensions

202 x 178 x 60 mm
mounting by custom mounting plate supplied

Weight

960 grams (including data radio)