Modbus / TCP Remote Digital I/O Module
RIO-2010

Features
- Web based remote I/O monitoring and control
- Web server and web interface ready
- Modbus, AJAX, MQTT
- Stand-alone alarm relay control and email alert
- Periodically data and event publishing to server (broker) via MQTT
- 8x Relay Out Form A or Form B relay with contact rating 30VDC@1A or 125VAC@0.5A
- 16 x isolated digital input and 3x Maxim 1-wire temperature measurement
- 1x 10/100Mbps Ethernet Port

H/W Specifications

CPU / Memory
- CPU: NXP Arm Cortex-M3 LPC1768 100MHz
- Memory: 512KB on-chip Flash, 64KB SRAM

Network Interface
- Type: 1 x 10/100Mbps, RJ45 connector
- Protection: 1.5kVrms magnetic isolation

RS-485 Interface
- Isolation Protection: 2500Vrms
- Direction Control: Auto, by hardware
- Connector: Terminal block
- Baud Rate: 1.2~460.8Kbps
- Parity: None, Even, Odd, Mark, Space
- Data Bits: 5, 6, 7, 8
- Stop Bits: 1, 1.5, 2

Digital Input
- No. of Channels: 16
- Photo Isolation (AC in): 2500Vrms
- Logical High: 5~24VDC
- Logical Low: 0~1.5VDC
- LED Indicators: Yes

Relay Output
- No. of Channels: 8
- Contact Rating: 30VDC@1A or 125VAC@0.5A
- LED Indicators: Yes

Maxim 1-Wire Interface
- No. of Channels: 3
- Connector: 3-pin header (VDD, DQ, GND)

General
- Temperature Sensor: Maxim DS18B20 (optional accessory 91-6DS18-001)
- Temperature Range: -55°C~125°C
- Accuracy: ±0.5°C
- Power Input: +9~+48VDC
- Power Consumption: 12VDC@220mA(max.), 12VDC@55mA(min)
- Dimensions (W x H x D): 182 x 118 x 36mm (7.16x4.64x1.42in)
- Operating Temperature: 0~70°C (32~158°F)

Access Control Guidelines

Default Access Ports
- Modbus / TCP Port: 502
- Telnet Console Port: 5001
- HTTP Port: 5003

Access Through Modbus Protocols
- Modbus / TCP via LAN interface
- Modbus / ASCII, Modbus / RTU via RS-485 interface

Access Through HTTP GET / POST Protocols
- AJAX-enabled demo page for up-and-running web-based monitoring and controls

Ordering Information

RIO-2010
- Modbus / TCP Remote Digital I/O Module
- Programmed Resolution 1-wire Digital Thermometer
- 110~240VAC to 12VDC 1A Power Adapter