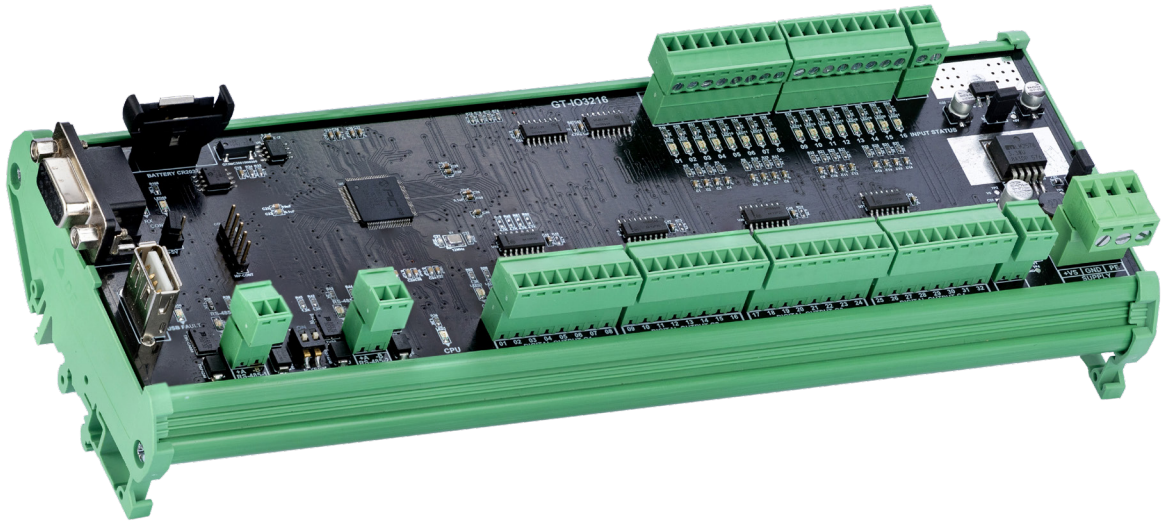
GT-IO3216
Modbus I/O Controller Board

GPT
Optimize Your Automation



CE

Unit Description

The GT-IO3216 is Modbus I/O Controller under brand GRO PRO TECH. It is designed to control contact with 32 ch. of Digital Output and 16 ch. of Digital Input monitor with Isolated-Optocoupler. The RS-485 x 2 port as Modbus RTU protocol it is Slave Mode for communicate Modbus Master such as PLC/Server and another one it is Modbus Master for interface with Slave Node, ex.Modbus Sensor.

Moreover, the GPT-SmartLink in-house software for Setting, Control and Monitoring. So that, It is convenient to use and develope with your automation system.

Typical Application

- Slave communicate in remote or Local site with SCADA / RTU System, ex. GT-4000R compact RTU
- Support Remote and Local Monitoring and Control via any Master Modbus Board
- Industry standard protocols of Modbus as master and slave
- Control and Monitoring in Utilities, Industrial factory or Agriculture, ex. Water management
- Standalone Schedule output control with Onboard Clock and digital input monitoring system
- Environment Monitoring, ex. Modern IoT sensor with Modbus RTU interface.

Feature and Solution

- High Performance for rapid control and monitoring with 32bit Microcontroller base
- On board Real Time Clock and EEPROM for System Clock Syncronize and Setting Store
- Industrial Grade with IEC and EN for Complied to CE standard
- 1 x RS-232 , Modbus RTU for Configuration
- 2 x RS-485, Modbus RTU for Control and Monitoring
- On board 16 x Digital Input with Opto-Isolated for Logic Input / Signal Trigger and Pulse
- On board 32 x Digital Output with Opto-Isolated, It can setting for Latching or General Coil output.

GT-IO3216

SPECIFICATION

PERFORMANCE	
Processor	Microchip 32 Bit high-performance microcontroller 96MHz
Nonvolatile Memory	1024 Mbit
Clock	Internal Real Time Clock with Battery Backup / Sync. with GT-4000R
COMMUNICATION	
RS-232	1 x RS-232
	Protocol Modbus RTU Slave
	Connecter : DB9 (Female) With Screw
RS-485	2 x RS-485: Ch.1 & Ch.2
	Protocol Modbus RTU Slave and Master (Configurable)
	Enhanced ESD protection: IEC 61000-4-2
	Support Modbus Slave 32 Node
PERIPHERAL	
Digital Input On Board	16 Channel / Input 100mA (max) / Isolated-Optocoupler
	Input Status from Dry Contact / NPN Open Collector
	Selecable Input Type, Ligic / Signal Trigger / Pulse
Digital Output On Board	32 Channel / Open Collector 500mA (max)/ Isolated-Optocoupler
	16 Output for Latching Relay and 32 Output for General Relay
	External Output Contactor, ex. Latching Relay GT-RY08L-D
EXTENSION INTERFACE	
Master Controller	RS-485 : Compact RTU GT-4000R
	RS-485 : Master Modbus Controller or SCADA with Modbus RTU
Sensor Monitoring	RS-485 : Sensor Modbus RTU Maximum 8 Node.
Wireless Communication	Support Modbus RS-485 to Wireless Converter (option)
SOFTWARE INTERFACE	
GPT-SmartLink™	The Software Monitoring and Setting with GT-4000R / GT-IO3216
Main / Software Interface	Modbus RTU Protocol
General Modbus RTU	Support Standard Modbus RTU software

GT-IO3216

SPECIFICATION

FEATURE	
Digital Input Status	Off, On and Event (Alarm)
Digital Output Counter	Output Run Hour for Record Life Time of “ON” Status
System Ouput Mode	Automatic and Manual System Mode can select by Modbus RTU
Automatic System Mode	Ouput Control with Schedule Plan and Sensor Trigger (Configurable)
	8 Time Schedule Plan per 1 Output Channel
	IO Mapping with Output Control Mode
	Standalone operation with setting value
Manual System Mode	Output Control with Modbus Protocol
Operation Status	On / Off / Alarm (Data Event) in Modbus Rigister
POWER SUPPLY	
Voltage Input Range	12 - 24 VDC
Max. Input Current	0.55 Adc
Operating Temperature	-10°C to +70°C
Over Current Protection	Onboard 0.60 A with Polyswitch
Earthing Protection	Terminal on Board
I/O Power Supply	External Power Supply
MECHANICAL	
Mounting	DIN Rail Holder
Dimension	(W)85mm. x (L)240mm. X (H)50mm.
STANDARDS / DIRECTIVES	
CE	In conformance with EMC Directive 2004/108/EC and Low Voltage Directive 2006/95/EC
EN IEC 61000-6-2 note1,2	Immunity for industrial environments (Industrial Grade)
EN IEC 61000-6-4 note1,2	Emission for industrial environments (Industrial Grade)
EN IEC 61000-3-2 note1,3	Harmonic Emission
EN 61000-3-3 note1,3	Voltage Fluctuation

Note
1) Test with AC/DC Power Supply Delta-DRC-12V030W1RZ and AC Line Filter SCHAFFNER-FN2412-8-44
2) EN IEC 61000-6-2:2019 and EN IEC 61000-6-4:2019
3) EN IEC 61000-3-2:2019+A:2021 and EN 61000-3-3:2019+A1:2019+A2:2021