CGate-03   Modbus Devices Cloud Gateway

Ver. 2.0

- ✓ **Suitable for Modbus Devices IoT Application**
- ✓ **Cloud monitoring and cloud backup applications**
- ✓ **Active Instant Modbus Slave device Monitoring Management**
- ✓ **Actively save Modbus Slave device operation information**
- ✓ **Web instant monitoring and management functions**
- ✓ **RS-485 Modbus-RTU Slave device connection port**
- ✓ **Ethernet Modbus-TCP Slave device connection port**
- ✓ **Standard TCP/IP Network Communication Interface**

Product Features

☒ Easy Setting, Plug & Play

Just need to connect the Modbus devices to EBox-CGate and complete basic settings, CGate-03 will take the initiative and regularly to read the information and store it in SQL database. No additional program development, just through the Web Console can reach all the basic operations.

☒ Web HMI, full-featured, easy to operate(web console)

Web Console functions in CGate-03 allow users to cross-platform in different operating system (Windows、Linux, iOS…)、different hardware environment (PC、Pad、Smart Phone…)，by simply using the graphic interface displayed in built-in standard Web Browser on the host，easy to understand and easy to use，which can make real-time monitoring、settings、operating information query and upgrading operations。

☒ Active Alarm

CGate-03 could have exclusive alarm parameters for its connected devices individually. When alert occurs, it can send Email and process instant DO change as alarm notification (equipped with LLD-M13 dedicated 4ch DI+4ch DO I/O extension module) and record the alerts status in database. 。

☒ Database Architecture, easy for Cloud application

CGate-03 adopts SQL-Based database architecture，mainly store records for immediate operational status, history log and all relevant settings。 The database stored in CGate-03 can not only set initiative upload function，but also achieve the database synchronization request through standard SQL database functionality to read data from remote or cloud host, to facilitate the subsequent data analysis jobs。

☒ Add New Modbus devices by yourself

CGate-03 is used to set the Modbus Slave device by "adding" the connected device。 In addition to the built-in original connectable device menu，users can add other undefined Modbus Slave devices and their detailed parameters through the Web Console to make the connected devices more complete。

☒ Modbus-TCP Protocol (Modbus Manager)

CGate-03 can integrate the Modbus register of all connected devices into the register of CGate-03 itself。The remote monitoring host or human machine panel (HMI) can act as the Modbus-TCP Master for remote operation management。

Suitable Application

☆ Solar Power Monitoring ☆ Measurement Instruments (IoT) ☆ Saving Application ☆ Intelligent Building Environment Monitor ☆ Automatic Smart Meter Reading

Product specifications

Applications

Modbus-RTU Instant device monitoring and management

▷ Type of Connecting devices：Modbus-RTU / Modbus-TCP Slave

▷ Total monitoring points：512 (per CGate-03)

▷ Single device monitoring points：32 (each Modbus Slave device)

▷ Max. no. of connected devices@RS-485 ：8 (less than total 256 monitoring points)

▷ Max. no. of connected devices@Ethernet：16 (less than total 512 monitoring points)

▷ Monitoring：Real-time Status、Alarm Process

Web Monitoring

▷ Function：Modbus device real-time status、System Parameters setting

▷ Protection：Login password

▷ Display language：TC、English

▷ Advanced function：Firmware upgrade

▷ Remote connection：4 max.

Operation Log

▷ Content：General operation Status

▷ Capacity：1,000,000

Database Application

▷ Function：Modbus device real-time status、System record

▷ Specification：MySQL Compatible

Active Alarm

▷ Function：Email、Instant DO control、Log record

Advanced Modbus protocol application: Modbus-TCP Slave

▷ Integrating information from Modbus-RTU devices becomes the monitoring points of EBox-CGate itself

▷ Modbus-TCP Slave device integration：512 points max.

▷ Remote Modbus-TCP Master connection：4 max.

Type of Connecting Devices

User defined Modbus Slave Equipment

▷ Communication Format：Modbus-RTU、Modbus-TCP

▷ Modbus-RTU Slave Address 1~127 / UID：0~127

▷ Coil/Register：32 Max @ 1 Modbus Slave device

▷ Communication Interface：RS-485, Ethernet

▷ RS-485 Baud Rate：1,200 ~ 115,200 bps

▷ RS-485 Parity Bit：None, Even, Odd,

▷ RS-485 Data Bits：5, 6, 7, 8

▷ RS-485 Stop Bit：1, 2 bits

Hardware

▷ System Core：Broadcom BCM2837 1.2GHz (Cortex-A53)

Network Interface

▷ Quantity：1

▷ Type：10/100BaseT Ethernet

▷ Connector：RJ45

RS-485 Modbus-RTU Interface

▷ Quantity：1

▷ RS-485 Signal：Data+, Data-, GND
(Support Auto Data Direction Control)

▷ Built-in Terminal Resistor：120Ω，Set up by Jumper

▷ Protection：15KV ESD static protection, 400W Surge protection

▷ Connector：5.00mm pluggable Terminal block

Instant Alarm - Digital I/O Control (GPIO)

▷ Quantity：16 points

▷ Signal Type：3.3V CMOS

▷ Connector: 2.54mm simple box header *1

▷ Corresponding I/O Module：LLD-M01, LLD-M13

Simple Human Interface

▷ Dip Switch：2 points

▷ LED Indicator：power, network, serial port, operation Status

▷ Buzzer：1 set

Power

▷ Working Voltage：DC 9~24VDC

▷ Power Connector：5.00mm terminal block

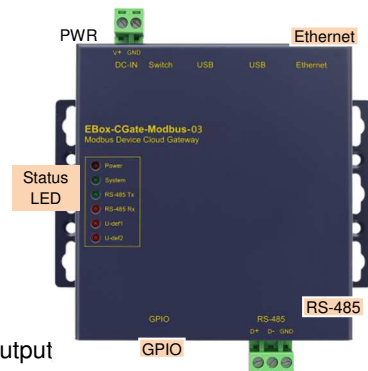▷ Power Consumption：<24W (Not include USB device connected)

Reserved Interface

▷ USB: 4 (A Type)

▷ Micro SD: 1 (need to open the case)

▷ HDMI: 1

▷ Audio output: 1

Others

▷ Cooling Fan 5VDC Output：1 (need to open the case)

▷ Real Time Clock：1 set

▷ Applicable Temperature/Humidity：0~50℃ / 20%~80% RHG

▷ Material/Dimensions：117.5 x 103.5 x 35.5mm
(fix boarder incl., terminal block excl.)

▷ Certification：CE, FCC

Exterior Schematic diagram

DIN-Rail Accessories (Optional)

DK-P01

DIO Expansion Module (Optional)

LLD-M13

Ordering Information

CGate-03 Modbus Devices Cloud Gateway

Optional Accessories

LLD-M01 8-ch Digital Input (Dry/Wet selectable) and 8-ch Relay Output

LLD-M13 5-ch Digital Input (4-ch Dry +1-ch Wet)，4-ch C-Type Relay Output I/O Expanding Module

DK-A01 3-fix points aluminum DIN-Rail Kit

DK-P01 Plastic DIN-Rail Kit