

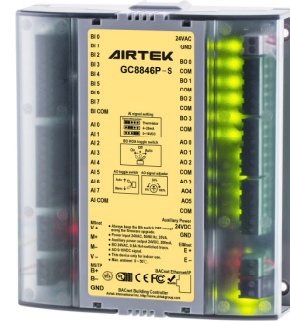
# Integration Layer Device

## BACnet Building Controller

# GC8846P, GC8846P-S

### 【Description】

GC8846P is a BACnet B-BC class listed LAN communication integration stand alone controller with router function. It is a communication bridge between workstation and field controller. Therefore It has a 100M Bases-TX Ethernet port that can communicate with operated workstation or other global controller through BACnet Ethernet or BACnet/IP communication protocol. In addition, it has an MS/TP ports can connect up to 32 sets DAC or DSC series controller and hundreds of expansion modules to form a BACnet network backbone. GC8846P equipped with BI/AI/BO/AO on-board. In addition, it has an EIMnet port can connect up to 24 EIM series of expansion modules, allowing you to expand in response to the needs of various points. Another MSnet port can connect to an external LCD control panel to make user operation and control easily at the job site.



### 【Features】

- Made in accordance with the BACnet communication protocol established by the American Heating, Refrigeration and Air-Conditioning Association (ASHRAE), and passed the BTL B-BC level certification.
- Peer to Peer peer-to-peer data transmission and sharing function and programmable, independent operation, alarm and event management, calendar, timetable, trend record, device and network management functions.
- Built-in MS/TP master and servant token communication interface, with 2,500Vrms anti-interference potential isolation design, can be connected to 32 on-site programmable controllers.
- Built-in RS-232 communication interface, through the AD-Linker connection line and hyper terminal machine program, the initial value of the equipment can be set or parameter modification.
- Digital input point (BI), with 5,000Vrms anti-interference optical coupling isolation capability and status indicator design.
- Analog input point (AI), with 16-bit resolution, can accept 3K or 10KΩ NTC thermistor, 4~20mA or 0~10VDC and other signals.
- Digital output point (BO), with 24VAC, 0.5A, hot-switched triacs (Hot-switched triacs), with 7,500Vpeak anti-interference optical coupling isolation device, status indicator light and HOA (manual/stop/automatic) switch And with the switching state feedback monitoring function.
- Analog output point (AO), with 16-bit resolution, 0~10VDC output signal, with HA (manual/automatic) switch and with switching state feedback monitoring function and manual signal output adjustment knob to facilitate on-site test run Adjustment and maintenance work is carried out.
- With online program editing, debugging, online program download and online firmware update functions.
- It has common function calculation functions such as enthalpy value, dew point temperature, PID control, and advanced mathematical function calculation functions such as logarithm, trigonometric function, and root sign.
- It has 1,000 digital software points (BV) and 1,000 analog software points (AV), which can be used as calculation values, set points, timers or warning points.
- All analog input cumulative value (AI), digital output value (BO), analog output value (AO), digital software point (BV), analog software point (AV) all have power-off memory function, which can be automatically when power is off Data can be stored in FRAM for more than 10 years.
- All BO, AO and BV points support 16-bit priority control function.
- Through the remote Internet connection, you can configure and manage various functions of the controller on the web page, and monitor and control the input and output points on the controller.

### 【Specification】

| Model     | BI | AI | BO | AO | DDC QTY | EIM QTY | Calendars | Schedules | Notification | Event | Trendlogs |
|-----------|----|----|----|----|---------|---------|-----------|-----------|--------------|-------|-----------|
| GC8846P   | 8  | 8  | 4  | 6  | 32      | 24      | 10        | 100       | 10           | 100   | 100       |
| GC8846P-S | 8  | 8  | 4  | 6  | 4       | 12      | 2         | 20        | 2            | 20    | 20        |

Power Supply : 24VAC, 35VA.

Microprocessor : 32-bit dual CPU microprocessor (MCU).

Memory : 128K +32K\*2 FRAM, 1M+128K+16K SRAM and 8M+1M+64K Flash memory.

Binary Input (BI) : 12VDC detection voltage, 5,000Vrms optical coupling isolation capability, accept dry contact or open collector input signal.

Analog Input (AI) : 16-bit resolution, can accept 3K or 10KΩ NTC thermistor, 4~20mA or 0~10VDC and other signals.

Binary Output (BO) : 24VAC, 0.5A, hot-switched triacs (Hot-switched triacs) with 7,500Vpeak anti-interference optical coupling isolation device, Status indicator light and HOA (manual/stop/automatic) switch with switching status feedback monitoring function.

Analog Output (AO) : 16-bit resolution, 0~10VDC output signal, with HA (manual/automatic) switch and with switching status feedback monitoring function

Auxiliary Power : And manual signal output adjustment knob.

Ethernet Port : 100M Ethernet communication interface, you can choose BACnet Ethernet or BACnet/IP communication layer communication mode.

MS/TP Port : RS-485 communication interface, built-in anti-interference isolator with rated isolation voltage of 2,500Vrms and maximum working isolation voltage of 560Vpeak, 32 controllers can be connected, the communication rate is 9,600/19,200/38,400/76,800 BPS can be selected, and the transmission distance is 1,200 meters.

MSnet Port : RS-485 communication interface, which can be connected to a man-machine control panel, the communication rate is 9,600/19,200/38,400 BPS optional. The transmission distance is 1,200 meters.

EIMnet Port : The RS-485 communication interface can be connected to 24 EIM.M expansion modules, the communication rate is 38,400 BPS, and the transmission distance is 1,200 meters.

Auxiliary power output : 24VDC, 200mA, for sensor use.

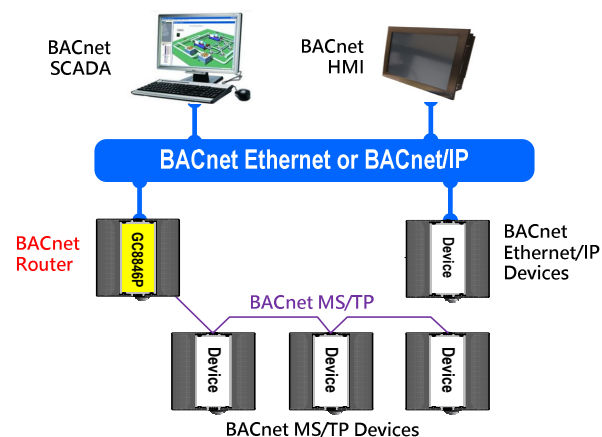
Clock : Real-time Clock, with gold capacitor power-off backup design, provides normal operation of the clock after power-off.

Environment : 0~50°C, 20~90%RH non-condensing.

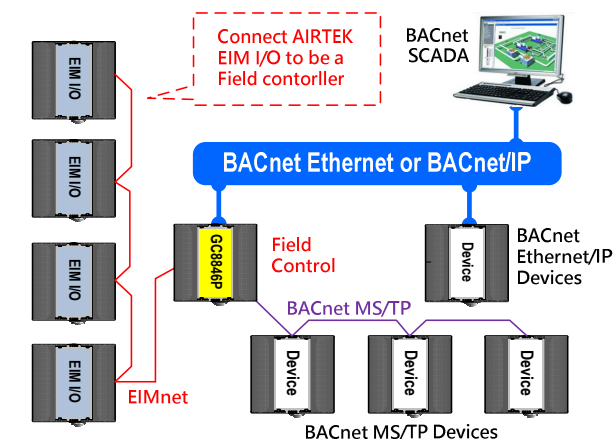
Certification : It has passed BTL (B-BC), UL916, FCC, CE certification and meets RoHS environmental protection standards.

## 【Network Architecture】

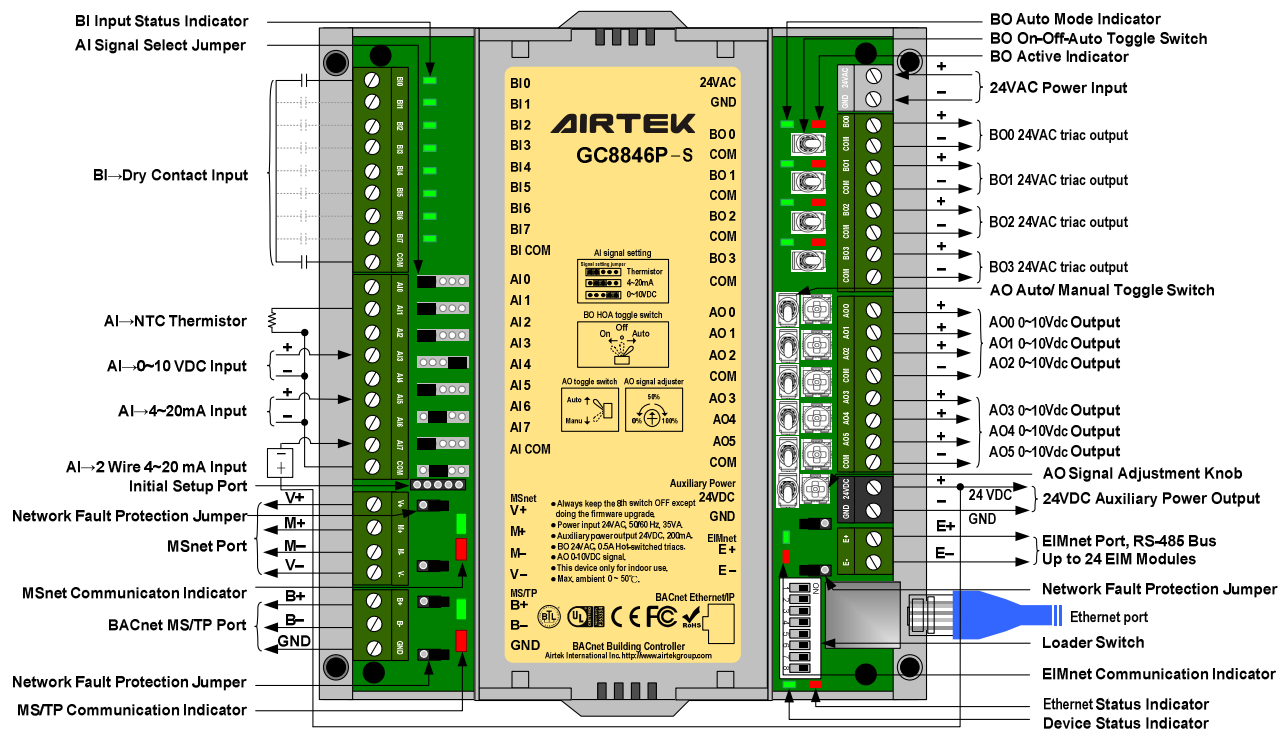
### BACnet Ethernet to RS-485 Data Router



### Field Control with EIM I/O



## 【Wiring Diagram】



## 【Dimension】 Unit : mm

