

Integration Layer Device

BACnet Web Embedded Building Controller

WC8846P-x

【Description】

The WC8846P-x is a BTL BACnet B-BC certified building controller featuring a web-embedded operating system, router functionality, programmable capabilities, and standalone operation. It supports BACnet standard objects including Schedule, Calendar, and Event enrollment. The WC8846P-x translates BACsoft software screens into web format, enabling users on corporate intranets or the internet to manage building mechanical and electrical equipment anytime, anywhere via browsers on 3C devices.



【Features】

- Developed in compliance with the BACnet communication protocol established by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), and certified as compliant with the BTL B-BC level.
 - Built-in 32-bit microprocessor with peer-to-peer data transmission and sharing capabilities, programmable and standalone operation, alarm logging, calendar, schedule, trend recording, device and network management functions.
 - Built-in Web Embedded operating system compatible with desktop computers (PC), notebook computers (NB), tablets, and smartphones. Additionally, it can be operated with AIRTEK's dedicated mobile app, providing a more convenient and comfortable operating environment and interface when monitoring the system via mobile devices.
 - Built-in MS/TP master-slave communication interface with 2,500Vrms interference-resistant potential isolation design.
 - Features online program editing, debugging, online program download, and online firmware update capabilities.
 - Features common HVAC functions such as enthalpy value, dew point temperature, and PID control, along with advanced mathematical functions including logarithms, trigonometric functions, and square roots.
 - Features 1,000 digital software points (BV) and 1,000 analog software points (AV), which can be used for calculations, setpoints, timers, or alarm points.
 - All analog input accumulated values (AI), digital output values (BO), analog output values (AO), digital software points (BV), and analog software points (AV) feature power-off memory functionality.
- Data is automatically written to FRAM during power loss and can be retained for over 10 years.
- All BO, AO, and BV points support 16-level priority control functionality.
 - When paired with the AIRTEK WC-Recorder tool, required data can be automatically converted into Excel files on a daily or monthly basis and saved to a PC. This facilitates long-term data storage and subsequent analysis applications.
 - Features email and LINE alert push notifications; different alerts can be configured to notify specific email and LINE users.
 - Features JSON data conversion functionality, enabling BACnet information within the system to be configured into corresponding JSON format for reading. This facilitates information integration between the BACnet system and third-party cloud/big data analytics software platforms.

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【Specification】

型 號	BI / AI / BO / AO	MS/TP	EIMnet	Calendar	Schedule	Notification	Alarm	Trend-log
WC8846P-A	8 / 8 / 4 / 6	32	24	20	200	20	200	200
WC8846P-A-S	8 / 8 / 4 / 6	4	12	2	20	2	20	20

【Hardware Specifications】

◆ Power Supply :

* 24VAC, 35VA.

◆ Microprocessor :

* 32-bit dual-CPU microprocessor (MCU) with
512MB DDR3/LvDDR3 SDRAM · 16GB eMMC.

◆ Digital Input(BI) :

* 12VDC detection voltage, 5,000Vrms interference-resistant
optically coupled isolation, accepts dry contact or open
collector input signals.

◆ Analog Input(AI) :

* 16-bit resolution, can accept 3K or 10KΩ NTC thermistor,
4~20mA or 0~10VDC signals.

◆ Digital Output(BO) :

* 250VAC, 7A, SPST Dry contact relay with 5,000Vrms
interference immunity optically coupled isolation, status
indicator and HOA (manual/stop/automatic) toggle switch with
toggle status feedback monitoring.

◆ Analog Output(AO) :

* 16-bit resolution, 0~10VDC output signal, HA
(manual/automatic) switch with switching status feedback
monitoring function and manual signal output adjustment knob.

◆ CONFIG :

* Built-in USB Type-C to connect to PC Super Terminal program
for device initial value setting or parameter modification.

◆ Ethernet interface :

* 100M Ethernet communication interface*4, BACnet Ethernet or
BACnet/IP communication layer is optional. A physical firewall
is required when connecting to an external network.

◆ MS/TP interface :

* RS-485 communication interface, built-in anti-interference
isolator with rated isolation voltage of 2,500Vrms and
maximum working insulation voltage of 560Vpeak, can be
connected to 4 or 32 controllers, communication rate of
9,600/19,200/38,400/76,800 BPS is selectable,
transmission distance of 1,200 meters.

◆ MSnet interface :

* RS-485 communication interface, can be connected to a
panel, communication rate 9,600/19,200/38,400 BPS
selectable, transmission distance 1,200 meters.

◆ EIMnet interface :

* RS-485 communication interface, can connect 12 or 24
EIM.M expansion modules, communication rate 38,400
BPS, transmission distance 1,200 meters.

◆ Auxiliary Power Output :

* 24VDC, 200mA · for use with sensors.

◆ Real Time Clock :

* Real-time Clock with Gold Capacitor Uninterruptible
Backup Design for normal operation after power failure.

◆ Environment :

* 0 ~ 50°C, 5 ~ 95%RH without condensation.

◆ Product Certification :

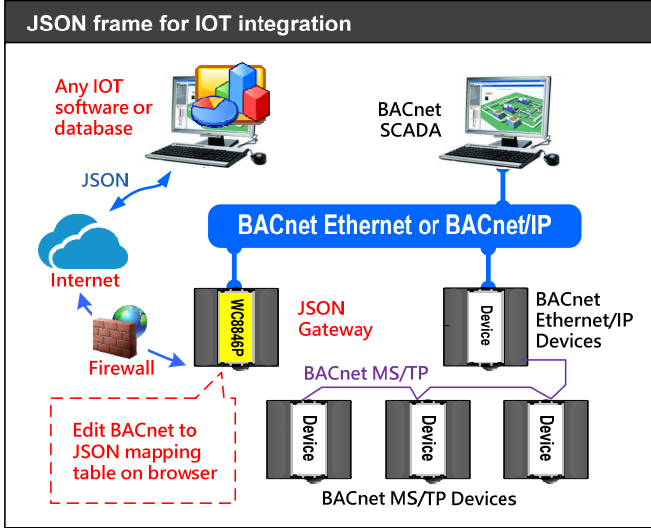
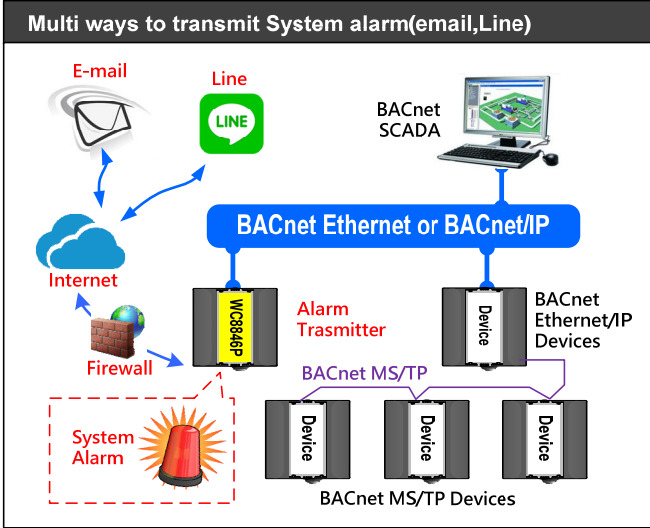
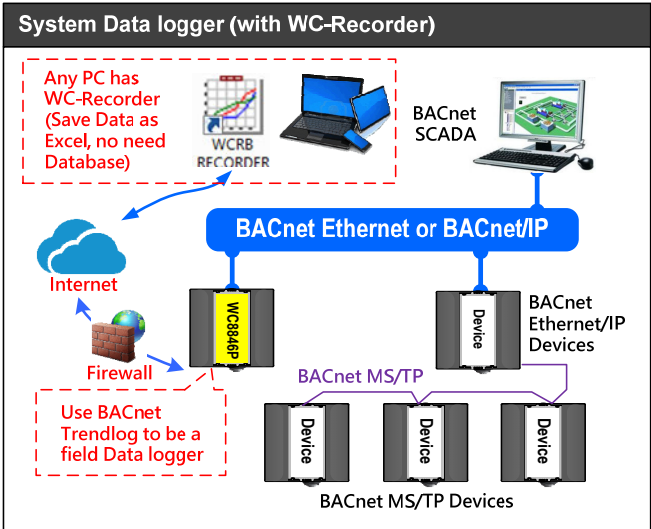
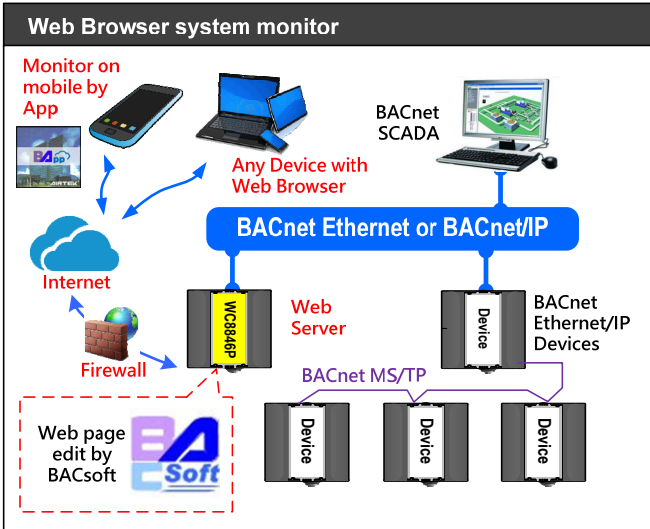
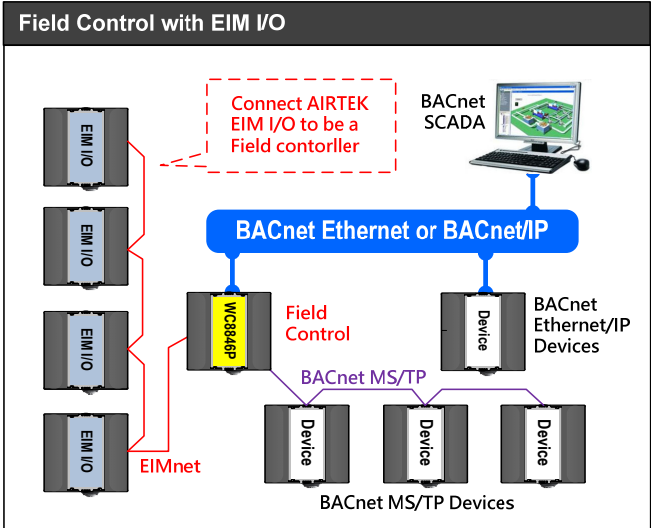
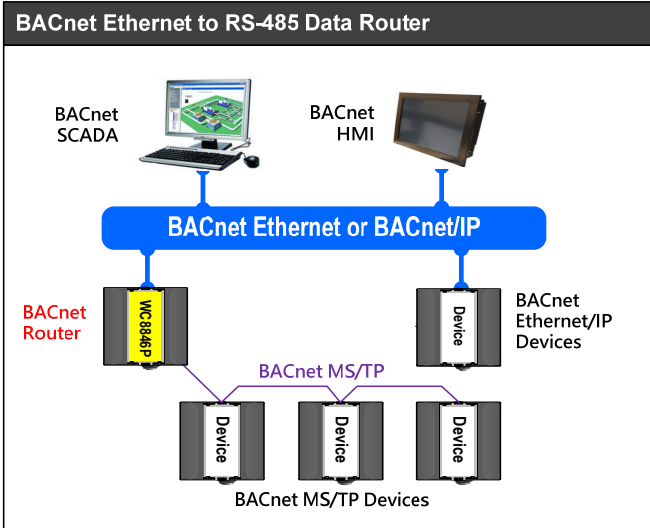
* BTL(B-BC), CE certified and RoHS compliant.

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[Network Architecture]

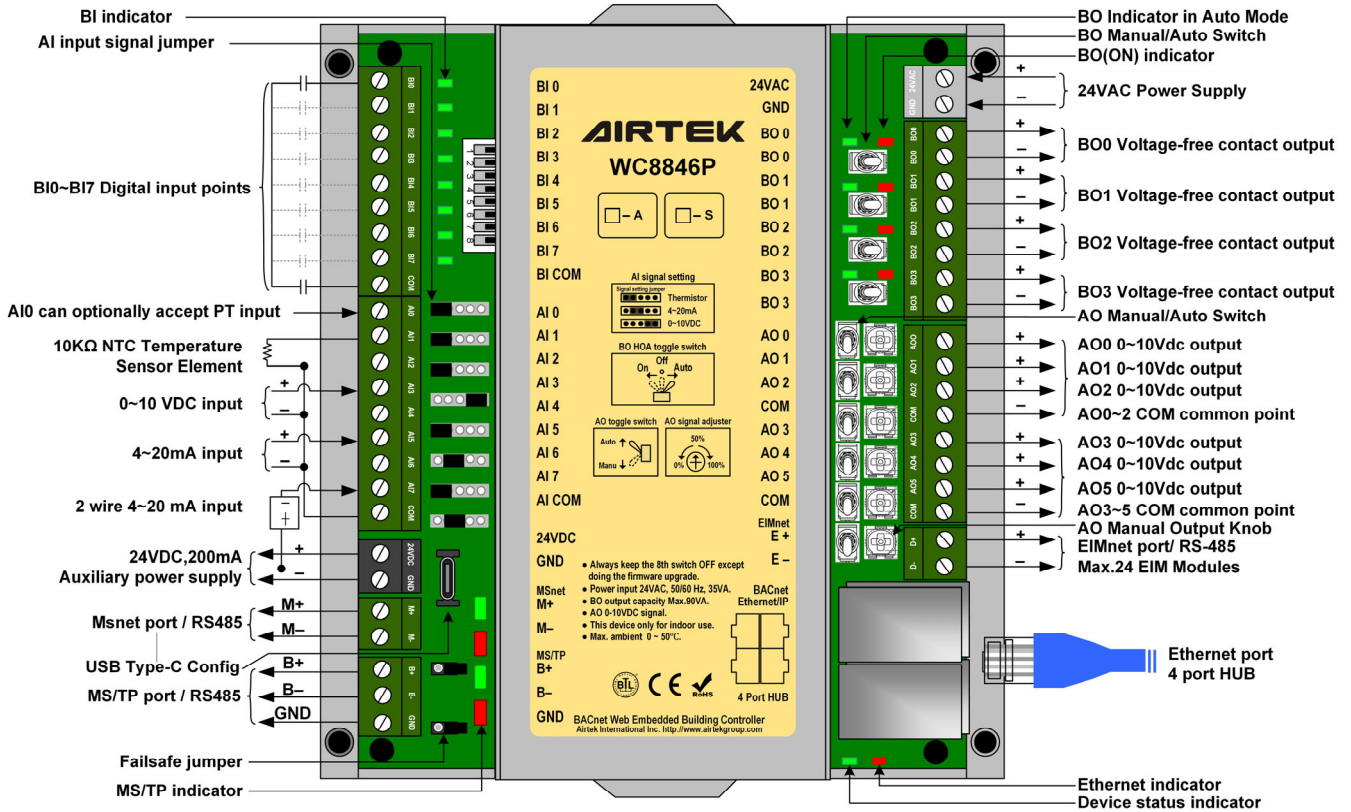


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【 Wiring Diagram 】



【 Dimension 】 Unit : mm

