

# EDGE CONTROL CONTROLLER

## Edge Control Series-ECC200

### High Performance Edge Controller

The ECC200 series network controller is a member of the edge control series family. It is a compact high-performance embedded controller, dual-core processor, more capacity. It supports multiple protocols at the same time, which is convenient for connecting remote I/O and field controller. Integrates the functions of alarm, schedule, trend log, event management and network management, complies with BACnet B-BC standard. It is an ideal choice for distributed control and management in building automation systems.

The appearance of the ECC200 inherits the classic matte black and Honeywell red family design, calm and elegant. Equipped with Linux operating system, the kernel is more efficient and stable, following Honeywell network security standards and international industrial automation control system security standards, to reduce network security risks.

Two Ethernet ports, support ring, daisy chain and star system topology, support RSTP rapid spanning tree protocol, when the network structure changes, faster network convergence, maximum utilization of network resources, and reduced system commissioning costs. while ensuring the real-time performance of the data. It has BACnet broadcast management function, (B-BBMD), to ensure each subnet network device interconnection and secure communication.

Support free programable, the upgraded programming tool inherits the original tool style, is more concise and easy to use, program can compatible with The original, support for offline simulation and more functions, improve the efficiency of engineering commissioning.



### APPLICATIONS

ECC200 series edge controllers can be used in HVAC, lighting, water supply and drainage control, power transformation and distribution in intelligent buildings

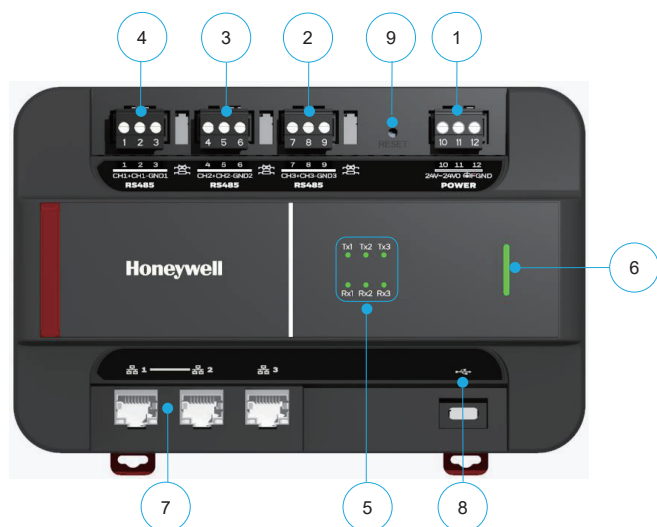
The equipment management and control of sub-systems such as commercial buildings, office , data centers, public facilities, industries, medical care, hotels, etc., to help users realize the smart and security and efficient management.

### PRODUCT CHARACTERISTICS

- Dual-core high-performance processor: Arm Cortex-A9, 800 MHz; Arm Cortex-M4 227MHz
- Random Access Memory (RAM): 1 GB
- Flash memory: 4 GB
- Operating system: LINUX / RTOS
- System Real Time Clock
- Compliant with BACnet standard, BACnet Building Controller (B-BC), BACnet routing device (B-RTR) BACnet Broadcast Management Device (B-BBMD)
- Three Ethernet ports, BACnet IP protocol, support Ring, Daisy Chain, Star topology, support RSTP.
- Three-trunks fully isolated RS485 ports, maximum isolation, Distance voltage 2500V(rms for 1 min), support BACnet MS/TP protocol, Modbus RTU Protocol (customer-defined) and EM bus extensions.
- BACnet MS/TP communication rate support: 9.6, 19.2, 38.4, 76.8, 115.2 Kbps
- Modbus RTU communication rate support: 4.8, 9.6, 19.2, 38.4, 57.6, 115.2 Kbps
- Three pairs of LED indicators for RS485 communication channel communication status
- Independent LED breathing light for quick mastering Operational status of Data Manager
- UL60730 Compliant: Automatic Action Type 1, operational control

**Honeywell**

## APPEARANCE AND TERMINAL



**Table 1**

Type	Legend	Logo	Description
Power terminal	1	GND	Connect to site ground
		24V0	Controller common terminal
		24V~	Controller (24Vac/dc)
RS485 port 3	2	CH3+	Port 3 RS485(+)
		CH3-	Port 3 RS485(-)
		GND3	Port 3 ground
RS485 port 2	3	CH2+	Port 2 RS485(+)
		CH2-	Port 2 RS485(-)
		GND2	Port 2 ground
RS485 port 1	4	CH1+	Port 1 RS485(+)
		CH1-	Port 1 RS485(-)
		GND1	Port 1 ground
LED	5	Tx1 LED (green)	RS485 port 1 to 3 send and receive instructions
		Rx1 LED (green)	
		Tx2 LED (green)	
		Rx2 LED (green)	
		Tx3 LED (green)	
		Rx3LED (green)	
RJ45 port	7	Columnar LED	Operating status indicator light
		Ethernet 1/2	
USB interface	8	Ethernet 3	10/100/1000 base-T
		TYPE-C developer debug port	
Reset key	9		Press hold for 10s to restore the factory default settings.

## Tx AND Rx LED INDICATORS

ECC200-PE1 has three pairs of transmit (Tx) and receive (Rx) LEDs, for display the transmitting and receiving status of RS485 communication.

**Table 2 Status information of RS485 LED indicator**

LED lamp status	Description
Not bright	The corresponding RS485 channel has no communication.
Tx bright	The corresponding RS485 channel is sending data
Rx bright	The corresponding RS485 channel is receiving data

## LED BREATHING LIGHT

**Table 3 Status information of LED breathing light**

LED lamp status	Description
Not bright	The product is not powered on or damaged.
Green light is always on	The product works normally
Green light is flashing	During the configuration file download process
Red, green and yellow are alternating	During the product startup process

## ETHERNET INTERFACE

Ethernet 1 and 2 RJ45 ports, 10/100Mbps adaptive, default IP: 192.168.1.97, supporting star and daisy chain connection, and ring redundant link connection.

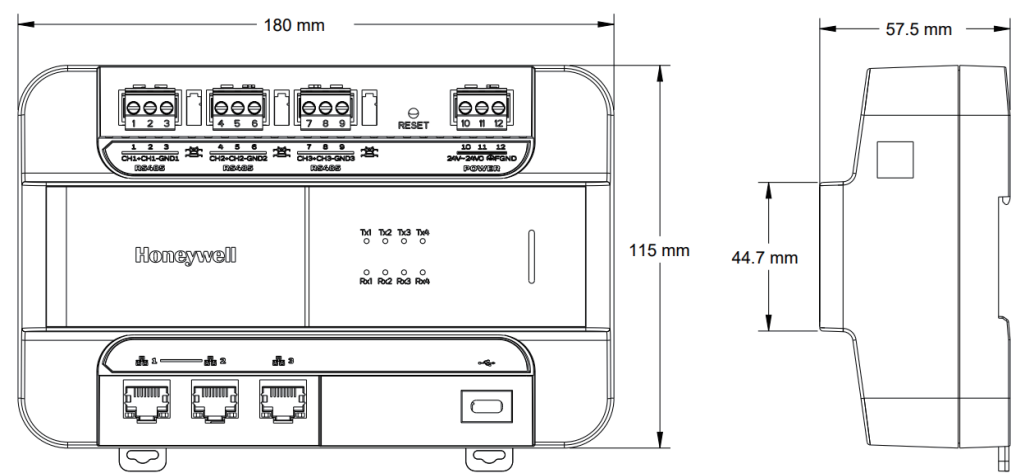
Ethernet 3 RJ45 ports, 10/100/1000Mbps adaptive, default IP: 192.168.2.97. Support MQTT.

*Recommend to use CAT5e for cabling.*

# TECHNICAL PARAMETER

Product model	ECC200-PE1			
Hardware parameters				
Central processing unit (CPU)	Dual-core: Arm Cortex-A9 main frequency: 800 MHz; Cortex -M4 frequency: 227MHz			
Operating system	LINUX / RTOS			
Random Access Memory (RAM)	DDR3L: 1 GB			
Flash memory	EMMC : 4 GB			
Real time clock accuracy	+/- — 2.63 minutes/year (+/- — 0.43 seconds/day)			
Real-time clock power-down holding time	72 hours			
BACnet Object	2000 points			
System data				
Operating voltage (AC)	19 to 29 Vac (50/60Hz)			
Operating voltage (DC)	19 to 29 V DC			
Overvoltage protection	Maximum overvoltage protection 29V AC or 40V DC. Terminals have short-circuit protection.			
Power consumption	5 W / 13 VA @ 24 VAC; 5 W@ 24 VDC;			
Standard				
Protection grades	IP20			
Test rules for electronic products	IEC68			
Certification and standards	CUL60730-1 UL60730-1 EN60730-1 CE RoHS 2.0 IEEE 802.3 BTL B-BC , B-RTR, B-BBMD (Rev 18)			
System transformer	The system transformer must be a safety isolation transformer conforming to IEC 61558-2-6. In America and Canada, NEC Class 2 transformers must be used.			
Working environment				
Ambient working temperature	0 to 50 ° C (32 to 122 ° F)			
Working humidity	5 to 95% relative humidity (no condensation)			
Storage temperature	-28.9 to +70 ° C ( — 20 to 158 ° F)			
Storage humidity	5 to 95% relative humidity (no condensation)			
Dust, vibration	Comply with EN60730-1			
Controller parameters				
Protocol	Maximum number of devices per trunk	RS485-1	RS485-2	RS485-3
BACnet MS/TP	64 ( load > 24kΩ)	YES	YES	YES
Modbus RTU	31 ( load > 12kΩ)	YES	YES	YES
EM extension IO module	Max. 16	YES	YES	YES
RS485 trunks	Three-trunk fully isolated RS485 ports, maximum isolation voltage 2500V (rms for 1 min)			
Ethernet	Three Ethernet ports, BACnet IP protocol, support Ring, Daisy Chain, star topology, support RSTP(Rapid Spanning Tree Protocol), Support MQTT for connected platform.			
BACnet MS/TP communication rate:	9.6, 19.2, 38.4, 76.8, 115.2 Kbps			
Modbus RTU communication rate:	4.8, 9.6, 19.2, 38.4, 57.6, 115.2 Kbps			
Automated management function (BACnet B-BC)				
Alarm	Dynamically create standard BACnet trend alarm objects, ≥400 Records.			
Schedule	Dynamically create standard BACnet trend schedule objects, ≥150 Records.			
Calendar	Dynamically create standard BACnet trend calendar objects, ≥100 Records.			
Trend Log	Dynamically create standard BACnet trend log objects, ≥400 Records.			

DIMENSIONS (MM)



ORDERING INFORMATION

Model	Product Description
ECC200-PE1	Edge network controller, dual-core high-performance processor, larger capacity; Three ethernet interfaces, support multiple Topological and rapid spanning tree protocol; three RS485 fully isolated trunks, support BACnet MS/TP protocol or Modbus RTU protocol and EM bus. BACnet standard building control(B-BC), including alarm, schedule, calendar, and trend log functions; supports BACnet broadcast Management device (B-BBMD) function and BACnet routing(B-RTR) function, Support MQTT for connected platform.

For more information

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FUTURE  
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WHAT  
WE  
MAKE IT

