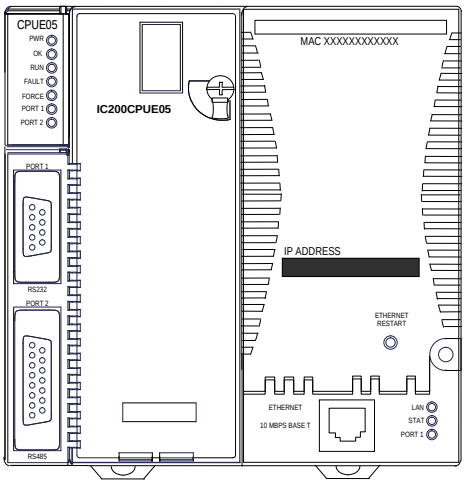
Important Product Information

*VersaMax**

IC200CPUE05

GFK-1892T
January 2016

CPU with Embedded Ethernet Interface



IC200CPUE05 shares the basic features of the other VersaMax* PLC CPUs. It provides powerful PLC functionality in a small, versatile system. CPUE05 can serve as the system controller for up to 64 modules with up to 2048 I/O points. Two serial ports provide RS-232 and RS-485 interfaces for serial communications. CPUE05 also provides a built-in Ethernet Interface. The RS-232 serial port can be configured for Local Station manager operation to provide access to diagnostic information about the Ethernet interface. CPUE05 has 128KB of configurable memory.

In addition, CPUE05 is compatible with the EZ Program Store device, which can be used to write, read, update, and verify programs, configuration, and reference table data without a programmer or programming software.

Features

- Supports up to 64 modules with up to 2048 I/O points
- Can be either auto-configured or configured from a programmer using configuration software
- 128KB of configurable memory for the application program, hardware configuration, registers (%R), analog inputs (%AI), and analog outputs (%AQ)
- Programming in Ladder Diagram and Instruction List
- Non-volatile flash memory for program storage
- Battery backup for program, data, and time of day clock
- Super capacitor provides power to memory for 1 hour
  - Over 1 hour, backup battery protects memory contents up to 6 months.
  - Backup battery has shelf life of 5 years when not in use.
- Run/Stop switch
- Floating point (real) data functions
- Embedded RS-232, RS-485, and Ethernet communications
- 70mm height when mounted on DIN rail with power supply (sold separately)

Product Information

Revision	IC200CPUE05-JP
Power Supply	Requires PWRx02
Firmware	Version 3.10
Programmer Compatibility	VersaPro software version 2.0 or later and Machine Edition Logic Developer.
Expansion I/O Compatibility	All types of I/O and communications modules can be used in expansion racks. Some analog modules require specific module revisions in expansion racks, as listed below: ***Module*** — ***Module Revision*** ALG320 — B or later ALG321 — B or later ALG322 — B or later ALG430 — C or later ALG431 — C or later ALG432 — B or later

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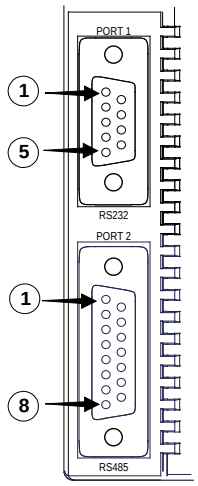
Specifications: IC200CPUE05

Size	Width: 4.95" (126mm) - along DIN rail Length: 5.04" (128mm) Depth: 2.72" (69.1mm)	
Program storage	System flash, battery-backed RAM	
Power Supply current consumption with no serial port converter or EZ Program Store device	5Vdc uses 220mA	3.3Vdc uses: 570mA
Power Supply current consumption with serial port converter or EZ Program Store device	5Vdc uses: 320mA	
Floating point	Yes	
Boolean execution speed	0.8 ms/K (typical)	
Real time clock accuracy (for timer functions)	100ppm (0.01%) or ±9sec/day	
Time of day clock accuracy	23ppm (0.0023%) or ±2sec/day @ 30°C. 100ppm (0.01%) or ±9sec/day @ full temperature range	
Embedded communications	RS-232, RS-485, Ethernet	
Configurable memory	128K bytes maximum	
Ethernet Interface Specifications		
Ethernet data rate	10Mbps (half- or full-duplex)	
Ethernet port	RJ-45, UTP	
Number of SRTP server connections	8	
Number of Ethernet Global Data (EGD) configuration-based exchanges	32	
EGD Exchange limits	100 data ranges per exchange 1400 bytes of data per exchange	
EGD Time Synchronization	Not Supported	
EGD Selective Consumption	Yes	
Load EGD configuration from PLC to programmer	Yes	
Remote Station Manager over UDP	Yes	
Local Station Manager (RS-232)	Via CPU Port 1	



Port 1 is an RS-232 port with a 9-pin female D-sub connector. The pinout of Port 1 allows a simple, straight-through cable to connect with a standard AT-style RS-232 port. Cable shielding attaches to the shell. Port 1 screw locks are threaded #4-40. Port 1 can be configured for either CPU serial communications (SNP, RTU, Serial I/O), or local Station Manager use. If Port 1 has been configured for CPU use, it can be forced to local Station Manager operation using the Ethernet Restart pushbutton. Port 1 remains in that mode until the PLC is power cycled, or the Ethernet Restart pushbutton is pressed.

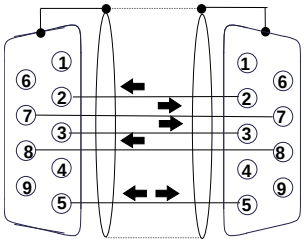
If Port 1 is configured as a local Station Manager, it cannot be used for CPU serial communications and the Ethernet Restart pushbutton will NOT toggle it to the CPU serial protocols.

Port 2 is an RS-485 port with a 15-pin female D-sub connector. This can be attached directly to an RS-485 to RS-232 adapter (IC690ACC901). Port 2 can be used for program, configuration, and table updates with the EZ Program Store module. Port 2 screw locks are threaded (metric) M3x0.5).

Pin Assignments for Port 1

Pin	Signal	Direction	Function
1	n/c		--
2	TXD	Output	Transmit Data output
3	RXD	Input	Receive Data input
4	n/c		--
5	GND	--	0V/GND signal reference
6	n/c		--
7	CTS	Input	Clear to Send input
8	RTS	Output	Request to Send output
9	n/c		--
Shell	SHLD	--	Cable Shield wire connection / 100% (Continuous) shielding cable shield connection

Cable Diagram for Attachment to a PC



PC 9-Pin Serial Port	CPU Port 1
9-pin female	9-pin male
(2) RXD	(2) TXD
(3) TXD	(3) RXD
(5) GND	(5) GND
(7) RTS	(7) CTS
(8) CTS	(8) RTS

The shield must attach to shell of connectors on both ends of the cable.

Connector and Cable Specifications for Port 1

Vendor Part numbers below are provided for reference only. Any part that meets the same specification can be used.

Cable: Belden 9610	Computer cable, overall braid over foil shield 5 conductor[1] 30 Volt / 80°C (176°F) 24 AWG tinned copper, 7x32 stranding			
9 Pin Male Connector:	Type: Crimp	Vendor: ITT/Cannon AMP	Plug: DEA9PK87F0 205204-1	Pin: 030-2487-017 66506-9
	Solder	ITT/Cannon AMP	ZDE9P 747904-2	-- --
Connector Shell:	Kit[2] – ITT Cannon DE121073-54 [9-pin size backshell kit]: Metal-Plated Plastic (Plastic with Nickel over Copper)[1] Cable Grounding Clamp (included) 40° cable exit design to maintain low-profile installation Plus – ITT Cannon 250-8501-010 [Extended Jackscrew]: Threaded with #4-40 for secure attachment to port[1] Order Qty 2 for each cable shell ordered			

Pin Assignments for Port 2

Pin	Signal	Direction	Function
1	SHLD	--	Cable Shield Drain wire connection
2, 3, 4	n/c		--
5	P5V	Output	+5.1Vdc to power external level converters (100mA max.)
6	RTSA	Output	Request to Send (A) output
7	GND	--	0V/GND reference signal
8	CTSB'	Input	Clear to Send (B') input
9	RT	--	Resistor Termination (120Ω) for RDA'
10	RDA'	Input	Receive Data (A') input
11	RDB'	Input	Receive Data (B') input
12	SDA	Output	Transmit Data (A) output
13	SDB	Output	Transmit Data (B) output
14	RTSB	Output	Request to Send (B) output
15	CTSA'	Input	Clear to Send (A') input
Shell	SHLD	--	Cable Shield wire connection / 100% (Continuous) shielding cable shield connection

Connector and Cable Specifications for Port 2

Vendor Part numbers below are provided for reference only. Any part that meets the same specification can be used.

[1] Critical Information – any other part selected should meet or exceed this criteria.
[2] Use of this kit maintains the 70mm (2.76in) installed depth.

Cable: Belden 8105	Low Capacitance Computer cable, overall braid over foil shield 5 Twisted-pairs[1] Shield Drain Wire [1] 30 Volt / 80°C (176°F) 24 AWG tinned copper, 7x32 stranding Velocity of Propagation = 78% Nominal Impedance = 100Ω[1]			
15 Pin Male Connector:	Type: Crimp	Vendor: ITT/Cannon AMP	Plug: DAA15PK87F0 205206-1	Pin: 030-2487-017 66506-9
	Solder	ITT/Cannon AMP	ZDA15P 747908-2	-- --
Connector Shell:	Kit[2]– ITT Cannon DA121073-50 [15-pin size backshell kit]: Metal-Plated Plastic (Plastic with Nickel over Copper) [1] Cable Grounding Clamp (included) 40° cable exit design to maintain low-profile installation Plus – ITT Cannon 250-8501-009 [Extended Jackscrew]: Threaded with (metric) M3x0.5 for secure attachment[1] Order Qty 2 for each cable shell ordered			

Cable Lengths

Maximum cable lengths and the total number of feet from the CPU to the last device attached to the cable are:

Port 1 (RS-232) = 15 meters (50 ft.)
Port 2 (RS-485) = 1200 meters (4000 ft.)

Serial Port Baud Rates

	Port 1	**Port 2**
RTU protocol	1200, 2400, 4800, 9600, 19.2k, 38.4k[3], 57.6k[3]	1200, 2400, 4800, 9600, 19.2k, 38.4k[3], 57.6k[3]
Serial I/O protocol	1200, 2400, 4800, 9600, 19.2k, 38.4k[3], 57.6k[3]	1200, 2400, 4800, 9600, 19.2k, 38.4k[3], 57.6k[3]
SNP protocol	4800, 9600, 19.2k, 38.4k[3]	4800, 9600, 19.2k, 38.4k[3]
Local Station Manager (this is independent of serial protocol baud rate)	1200, 2400, 4800, 9600, 19.2k, 38.4k, 57.6k, 115.2k	N/A
Firmware upgrade	1200, 2400, 4800, 9600, 19.2k, 38.4k, 57.6k, 115.2k	N/A

[3] Only available on one port at a time.