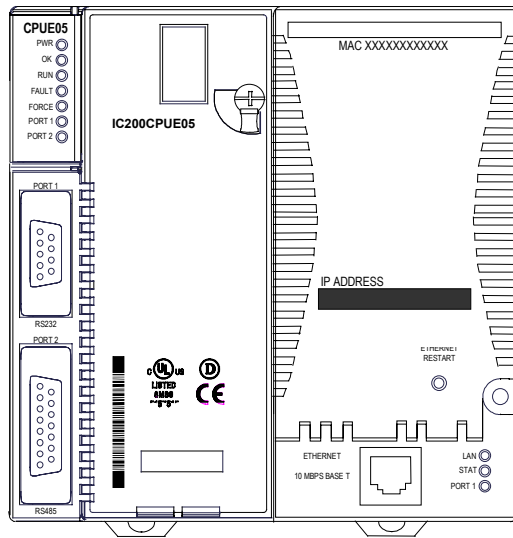


CPU with Embedded Ethernet Interface

December 2002

GFK-1892C



Features

- Supports up to 64 modules with up to 2048 I/O points
- Can be either autoconfigured or configured from a programmer using configuration software
- 64KB 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
- Supports EZ Program Store device
- 70mm height when mounted on DIN rail with power supply (sold separately)

Product Revision History

Rev	FW version	Description/Features
CPUE05-AD	2.31	Support for Modbus® RTU Master
CPUE05-AC	2.30	Added support for Modbus® RTU Master
CPUE05-AB	2.20	Added new serial I/O baud rates
CPUE05-AA	2.10	Initial Product Release

This release replaces firmware version 2.20 and 2.30. If you need to determine the current firmware version of a CPU, see the steps below:

- With Cimplicity Machine Edition Logic Developer, go online to the CPU, then select Target > Online Commands > Show Status. The Device Information Software Revision shows the current firmware revision level.
- With a VersaPro or Control programmer, attach the CPU. Under the PLC menu (VersaPro) or the Comm menu (Control), select the Memory tab on the Status Information dialog.
- A firmware upgrade is optional. Upgrading is recommended for applications requiring the new Modbus Master feature. An upgrade can be ordered from the factory (44A751470-G03), or downloaded from the technical support area at GEFanuc.com.

The firmware resides in FLASH memory, and is upgraded by serial download from an IBM-compatible personal computer via CPU port 1. Port 2 cannot be used for a firmware upgrade.

Specifications

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	5V uses 220mA	3.3V uses: 570mA
Power Supply current consumption with serial port converter or EZ Program Store device	5V uses: 320mA	
Floating point	yes	
Boolean execution speed	0.8 ms/K (typical)	
Realtime clock accuracy (for timer functions)	100ppm (0.01%) or +/- 9sec/day	
Time of day clock accuracy	23ppm (0.0023%) or +/- 2sec/day @ 30C. 100ppm (0.01%) or +/- 9sec/day @ full temperature range	
Embedded communications	RS-232, RS-485, Ethernet	
Configurable memory	64K bytes maximum	
<i>Ethernet Interface Specifications</i>		
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	NTP	
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	

Resolved for this Update

If a previous Run Mode Store has failed for a legitimate reason (for example, not enough memory), the CPU's OK LED does not go off if a second Run Mode Store is attempted.

New for this Release

This release adds Modbus RTU Master to the serial protocols supported on serial ports 1 and 2. At the present time, none of the GE Fanuc programming products supports hardware configurations specifying Modbus RTU Master. See the document GFK-2220, *Modbus RTU Master Communications*, which is available at www.GEFanuc.com (<http://www.gefanuc.com/support/plc/m-versamax.htm>), for information on using Modbus RTU Master communications. This document is a supplement to GFK-0582, the *Serial Communications User's Manual*.

CPU with Embedded Ethernet Interface

December 2002

GFK-1892C

Product Information

Revision:	CPUE05-AD														
Power Supply	Requires PWRx02														
Firmware:	Version 2.31														
Programmer Compatibility:	VersaPro software version 2.0 or later, and Cimplicity 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: <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Module</th> <th>Module Revision</th> </tr> </thead> <tbody> <tr> <td>*ALG320</td> <td>B or later</td> </tr> <tr> <td>*ALG321</td> <td>B or later</td> </tr> <tr> <td>*ALG322</td> <td>B or later</td> </tr> <tr> <td>*ALG430</td> <td>C or later</td> </tr> <tr> <td>*ALG431</td> <td>C or later</td> </tr> <tr> <td>*ALG432</td> <td>B or later</td> </tr> </tbody> </table>	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
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														

Operating Notes/Restrictions

1. Using an older revision non-intelligent analog module in an expansion rack will cause a System Configuration Mismatch error to be logged. The faulted module must be replaced with a newer revision before it will be scanned. The allowed revisions are detailed under Compatibility, in the Product Information section, above.
2. If an Integral term is used in an IND or ISA PID loop, PID Integral values less than 0.002 should be avoided. The following example characterizes the behavior when an Integral value less than 0.002 is used:
 Assume that the SP=16000, PV=16000, and CV=16000
 P = 1.00, I = 1.000, D = 0.00
 - If you drop the Integral term to 0.002; the CV does not change
 - If the Integral term is 0.001, the CV drops to half its original value (8000)
 If the Integral term is 0.000, the CV drops to 0. At this point, there is no Integral contribution.
3. If the receiver in a local single rack is powered off while the CPU is powered on, erroneous "Addition of rack" faults may be logged by the CPU. It is recommended that both the CPU and the receiver be powered by a single source.
4. Occasionally, a "Backplane Communication Fault" may be logged on an intelligent I/O module after power-cycling the main or expansion rack. This is a diagnostic fault that can be cleared.
5. In rare instances, exceptions 28/1e and/or 1/0e may occur during powerdown of the CPUE05. These do not indicate a problem and may be ignored.
6. In very rare instances, when field power is lost on one module, non-intelligent modules in the same rack may also report faults.
7. In very rare instances, the CPU may not add a module being hot inserted. It will not generate an 'Addition of Module' fault and will not be scanned. The situation can be corrected by extracting and re-inserting the module.
8. In very rare instances
9. es, a module being hot inserted may cause analog modules in the same rack to set outputs to zero. In addition, 'Loss of Module', 'System Configuration Mismatch' or field faults may be generated on other modules in the same rack. If the modules do not return to correct behavior momentarily, power cycling will restore full operation.
10. When using the VersaPro programmer connected to the CPUE05 via Ethernet, exceptions 8/8 and 8/16 may occur when frequently changing reference view tables to a PLC with a very long (> 300 ms) scan time.
11. If the PLC Fault Table is cleared, but the I/O Fault Table is not, the Ethernet interface may not regenerate pre-existing faults. Conversely, if the I/O Fault Table is cleared, and the PLC Fault Table is not, faults may be duplicated in the PLC Fault Table. It is recommended that you clear the PLC and I/O Fault Tables at the same time.
12. The CPUE05 gives priority to servicing the user logic program before servicing Ethernet traffic. Therefore, a long scan time may impact Ethernet throughput.
13. When servicing Ethernet traffic, the CPUE05 gives priority to servicing EGD traffic before servicing SRTP traffic, and gives priority to servicing SRTP traffic before servicing Station Manager traffic. Therefore, a heavy load of EGD traffic can lock out SRTP operation and likewise a heavy load of EGD and/or SRTP traffic can lock out Station Manager operation. For example, configuring the CPUE05 with 32 EGD exchanges at rates faster than 150 ms will result in frequent timeouts on SRTP operations.
14. Do not issue multiple "ping" requests to a CPUE05 – it processes one incoming ping at a time. If the configured data length of a consumed EGD exchange does not match the received data length, the PLC Fault Table will be filled with entries (exception 28/1d) until the condition is corrected. Use the Station Manager "Stat g" command to determine which exchange is misconfigured.
15. Caution to NTP users:
 - a) No exception reported if NTP server not available at startup.
 - b) Station Manager startup message does not display correct time if NTP configured.
 - c) Do not set NTP advanced user parameters *nminpoll** and *nmaxpoll** to the same value.
 - d) Do not use more than one NTP server of the same stratum.
 - e) Do not specify the IP address of a CPUE05 as the time server in the configuration of a CPUE05 or other device.
16. If your application attempts to perform more Ethernet communication than the CPUE05 can support, the following behaviors may be observed:
 - a) The Ethernet interface may restart itself and the exception log will contain 28/1 exceptions followed by a system error restart 1/5.
 - b) Ethernet operation will stop and the Ethernet LEDs in the lower right corner will blink indicating fatal fault 31. Push the Ethernet restart pushbutton to recover normal Ethernet operation.
 - c) Ethernet operation will stop, the Ethernet LAN LED will go off, and pushing the Ethernet restart pushbutton will have no effect. There will be no response to Station Manager commands. Ten seconds later, the Ethernet interface will restart itself. The exception log will contain a restart due to watchdog timeout 1/0c.
 - d) The application may fail to receive data from one or more nodes that are transmitting data to it. Push the Ethernet restart pushbutton to recover normal Ethernet operation.

CPU with Embedded Ethernet Interface

December 2002

GFK-1892C

- e) The exception log will contain 28/1b and/or 28/1d exceptions. For each such exception, data for one EGD consumption sample will not be delivered into reference memory

NOTE: If your application experiences these symptoms of overload, you must reduce the number/frequency/size of EGD exchanges and/or number/frequency/size of SRTP channels.

17. EGD group number to UDP port number assignment cannot be changed by setting the g*_udp advanced user parameters.
18. The CPUE05 does not support "supernetting", a technique of configuring the subnet mask in such a way to allow communication to multiple subnets.
19. Sustained heavy SRTP Server operation with very large data transfers (>32Kbytes) can cause loss of an internal resource called message buffers. This can result in reduced network performance and possible loss of message received from the network.
20. The CPUE05 does not reject a configuration containing a broadcast or multicast value for the module's IP Address. Do not configure broadcast or multicast values for an individual IP address. Avoid addresses of the following forms:
- x.y.z.255
 - >223.x.y.z
 - x.y.z.0
 - x.y.z.1
- Such addresses may result in erratic communications behavior.

Preinstallation Check

Carefully inspect all shipping containers for damage. If any equipment is damaged, notify the delivery service immediately. Save the damaged shipping container for inspection by the delivery service. After unpacking the equipment, record all serial numbers. Save the shipping containers and packing material in case it is necessary to transport or ship any part of the system.

Module Installation

This equipment may be mounted on a horizontal or vertical DIN rail. If mounted on a vertical DIN rail, the CPU module must be located at the bottom. The CPU and connecting carriers must be installed on the same section of 35mm x 7.5mm DIN rail, 1mm thick. Steel DIN rail is recommended. The DIN rail must be electrically grounded to provide EMC protection. The rail must have a conductive (unpainted) corrosion-resistant finish. DIN rails compliant with DIN EN50022 are preferred. For vibration resistance, the DIN rail should be installed on a panel using screws spaced approximately 15.24cm (6 inches) apart.

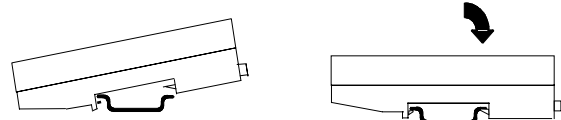
Rated thermal specifications for the CPU module are based on a clearance of 2" above and below the equipment and 1" to the left of the CPU module.

1. Allow sufficient finger clearance for opening CPU door.
2. Allow adequate clearance for serial port and Ethernet cables.
3. Allow adequate space for power wiring.

The CPU with power supply attached fits into a 70mm deep enclosure.

Installing the CPU on the DIN Rail

The CPU snaps easily onto the DIN rail. No tools are required for mounting or grounding to the DIN rail.



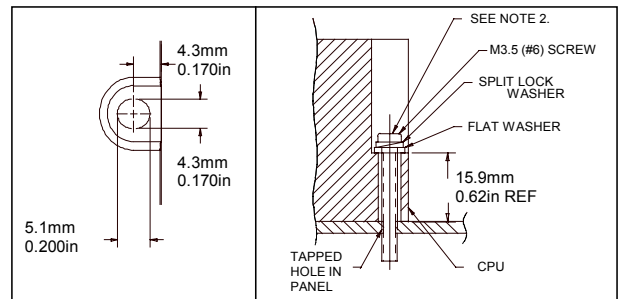
Before joining module carriers to the CPU, remove the connector cover on the right-hand side of the CPU. Do not discard this cover, you will need to install it on the last carrier, to protect the connector pins from contamination and damage during use.

Panel-Mounting

If excessive vibration is a factor the CPU should also be screwed down to the mounting panel.

Note 1. Tolerances are +/- 0.13mm (0.005in) non-cumulative.

Note 2. 1.1-1.4Nm (10-12 in/lbs) of torque should be applied to M3.5 (#6-32) steel screw threaded into material containing internal threads and having a minimum thickness of 2.4mm (0.093in).

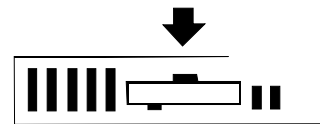


Removing the CPU from the DIN Rail

1. Turn off power to the power supply.
2. (If the CPU is attached to the panel with a screw) remove the power supply module. Remove the panel-mount screw.
3. Slide the CPU away from the other modules until the connector on the right side disengages from the next carrier.
4. With a small flathead screwdriver, pull the DIN rail latch outward while tilting the other end of the module down to disengage it from the DIN rail.

Activating or Replacing the Backup Battery

The CPU is shipped with a battery already installed. The battery holder is located in the top side of the CPU module. Before the first use, activate the battery by pulling and removing the insulator tab.



To replace the battery, use a small screwdriver to gently pry open the battery holder. Replace battery only with ACC001 from your PLC supplier, or with Panasonic battery: BR2032. Use of another battery may present a risk of fire or explosion.

Caution

Battery may explode if mistreated.

Do not recharge, disassemble, heat above 100 deg.C (212 deg.F) or incinerate.

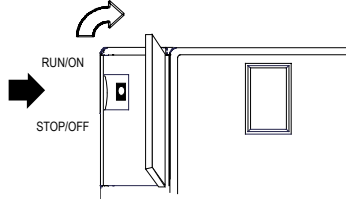
CPU with Embedded Ethernet Interface

December 2002

GFK-1892C

Switching the PLC Operating Mode

The CPU Run/Stop mode switch is located behind the module door. This switch can be used to place the CPU in Stop or Run mode. It can also be used to block accidental writing to CPU memory and forcing or overriding discrete data. Use of this feature is configurable. The default configuration enables Run/Stop mode selection and disables memory protection.



If Run/Stop mode switch operation is enabled, the switch can be used to place the CPU in Run mode.

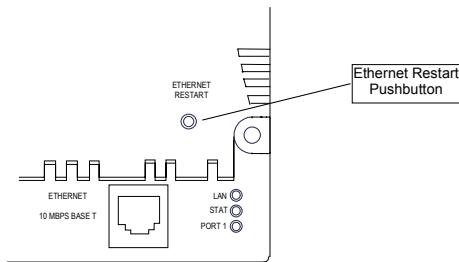
If the CPU has non-fatal faults and is not in Stop/Fault mode, placing the switch in Run position causes the CPU to go to Run mode. Faults are NOT cleared.

If the CPU has fatal faults and is in Stop/Fault mode, placing the switch in Run position causes the Run LED to blink for 5 seconds. While the Run LED is blinking, the CPU switch can be used to clear the fault table and put the CPU in Run mode. After the switch has been in Run position for at least 1/2 second, move it to Stop position for at least 1/2 second. Then move it back to Run position. The faults are cleared and the CPU goes to Run mode. The LED stops blinking and stays on. This can be repeated if necessary.

If the switch is not toggled, after 5 seconds the Run LED goes off and the CPU remains in Stop/Fault mode. Faults stay in the fault table.

Ethernet Restart Pushbutton

The Ethernet Restart pushbutton is located on the right side of the module.



The Ethernet Restart pushbutton has two functions:

- When pressed for less than 5 seconds, it resets the Ethernet hardware, tests the Ethernet LEDs, and restarts the Ethernet firmware. This disrupts any Ethernet communications that are presently underway.
- When pressed for at least 5 seconds, it toggles the function of Port 1 between its configured operation and forced local Station Manager operation.

Observing the Module LEDs

The CPU contains two sets of LEDs, one in the upper left corner and one in the lower right corner.

- PWR
 - OK
 - RUN
 - FAULT
 - FORCE
 - PORT 1
 - PORT 2
- The LEDs in the upper left corner indicate the presence of power and show the operating mode and status of the CPU.

POWER	ON when the CPU is receiving 5V power from the power supply. Does not indicate the status of the 3.3V power output.
OK	ON indicates the CPU has passed its powerup diagnostics and is functioning properly. OFF indicates a CPU problem. Fast blinking indicates that the CPU is running its powerup diagnostics. Slow blinking indicates the CPU is configuring I/O modules. (Simultaneous blinking of this LED and the green Run LED indicates that the CPU is in boot mode and is waiting for a firmware update through Port 1.)
RUN	Green when the CPU is in Run mode. Amber when the CPU is in Stop/I/O Scan mode. If this LED is OFF but OK is ON, the CPU is in Stop/No IO Scan mode. If this LED is flashing green and the Fault LED is ON, the module switch was moved from Stop to Run mode while a fatal fault existed. Toggling the switch will continue to Run mode.
FAULT	ON if the CPU is in Stop/Faulted mode because a fatal fault has occurred. To turn off the Fault LED, clear both the I/O Fault Table and the PLC Fault Table. If this LED is blinking and the OK LED is OFF a fatal fault was detected during PLC powerup diagnostics. Contact PLC Field Service.
FORCE	ON if an override is active on a bit reference.
PORT 1 PORT 2	Blinking indicates activity on that port. (Note: does not blink to indicate local Station Manager activity, see PORT 1 LED below.)

- LAN
 - STAT
 - PORT 1
- The LEDs in the lower right corner show the operating mode and status of the Ethernet port. The Ethernet LEDs turn ON briefly, first amber then green, whenever a restart is performed in the Operational state by pressing and releasing the Restart pushbutton (see below). This allows you to verify that the Ethernet LEDs are operational. All three LEDs blink green in unison when a software load is in progress.

LAN	Indicates the status and activity of the Ethernet network connection. ON/flickering green indicates Ethernet interface is online. ON amber indicates Ethernet interface is offline.
STAT	Indicates the general status of the Ethernet interface. ON green indicates no "exception" detected. ON amber indicates an exception. Blinking amber indicates error code. Blinking green indicates waiting for configuration or waiting for IP address.
PORT 1	ON amber indicates Port 1 is available for local Station Manager use (either by configuration or forced). OFF indicates PLC CPU is controlling Port 1.

CPU with Embedded Ethernet Interface

December 2002

GFK-1892C

Using the CPU Serial Ports

The CPU's two serial ports are software-configurable for SNP slave, RTU slave, Serial I/O operation, or local Station Manager operation (Port 1 only). If a port is being used for RTU, it automatically switches to SNP slave mode if necessary. Both ports' default configuration is SNP slave mode. If configured for Serial I/O, a port automatically reverts to SNP slave when the CPU is in Stop mode.

An external device can obtain power from Port 2 if it requires 100mA or less at 5VDC.

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.

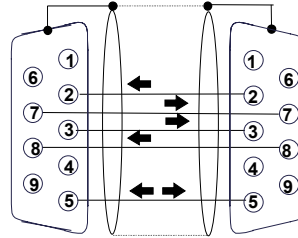
If Port 1 is configured as a local Station Manager, it cannot be used for CPU serial communications and the Ethernet Restart pushbutton will NOT toggle it to the CPU serial protocols.

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 † 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* – ITT Cannon DE121073-54 [9-pin size backshell kit]: Metal-Plated Plastic (Plastic with Nickel over Copper) † 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 † Order Qty 2 for each cable shell ordered			

† Critical Information – any other part selected should meet or exceed this criteria.
* Use of this kit maintains the 70mm installed depth.

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 (120 ohm) 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

CPU with Embedded Ethernet Interface

December 2002

GFK-1892C

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.

Cable: Belden 8105	Low Capacitance Computer cable, overall braid over foil shield 5 Twisted-pairs † Shield Drain Wire † 30 Volt / 80°C (176°F) 24 AWG tinned copper, 7x32 stranding Velocity of Propagation = 78% Nominal Impedance = 100Ω †			
15 Pin Male Connector:	Type:	Vendor:	Plug:	Pin:
	Crimp	ITT/Cannon AMP	DAA15PK87F0 205206-1	030-2487-017 66506-9
	Solder	ITT/Cannon AMP	ZDA15P 747908-2	-- --
Connector Shell:	Kit*– ITT Cannon DA121073-50 [15-pin size backshell kit]: Metal-Plated Plastic (Plastic with Nickel over Copper) † 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 † Order Qty 2 for each cable shell ordered			

† Critical Information – any other part selected should meet or exceed this criteria.

* Use of this kit maintains the 70mm installed depth.

Cable Lengths

Maximum cable lengths 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.)

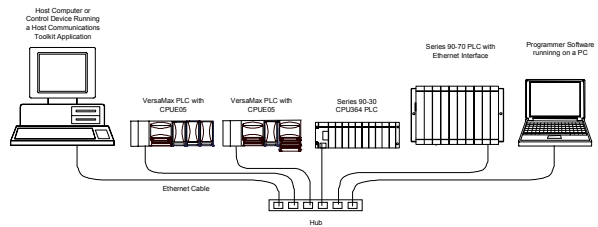
Serial Port Baud Rates

	Port 1	Port 2
RTU protocol	1200, 2400, 4800, 9600, 19.2K, 38.4K*, 57.6K*	1200, 2400, 4800, 9600, 19.2K, 38.4K*, 57.6K*
Serial I/O protocol	1200, 2400, 4800, 9600, 19.2K, 38.4K*, 57.6K*	1200, 2400, 4800, 9600, 19.2K, 38.4K*, 57.6K*
SNP protocol	4800, 9600, 19.2K, 38.4K*	4800, 9600, 19.2K, 38.4K*
Local Station Manager (this is independent of serial protocol baud rate)	1200, 2400, 4800, 9600, 19.2K, 38.4K, 57.6K, 115.2K	na

* Only available on one port at a time.

Using the Ethernet Port

The built-in Ethernet interface makes it possible to communicate on a 10BaseT network. The CPUE05 supports half-duplex and full-duplex operation; operation is automatically sensed without user configuration. Using 10/100 hubs allows communication on a network containing 100Mb devices.

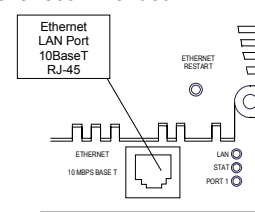


The Ethernet interface can be used to:

- Send and receive Ethernet Global Data. Ethernet Global Data can be used for highly efficient periodic data transfer on the LAN. The CPU supports up to 32 simultaneous Ethernet Global Data exchanges. Global Data exchanges are configured using the PLC programming software, then stored to the PLC. Both Produced and Consumed exchanges may be configured. Supports up to 1200 data ranges across all Ethernet Global Data exchanges, and supports selective consumption of Ethernet Global Data exchanges.
- Access CPU data from a host computer or other GE Fanuc PLCs. CPU supports up to eight simultaneous SRTP Server connections for use by other SRTP client devices on the Ethernet network.
- Communicate simultaneously to multiple devices. The multiplexing capabilities of the Ethernet interface, along with the Ethernet network's high capacity, allow the CPU to communicate with several other devices at the same time.
- Indirectly attach to other Local Area Networks and/or wide area networks via third party IP routers. Communicate with remote PLCs and other nodes via an IP Router.
- Communicate with remote computers via PPP (Point-to-Point Protocol) or SLIP (Serial Line Protocol) using modems and/or serial lines. Using third party PPP or SLIP devices, a remote host computer can be attached to a TCP/IP network.

Ethernet LAN Port

The 10BaseT twisted pair cable must meet applicable IEEE 802 standards. Category 5 is recommended.



Station Manager Functionality

Built-in Station Manager functionality permits on-line diagnostic and supervisory access through either Port 1 or via Ethernet. Station Manager services include:

- An interactive set of commands for interrogating and controlling the station.
- Unrestricted access to observe internal statistics, an exception log, and configuration parameters.
- Password security for commands that change station parameters or operation.
- Use of the Station Manager function requires a separate computer terminal or terminal emulator.