GE IC695CPE400-AAAA

Rackless RX3i CPU



GE IC695CPE400-AAAA is the initial -AAAA revision of the PACSystems RX3i CPE400 rackless CPU, providing a standalone platform for deterministic machine and process control. It executes the engineered control application and exchanges data with the configured I/O and application networks through dedicated Ethernet interfaces. The CPE400 architecture also separates its control runtime from the Field Agent environment used for higher-level connectivity and analysis. For an existing system, the complete suffix and installed firmware are essential to identifying the correct CPU and the functions available to the retained project.

Technical Specifications

Product Identity	
Platform	PACSystems RX3i
Complete code	IC695CPE400-AAAA
Functional Configuration	
Product function	Rackless programmable automation controller
Processor	Quad-core
Front network interfaces	LAN1: 1 port; LAN2: 2 switched ports; LAN3: 2 switched ports
Ethernet rates	10/100/1000 Mbps
Status display	OLED
Configuration software	PME; version depends on installed firmware and features
Performance & Power	
User program / data memory	64 MB configurable
Supply	External SELV supply, 18-30 V DC
Environment	
Operating / storage temperature	–40 to +70 °C operating, –40 to +85 °C in storage

Selected original manufacturer material follows on pages 3–6.

Compatibility & Selection Guide

System and software compatibility. The official release history identifies IC695CPE400-AAAA as the initial December 2016 release. Native CPE400 configuration requires PME 9.00 SIM 8 or later, while firmware-dependent functions have additional requirements: hot-standby redundancy begins at release 9.30 and serial-port support at 9.40. Confirm the offered unit's actual firmware and project requirements instead of assuming the features of a later release.

Wiring & Installation Reference

Power and network connections

+ / - · External SELV DC supply · 18-30 V DC; observe polarity

FGND · Ground connection · Follow the documented grounding arrangement

LAN3 · Redundant CPU synchronization · No unrelated network devices

DIN-rail or panel mounting

1. Select the adaptor Use the DIN-rail adaptor or compatible panel-mount adaptor.

2. Secure the unit Observe the manufacturer mounting clearances. Replacement adaptor plates use four Torx M3 screws tightened to 0.6 N·m.

3. Confirm the application Verify actual firmware, saved project, network settings and any Energy Pack before returning the CPU to service.

Installation precautions

Keep power and the required Energy Pack connected throughout a firmware update; follow the manufacturer update procedure.

Incorrect connection of the positive supply to FGND can cause a short circuit. Confirm polarity before energizing.

If an IC695ACC403 Energy Pack is used, follow its separate wiring and grounding instructions.

View power connection diagram (PDF) — page 4 · View mounting instructions (PDF) — page 3

period. All shipping containers and all packing material should be saved should it be necessary to transport or ship any part of the system.

Verify that all components of the system have been received and that they agree with the order. If the system received does not agree with the customer's order, contact Customer Care.

Installation

For instructions on wall mounting instructions, DIN rail mounting instructions, or minimum clearances required, please consult GFK-2222, RX3i CPU Reference Manual.

As shipped, the CPL410/CPE400 is intended for mounting on a DIN rail. A panel-mount adaptor is also available. If panel-mounting is required, replace the DIN-rail adaptor with the panel-mount adaptor using the screws supplied with that adaptor. Both adaptors attach to the rear of the CPL410/CPE400 chassis using four Torx M3 screws. Torque newly-installed screws to 5.3 in-lbs (0.6 Nm) if installing a new adaptor plate. For installation to standards, refer to the Installation and Maintenance Requirements document, GFK-3004.

Installation in Hazardous Areas

Refer to *Installation and Maintenance Requirements*, GFK-3004.

Connect to Power Supply

The 24 VDC power input connector is located on the underside of the CPL410/CPE400, as shown in Figure 3. The signal pinouts are also indicated.

The mating connector for the CPL410/CPE400 24Vdc power input is the 3-pin Phoenix 1827716 shown in Figure 4. The power supply cable prepared by the user must use the specified mating connector.

The positive "+" and negative "-" signals are required. FGND is optional but recommended.

For the mating connector, the compatible conductor size is from 24AWG to 16AWG. Strip the wires back 7mm before inserting into the connector. Tightening torque for the three signal screws is 2.2 in-lbs (0.248Nm). Secure the mating connector to the power input connector via the two captive screws provided.

Figure 3: 24 VDC Power Input Connector



The user-supplied SELV[2] power supply must supply voltage in the range of 18Vdc to 30Vdc.

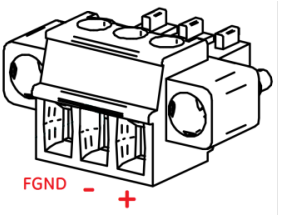
Once the power supply cable (or compatible Energy Pack ACC403) has been attached to the CPL410/CPE400 and the power supply has

[2] *SELV = Safety Extra Low Voltage*

been turned on, the unit will start booting. There is no need to push any button.

The unit is equipped with built-in reverse polarity protection. If + and - are swapped the unit will not power-up. If + is connected to FGND, this will cause a short. The power supply needs to protect itself against this condition.

Figure 4: 24 VDC Power Input Module Connector



Inrush Current

The CPL410/CPE400 may experience an inrush current of up to 49 A for 15 µs.

Overvoltage Protection

In the CPL410/CPE400, the voltage to the inner loads is clamped to 33 VDC. At 33 VDC, the internal clamping diode starts conducting at 1 mA. Any further increase in the voltage will cause the internal current fuse to blow and/or the clamping diode to break.

⚠ CAUTION

EQUIPMENT REPAIR REQUIRED – Internal components must be repaired at the factory; they are not field replaceable. Contact the support team at the link provided at the end of this document.

Overcurrent protection

The function protects the internal circuitry from overcurrent conditions before serious damage can occur, such as overheating of the equipment. The fuse is rated for 4 A continuous current. Once the sensed current reaches 40 A, the fuse will blow after a period of 10ms to 100ms.

Grounding

Grounding via the FGND connection on the 3-pin 24 VDC In power header is recommended (see the *Connect to Power Supply* section), but is not required if the CPL410/CPE400 is mounted to a grounded metal panel. Furthermore, if an Energy Pack is connected, be sure to comply with grounding procedures as described in *PACSystems RX3i Rackless Energy Pack IC695ACC403 Quick Start Guide,* GFK-3000.

Module Start-up

Equipment Needed

- This PACSystems Rackless RX3i CPU.