GE RX3i PacSystem Series Service Manual

IC695CPE310

1. Description

The IC695CPE310 is a PACSystems RX3i mid-range controller module. This is manufactured by Emerson Automation, formerly by GE Intelligent Platforms (GE IP). This controller mainly features One (1) Ethernet communication port; Two (2) serial ports composed of One (1) RS232 and One (1) RS485 port that supports SNP, Serial I/O, Modbus Slave and Modbus Master protocols; It also has One (1) built-in USB Master port for application upload and download to a thumb drive of smart phone. It has 1.1 GHz mic

3. Product Information

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Brand GE Fanuc

Series PACSystem RX3i

Manufacturer Emerson Automation

Part Number IC695CPE310

Product Description RX3i Mid range controller

Product Description RX3i CPU

Communication ports One (1) Ethernet; Two (2) serial ports

Number of Slots 2

User logic memory The IC695CPE310 has 10 MB user memory.

Number of Local Racks 8

Discrete I/O memory 32 K

Program Storage 10 MB of User Memory

Analog I/O memory 32 K

Type of Memory Storage SRAM, Flash

Compatible Memory storage SRAM, Flash

Processor Speed 1.1 Ghz

Boolean execution speed 0.72 ms/k

Power Requirement 1 Amp at +5 and +3.3 Volts DC, 0.5 Amps at +24 Volts DC

Local Rack Up to Eight (8) local racks

Floating Point Yes

Supported protocols SNP, Serial I/O, Modbus Slave and Modbus Master protocols

Serial Communication RS-232, RS-485

Ethernet communication speed 10/100 Mbps

Ethernet Port Yes

Protocol Support Modbus RTU Slave, SNP Slave, Serial I/O

Backplane Universal backplane

The IC695CPE310 is a Central Processing Unit (CPU) module from the PACsystem RX3i product category. Also termed as controller or processor, the CPU’s main function is to provide the logic execution, computation and communication capability to the system. Specific for the IC695CPE310, this CPU is built with a 1.1 GHz microprocessor speed with Boolean logic execution speed of 0.72 ms/k. It comes with multiple communication interface such as Two (2) serial ports composed of One (1) RS232 and One (1) RS485 port and One (1) Ethernet communication interface. The IC695CPE310 can accommodate up to 32 K bits of discrete Input and discrete output signals, referenced as %I and %Q in the program and 32 K Words of analog input and output capacity. Aside from this I/O memory capability, the IC695CPE310 is provided with a battery-backed memory amounting to 10 MB. The IC695CPE310 supports a variety of communication protocols. For the Ethernet port, supported protocol is SRTP at data transmission rate of 10/100 Mbaud with auto-negotiation capability. The serial interface on the other hand supports SNP, Serial I/O, Modbus Slave and Modbus Master protocols. Additional communication options available to this CPU are Serial, Genius, Reflective Memory using Control Memory Exchange (CMX) module and Ethernet while supported fieldbus of this controller are PROFINET, EGD, Modbus TCP Server and Client, Genius, Profibus DP and Ethernet. This CPU is downloaded with a user program and configuration that is engineered using the Proficy Machine Edition Logic Developer Machine Edition 7.0 SIM 3 or later software package.

The IC695CPE310 RX3i CPU module is a central processing unit that is manufactured by GE Fanuc. It is based on a state-of-the-art processor with a high level of performance and fast computation speed. It can manage up to 32K inputs and outputs at a time. It is compatible with multiple IEC languages as well as with the C programming language to allow for flexible programming. The IC695CPE310 RX3i CPU module offers hot-swap capabilities and advanced diagnostic facilities that enable solutions for complex applications. It features a battery-backed real-time clock and dynamic data back up facilities. The USB-A 2.0 master port of the CPU module can be used to configure the applications and download application data to a thumb drive or to a smartphone. The IC695CPE310 RX3i CPU supports up to 8 local racks. It ensures maximized data storage facilities while reducing the need for external hardware. It also has a built-in RJ-45 Ethernet port and one 2-port switch. This rack-based Ethernet interface offers a complete set of Ethernet functionalities and a maximum of 2 programmer connections. The IC695CPE310 CPU is compliant with the EC RoHS DIRECTIVE 2002/95/EC requirements for meeting industrial standards. It offers 2 serial ports which are the RS-232 and RS-485 ports. The users can swap between the CPU310 and CPE310 devices without upgrading the legacy PME software. The RS-232 port’s pin number 5 does not provide 5 Volts of power. It comes with 10 MB of non-volatile flash memory which can hold data indefinitely without losing the integrity of the data. This module can be used in a variety of applications such as automotive, discrete manufacturing, chemical industry, and industrial steam applications.