GE RX3i PacSystem Series Service Manual

IC695CPU320

1. Description

The GE Fanuc / Emerson Automation IC693CPU320 is a PACSystem RX3i Processor module. This module occupies Two (2) slots, processor speed of 1GHz with typical scan rate of 0.047 ms per 1000 Boolean instructions. This processor has Two (2) serial communication ports supporting RS232 and RS485 communication standards.

2. Specifications

Specification	Value
Brand	**GE Fanuc**
Series	**RX3i PacSystem**
Part	**Number IC695CPU320**
Product	**Type CPU module**
Compatibility	**PACSystems RX3i**
Microprocessor	**Celeron M**
Clock	**Speed 1.0 Gigahertz**
RAM	**64 Megabytes**
NVRAM	**64 Megabytes**
Serial	**Ports 2**
Maximum	**Program Blocks 512**
Maximum	**Block Size 128 kilobytes**
Communication	**standards RS232; RS485**
Batteries	**IC695ACC302 Lithium Smart Battery IC693ACC302 Series 90-30 Auxiliary Battery Module**
Operating	**Temperature 0 to 60 degrees Celsius**
The	**IC695CPU320 is a GE Fanuc / Emerson Automation controller module. This module belongs to the PACSystems RX3i controller platform. This controller may be used for efficient controlling of industrial machines and processes. It features High-speed data transfer via the Peripheral Component Interconnect (PCI) slot and supports serial backplane for migration of Series 90-30 I/O systems.**

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Technical specifications for IC695CPU320

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The IC695CPU320 has built-in Two (2) communication ports that supports RS232 and RS485 communication standard. These communication ports communicate with programming workstations, Human Machine Interface (HMI), Supervisory Control and Data Acquisition (SCADA) systems using the Series Ninety Protocol (SNP) slave mode. This controller may be installed in Rx3i 12 Slot Universal Backplane with catalog number IC695CHS012 and Rx3i 16 Slot Universal Backplane with catalog number IC695CHS016.

The IC695CPU320 has an internal Celeron M processor with processing speed of 1GHz. It contains 65 Mbytes of user memory with contents retained by a Lithium Smart Battery Series 90-30 Auxiliary Battery Module with catalog number IC695ACC302 and IC693ACC302, respectively. Additionally, it has 64 Mbytes of non-volatile flash user memory. Furthermore, these user memories support re-allocation for custom size of data and program memory. It supports up to 512 program blocks wherein a single block may have a maximum size of 128 KB.

The IC695CPU320 supports majority of series 90-30 PLC I/O modules. This feature provides flexibility that is especially useful and beneficial in upgrading the legacy 90-30 series to the modern PACSystems RX3i controller platforms. This allows a phased migration, wherein the controllers and logic of the existing 90-30 PLCs are migrated first, followed by the I/O modules. The PACSystem RX3i supports firmware modification.

Various accessories can be ordered for the IC695CPU320 module, including an RS-232 cable like the IC200CBL001 cable, a smart lithium battery like the IC695ACC302 battery, a GE Series 90-30 auxiliary battery module like the IC693ACC302 module, standard power supplies rated at 120 to 240 Volts AC, 125 Volts DC, and 40 Watts. The GE Fanuc IC695CPU320 module is capable of executing 1000 Boolean instructions in 0.047 milliseconds. The module supports 512 program blocks. The maximum size of a program block is 128 kilobytes. Two embedded communications ports are provided on the module which are the RS-485 and RS-232 ports. The serial protocols that are supported include the SNP, Serial I/O, and Modbus RTU slave protocols.

The IC695CPU320 module communicates with a programmer and an HMI through the serial port by using the SNP slave protocol. The module communicates with smart options modules and I/O over the dual backplane bus. The environmental specifications include a 0 to 60 degrees Celsius operating temperature range. The IC695CPU320 module is supports both a serial backplane bus and an RX3i backplane bus and it draws 1 Amp of current at 3.3 Volts DC from the backplane and 1.2 Amps of current at 5 Volts DC from the backplane. Six LEDs are provided on the front panel for module status updates.