GE Rx7i PACsystem Series Service Manual

IC698CPE020

1. Description

The IC698CPE020 is a Central Processing Units (CPU). It is part of the PACSystem RX7i platform, currently under Emerson Automation, formerly produced by GE Intelligent Platforms (GE IP). This CPU is a rack mounted device that comes with 700 MHz Pentium III microprocessor and 10 Mbytes of battery-backed user memory and 10 Mbytes non-volatile (Flash) memory.

2. Specifications

Specification	Value
Brand	**GE Fanuc**
Series	**PACSystem RX7i**
Manufacturer	**GE Fanuc**
Manufacturer	**GE Intelligent Platforms (Former); Emerson Automation (Current)**
Part	**Number IC698CPE020**
Product	**Description Rack mount CPU**
Series	**PACSystem RX7i**
Description	**Rx7i PACsystem CPU**
Communication	**ports Two (2) LAN Ports; Two (2) RS232 / RJ45 Serial port**
Part	**Number IC698CPE020**
Application	**Rx7i System**
Random	**Access Memory (RAM) 10 MB**
Boolean	**Execution Speed 0.14 ms per 1000 Boolean contacts/coils which**
Operating	**Voltage 5 to 12 Volts DC**
Flash	**Memory 10 MB**
Supported	**programming language Ladder Diagram, Structured Text, Function Block Diagram, or C**
Current	**Rating 4.3 Amps**
Discrete	**I/O memory 32 K**
IO	**Memory 32 Kbits Discrete I/O; 32 KWords Analog I/O**
Microprocessor	**700 Mega-Hertz Pentium III microprocessor**
Analog	**I/O memory 32 Kwords**
No.	**of Program blocks 512 Program block**
CPU	**Memory 10 Megabyte User Logic RAM**
Compatible	**Memory storage SRAM, Flash**
Maximum	**Program block size 128 KB**
User	**Memory 10 Megabyte**
Processor	**speed 700**

3. Product Information

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Technical specifications for IC698CPE020

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Series PACSystem RX7i

Manufacturer GE Fanuc

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Application Rx7i System

Random Access Memory (RAM) 10 MB

Boolean Execution Speed 0.14 ms per 1000 Boolean contacts/coils which

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Flash Memory 10 MB

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Discrete I/O memory 32 K

IO Memory 32 Kbits Discrete I/O; 32 KWords Analog I/O

Microprocessor 700 Mega-Hertz Pentium III microprocessor

Analog I/O memory 32 Kwords

No. of Program blocks 512 Program block

CPU Memory 10 Megabyte User Logic RAM

Compatible Memory storage SRAM, Flash

Maximum Program block size 128 KB

User Memory 10 Megabyte

Processor speed 700 MHz

User Memory 10 MB user-memory; 10 MB non-volatile memory

Max Program Block 512 Program Blocks

Supported serial protocols Modbus RTU Slave, SNP, Serial I/O

Processor type Pentium III, 700 MHz

Supported Operation Floating Point Operation

Floating point Supported

Supported Ethernet protocols Ethernet Global data (EGD), SRTP, Modbus/TCP Server, and Modbus/TCP Client

Programming Languages Ladder Diagram, C, Structured Text, and Function Block Diagram

Ethernet data rate 10Mb/sec and 100Mb/sec

Station Manager Port One (1) RS232 Station Manager port

Built-in Ports 2 Serial (RS-232, RS-485) 1 Ethernet (Auto 10/100, RJ45)

FTP / Webserver Supported; Up to 16 connections

Media Redundancy Supported via LAN 2

Supported Protocols Ethernet: SRTP, Modbus TCP Server and Client, Ethernet Global Data (EGD); Serial: Modbus RTU Slave, SNP, Serial I/O.

Controller Redundancy Supported via Synchronization Port LAN3

Supported Protocols Ethernet, SRTP Server, Modbus TCP Server, and EGD protocols

Location Rx7i Rack

Current draw +5 VDC: 4.5 Amps nominal; +12 VDC: 0.042 Amps nominal; -12 VDC: 0.008 Amps nominal

The IC698CPE020 is a Rack mount Central processing Module (CPU) from the PACSystem RX7i Programmable Automation Controller (PAC) Platform of Emerson Automation, formerly by GE Intelligent Platforms (GE IP). This CPU module is mainly used to process the downloaded user program for execution and actuation of connected electrical loads. The IC698CPE020 is provided with a Pentium III, 700 MHz micro-processor with integrated 10 MB user memory and 10 MB non-volatile or flash memory. It has I/O memory that is designed to handle up to 32Kbits for discrete %I and %Q and up to 32K words each for analog %AI and %AQ. Up to 512 program blocks may be downloaded to this processor with maximum individual block size of 128 KB. This CPU has built-in Two (2) Ethernet ports that support transmission rates of 10/100 mbps and compatible with Ethernet Global Data (EGD), TCP/IP communication services using SRTP, Modbus/TCP Server, and Modbus/TCP Client and may also be used as the primary programming and configuration port. These ethernet ports are embedded switch ports and requires a single Ethernet I/P address only. With a CPU release 5.0 or later, these CPU ports can be used for Time Synchronization. Aside from Ethernet ports, This module also has Three (3) isolated serial ports, supporting RS232 and RS485 standards. Two (2) of the serial ports can be used for data communication as these ports are compatible with Modbus RTU Slave, SNP, Serial I/O. The remaining serial port functions as ethernet station manager port. The IC698CPE020 comes with an upgradable firmware with integrated data monitoring capability. It has a total combined 16 Web server and FTP connections.

The GE Fanuc IC698CPE020 CPU is a central processing unit from the RX7i family of performance controllers that are designed to provide application flexibility across multiple hardware platforms. A fully programmed and configured IC698CPE020 CPU can perform real-time control of applications and machine processes and communicate with multiple I/O devices over the Rx7i backplane. The IC698CPE020 CPU is built with the VME64 architecture that supports a wide range of VME embedded technologies with fast data throughput, and it can communicate with a host of Human-Machine Interface devices (HMIs) via embedded Ethernet ports. The IC698CPE020 CPU comes with a 700-Megahertz Pentium III microprocessor and a 10-Megabyte RAM and a 10-Megabyte non-volatile flash memory for the storage of user data and programs. The IC698CPE020 CPU can perform both floating points math and Boolean functions and it supports the programming of the users' applications by using the Ladder Diagram, C, Function Block Diagram, and Structured Text programming languages. The GE Fanuc IC698CPE020 CPU supports up to 512 KB of program blocks and it has a reference data table consisting of 32 Kilobits of %I and %Q discrete data and up to 32 kilowords of %AI and %AQ analog data. The IC698CPE020 CPU is located in Slot 1 of the Rx7i I/O rack and it has a maximum backplane current draw rating of 3.2 Amps at 5 Volts DC voltage. It has 3 rear serial ports that are the RS-485 port, the RS-232 port, and the RS-232 manager port, and a dual embedded Ethernet port that support high-speed TCP/IP communication. The IC698CPE020 CPU also supports the Modbus RTU Slave, SNP, and the Serial I/O communication protocols. The IC698CPE020 CPU is configured by using the Proficy Machine Edition Logic Developer PLC software that is version 4.0 or later.