GE Rx7i PACsystem Series Service Manual

IC698CPE010

1. Description

The IC698CPE010 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 300 MHz Celeron 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 IC698CPE010**
Product	**Description Rack mount CPU**
Series	**PACSystem RX7i**
Description	**EX7i Central Processing Unit (CPU)**
Communication	**ports Two (2) LAN Ports; Two (2) RS232 / RJ45 Serial port**
Part	**Number IC698CPE010**
Application	**RX7i System**
Random	**Access Memory (RAM) 10 MB**
Boolean	**Execution Speed 0.33 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 3.4 Amps**
Discrete	**I/O memory 32 K**
IO	**Memory 32 Kbits Discrete I/O; 32 KWords Analog I/O**
CPU	**Memory 10 Megabytes of User Logic RAM**
Analog	**I/O memory 32 Kwords**
No.	**of Program blocks 512 Program block**
User	**Memory 10 Megabyte**
Compatible	**Memory storage SRAM, Flash**
Maximum	**Program block size 128 KB**
Max	**Program Block 512 Program Blocks**
Processor	**speed 300**

3. Product Information

The IC698CPE010 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 300 MHz Celeron microprocessor and 10 Mbytes of battery-backed user memory and 10 Mbytes non-volatile (Flash) memory.

Technical specifications for IC698CPE010

Brand GE Fanuc

Series PACSystem RX7i

Manufacturer GE Fanuc

Manufacturer GE Intelligent Platforms (Former); Emerson Automation (Current)

Part Number IC698CPE010

Product Description Rack mount CPU

Series PACSystem RX7i

Description EX7i Central Processing Unit (CPU)

Communication ports Two (2) LAN Ports; Two (2) RS232 / RJ45 Serial port

Part Number IC698CPE010

Application RX7i System

Random Access Memory (RAM) 10 MB

Boolean Execution Speed 0.33 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 3.4 Amps

Discrete I/O memory 32 K

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

CPU Memory 10 Megabytes of User Logic RAM

Analog I/O memory 32 Kwords

No. of Program blocks 512 Program block

User Memory 10 Megabyte

Compatible Memory storage SRAM, Flash

Maximum Program block size 128 KB

Max Program Block 512 Program Blocks

Processor speed 300 MHz

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

Supported Operation Floating Point/Boolean Operations

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

Processor type Intel Celeron, 300 MHz

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

Floating point Supported

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

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

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

Station Manager Port One (1) RS232 Station Manager port

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

FTP / Webserver Supported; Up to 16 connections

Media Redundancy Supported via LAN 2

Configuration Proficy Machine Edition Logic Developer PLC version 4.0 or later

Controller Redundancy Supported via Synchronization Port LAN3

Location Rx7i Rack

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

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

The IC698CPE010 is a Central Processing Unit (CPU) module that belongs to the PACSystem RX7i platform of Emerson Automation. This controller series are designed for use in large and more complex applications. It is a rack mount module, occupying the designated CPU slot of the baseplate. The IC698CPE010 is installed with a 300 MHz, Intel Celeron microprocessor, exhibiting Boolean execution speed of 0.33 ms per 1000 Boolean contact / coils. It has a built-in 10 MB battery backed user memory and 10 MB non-volatile or flash memory. Up to 512 Program Blocks can be downloaded to this module with each block having a maximum size of 128 KB.The I/O capacity of this CPU includes up to 32Kbits for discrete (%I) and (%Q) and up to 32K words each for analog (%AI) and (%AQ) data. It supports floating point data and comes with a variety of communication interface such as RS-232, RS-485, Ethernet interface. Specifically, this module has Three (3) serial ports spportingRS232. RS485 Electrical standard compatible with Modbus RTU Slave, SNP, Serial I/O protocols. One serial port functions as Station manager port. It also has embedded dual Ethernet communication interfaces that functions as embedded switch and requires a single IP address for operation, supporting linear and Media Redundancy Protocol (MRP). These ethernet interface permit data exchange at transmission rates of 10/100 mbps with auto-negotiation and capability, supporting half and full-duplex mode. The ethernet ports support Ethernet Global Data (EGD), SRTP, MODBUS TCP Server and Client protocols. It also allows access to the File Transfer Protocol (FTP) and Web server capability of the CPU.

The GE Fanuc IC698CPE010 Central Processing Unit (CPU) is a CPU module for the RX7i PACsystem series. The IC698CPE010 CPU module is an Intel Celeron processor module the performs real-time application processes, machine control, and system handling functions via user-programmed values and parameters. This CPU module is capable of communicating with I/O modules and other smart option modules over the Rx7i backplane via the VME64 Standard format. The IC698CPE010 CPU module incorporates the VME64 open architecture that supports high-speed I/O data transfers from a wide range of VME-based modules, Series 90-70 modules, communication modules, smart option modules, and a wide range of HMI devices. The IC698CPE010 CPU module offers 10 Megabytes of lithium battery-backed RAM memory and 10 Megabytes of non-volatile user memory for application and data storage. It can support a maximum of 512 program blocks (128 kilobits per block), and it has a reference table that comprises of both discrete and analog data. The IC698CPE010 CPU module is capable of performing floating-point and Boolean operations, and advanced user parameters are configured by using the C, Ladder Diagram, Structured Text, and Function Block Diagram programming languages. The IC698CPE010 CPU module is installed in Slot 1 of the GE Fanuc Rx7i Rack, and it has a backplane current requirement of 3.2 Amps at 5 Volts DC. The IC698CPE010 CPU module comes with 3 serial ports which are the RS-485 serial port, the RS-232 serial port, and the RS-232 Ethernet station manager port and a dual 10/100 Mbps Ethernet port for high-speed EGD data exchange and TCP/IP enabled communication. The IC698CPE010 CPU module can be configured by using the Proficy Machine Edition Configuration software (version 4.0 or later), which provides an advanced configuration environment for the development and maintenance of machine-level automation.