GE Rx7i PACsystem Series Service Manual

IC698CMX016

1. Description

The IC698CMX016 is a Control Memory Exchange Module. It is part of the PACSystem RX7i platform, currently under Emerson Automation, formerly produced by GE Intelligent Platforms (GE IP). This module is mainly used to provide deterministic sharing of data among PLCs and compatible devices over Fiber Optic network using reflective memory technology.

2. Specifications

Specification	Value
Brand	**GE Fanuc**
Series	**PACSystem RX7i**
Manufacturer	**GE Fanuc**
Manufacturer	**GE Intelligent Platforms (Former); Emerson Automation (Current)**
Part	**Number IC698CMX016**
Product	**Description Control Memory Exchange Module**
Series	**PACSystem RX7i**
Description	**Control Memory Xchange Module**
User	**Memory 16 MB SDRAM**
Part	**Number IC698CMX016**
Application	**Rx7i System**
Communication	**interface Multi-mode, Fiber Optic port**
Operating	**Voltage +5VDC (from power supply)**
FO	**connector LC connector**
Transfer	**Rate 43 to 174 Megabyte per Seconds**
Transmission	**speed 2.12 Gbaud data transmission**
Packet	**Size Dynamic, automatically controlled by Memory Xchange module**
Current	**Rating 1.8 Amps**
Maximum	**network transfer 43 Mbyte/s (4 byte packets) to 174 Mbyte/s (64 byte packets)**
Current	**requirements 1.8A**
Node	**Capacity 256**
Packet	**size Dynamic, automatically controlled by Memory Xchange module**
Connectors	**Fiber optic LC type, conforms to IEC 61754-20**
Ports	**2 Fiber-Optic Ports (TX and RX)**
Operating	**voltage 5VDC**
Insertion	**Loss Insertio**

3. Product Information

The IC698CMX016 is a Control Memory Exchange Module. It is part of the PACSystem RX7i platform, currently under Emerson Automation, formerly produced by GE Intelligent Platforms (GE IP). This module is mainly used to provide deterministic sharing of data among PLCs and compatible devices over Fiber Optic network using reflective memory technology.

Technical specifications for IC698CMX016

Brand GE Fanuc

Series PACSystem RX7i

Manufacturer GE Fanuc

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

Part Number IC698CMX016

Product Description Control Memory Exchange Module

Series PACSystem RX7i

Description Control Memory Xchange Module

User Memory 16 MB SDRAM

Part Number IC698CMX016

Application Rx7i System

Communication interface Multi-mode, Fiber Optic port

Operating Voltage +5VDC (from power supply)

FO connector LC connector

Transfer Rate 43 to 174 Megabyte per Seconds

Transmission speed 2.12 Gbaud data transmission

Packet Size Dynamic, automatically controlled by Memory Xchange module

Current Rating 1.8 Amps

Maximum network transfer 43 Mbyte/s (4 byte packets) to 174 Mbyte/s (64 byte packets)

Current requirements 1.8A

Node Capacity 256

Packet size Dynamic, automatically controlled by Memory Xchange module

Connectors Fiber optic LC type, conforms to IEC 61754-20

Ports 2 Fiber-Optic Ports (TX and RX)

Operating voltage 5VDC

Insertion Loss Insertion loss: 0.35 dB (maximum)

Configuration Machine Edition (ME) Logic Developer PLC, version 4.5 or later

Current requirements 1.8A

Return Loss -30dB

Approximate Dimensions 6.299 x 9.187 Inches

Module with Single slot

Temperature range -20°C to +85°C

LEDs 4 Status LEDs

LED indicators Own data; Signal Detect

Physical size 6.299” (W) x 9.187” (H)

Product lifecycle Active

The IC698CMX016 is a Control Memory Exchange Module from the PACSystem RX7i platform of Programmable Automation Controllers (PAC). This component is essentially a memory module however, the main function of the IC698CMX016 is to provide a deterministic sharing of data among PLCs and compatible devices over Fiber Optic network using reflective memory technology. The module comes with 16 MB SDRAM of reflective memory with parity. It is mounted to an RX7i rack and occupies a single slot of the backplane. This module is CPU independent as it does not require any CPU processing to operate. Furthermore, it is network compatible with VMIC 5565 family of reflective memory devices. The IC698CMX016’s communication interfaces include an LC fiber optic port that supports transmission speed of 2.12 Gbaud over a multimode fiber media at maximum distance of 300 meters or 984.25 ft The supported dynamic packet size ranges from 4-64 bytes with maximum network transfer rate of 43 Mbytes / second in 4 byte packets to 174 Mbytes / second in 64 byte packets. This memory module is capable of communicating with up to 256 nodes per network and supports redundant transfer mode operation. The IC698CMX016 front panel is provided with a variety of LED status indicators such as an OK, CONFIG, OWN DATA and SIGNAL DETECT. TO utilize the capabilities of the IC698CMX016, it must be installed along an s RX7i CPU with release 2.00 or higher firmware, RX7i CPU rack with power supply and configured using Proficy Machine Edition – Logic Developer PLC, version 4.5 or later.

The GE Fanuc IC698CMX016 Communication Module is a Control Memory Xchange or CMX module for the Rx7i system. This module provides pre-programmed data sharing between PLCs and connected field devices on the high-speed fiber-optic network reflective memory system. The IC698CMX016 Module can accommodate up to 256 nodes contained within a single reflective memory network, and it is compatible with the VMIC 5565 series of reflective memory devices connected to each node. Each VMIC 5565 device is connected to the 2.12 GBaud fiber-optic network in a daisy-chain loop with a fiber-optic cable, and the IC698CMX016 Communication Module can transmit field data in a configurable transmission range of 43 Megabyte per second (in 4-byte dynamic packet sizes) to 174 Megabyte per second (in 64-byte dynamic packet sizes). It has 16 MB of user memory (SDRAM) and reliable software configuration from the Machine Edition (ME) Logic Developer PLC, version 4.5 or later software. The GE Fanuc IC698CMX016 Module has a voltage rating of 5.0 Volts DC and a maximum operating current of 1.8 Amps. On the front panel of the IC698CMX016 Module, there is an optical transceiver with 2 fiber-optic ports labelled TX and RX for transmitting and receiving field data. The IC698CMX016 Module offers user-configurable VME bus outputs through which a transfer of data over the network is initiated, and it also offers Network error detection for smooth data transfers. The IC698CMX016 Module is installed in a single slot of the Rx7i PACsystem I/O rack. It comes with 4 front-panel status/diagnostic LEDs which are the OK CONFIG, OWN DATA, and SIGNAL DETECT LEDs that shows the module’s operation and communication status.