GE RX3i PacSystem Series Service Manual

IC695EDS001

1. Description

The IC695EDS001 is an Ethernet DNP3 Slave / Outstation Module that is part of the PACSystem RX3i platform, currently under Emerson Automation, formerly produced by GE Intelligent Platform (GE IP). This module has One (1) Station Manager port provided by the 9-pin Dh-shell connector and Two (2) RJ45 Ethernet communication port supporting DNP3 Slave protocol. It enables communication of up to 12,072 points and 20,000 events and integration of Four (4) DNP3 data objects such as DI, DI w/time, DO, D

3. Product Information

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Brand GE Fanuc

Series RX3i PacSystem

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

Part Number IC695EDS001

Series PACSystem RX3i

Product type DNP3 outstation module

Part Number IC695EDS001

Compatibility RX3i PACSystems

Product Description Ethernet DNP3 Outstation module

Serial Ports 1

Communication ports One (1) RS232 Station Manager; Two (2) RJ45 Ethernet ports

Ethernet Ports 2

Ethernet Transmission Speed 10/100 mbps

Maximum DNP3 Masters 8

Supported Topologies Line, Star, Daisy chain

Ethernet Protocols LLA, TCP/IP

Supported no of data points Up to 12,072

IP Address per Module 1

Supported no of events 20,000

MAC Address per Module 1

Supported data Objects DI, DI w/time, DO, DO w/time, CROB, analog output values, time setting, and class polls and supports communication

Maximum Modules per Rack 4

No. of modules per RX3i Up to Four (4)

Power Requirements 840 milliamps at 3.3 Volts DC, 614 milliamps at 5 Volts DC

Mounting location Any I/O slot of RX3i Main Rack

Removal and insertion under Power Supported

The IC695EDS001 is a DNP3 outstation module that belongs to the PACSystem RX3i Programmable Automation Controllers (PAC), formerly by GE Intelligent Platforms, now under Emerson Automation. This module supports DNP3 Slave communication over Ethernet I/P, allowing data exchange of up to 12,072 points and 20,000 events between DNP3 masters. This module also supports Four (4) DNP3 data objects including DI, DI w/time, DO, DO w/time, CROB, analog output values, time setting, and class polls. The IC695EDS001 comes with One (1) Module Station manager ports for module and network management and also used as firmware upgrade port. For DNP3 connectivity, it has Two (2) RJ45 terminals supporting 10/100 mbps transmission rate. These ports acts as embedded ethernet switch and capable of auto-sensing for direct connection to a 10BaseT or 100BaseTX IEEE 802.3 network without the need of installing an external transceiver. These ports support a variety of network topologies such as Line, Star, daisy chain or Ring topologies. The IC695EDS001 is installed to a PACSystem RX3i rack and occupies a single slot of the chassis. Multiple module instances are permitted, specifically up to Four (4) IC695EDS001 per RX3i system. It supports module Removal and Insertion Under Power (RIUP). Compatible RX3i CPUs for the IC695EDS001 includes CPU320/CPU315 Primary Firmware Release 8.05; CPU320/CPU315 Boot Firmware Release 5.10; CPE310/CPE305 Primary Firmware Release 8.05; CPE310/CPE305 Boot Firmware Release 7.10; CRU320 Primary Firmware Release 8.05; CRU320 Boot Firmware Release 5.10 and CPU310/CMU310/NIU001 Primary Firmware Release 6.71. Compatible Programming software is Proficy Machine Edition Logic Developer, Release 8.5 SIM 7 or later.

The GE Fanuc IC695EDS001 module is a DNP3 outstation module for the RX3i PACSystems platforms. The IC695EDS001 module is an Ethernet module which is installed in the RX3i backplane and allows the RX3i system to act as an Outstation device on DNP3 networks where it can communicate with a maximum of 8 DNP3 masters. Communication interfaces on the module include a RS-232 port with a 9-pin female D-connector and two 10/100 Mbps Ethernet ports with a female RJ-45 interface. The RS-232 port can be used for network management. The integrated network switch supports auto-negotiate, crossover detection, speed, and sense functions. The supported Ethernet protocols include the LLA and TCP/IP protocols. One IP address and one MAC address are supported per IC695EDS001 module. A recessed restart button for the Ethernet firmware allows for the restarting of the Ethernet firmware without module power-cycling. The IC695EDS001 module can be installed in any empty slot of an RX3i rack. Depending on available slots and power, up to four IC695EDS001 modules can be installed in a single RX39 rack. The module can be removed and inserted while the rack power is applied. When the host CPU comes with a serial port, the Windloader utility can be used to upgrade the firmware on the IC695EDS001 module. If the host CPU does not come with a serial port, a web-based software tool can be used for upgrading the module firmware. A single RX3i CPU supports 32 DNP3 masters. A single IC695EDS001 module supports 12,072 DNP3 points and 20,000 DPN3 events. The IC695EDS001 module supports unsolicited data exchanges with DNP3 masters. The IC695EDS001 module requires a maximum of 840 milliamps of current at 3.3 Volts DC and 614 milliamps of current at 5 Volts DC.