

GE Fanuc IC695ETM001

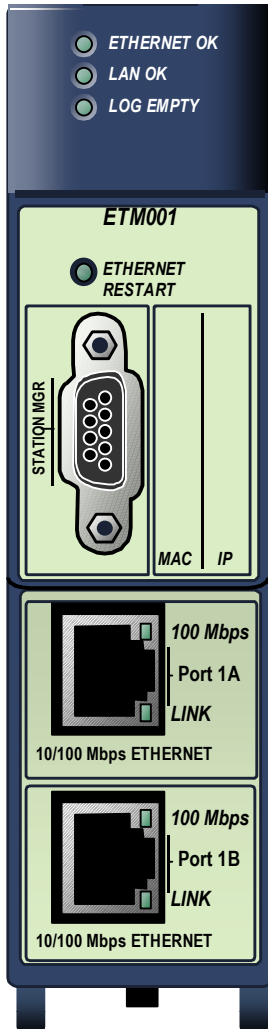
<http://www.pdfsupply.com/automation/ge-fanuc/rx3i-pacsystem/IC695ETM001>

Rx3i PacSystem

Ethernet module 10/100 Mbits 2 RJ45 connections one IP address
IC695E IC695ET IC695ETM

919-535-3180
sales@pdfsupply.com

Ethernet Interface Module: IC695ETM001



The Ethernet Interface Module, IC695ETM001, is used to connect a PACSystems RX3i controller to an Ethernet network. It enables the RX3i controller to communicate with other PACSystems equipment and with Series 90 and VersaMax controllers. The Ethernet Interface provides TCP/IP communications with other PLCs, host computers running the Host Communications Toolkit or programmer software, and computers running the TCP/IP version of the programming software. These communications use the GE Fanuc SRTP and Ethernet Global Data (EGD) protocols over a four-layer TCP/IP (Internet) stack.

Features of the RX3i Ethernet Interface include:

- Full PLC programming and configuration services
- Periodic data exchange using Ethernet Global Data (EGD)
- EGD Commands to read and write PLC and EGD exchange memory over the network.
- TCP/IP communication services using SRTP
- Comprehensive station management and diagnostic tools
- Extended PLC connectivity via IEEE 802.3 CSMA/CD 10Mbps and 100Mbps Ethernet LAN port connectors.
- Network switch that has Auto negotiate, Sense, Speed, and crossover detection.
- Direct connection to BaseT (twisted pair) network switch, hub, or repeater without an external transceiver.

For more information about this module, please refer to the following publications:

- *TCP/IP Ethernet Communications for PACSystems*, GFK-2224
- *PACSystems TCP/IP Communications, Station Manager Manual*, GFK-2225

Specifications: IC695ETM001

Ethernet processor speed	200 MHz
Connectors	- Station Manager (RS-232) Port: 9-pin female D-connector - Two 10BaseT / 100BaseTX Ports: 8-pin female shielded RJ-45
LAN	IEEE 802.2 Logical Link Control Class I IEEE 802.3 CSMA/CD Medium Access Control 10/100 Mbps
Number of IP addresses	One
Number of Ethernet Port Connectors	Two, both are 10BaseT / 100BaseTX with auto-sensing RJ-45 connection.
Embedded Ethernet Switch	Yes – Allows daisy chaining of Ethernet nodes.
Serial Port	Station Manager Port: RS-232 DCE, 1200 - 115200 bps.

Refer to Appendix A for product standards and general specifications.

Ethernet Interface Ports

The Ethernet Interface module has two auto-sensing 10Base T / 100Base TX RJ-45 shielded twisted pair Ethernet ports for connection to either a 10BaseT or 100BaseTX IEEE 802.3 network. The port automatically senses the speed (10Mbps or 100Mbps), duplex mode (half duplex or full duplex) and cable (straight-through or crossover) attached to it with no intervention required.

Ethernet Media

The Ethernet Interface can operate directly on 10BaseT/100BaseTX media via its network ports.

10BaseT: 10BaseT uses a twisted pair cable of up to 100 meters in length between each node and a switch, hub, or repeater. Typical switches, hubs, or repeaters support 6 to 12 nodes connected in a star wiring topology.

100BaseTX: 100BaseTX uses a cable of up to 100 meters in length between each node and a switch, hub, or repeater. The cable should be data grade Category 5 unshielded twisted pair (UTP) or shielded twisted pair (STP) cable. Two pairs of wire are used, one for transmission, and the other for collision detection and receive. Typical switches, hubs, or repeaters support 6 to 12 nodes connected in a star wiring topology.

Station Manager

The built-in Station Manager function of the Ethernet Interface provides on-line supervisory access to the Ethernet Interface, through the Station Manager port or over the Ethernet cable. Station Manager services include:

- An interactive set of commands for interrogating and controlling the station.
- Unrestricted access to observe internal statistics, an exception log, and configuration parameters.
- Password security for commands that change station parameters or operation.

Refer to the *PACSystems TCP/IP Ethernet Communications Station Manager Manual*, GFK-2225 for complete information on the Station Manager.

Firmware Upgrades

The Ethernet Interface receives its firmware upgrades indirectly from the PLC CPU using the WinLoader software utility. WinLoader is supplied with any updates to the Ethernet Interface software.

Ethernet Global Data (EGD)

Each PACSystems CPU supports up to 255 simultaneous Ethernet Global Data (EGD) exchanges. EGD exchanges are configured using the programmer and stored into the PLC. Both Produced and Consumed exchanges can be configured. PACSystems Ethernet Interfaces support both selective consumption of EGD exchanges and EGD exchange production and consumption to the broadcast IP address of the local subnet.

The Ethernet Interface can be configured to use SNTP to synchronize the timestamps of produced EGD exchanges.

The Ethernet Interface implements the capabilities of a Class 1 and Class 2 device. COMMREQ-driven EGD Commands can be used in the application program to read and write data into the CPU or other EGD Class 2 devices.

Ethernet Interface Controls and Indicators

LEDs

- The **Ethernet OK** LED indicates whether the module is able to perform normal operation. This LED is On for normal operation and flashing for all other operations. If a hardware or runtime failure occurs, the EOK LED blinks a two-digit error.
- The **LAN OK** LED indicates access to the Ethernet network. The LAN LED blinks when data is being sent or received over the network directed to or from the Ethernet interface. It remains On when the Ethernet interface is not actively accessing the network but the Ethernet physical interface is available and one or both of the Ethernet ports is operational. It is Off otherwise unless software load is occurring.
- The **Log Empty** LED is On during normal operation. It is Off if an event has been logged.
- Two Ethernet network activity LEDs (**LINK**) indicate the network link status and activity.
- Two Ethernet network speed LEDs (**100Mbps**) indicates the network data speed (10 (off) or 100 Mb/sec (on)).

Ethernet Restart Pushbutton

This pushbutton is used to manually restart the Ethernet firmware without power cycling the entire system. It is recessed to prevent accidental operation.

Connectors

The module has two 10BaseT/100BaseTX Ethernet Network Port Connectors. There is only one interface to the network (only one Ethernet MAC address and only one IP address).

It also has a Station Manager (RS-232) Serial Port.

