May 28, 2004
GFK-2266D

IMPORTANT PRODUCT INFORMATION

READ THIS INFORMATION FIRST

Product: PACSystems™ RX7i Ethernet Module with Firmware Version 2.0

IC698ETM001-CD

This document contains information that is not available in any other publication; therefore, we recommend you save it for future reference. This document discusses the features of the PACSystems RX7i Ethernet Interface Module version 2.0, which corrects the problems described on page 3.

The Ethernet Interface module provides:

- Data exchange using Ethernet Global Data (EGD)
- TCP/IP communication services using SRTP
- Full control system programming and configuration services
- Comprehensive station management and diagnostic tools
- Two full-duplex 10BaseT/100BaseT/TX (RJ-45 Connector) ports with an internal network switch providing auto-negotiated network speed, duplex mode, and crossover detection.

Hardware Identification

The following table shows the revision level of the circuit boards used in this release of the RX7i Ethernet Interface Module.

Catalog Number	Circuit Board ID
IC698ETM001-CD Carrier Card	NE8A1_F2_R02
IC698ETM001-CD Ethernet	EX8A1_F2_R03

Firmware Identification

Catalog Number	Ethernet Firmware Revision
IC698ETM001-CD	Main: 2.00 (22A2) Boot: 1.50 (46A1)

Ethernet Programmable Parts:

Part ID	Revision
PLD	6006_U6_PLD_A.jed

Updates

IC698ETM001-Ax, IC698ETM001-Bx or IC698ETM001-Cx firmware is field upgradeable to IC698ETM001-AD, IC698ETM001-BD or IC698ETM001-CD. To upgrade an RX7i Ethernet Interface module to firmware version 2.0, you must order field upgrade kit 44A752256-G03 or download it at no charge from the web at http://www.geindustrial.com/cwc/gefanuc/support/ControllersIO/psrx7i-u.htm.

The hardware cannot be upgraded.

Product Documentation

PACSystems RX7i CPU Reference Manual, GFK-2222

PACSystems RX7i Installation Manual, GFK-2223

TCP/IP Ethernet Communications for PACSystems RX7i, GFK-2224

Station Manager for the PACSystems RX7i, GFK-2225

PACSystems RX7i User's Guide to Integration of VME Modules, GFK-2235

CIMPLICITY® Machine Edition Getting Started, GFK-1868

CIMPLICITY Machine Edition Logic Developer – PLC Programming Software Getting Started, GFK-1918

Datasheet, PACSystems RX7i E-net Module, GFK-2227

Important Product Information, RX7i Ethernet Module, GFK-2266D (this document)

Ethernet Functional Compatibility

Subject	*Description*
RX7i Does Not Support SRTP Client ("Channels")	The Ethernet Interface does not support the SRTP Client operation ("SRTP Channels") that was provided in the Series 90-70 Ethernet Interface (IC697CMM742).
SRTP and EGD Performance Differs from Series 90-70	SRTP and EGD performance in the RX7i differs slightly from the Series 90-70. Each RX7i Ethernet Interface supports a greater number of SRTP connections and EGD exchanges. Please also note that the RX7i currently has several SRTP and EGD operational restrictions when compared to the Series 90-70. When migrating Series 90-70 Ethernet applications to the RX7i, please carefully read the "Ethernet Operational Notes" section on page 7.
Series 90-70 LAN Interface Modules (IC697CMM741 and IC697CMM742) not Supported by RX7i	Please note that the Series 90-70 LAN Interface Modules (IC697CMM741 and IC697CMM742) are not supported by the RX7i and should not be placed in an RX7i rack. The RX7i CPU contains an embedded Ethernet Interface. If additional Ethernet Interfaces are required, the RX7i Ethernet Module (IC698ETM001) should be used.

Ethernet Problems Resolved by Version 2.0

Subject	*Description*
Switching Between Bit and Word Memory on Reference Table Web Page	Switching between displaying bit memory and word memory no longer generates errors.
SRTP Server automatically cleans up session at CPU	CPU session can remain active when an SRTP server connection is closed if the remote SRTP client established the session with an SRTP Data Request PDU (type 03) instead of the proper Session Request PDU (type 08). The SRTP Server now automatically cleans up any CPU session when the network connection is closed.
Station Manager help display lists invalid FORMATS command	The Station Manager help command (? or HELP) no longer lists FORMATS as a valid command.
Ethernet Port Labels Do Not Match	The Ethernet interface now correctly identifies the external Ethernet ports as "Port 1A" and "Port 1B", instead of "Port 1" and "Port 2". This matches the Ethernet port labeling on the CPU and ETM modules.
Invalid IP Addresses are Not Detected as Errors	The Ethernet Interface should accept only valid Class A, B, or C addresses as its configured IP Address value. Currently, the following invalid addresses are also accepted but should not be: Class D (Multicast), and Loopback.
Incorrect AUP File Line Number in Log Event	The Ethernet exception log event for some invalid AUP parameter data values may indicate the AUP file line number as 0.
Exception when Using Non-standard EGD Host Groups	Storing a HW Config with an AUP file that defines non-standard UDP port numbers for EGD Host Groups used in the produced EGD exchanges, the Ethernet Interface may log an exception Event = 28, Entry 2 = 0001H.

New Ethernet Features and Enhancements

Release 2.00 of the RX7i Ethernet interfaces provides the following new features and enhancements:

- Redundant IP addressing - can be used by Ethernet interfaces in conjunction with Hot Standby CPU Redundancy. Each Redundant PLC Unit contains at least one Ethernet interface that is assigned a unique IP address used to directly access the specific PLC. In addition, a third “redundant” IP address is assigned to the pair of Ethernet interfaces in both the primary and secondary units; the redundant IP address is active on the Ethernet interface in only one of the PLC units at a time: the “active” unit. The active unit handles all data sent to the redundant IP address (including EGD produced to the redundant IP address). If redundancy control passes from the synchronized active unit to the synchronized backup unit, all Ethernet interface(s) in what was the active unit will deactivate their redundant IP address, and the Ethernet interface(s) within the newly activated unit will activate their redundant IP address.
- EGD Class II functionality (Commands) - (acknowledged single command transfers sometimes referred to as “datagrams”) and Reliable Data Service (RDS, retry mechanism to make sure a command message gets through once and only once).