

GFK-2506J

September 2013

The PACSystems* Control Memory Xchange (CMX) module provides deterministic sharing of data among PLCs and other computing devices on a high-speed fiber optic network, using reflective memory technology. A reflective memory network can contain up to 256 nodes. Each node in the network can be any reflective memory device that is compatible with the 5565 family. When data is written to one node, all nodes on the network are automatically updated with the new data.

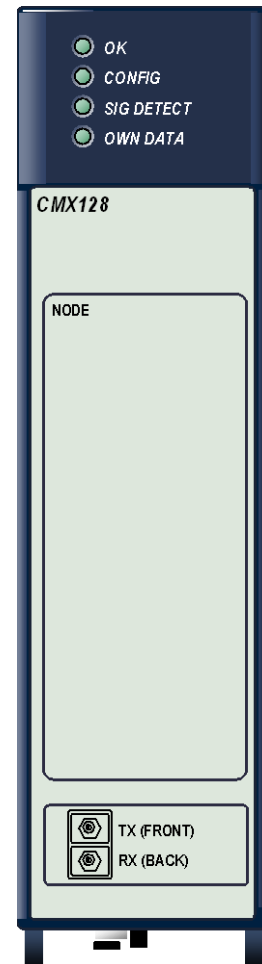
Each node in the reflective memory network is connected in a daisy-chained loop using fiber optic cables. The transmitter of the first node is tied to the receiver of the second. The transmitter of the second node is tied to the receiver of the third node, and so on, until the loop is completed back at the receiver of the first node. The figure on page 4 shows an example of a reflective memory network.

A PACSystems RX3i main rack supports a maximum of six CMX modules.

Features

- PACSystems RX3i single slot form factor.
- 128 Mbytes reflective memory with parity.
- Software configuration of all node parameters (no jumper or switch settings required).
- No RX3i CPU processing required to operate the network.
- Network-compatible with VMIC 5565 family of reflective memory devices, including the ACC-5595 reflective memory hub and the RX7i CMX module.
- Connection with multimode fiber up to 300m/984.25ft.
- Dynamic packet sizes of 4 to 68 bytes, controlled by the CMX module.
- Network transfer rate of 43 Mbyte/s (4 byte packets) to 174 Mbyte/s (64 byte packets)
- Network link speed of 2.1 Gigabits/sec.
- Programmable module interrupt output.
- Four general-purpose network interrupts with 32 bits of data each.
- Network error detection.
- Up to 256 nodes per network.
- Redundant transfer mode operation. This optional mode reduces the chance of a data packet being dropped from the network.
- Configurable network memory offset allows you to assign nodes on a network to groups according to the 16MB segment in the network address space that they use.

The CMX128 module must be located in an RX3i Universal Backplane. The module can be hot-inserted and removed following the instructions in the *PACSystems RX3i System Manual*, GFK-2314.



* indicates a trademark of GE Intelligent Platforms, Inc. and/or its affiliates. All other trademarks are the property of their respective owners. All rights reserved.

GFK-2506J

Specifications

Packet size	Dynamic packet sizes of 4 to 68 bytes (firmware version 1.04 and later), automatically controlled by the CMX module
Transfer rate	Network link speed of 2.1 Gbits/sec
User memory	128MB SDRAM
Input power (from RX3i power supply)	660 mA @ +3.3 VDC 253 mA @ +5 VDC
Connectors	<ul style="list-style-type: none"> ■ Fiber optic LC type, conforms to IEC 61754-20 ■ Zirconium ceramic ferrule ■ Insertion loss: 0.35 dB (maximum) ■ Return loss: -30dB

Refer to the *PACSystems RX3i System Manual*, GFK-2314 for product standards and general specifications.

Related Publications

Available at www.ge-ip.com/support

PACSystems Memory Xchange Modules User's Manual, GFK-2300

PACSystems RX3i System Manual, GFK-2314

PACSystems CPU Reference Manual, GFK-2222

Proficy Machine Edition Logic Developer-PLC Getting Started, GFK-1918

Ordering Information

Description	Catalog Number
Control Memory Xchange Module for RX3i	IC695CMX128
Fiber Optic Cables	VMICBL-000-F5-0xx, where 0xx distinguishes different lengths
<i>Reflective Memory Hub</i>	VMIACC-5595