

MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

GE PACSYSTEMS RX3i

IC695PNC001

PROFINET CONTROLLER MODULE

Used with the applicable PACSystems RX3i communications configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

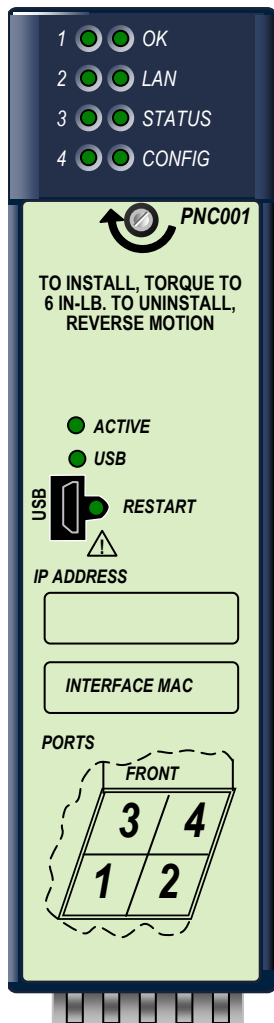
Source: GE official manufacturer documentation

PACSystems* RX3i

IC695PNC001

PROFINET Controller Module

GFK-2573A
December 2011



The PACSystems* RX3i PROFINET Controller (PNC) module, IC695PNC001, connects a PACSystems RX3i controller to a high-speed PROFINET local area network. It enables the RX3i controller to communicate with IO-Devices on the LAN. The PNC provides all the functions, services, and protocols required for certification as a PROFINET IO Version 2.2 IO Controller, running at both 100 Mbps and 1 Gbps.

The PNC supports 10/100/1000 Mbps Copper, 100/1000 Mbps Multi-mode Fiber, and 100/1000 Mbps Single-mode Fiber. The LAN can include media interfaces of more than one type. PROFINET communications on the LAN require 100 and 1000 Mbps link speed. 10 Mbps cannot be used for PROFINET communications. However, 10 Mbps can be used for other types of Ethernet traffic such as ping and telnet.

Features of the RX3i PNC include:

- Full programming and configuration services for the PROFINET Controller, VersaMax PROFINET Scanner and third-party IO-Devices using Proficy Machine Edition .
- Firmware upgrades using the WinLoader software utility.
- Built-in Command Line Interface function that provides direct monitoring and partial configuration via the micro USB port or using telnet.
Note: The USB port is for system setup and diagnostics only. It is not intended for permanent connection.
- Support for star, ring, and daisy-chain/line network topologies.
- Four switched Ethernet ports - two 8-conductor RJ-45 shielded twisted pair 10/100/1000 Mbps copper interfaces and two Small Form-factor Pluggable (SFP) cages for user-supplied SFP devices.
- Internal clock synchronized with the RX3i CPU for time-stamped diagnostics entries.
- Restart pushbutton to manually restart the PNC without power cycling the system.
- LEDs: OK, LAN, STATUS, CONFIG, ACTIVE, USB, and four Port LEDs.
- Compliant with EU RoHS Directive using the following exemptions identified in the Annex: 7c-I and 7c-III.

Ordering Information

IC695PNC001	PACSystems RX3i PROFINET Controller Module 10/100/1000, 4 Ports - 2 SFP connections, 2 Copper
IC200PNS001	VersaMax PROFINET Scanner, 10/100, 2 Ports, Copper
IC200PNS002	VersaMax PROFINET Scanner, 10/100, 2 Ports, Multimode Fiber
IC695SPC100**	RX3i 10/100/1000base-TX (CAT5 100m) SFP
IC695SPF002**	RX3i 100Base-FX (fiber 2 km) SFP

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** Available at a later date.

GFK-2573A

Important Product Information for this Release

Release History

Version	Firmware Revision	Date	Comments
IC695PNC001-AB	1.10	Dec. 2011	Adds support for SNMP and LLDP standards to facilitate network management. Provides enhanced Revision Information in the Explore PROFINET Networks tool.
IC695PNC001-AA	1.00	Jun. 2011	Initial release. Supports GSDML Version 2.2 and previous.

Upgrades

The PNC can be field upgraded to firmware version 1.10 using the Winloader firmware upgrade utility and upgrade kit 82A1790-MS10-000-A1, which can be downloaded from <http://support.ge-ip.com>.

Compatibility

The following CPU firmware, programming software and backplane hardware versions are required to use the features introduced in PNC release 1.10:

RX3i CPU firmware	Models CPU315 or CPU320, with firmware version 7.00 or higher
Programmer software	Proficy Machine Edition version 7.0 SIM 4 or later
VersaMax PROFINET Scanner	IC200PNS001/002 with firmware version 1.00
RX3i backplane hardware	The following backplane hardware revisions must be used: IC695CHS012-BAMP IC695CHS016-BAMP IC695CHS012CA-BAMP IC695CHS016CA-BAMP or IC695CHS012-CA (or later) IC695CHS016-CA (or later) IC695CHS012CA-CA (or later) IC695CHS016CA-CA (or later) or IC695CHS007-AA (or later)

Problems Resolved in Release 1.10

No interoperation with Beckhoff I/O	The initial version of the PNC is unable to connect to or transfer I/O with Beckhoff Bk9053/Bk9103 I/O. RX3i PROFINET controller firmware 1.10 and later has corrected this issue and is able to connect to and transfer I/O with Beckhoff Bk9053/Bk9103 I/O.
Occasional Loss of Device when storing large configuration	When storing a hardware configuration containing a large number of PROFINET devices, sometimes (~5%) the initial version of the PNC will not successfully complete a connection to one or more of the devices. A Loss of Device fault will be logged (with no subsequent Add of Device). Storing the same configuration again will cause the PNC to restart itself and then it typically connects to all devices. A manual restart, via the pushbutton or the CLI command, will also result in successful reconnection. RX3i PROFINET controller firmware 1.10 and later corrects this issue.