General Electric IC695PNC001

TECHNICAL REFERENCE / EXACT-MODEL ENGINEERING DOSSIER

General Electric IC695PNC001 is a PACSystems RX3i PROFINET controller module that links the host RX3i control system with configured PROFINET I/O devices.

01 Product identity and system position

Complete catalog reference	IC695PNC001
Product type	PACSystems RX3i PROFINET Controller Module
Host platform	PACSystems RX3i
Function	IC695PNC001 provides the PROFINET controller role inside an RX3i application; its actual device map and supported features are determined by the installed hardware and firmware.

02 How the installed system uses this module

The IC695PNC001 is identified in Emerson product information as an RX3i PROFINET Controller. It is an I/O-network interface for the RX3i controller, distinct from an IC695PNS001 PROFINET Scanner. Device names, addressing, I/O mapping and update behavior belong to the engineered network configuration.

The installation has a revision boundary. Emerson CPU product information distinguishes IC695PNC001-Ax and IC695PNC001-Bxxx hardware. Features such as extended subslot numbers, remote HART device information and certain CPU combinations have minimum firmware versions; check the actual suffix and releases before restoring a project.

A replacement should preserve the RX3i rack position, controller project, network topology, device identity and PROFINET I/O map. Acceptance requires checking the CPU and PNC diagnostics together, then proving that each configured I/O device exchanges the intended data under an approved machine test.

03 Verified technical and compatibility data

The catalog identity and PROFINET-controller role apply to IC695PNC001. Feature thresholds from GFK-2714AN depend on the installed PNC hardware suffix, PNC firmware, CPU firmware and PAC Machine Edition version.

Product family	PACSystems RX3i
Module function	PROFINET I/O controller
Catalog reference	IC695PNC001
Host architecture	RX3i rack-based controller
Network role	Configured PROFINET devices
Hardware implementations	Ax; Bxxx
Extended PROFINET subslots	Ax 2.25+; Bxxx 3.00+
Remote HART information	Ax 2.26+; Bxxx 3.00+
Simplex PROFINET I/O	Ax 2.00+; Bxxx 3.00+
CPE302/305/310-Axxx 10.05+ pairing	Bxxx 3.16+

04 Application and interface decisions

Remote I/O integration	Control configured PROFINET I/O devices from the RX3i application.
Controller maintenance	Replace an installed PNC while retaining the documented rack slot, network identity and I/O map.

Revision planning	Check Ax or Bxxx hardware and firmware requirements before enabling version-dependent features.
Network fault isolation	Correlate PNC, CPU and device diagnostics with physical link and configured device identity.

05 Engineer questions

What role does IC695PNC001 have in an RX3i system?	It provides the PROFINET I/O controller function for the configured RX3i application. Keep its role separate from the IC695PNS001 scanner role.
Why must the IC695PNC001 hardware suffix be checked?	Emerson compatibility tables separate Ax and Bxxx implementations, and feature thresholds differ between them.
What should be archived before replacing IC695PNC001?	Save the RX3i project, PNC firmware identification, device names, network addressing and I/O mapping.
How should IC695PNC001 compatibility with the host CPU be checked?	Compare the actual CPU firmware, PNC hardware suffix and PNC firmware with the feature-specific compatibility table before restoring the project.
When can IC695PNC001 use extended PROFINET subslots?	The cited RX3i table gives a minimum of 2.25 for Ax hardware and 3.00 for Bxxx hardware; confirm the installed revision and CPU project.
Can IC695PNC001 remote HART information be assumed for every revision?	No. The cited table requires PNC Ax 2.26 or Bxxx 3.00, plus compatible CPU and scanner versions for the configured path.
What should be checked after IC695PNC001 is installed?	Confirm module status, network link, configured device identity and expected I/O data exchange under an approved test.
What can cause an IC695PNC001 network to appear healthy while I/O is unavailable?	A physical link alone does not prove matching device names, configuration, data map or CPU ownership. Check diagnostics at the PNC and each configured device.

06 RX3i integration logic

Controller ownership	The RX3i CPU project assigns the PNC its network role. Capture the active CPU release before comparing replacement behavior.
Device identity	Match configured PROFINET device names and addressing to the as-left record. Link presence alone does not prove data ownership.
I/O map integrity	Compare input and output references, slot/subslot assignments and device diagnostics before allowing machine commands.
Revision-sensitive services	Apply the Ax or Bxxx firmware threshold relevant to the desired feature; do not combine limits from different hardware implementations.
Change control	Retain the project revision and final module firmware with the post-change communication result.

Diagnostic interpretation

No link	Inspect port connection, switch path and the powered network segment before changing the controller project.
Link without I/O	Compare device identity, configured topology, I/O map and individual device fault state.
Intermittent data	Review the affected path, physical connection, controller status and fault timestamps in one sequence.
Feature unavailable	Check hardware suffix and all minimum software/firmware versions stated for the exact feature.

07 Configuration acceptance matrix

RX3i hardware project	Compare the programmed rack position and module selection with the actual installed IC695PNC001 before downloading.
PROFINET name assignment	Record the configured device names as installed; a substituted device must receive the approved identity.
I/O reference allocation	Compare each configured slot and subslot with the CPU reference addresses used by the machine program.
Device update behavior	Review the configured update behavior and fault response against the approved process design.
Network recovery	Prove that all intended devices return to data exchange after the approved restart or module replacement sequence.
As-left archive	Keep firmware, project file, diagnostics and observed acceptance results together for the next service event.

A correct catalog match does not by itself restore the engineered network. The complete RX3i project and connected-device identities establish the operating result.

Evidence and applicability

Emerson PACSystems RX3i IC695PNC001 product information and RX3i CPU Important Product Information GFK-2714AN

Confirm the actual hardware suffix, firmware and installed project before applying version-dependent capabilities.

Discuss the complete IC695PNC001 marking and installed configuration with Apter Power.
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