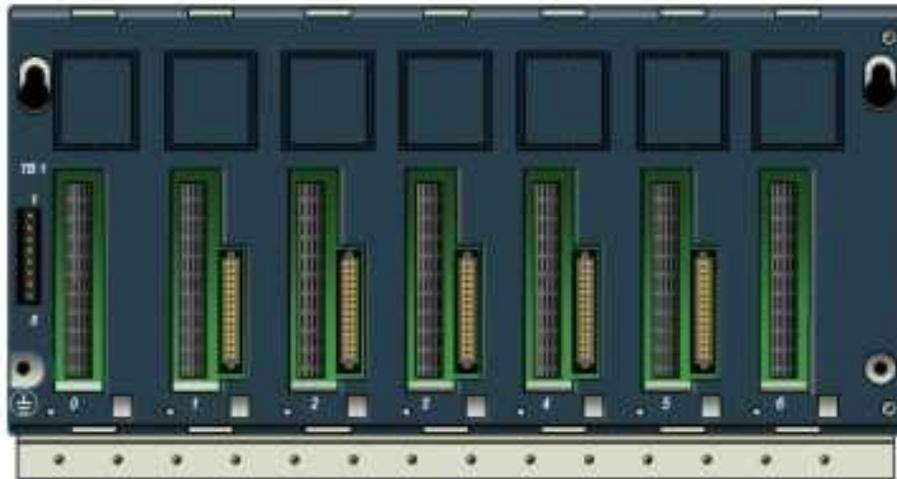


# PACSystems™ RX3i

UNIVERSAL BACKPLANE  
(IC695CHS007)



## Warnings and Caution Notes as Used in this Publication

### WARNING

Warning notices are used in this publication to emphasize that hazardous voltages, currents, temperatures, or other conditions that could cause personal injury exist in this equipment or may be associated with its use.

In situations where inattention could cause either personal injury or damage to equipment, a Warning notice is used.

### CAUTION

Caution notices are used where equipment might be damaged if care is not taken.

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**Note:** Notes merely call attention to information that is especially significant to understanding and operating the equipment.

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# Introduction

## Dual-Bus Backplane

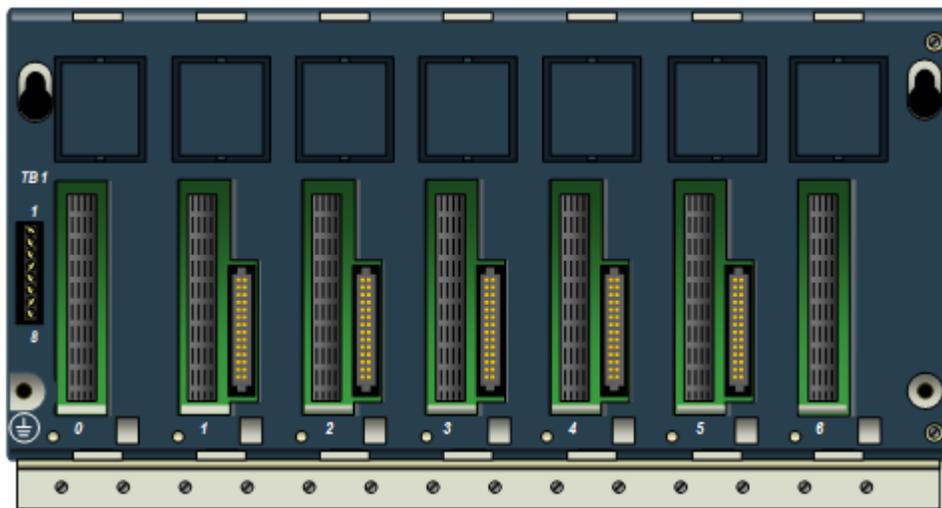
The PACSystems RX3i 7-slot Universal Backplane is the smallest member of the RX3i Universal Backplane family. With its dual-purpose backplane, the RX3i Universal Backplane supports both PCI-based backplane (IC695) and serial backplane (IC693 and IC694) I/O and option modules. It also supports Series 90-30 I/O and option modules. The compact size of the 7-slot rack makes it ideal for applications where space is a significant constraint, or the number of I/O modules in a single location is small.

Slot 0, the slot furthest to the left (Figure 1), supports the IC695 power supply only. Slots 1–5 support both PCI based and serial backplane modules. Slot 6 only provides a PCI connector and therefore can only accept IC695 single-width modules.

Features of the Universal Backplane include:

- Terminal Strip on the left end (Figure 1) for Isolated +24V input
- Backplane grounding point
- An integral grounding bar for connecting module/shield grounds
- Printed slot numbers that are mirrored in the PAC Machine Edition (PME) hardware configuration.
- Support for all RX3i-compatible modules, except the IC695LRE001 Serial Bus Transmitter. Refer to the PACSystems RX3i System Manual, GFK-2314, for lists of supported modules.

**Figure 1: IC695CHS007 Universal Backplane showing slots 0 through 6**



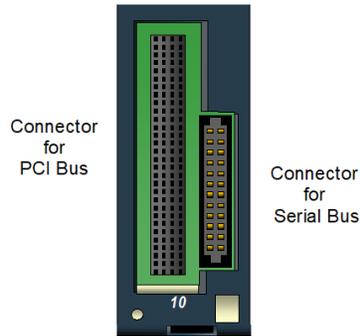
For product installation, mounting, clearances and operation, refer to the PACSystems RX3i System Manual, GFK 2314:

<https://www.emerson.com/Industrial-Automation-Controls/support>.

## PCI-Only Backplane

The PACSystems RX3i 7-slot Universal Backplane is also available as a PCI-exclusive variation (IC695CHS007PCIONLY). The PCI-exclusive version of this backplane supports only IC695 modules. Visually, customers can identify the difference between the two models by the absence of the Serial Bus connector, which is located next to the PCI Bus connector on the dual-purpose backplane (Figure 2).

**Figure 2: Connectors on the Universal Backplane**



## Installation Location

This product is intended for use with the RX3i system. Its components are considered open equipment (having live electrical parts that may be accessible to users) and must be installed in an ultimate enclosure that is manufactured to provide safety. At a minimum, the enclosure shall provide a degree of protection against solid objects as small as 12mm (fingers, for example). This equates to a NEMA/UL Type 1 enclosure or an IEC60529 IP20 rating providing at least a pollution degree 2 environment. For details about installing RX3i rack systems, refer to the PACSystems RX3i System Manual, GFK 2314.

## Installation in Hazardous Areas

The following information is for products bearing the UL marking for Hazardous Areas or ATEX marking for explosive atmospheres:

### CLASS 1 DIVISION 2 GROUPS ABCD

- This equipment is an open-type device and is meant to be installed in an enclosure suitable for the environment that is only accessible with the use of a tool.
- Suitable for use in Class I, Division 2, Groups A, B, C and D Hazardous Locations, or nonhazardous locations only.

### **⚠ WARNING**

- EXPLOSION HAZARD - SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR CLASS I, DIVISION 2.
- WHEN IN HAZARDOUS LOCATIONS, TURN OFF POWER BEFORE REPLACING OR WIRING MODULES.

## ATEX Zone 2

This module must be mounted in an enclosure certified in accordance with EN60079-15 for use in Zone 2, Group IIC and rated IP54. The enclosure shall only be able to be opened with the use of a tool.

## Important Product Information

### Release History

Catalog Revision	Date	Description
IC695CHS007-FB IC695CHS007PCIONLY-FB	Feb 2022	Manufacturing change. No change to form, fit, nor function.
IC695CHS007PCIONLY-EA	Oct 2021	Updates to support CHS007 models with PCI-exclusive capabilities.
IC695CHS007-EA	Sep 2019	Following Emerson's acquisition of this product, changes have been made to apply appropriate branding and registration of the product with required certification agencies. No changes to material, process, form, fit or functionality.
IC695CHS007-DA	June 2018	Hardware Updated to moveout noise spikes on reset line.
IC695CHS007-CA	April 2015	The catalog number is being bumped for manufacturing reasons. There is no other change in the delivered product.
IC695CHS007-BA	March 2012	Mechanical enhancements for improved module-to-connector engagement with the backplane PCI connector, as described below.
IC695CHS007-AA	March 2011	Initial release.

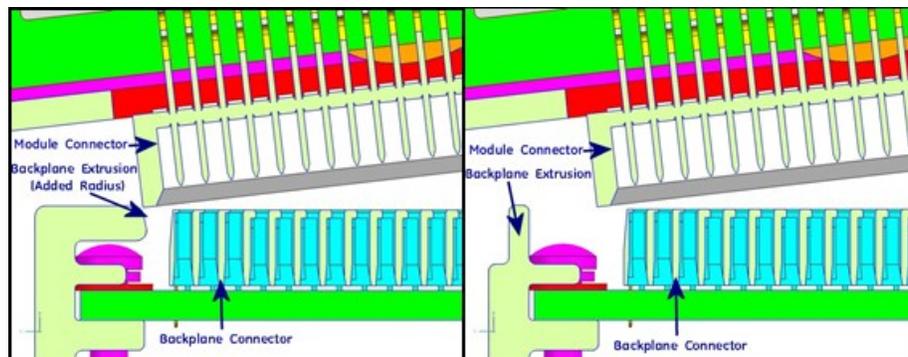
### Operating Notes

Effective with IC695CHS007-BA, IC695CHS012-DA and IC695CHS016-DA, the product was enhanced with the following mechanical design changes:

1. Added an upper ledge with a radius to the backplane extrusion. For PCI-based (IC695) RX3i modules, this upper ledge helps align the module vertically as it is being inserted into the backplane. This reduces the likelihood of experiencing bent or recessed module backplane connector pins when inserting PCI based modules into the backplane.

*Note* that, the edge with the enhanced radius reduces, but does not eliminate, the likelihood of experiencing bent or recessed mating pins on PCI-based modules. To avoid damaging mating module pins, continue to exercise proper care and follow the installation instructions in the PACSystems RX3i System Manual, GFK-2314, when inserting modules into an RX3i universal backplane.

**Figure 3: Backplane Connector**



2. Backplane PWA and backplane connectors were moved 0.015 inch (3.81mm) closer to the front of the backplane. This increases the mechanical module-to-backplane engagement, providing for better connectivity.

## General Contact Information

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Knowledge Base: <https://www.emerson.com/industrial-automation-controls/support>

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Any escalation request should be sent to: [mas.sfdcescalation@emerson.com](mailto:mas.sfdcescalation@emerson.com)

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