MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

GENERAL ELECTRIC

IC695PBM300

PROFIBUS DP MASTER MODULE

Used with the applicable PACSystems RX3i configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

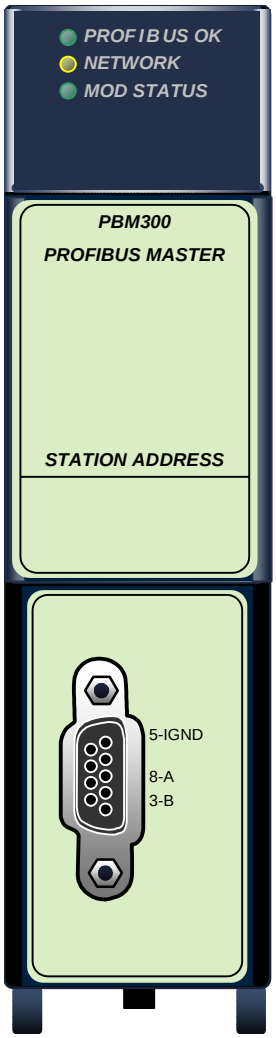
Source: GE Fanuc GFK-2359C, RX3i PROFIBUS Master Module

GFK-2359C
January, 2010

The RX3i PROFIBUS Master Module, IC695PBM300, allows the RX3i CPU to send and receive data on a PROFIBUS-DP network.

The IC695PBM300 module provides the following PROFIBUS communications features:

- Supports all standard data rates
- Supports a maximum of 3,584 bytes of input data and 3,584 bytes of output data
- Supports a maximum of 125 PROFIBUS-DP slaves
- Supports a maximum of 244 bytes of input data and 244 bytes of output data for each slave
- Supports Sync and Freeze modes
- Supports DP-V1 Read, Write and Alarm messages
- Has PROFIBUS-compliant module and network status LEDs



The PROFIBUS Master module requires an RX3i CPU with firmware version 2.9 or later. This module must be located in an RX3i Universal Backplane.

The PROFIBUS module receives its firmware upgrades indirectly from the host controller CPU using the WinLoader software utility. WinLoader is supplied with any updates to the PROFIBUS module software.

Release Information

Version 1.04 of the IC695PBM300 RX3i PROFIBUS Master resolves the following issues:

- When multiple Lumberg devices (8in4out) are connected to the bus and power is removed from these devices, but the PBM300 remains powered, the inputs assigned to the Lumberg devices will toggle between 1 and 0.
- Configuring slaves with a large amount of parameter data returns the correct error code when parameter data exceeds the available memory space.

The IC695PBM300 is field upgradable to firmware version 1.04 using the firmware upgrade utility.

Upgrade Kit: 44A753033-G02

Release History

Catalog Number	Date	Firmware Version
IC695PBM300-BC	May 2006	1.04
IC695PBM300-BB	Apr. 2005	1.02
IC695PBM300-BA	Feb. 2005	1.00
IC695PBM300-AA	Dec. 2004	1.00

PBM300 Functional Compatibility

Subject	Description
Series 90™-30 PROFIBUS	Customers using existing Series 90-30 PROFIBUS products should review the PACSystems RX3i PROFIBUS Modules User's Manual, GFK-2301. Changes have been made in items such as CommReq status words and data fields. This module will report additional information in some instances, and less information in other instances. This product also supports PROFIBUS DP-V1 functionality.
Programmer Version Requirements	The IC695PBM300 can be configured and programmed with Machine Edition Logic Developer PLC version 5.0 Build 3227 SP2 or later.
Total Configuration Size	The number and types of slave devices that can exchange data with the master are constrained by various memory resources within the module. The amount of memory available for the PROFIBUS configuration is affected by the number and types of slave modules in the network configuration. The total slave configuration data size is limited to approximately 9KB.
Data Sizes	The amount of data that can be configured on the IC695PBM300 PROFIBUS network provides up to 3584 input bytes and 3584 output bytes.
DOIO Functionality	DOIO functionality is not supported in the embedded PROFIBUS interface at this time. The DOIO function block returns an error if it is executed using the embedded PROFIBUS as a target.
PLC C Toolkit Version Requirements	Version 4.00 Build 50A1 or later of the PLC C Toolkit must be used for C programming.

Problems Resolved by this Revision

The following problems are resolved in version 1.04.

Subject	Description
Inputs to Lumberg devices blink when devices are powered down.	In previous versions, when multiple Lumberg devices (8in4out) are connected to the bus and power is removed from these devices (but the PROFIBUS master remains powered), the inputs assigned to the Lumberg devices will toggle between 1 and 0. This problem has been corrected in version 1.04.
Incorrect error returned when memory space exceeded	Configuring slaves with large amount of parameter data returns the incorrect error code when parameter data exceed the available memory space. This problem is resolved in version 1.04.

Problems Resolved in RX3i CPU (IC695CPU310)

The following problems were resolved in Release 3.00 of the RX3i CPU.

Subject	Description
PBM300 DPV1 Status data	When a slave module sends a DPV1 Alarm Request to the PBM300 master, the alarm information is displayed in the DPV1 Status input area. The Sequence Number field in this status area will only indicate the value 0 in release 2.9 RX3i CPU firmware, thus only slave DPV1 Alarms with Sequence Number 0 can be properly indicated. This issue is corrected in release 3.0 of the RX3i CPU firmware release.
Discrete memory types for PBM300 COMMREQ	In a PBM300 COMMREQ request, the COMMREQ response reference memory area is indicated in the request. Discrete reference memory types are now supported for the response data area.

PBM300 Restrictions and Open Issues

Subject	*Description*
Get Master Status CommReq returns “1 or More Slaves Not in IO Exchange Mode” on First Scan	When a Get Master Status CommReq is called on the first scan of the PLC, the CommReq may return a false positive saying that the PROFIBUS network has “1 or More Slaves Not in IO Exchange Mode." The Get Master Status CommReq should not be called or relied upon for any data during the first scan of the PLC.
Machine Edition Logic Developer PLC displays incorrect information for Master Type and Device ID	The Network Settings window, which can be displayed while configuring a PBM300 in Machine Edition, does not indicate correct information for Master Type and Device ID. This information is only displayed to the user and does not affect any underlying configuration information sent to the master module or its slaves. The Device ID (also known as PROFIBUS Ident Number), if correctly displayed should be 0x0934.

Specifications: IC695PBM300

Environment	Storage temperature = -40°C to 85°C Operating temperature = 0°C to 60°C
Backplane Compatibility	RX3i PCI
Backplane Current Consumption	440mA @ 3.3VDC
Data rates	Supports all standard data rates (9.6 kBit/s, 19.2 kBit/s, 93.75 kBit/s, 187.5 kBit/s, 500 kBit/s, 1.5 MBit/s, 3 MBit/s, 6 MBit/s and 12 MBit/s)
Status Information Available	Slave Status Bit Array Table Network Diagnostic Counters DP Master Diagnostic Counters Firmware Module Revision Slave Diagnostic Address
Data Sizes	The amount of data that can be configured on the PBM300 PROFIBUS network provides up to 3584 bytes input and 3584 bytes output.

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