Networks and Distributed I/O Systems

The RX3i features a variety of communications options for distributed control and/or I/O. Choose from Profinet Controller, Ethernet EGD, Profibus-DP, Genius and DeviceNet. These communication modules are easy to install and quick to configure.

	IC695ETM001	IC695PNC001	IC695CMX128	IC695PBM300
Product Name	**PACSystems RX3i Ethernet TCP/IP 10/100Mbits, two RJ-45 ports with built-in switch**	**PROFINET Controller (PNC) module, 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.**	**RX3i Control Memory Xchange Module for Peer to Peer network. 128Megbytes of user shared memory.**	**PACSystems RX3i Profibus Master Module, Supports DPV1 Class 1 and Class 2.**
Lifecycle Status	Active	Active	Active	Active
Module Type	Ethernet	PROFINET Controller	Reflective Memory	Profibus Master
Backplane Support	Universal Backplane Only. Uses PCI Bus.	Universal Backplane Only. Uses PCI Bus.	Universal Backplane Only. Uses PCI Bus.	Universal Backplane Only. Uses PCI Bus.
Number of Slots Module Occupies on Backplane	1	1	1	1
Protocol Support	SRT, Ethernet Global Data (EGD), Channels (Client and Server), Modbus TCP (Client and Server)	PROFINET	None Required	Profibus DPV1
Entity Type	Client/Server	Master	Deterministic Peer to Peer. Programmable Interrupt support.	Master
Communication Ports	Two RJ-45 ports one MAC Address	Two RJ-45 and Two SFP Cages (Not included, available separately). Only one MAC address.		PROFIBUS DB-9 connector
Bus Speed	10/100Mbaud	10/100/1000Mbaud	Network link speed of 2.1 Gigabits/ sec. Network transfer rate of 43 Mbyte/s (4 byte packets) to 174 Mbyte/s (64 byte packets)	12Mbaud
I/O Device Update Rate	N/A	Configurable: 1 ms to 512 ms		
Maximum I/O Memory	N/A	128 Kbytes of combined input/output memory per PROFINET Controller		
System Maximum Limits	N/A	Up to 4 PNC001 per CPU IO- Devices per I/O Controller - 64 IO-Devices per Network - 128 per network, across up to 8 I/O controllers IO-Devices per CPU - 128 across 4 Profinet controllers Profinet Slots per device - 256 Number of Profinet Subslots per slot - 256 Number of Profinet Submodules per CPU - 2048		
Network Distance	Network Dependent	100 meters for cooper Up to 70,000 meters with Fiber	Multimode Fiber up to 300 meters between nodes. 10Km when HUB is used	Baud Rate Dependent. 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)
Bus Diagnostics	Yes	Yes	Network error detection.	Yes, Slave Status Bit Array Table, Network Diagnostic Counters, DP Master Diagnostic Counters, Firmware Module Revision, Slave Diagnostic Address
Number of Drops Supported	Network Dependent	64 Drops 256 Subslots	256	Up To 125 (Requires repeater every 25 nodes)
Message Size	N/A		Up to 128 Mbytes reflective memory with parity. Dynamic packet sizes of 4 to 64 bytes, automatically controlled by the CMX module	244 bytes of input and 244 bytes of output for each slave. Not to exceed 3584 bytes input and 3584 bytes outputs total for the system.
Connector Type	Two RJ-45	Two RJ-45 and two optional SFP plug connectors for copper or fiber connections	Fiber optic LC type, conforms to IEC 61754-20; Zirconium ceramic ferrule; Insertion loss 0.35 dB (maximum); Return loss -30 dB	Profibus Connector
Internal Power Used	840 mA @ 3.3 VDC; 614 mA @ 5 VDC	3.3 V: 0.5 A with no SFP devices installed 1.2 A maximum (two SFP devices installed, 0.35 A per SFP device) 5 V: 1.5 A maximum	660 mA @ +3.3 VD 253 mA @ +5 VDC	420 mA @ 5 VDC