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	IC695PNS001	IC695CMX128
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.	PACSystems RX3i PROFINET Scanner (PNS) module, connects a remote node of 90-30 or RX3i modules to a PROFINET IO-Controller	RX3i Control Memory Xchange Module for Peer to Peer network. 128Megbytes of user shared memory.
Lifecycle Status	Active	Active	Active	Active
Module Type	Ethernet	PROFINET Controller	PROFINET Scanner	Reflective Memory
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	PROFINET	None Required
Entity Type	Client/Server	Master	I/O Device (Scanner)	Deterministic Peer to Peer. Programmable Interrupt support.
Communication Ports	Two RJ-45 ports one MAC Address	Two RJ-45 and Two SFP Cages (SFPs not included, available separately). 5 MAC addresses.	Two RJ-45 and Two SFP Cages (SFPs not included, available separately). 5 MAC addresses.	
Bus Speed	10/100Mbaud	10/100/1000Mbaud	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)
I/O Device Update Rate	N/A	Configurable: 1 ms to 512 ms	Configurable: 1 ms to 512 ms	
Maximum I/O Memory	N/A	128 Kbytes of combined input/output memory per PROFINET Controller	2880 bytes total: 1440 bytes of input data, 1440 bytes of output data	
System Maximum Limits	N/A	Up to 4 PNC001 per CPU IO 64 IO-Devices per Network 255 IO-Devices across 4 PROFINET controllers per CPU 256 PROFINET Slots per device 2048 Number of PROFINET Submodules per CPU	1 PNS per rack 32 input status bits and 32 output control bits	
Network Distance	Network Dependent	100 meters for cooper Up to 70,000 meters with Fiber	100 meters for cooper Up to 70,000 meters with Fiber	Multimode Fiber up to 300 meters between nodes. 10Km when HUB is used
Bus Diagnostics	Yes	Yes	Yes	Network error detection.
Number of Drops Supported	Network Dependent	64 Drops 256 Subslots	Supports number of modules allowed per rack Does not support LRE for Series 90-30 expansion racks	256
Message Size	N/A	N/A	N/A	Up to 128 Mbytes reflective memory with parity. Dynamic packet sizes of 4 to 64 bytes, automatically controlled by the CMX module
Connector Type	Two RJ-45	Two RJ-45 and two optional SFP plug connectors for copper or fiber (single or multimode) connections	Two RJ-45 and two optional SFP plug connectors for copper or fiber (single or multimode) connections	Fiber optic LC type, conforms to IEC 61754-20; Zirconium ceramic ferrule; Insertion loss 0.35 dB (maximum); Return loss -30 dB
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	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 VDC 253 mA @ +5 VDC