Remote I/O Units

A Remote I/O Unit connects VersaMax I/O modules to a host PLC or computer via a variety of networks. This makes it easy to include VersaMax I/O in the innovative PROFINET interface, as well as Genius, Profibus-DP, DeviceNet, or other Ethernet installations. Together, the Remote I/O Unit and its modules form an I/O station capable of providing up to 256 points of I/O.

	IC200PNS001	IC200PNS002	IC200DBI001	IC200EBI001
Product Name	Remote I/O PROFINET Network Interface Unit (Cooper Media) with built-in switch	Bus Transmitter Expansion Module (Fiber Media) with built-in switch	Remote I/O DeviceNet Network Interface Unit (Slave)	Remote I/O Ethernet Network Interface Unit
Lifecycle Status	Active	Active	Active	Active
Protocol Supported	PROFINET Slave, Version 2.2 Class A IO-Device	PROFINET Slave, Version 2.2 Class A IO-Device	DeviceNet Slave	EGD and Modbus TCP Server
Distance	100 Meters max drop length 10/100Mbaud	2 – 2,000 (Full-Duplex) 2 – 400 (Half-Duplex)	500Kbps 100m bus length and branches totaling < 39m 250Kbps 250m bus length and branches totaling < 78m 125Kbps 500m bus length and branches totaling < 156m	100 Meters max drop length 10/100Mbaud
I/O Discrete Points	2880 bytes total 1440 bytes of input data 1440 bytes of output data	2880 bytes total 1440 bytes of input data 1440 bytes of output data	Includes both discrete and analog. Up to 128 bytes of inputs + 2-byte status word Up to 128 bytes of outputs + 2-byte control word.	1024 bytes maximum both discrete and analog. %I: 2048 points %Q: 2048 points
I/O Analog Words	2880 bytes total 1440 bytes of input data 1440 bytes of output data	2880 bytes total 1440 bytes of input data 1440 bytes of output data	Includes both discrete and analog. Up to 128 bytes of inputs + 2-byte status word Up to 128 bytes of outputs + 2-byte control word.	1024 bytes maximum both discrete and analog. %AI: 128 channels %AQ: 128 channels
I/O Data	N/A	N/A	Up to 128 bytes of inputs + 2-byte status word Up to 128 bytes of outputs + 2-byte control word.	256 Bytes of input, output, Analog input and Analog output
I/O Data Update Rate	Configurable: 1ms, 2ms, 4ms, 8ms, 16ms, 32ms, 64ms, 128ms, 256ms and 512ms	Configurable: 1ms, 2ms, 4ms, 8ms, 16ms, 32ms, 64ms, 128ms, 256ms and 512ms	N/A	N/A
Network Topology	Daisy-chain/line, star, or ring (redundant media) topology.	Daisy-chain/line, star, or ring (redundant media) topology.	Linear bus (trunkline/dropline); power and signal on the same network cable	Network dependent
Transmission Media	10/100BASE-T	Fiber 100BASE-FX	Shielded, dual twisted pair cable, terminated at both ends	Ethernet twisted pair
Connector	(2) RJ45 with built-in switch	(2) SC or SC-Duplex with built-in switch	5-pin open pluggable connector	RJ-45
User Diagnostic Data	32 input status bits and 32 output control bits	32 input status bits and 32 output control bits	2 bytes of status/control	4
Number of Modules	8 per NIU/station, not expandable	8 per NIU/station, not expandable	8 per NIU/station	8 per NIU/station
Redundancy	No	No	N/A	No
5V Backplane Current Consumption (mA)	3 Watts	5 Watts	160	175
3.3V Backplane Current Consumption (mA)	N/A	N/A	10	425
Dimensions (W x H x D)	134mm (5.28 in) x 132mm (5.2 in)	134mm (5.28 in) x 132mm (5.2 in)	133.4 mm (5.25 in) x 85.9 mm (3.38 in) not including the height of power supply	133.4 mm (5.25 in) x 85.9 mm (3.38 in) not including the height of power supply

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A Remote I/O Unit connects VersaMax I/O modules to a host PLC or computer via a variety of networks, which makes it easy to include VersaMax I/O in Genius, Profibus-DP, DeviceNet, or Ethernet installations. Together, the Remote I/O Unit and its modules form an I/O station capable of providing up to 256 points of I/O.

	IC200GBI001	IC200PBI001
Product Name	Genius Network Interface Unit	Remote I/O Profibus-DP Network Interface Unit (Slave)
Lifecycle Status	Active	Active
Protocol Supported	Genius	Profibus DP
Distance	1372 to 2286 meters - 38.4 Kbaud supports a maximum of 16 devices. 1067 to 1372 meters 76.8 Kbaud supports a maximum of 32 devices. 609 to 1067 meters - 153. 6 Kbaud extended supports a maximum of 32 devices. Less than 609 meters 153.6 Kbaud standard or 153.6 Kbaud extended supports a maximum of 32 devices.	9.6Kbits - 1,200 meters 19.2Kbits - 1,200 meters 93.75Kbits - 1,200 meters 187.5Kbits - 600 meters 500Kbits - 400 meters 1.5Mbits - 200 meters 3Mbits; 6Mbits; 12Mbits - 100 meters
I/O Discrete Points	1024 Inputs and 1024 Outputs	375 bytes maximum. Up to 244 bytes of inputs or 244 bytes of outputs
I/O Analog Words	64 Analog In and 64 Analog Out	375 bytes maximum. Up to 244 bytes of inputs or 244 bytes of outputs
I/O Data	128 bytes in and 128 out per bus scan	375 bytes maximum. Up to 244 bytes of inputs or 244 bytes of outputs.
I/O Data Update Rate	N/A	N/A
Network Topology	Bus	Linear bus, terminated at both ends. Stubs are possible.
Transmission Media	Shielded, twisted pair, fiber optic (external option)	Shielded, twisted pair cable
Connector	Removable Connector	9-pin D-sub connector
User Diagnostic Data	Yes	2 bytes of status/control, 5 bytes of standard Profibus diagnostics
Number of Modules	8 per NIU/station	8 per NIU/station
Redundancy	Full media and hardware redundancy supported	N/A
5V Backplane Current Consumption (mA)	250	250
3.3V Backplane Current Consumption (mA)	10	10
Dimensions (W x H x D)	133.4 mm (5.25 in) x 85.9 mm (3.38 in) not including the height of power supply	133.4 mm (5.25 in) x 85.9 mm (3.38 in) not including the height of power supply

Network Interface Modules

Network Interface Modules allow a VersaMax PLC to operate as a master or slave on a network. Modules currently available support DeviceNet master or slave communications and Profibus-DP slave communications. An AS-i master communications is also available.

	IC200BEM002	IC200BEM103	IC200BEM104	IC200CHS006
Product Name	PLC Network Communications Profibus-DP (Slave). Requires IC200CHS006 Communications Carrier.	PLC Network Communications DeviceNet (Master). Requires IC200CHS006 Communications Carrier.	PLC Network Communications AS-i (Master). Requires IC200CHS006 Communications Carrier.	VersaMax I/O, Local Communications Carrier (Supports IC200BEMxxx Modules)
Lifecycle Status	Active	Active	Active	Active
Number of Stations	32 without repeaters; up to 125 with repeaters	N/A	N/A	N/A
I/O Data	384 Bytes maximum; up to 244 bytes of inputs or 244 bytes of outputs	Up to 128 bytes of inputs and 128 bytes of outputs	4 input bits and 4 output bits per slave	N/A
Network Data Rate	9.6 Kbaud to 12 Mbaud	125 Kbaud, 250 Kbaud, 500 Kbaud	166.6Kbits/second	N/A
Network Topology	Linear bus, terminated at both ends. Stubs are possible	Linear bus (trunkline/ dropline); power and signal on the same network cable	Tree Structure	N/A
Transmission Media	Shielded, twisted pair cable	Shielded, dual twisted pair cable	Rubber coated two wire cable	N/A
Connector	9-pin D-sub connector	5-pin open pluggable connector	Box Style	N/A
Number of Nodes	N/A	Supports up to 40 slave devices	Supports up to 31 slave devices	N/A
User Diagnostic Data	N/A	One presence bit per slave device	Display data	N/A
Power Consumption	460 mA maximum from 5 V output, 5 mA from +3.3 V output	490 mA maximum from 5 V output, 2 mA from +3.3 V output	350 mA maximum from 5 V output	N/A
Dimensions (W x H x D)	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	66.8 mm (2.63 in) x 133.4 mm (5.25 in) x 70 mm (2.75 in), not including the height of DIN Rail

Serial Communications

The serial communications expansion module provides a Modbus Master port for a Genius NIU remote I/O drop. The serial port can be used to interface with a wide range of Modbus slave devices such as controllers, VFDs, bar code readers, marques and much more. The data is transferred to and from the NIU over the Genius LAN and is compatible with any controller that supports Genius Global Data.

	IC200CMM020
Product Name	**Modbus Master Module, 1 RS-485 port.** **Requires IC200CHS006 Communications Carrier.**
Lifecycle Status	Active
Module Type	Modbus Master
NIU Type Supported	Genius and Profinet Slave
Number of Serial Communications Modules	Up to 2 per Genius NIU I/O Station
Number of RTU slaves per Serial Communications Module	1 to 247
Serial Port Type	RS-485. 15-pin subminiature 'D' connector. For RS-232 communications, an RS-485 to RS-232 adapter such as IC690ACC901 can be used. Adapter IC690ACC901 can be installed with its right-angle cable hanging down.RS-485 supports both 2-wire and 4-wire electrical interfaces
Baud Rate Supported	1200, 2400, 4800, 9600, and 19200, and half or full duplex operation
COMMREQ command memory (%AQ) required in the GENERIC_COMM module hardware configuration	Depends on individual COMMREQ content. Minimum: 22 words Maximum: 64 words
RTU Master Commands	65520, Initialize RTU Master Port 8000, Clear RTU Master Diag. Status 8001, Read RTU Master Diag. Status 8002, Send RTU Read/Force/Preset Query 8003, Send RTU Diagnostic Query
Power Consumption	460 mA maximum from 5 V output, 5 mA from +3.3 V output
Dimensions (W x H x D)	110mm (4.3in) x 66.8mm (2.63in) x 50mm (1.956 in), not including the height of the carrier or the mating connectors

Accessories

IC200ACC001	Replacement Battery for VersaMax CPUs	Active
IC200ACC003	EZ Program Store, CPU RS-485 Port Update Device	Active
IC200ACC201	Expansion Terminator QTY 1	Active
IC200ACC202	Expansion Terminator QTY 2	Active
IC690ACC905	Encapsulated Thermistor Kit QTY 2	Active
IC200ACC301	I/O Filler Module	Active
IC200ACC302	I/O Input Simulator	Active
IC200ACC303	I/O Shorting Bar QTY 2	Active
IC200ACC304	Cable Connector Kit, QTY 2, for connector base (IC200CHS003) I/O Base (IC200CHS011, CHS012, CHS014, CHS015 and CHS1xx bases)	Active
IC200ACC313	DIN rail clips (Qty 2) to secure modules on DIN rail	Active
IC200TBM001	I/O Auxiliary Terminal Strip, 18 Internally Bussed, Barrier Style	Active
IC200TBM002	I/O Auxiliary Terminal Strip, 18 Internally Bussed, Box Style	Active
IC200TBM005	I/O Auxiliary Terminal Strip, 18 Internally Bussed, Spring Clamp Style	Active

Cables for Connector Type Carrier

IC200CBL105	Cable, I/O Non-Shielded, 2 Connectors. 0.5M used with IC200CHS003 and IC200CHS011, 012, 015.	Active
IC200CBL110	Cable, I/O Non-Shielded, 2 Connectors, 1.0M used with IC200CHS003 and IC200CHS011, 012, 015.	Active
IC200CBL120	Cable, I/O Non-Shielded, 2 Connectors, 2.0M used with IC200CHS003 and IC200CHS011, 012, 015.	Active
IC200CBL230	Cable, I/O Non-Shielded, 1 Connector, 3.0M used with IC200CHS003 and IC200CHS011, 012, 015.	Active

Cables to Connect Rack to Rack Expansion

IC200CBL600	Rack Expansion Cable, Shielded, Single Ended, 1M to One Expansion Receiver Module (IC200ERM00x)	Active
IC200CBL601	Rack Expansion Cable, Shielded, 2 Connectors, 1M. Supports Multidrop to Multiple Expansion Receiver Modules (IC200ERM00x)	Active
IC200CBL602	Rack Expansion Cable, Shielded, 2 Connectors, 2M. Supports Multidrop to Multiple Expansion Receiver Modules (IC200ERM00x)	Active
IC200ACC304	Cable Connector Kit, QTY 2, for connector base (IC200CHS003) I/O Base (IC200CHS011, CHS012, CHS014, CHS015 and CHS1xx bases)	Active

Starter Kits

IC200PKG001	PLC Starter Kit CPU001	Contains CPU001, PWR101, MDD845, CHS002, ACC302, CBL001, GFK-1503, GFK-1504, 641VPS300 (Infolink included), coffee mug, and plastic carry case. Does not include 24 VDC power supply for inputs.	Active
IC200PKG010	PLC Starter Kit CPUE05	Contains CPUE05, PWR101, MDD845, CHS002, ACC302, CBL001, GFK-1503, GFK-1504, Machine Edition (Infolink included), coffee mug, and plastic carry case. Does not include 24 VDC power supply for inputs.	Active
IC200PKG101	I/O Starter Kit GENIUS	Contains GBI001, PWR101, MDD845, CHS002, ACC302, CBL001, GFK-1535, GFK-1504, 690CDR002 (Infolink), coffee mug, and plastic carry case. Does not include 24 VDC power supply for inputs.	Active
IC200PKG102	I/O Starter Kit Profibus-DP	Contains PBI001, PWR101, MDD845, CHS002, ACC302, CBL001, GFK-1534, GFK-1504, 690CDR002 (Infolink), coffee mug, and plastic carry case. Does not include 24 VDC power supply for inputs.	Active
IC200PKG103	I/O Starter Kit DeviceNet	Contains DBI001, PWR101, MDD845, CHS002, ACC302, CBL001, GFK-1533, GFK-1504, 690CDR002 (Infolink), coffee mug, and plastic carry case. Does not include 24 VDC power supply for inputs.	Active
IC200PKG104	I/O Starter Kit Ethernet	Contains EBI001, PWR101, MDD845, CHS002, ACC302, CBL001, GFK-1534, GFK-1504, Machine Edition (Infolink), coffee mug, and plastic carry case. Does not include 24 VDC power supply for inputs.	Active