


Modicon Quantum automation platform

Networks and buses

Type of network and bus	Ethernet TCP/IP Modbus TCP <i>Transparent Ready</i>		Modbus Plus network	
				
Physical interface	10BASE-T/ 100BASE-TX (copper cable)	10BASE-T/100BASE-TX (copper cable) 100BASE-FX (fiber optic cable)	Single or dual (redundant) copper cable Fiber optic cable	
Access method		CSMA-CD	Token ring	
Data rate	10/100 Mbps	10/100 Mbps (copper cable), 100 Mbps (fiber optic cable)	1 Mbps	
Medium	Shielded twisted pair cables	Shielded twisted pair cables Fiber optic cable	Twisted pair	
Functions, main services	<ul style="list-style-type: none"> - Standard Web service - Modbus TCP messaging - I/O Scanning services - Global Data - FDR client - SNMP management - SMTP services (E-mail) 	<ul style="list-style-type: none"> - Standard Web/FactoryCast service depending on model - Modbus TCP messaging - I/O Scanning services - Global Data depending on model - FDR client - SNMP management - SMTP services (E-mail) depending on model 	<ul style="list-style-type: none"> - FactoryCast HMI active Web service - Modbus TCP messaging - SNMP agent 	<ul style="list-style-type: none"> - Reading/writing of variables - Global Data service - Peer Cop service - Distributed I/O (DIO) service
Compatibility	CPU	Unity CPUs	All CPUs	
	Software	Unity Pro V2.0	Unity Pro V2.0 Concept ProWORX 32	
Power consumption	–	1000 mA	1300...3800 mA depending on 140 CPU model 780 mA for 140 NOM	
Type of module	140 CPU 651 50/60 1 integrated port	140 NOE 771 ●1	140 NWM 100 00	140 CPU 1 integrated port 140 NOM 2●● 00
Pages or website	48280/7	48312/3	48280/7, 48202/5 and 48211/8	

AS-Interface actuator/sensor bus	Modbus SL bus	Profibus DP V0 bus	Profibus DP V1 bus	INTERBus bus	Asynchronous serial links
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2-wire unshielded cable	Single copper cable	Single RS 485 cable		Single RS 485 cable (full-duplex)	2 non-isolated RS 232 channels
Master/slave, M2 profile (AS-Interface V1)	Master/slave	Class 1 master		Generation 3 or 4 master depending on model	–
167 Kbps	19.2 Kbps	9.6 Kbps... 12 Mbps depending on distance (1200... 100 m without repeaters)		500 Kbps	19.2 Kbps
Ribbon cable	Shielded twisted pair cable	Shielded twisted pair or fiber optic cable		Fiber optic shielded twisted pair cable	Shielded cable

- Standard addressing with 31 slaves (4I/4Q "discrete") - Local diagnostics (slave devices, channel status, etc.)	Modbus slave protocol - Reading/writing of PLC variables - Programming - Download - 1 or 2 RS 232/485 ports depending on model Modbus master protocol - Max. 247 slaves	- Cyclic I/O exchange - Broadcast communication - Multicast communication	- Cyclic exchanges (1536 discrete inputs/ 1536 discrete outputs) - Acyclic communication for parameter transmission (in parallel with cyclic exchanges) - Management of fallback modes - "Sync and Freeze" modes - Extended diagnostics	- Cyclic I/O exchanges (256 subscriber, 4096 I/O) - Configuration check - PCP V1.5 or V2.0 protocol depending on model - Remote bus technology	- Reading/writing of ASCII sequences, 7 or 8 bits, controlled by PLC application program - Application of message formats to character strings - Integrated command interpreter
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All CPUs				All CPUs except 140 CPU 113 02 (2)	All CPUs
Unity Pro V2.0 Concept ProWORX 32	Unity Pro V2.0 Concept ProWORX 32	Concept V2.2 (min.) ProWORX 32 Configuration software: SyCon	Unity Pro V2.0 Concept V2.6 (min.) ProWORX 32 Configuration software: Prosoft Configuration Builder (1)	Generation 3: Concept V2.2 (min.) and ProWORX 32 Configuration software: ULEX Generation 4: Concept V2.5 (min.) Configuration software: SyCon	Unity Pro V2.0 Concept V2.2 (min.) ProWORX 32

250 mA	1300...3800 mA depending on 140 CPU model 780 mA for 140 NOM	800 mA	1000 mA	800 mA	300 mA
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140 EIA 921 00	140 CPU 1 or 2 integrated ports 140 NOM 2●● 00	140 CRP 811 00	PTQ PDP MV1 (1)	140 NOA 611 10 (generation 3) 622 00 (generation 4)	140 ESI 062 10
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48189/3	48280/7, 48202/5 and 48211/8	48213/3	www.prosoft-technology.com	48212/3	48210/3
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(1) Products by our partner Prosoft Technology (e-mail: prosoft@prosoft-technology.com).

(2) Generation 4 module, 140 NOA 622 00: Only compatible with 140 CPU 113 03/434 12A/534 14B CPUs.