

# Modicon Quantum automation platform

## Processors

### Concept - ProWORX 32

Automation platform for Concept and ProWORX software offer	Simple applications
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<b>Number of racks</b> 2/3/4/6/10/16 slots	Local I/O	2 racks (1 main + 1 extension)
	Remote I/O (RIO)	31 stations with 2 racks (1 main + 1 extension)
	Distributed I/O (DIO)	3 networks with 63 single-rack stations
<b>Maximum discrete I/O (1)</b>	Local I/O	1024 input channels and 1024 output channels (max. 27 slots)
	Remote I/O (RIO)	31,744 input channels and 31,744 output channels
	Distributed I/O (DIO)	8000 input channels and 8000 output channels per network
<b>Maximum analog I/O (1)</b>	Local I/O	64 input channels and 64 output channels (max. 27 slots)
	Remote I/O (RIO)	1984 input channels and 1984 output channels
	Distributed I/O (DIO)	500 input channels and 500 output channels per network
<b>Application-specific modules</b>		Intrinsically safe I/O, high-speed counter, axis control, interrupt inputs, serial link, accurate time stamping

<b>Number of communication modules and axes (in local rack)</b>	Ethernet TCP/IP, Modbus Plus, Profibus DP, Sy/Max Ethernet, SERCOS, all combinations	2	
<b>Bus connections</b>	Modbus	1 integrated RS 232 Modbus master or ASCII port via EFB XXMIT on Concept or XMIT module on ProWORX	
	AS-Interface actuator/sensor bus	4 on local rack, 4 on remote rack (RIO), 2 on distributed rack (DIO)	
	INTERBUS	Generation 3	3
	Generation 4	2	
<b>Network connections</b>	Profibus DP/SERCOS MMS	Profibus DP/SERCOS MMS, 2 "option" modules on local rack	
	Modbus Plus	1 integrated port, 2 "option" modules on local rack	
	Ethernet TCP/IP	2 "option" modules on local rack	

<b>Process control</b>	Control loops (2)	10 to 20 programmable channels
<b>Redundancy</b>		Power supplies, remote I/O network, Modbus Plus modules, Ethernet TCP/IP modules
<b>Hot Standby availability</b>	Hot Standby LL984	Yes
	Hot Standby IEC	–

<b>Memory capacity</b>	LL984 program (max.)	8 Kwords	16 Kwords	
	IEC program (max.)	109 Kb	368 Kb	
	Localized data (State RAM)	I/O bits (max.)	8192 input bits and 8192 output bits	
		16-bit I/O words (max.)	9999 I/O words	

<b>Quantum CPU</b>	140 CPU 113 02	140 CPU 113 03
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(1) The maximum values for the number of discrete I/O and analog I/O are not cumulative.  
 (2) Usage values, including memory resources and processor power.

**Simple and complex applications**

**Complex applications**



2 racks (1 main + 1 extension)	
31 stations with 2 racks (1 main + 1 extension)	
3 networks with 63 single-rack stations	
1024 input channels and 1024 output channels (max. 27 slots)	
31,744 input channels and 31,744 output channels	
8000 input channels and 8000 output channels per network	
64 input channels and 64 output channels (max. 27 slots)	
1984 input channels and 1984 output channels	
500 input channels and 500 output channels per network	
Intrinsically safe I/O, high-speed counter, axis control, interrupt inputs, serial link, accurate time stamping	
6	
2 integrated RS 232 Modbus master or ASCII ports on port no. 1 via EFB XXMIT on Concept or XMIT module on ProWORX	
Not limited on local rack (max. 27 slots), 4 on remote rack (RIO), 2 on distributed rack (DIO)	
3	
6	
Profibus DP/SERCOS MMS, 6 "option" modules on local rack	
1 integrated port, 6 "option" modules on local rack	
6 "option" modules on local rack	
40 to 80 programmable channels	60 to 100 programmable channels
Power supplies, remote I/O network, Modbus Plus modules, Ethernet TCP/IP modules	
Yes	
Yes	
64 Kwords	
896 Kb	2.5 Mb
64 Kbps I/O	
57 Kwords I/O	
<b>140 CPU 434 12 A</b> <i>(3)</i>	<b>140 CPU 534 14 B</b> <i>(4)</i>

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*(3) CPU able to migrate from Concept to Unity Pro.*

*(4) CPU able to migrate from Concept to Unity Pro with Unity Pro software version ≥ 3.0.*