

# XL4 OCS

## The World's Most Advanced 1/4DIN All-In-One Controller.

The XL4 is a milestone product in the OCS Product Line. It Sets the Standard for Functionality and Performance, solidifying our position as the technology leader in All-in-One Control.



High Performance Logic  
Controller with Online  
Programming

3.5" QVGA Color Touchscreen  
for Detailed Graphics

Built-in Digital & Analog I/O with  
(2) 500kHz High-speed Counters

10/100 Ethernet for E-mail, Web  
Serving, FTP & Modbus/TCP

USB 2.0 Ports for Programming  
& FLASH Drive Support

32GB microSD Slot for  
Virtually Unlimited Data  
Logging



### 3.5" Color Touchscreen

The XL4 is in the same ¼ DIN form factor as our extremely popular XLe & XLt. The XL4 LCD TFT Display is in full color with QVGA resolution and provides virtually instantaneous updates.

### Full Ethernet Built into Every Unit

The XL4 model now has 100Mbps Ethernet built into every model. The XL4 Ethernet support includes an integrated Web Server, FTP Host, Email, Modbus/TCP Master/Slave, Programming, and much more.

### Online Programming & High-Speed USB 2.0

The XL4 includes both a USB Host port and a USB On-the-go Port – each at USB 2.0 speeds. The Host Port allows connection of removable FLASH drives, supporting drives up to 2TB. XL4 Online Programming allows the logic program to be modified on-the-fly without entering stop mode.

### Advanced High Speed Counter (>500kHz)

The 2 channel High Speed Counter accepts frequencies exceeding 500kHz, supporting a variety of modes including Totalizing, Quadrature, Pulse Measurement, Frequency Counting and Setpoint Controlled Outputs.

# XL4 Specifications

General Specifications					Control & Logic Specifications						
Required Power (Steady state)	95 mA @ 24 VDC 190 mA @ 12 VDC				Control Language Support	Advanced Ladder Logic Full IEC 1131-3 Languages					
Required Power (Inrush)	2A for <1 ms @ 24 VDC DC Switched				Logic Program Size & Logic Scan Rate	1MB, maximum 0.013mS/K					
Primary Power Range	10 – 30 VDC				Online Programming Changes	Supported in Advanced Ladder					
Relative Humidity	5 to 95% Non-condensing				I/O Support	Digital Inputs	2048				
Clock Accuracy	+/- 20 ppm maximum at 25° C (+/- 1 Minutes per Month)					Digital Outputs	2048				
Operating Temp	-10°C to +60°C					Analog Inputs	512				
Storage Temp	-30°C to +70°C					Analog Outputs	512				
Weight	12 oz. (340 g)				General Purpose Registers	50,000 (words) Retentive					
UL / CE	USA: <a href="http://www.heapg.com/support/product-certifications/">http://www.heapg.com/support/product-certifications/</a>					16,384 (bits) Retentive					
	Europe: <a href="http://www.horner-apg.com/en/support/certification.aspx">http://www.horner-apg.com/en/support/certification.aspx</a>					16,384 (bits) Non-retentive					
Display Specifications					Connectivity						
Display Type	3.5" TFT Transmissive Color				Serial Ports	1 RS-232 & 1 RS-485 on single Modular Jack					
Resolution	QVGA (320x240)				USB mini-B	USB 2.0 (480MHz) Programming & Data Access					
Color	16-bit (65,535)				USB A	USB 2.0 (480MHz) for USB FLASH Drives (2TB)					
Screen Memory	64MB				CAN	Remote I/O, Peer-to-Peer Comms, Cscope					
User-Programmable Screens	1023				Ethernet	10/100 Mb (Auto-MDX) Modbus TCP C/S, HTTP, FTP, SMTP, Cscope					
Backlight	LED – 50,000 hour life				Remote I/O	SmartRail, SmartStix, SmartBlock, SmartMod					
Screen Update Rate	User Configurable within the scan time. (perceived as instantaneous in many cases)				Removable Memory	MicroSD, support for >32GB max. Application Updates, Datalogging, more					
Input / Output Specifications											
Model	DC In	DC Out	Relays	HS In	HS Out	mA/V In	mA/V RTD/Tc	mA/V Out	High-Speed Counters		
Model 2	12		6	4		4			Number of Counters	2	
Model 3	12	12		4	2	2			Maximum Frequency	>500kHz each	
Model 4	24	16		4	2	2			Accumulator Size	32-bits each	
Model 5	12	12		4	2		2	2	Modes Supported		
There are 4 high-speed inputs of the total DC Inputs. There are 2 high-speed outputs of the total DC outputs. Model 2, 3 & 4 feature 12-bit Analog I/O. Model 5 features 14/16-bit Analog I/O. High-speed Outputs can be used for PWM and Pulse Train Outputs, currently limited to <65kHz.									Totalizer	Quadrature	
									Pulse Meas.		Frequency Meas.
									2 Position Controlled Outputs		1 ON/OFF Setpoint per Output

## XL4 Model Numbers

Part Numbers	Description	Model
HE-XC1E0	XL4 with No Built-in I/O	Model 0
HE-XC1E2	XL4 with 12 DC In, 6 Relay Out, 4 12-bit Analog In	Model 2
HE-XC1E3	XL4 with 12 DC In, 12 DC Out, 2 12-bit Analog In	Model 3
HE-XC1E4	XL4 with 24 DC In, 16 DC Out, 2 12-bit Analog In	Model 4
HE-XC1E5	XL4 with 12 DC In, 12 DC Out, 2 14/16-bit Universal Analog In (mA/V/Tc/mV/RTD), 2 14-bit Analog Out	Model 5

## Expansion & Remote I/O and Accessories



SmartRail Modular I/O



SmartRail Terminal Block I/O



SmartBlock Specialty I/O



HE-CBX45 Serial Breakout Cable



HE-XCK Programming Cable Kit

Kit Includes  
 USB Cable  
 Ethernet Cable  
 RS-232 Cable  
 USB/RS-232 Adapter

