

# XL4 The Compact All-in-One Controller



## XL4 The World's Most Advanced 1/4DIN All-in-one Controller

The XL4 All-in-One controller with a built-in 32,000 colour TFT touch screen, I/O-Modules, networking options, removable MicroSD™ Card and USB ports. It's programmable by Horner APG's industry recognised Cscape™ software and can control a wide range of different processes and machines from small to medium applications.

**3.5" Color Touchscreen**  
QVGA Resolution, 16-bit color, instantaneous screen updates, System Key & 4 Function Keys

**microSD (32GB)**  
Datalogging, Field Application Updates, Recipes, more

**10/100 Ethernet**  
Modbus/TCP Client/Server, HTTP Web Serving, FTP, E-mail, Programming

**USB 2.0 Host**  
FLASH Drive Support (<2TB), Firmware Updates, more

**USB 2.0 On-the-Go**  
High-speed Data & Online Programming

**Digital & Analog In**  
DC Inputs, High Speed Counters (500kHz), 2-bit or 14-bit Analog In

**Digital Outputs**  
DC or Relay, 2 PWM or PTO (200kHz w/opt. drivers)

**RS-232 & RS-485 Serial Ports**  
Modbus/RTU Master & Slave, PLC /Drive Protocols & Programming

**CAN Port**  
Local & Remote I/O, Peer-to-Peer Communications & Programming

**High-performance Logic Controller**  
IEC 1131 Logic Programming, or Advanced Ladder Logic with Online Programming, 1MB Logic Program, 0.013mS/K Logic Scan Rate



For complete product details see  
[www.horner-apg.com/xl4](http://www.horner-apg.com/xl4)

**HORNER**  
APG  
25 Years of Innovation

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## For a wide range of Application

As a compact, powerful controller, XL4 can be used in literally thousands of applications from Machines to Mobile and Process Control Applications. High-speed Ethernet, CANBus and Modbus options offer you the perfect networking mix.

### Model Selector

Model: HEXT251	I/O Expansion	CANbus	Digital Inputs	Digital Outputs	Analog Inputs	Analog Outputs
<b>C100</b>	CANBus / Modbus / Ethernet	1 Port	Same features as other models but no I/O			
<b>C112</b>	CANBus / Modbus / Ethernet	1 Port	12 DC (4 HSC)	6 Relay	4 (10 bit)	No
<b>C113</b>	CANBus / Modbus / Ethernet	1 Port	12 DC (4 HSC)	12 DC (2 PWM)	2 (10 bit)	No
<b>C114</b>	CANBus / Modbus / Ethernet	1 Port	24 DC (4 HSC)	16 DC (2 PWM)	2 (10 bit)	No
<b>C115</b>	CANBus / Modbus / Ethernet	1 Port	12 DC (4 HSC)	12 DC (2 PWM)	2 (14bit) Universal (T/C, RTD, mV,mA,V)	2 (12 bit)

General Specifications	
Required Power (Steady state)	95 mA @ 24 VDC 190 mA @ 12 VDC
Required Power (Inrush)	2A for <1 ms @ 24 VDC DC Switched
Primary Power Range	10 – 30 VDC
Relative Humidity	5 to 95% Non-condensing
Clock Accuracy	+/- 20 ppm maximum at 25° C (+/- 1 Minutes per Month)
Operating Temp	-10°C to +60°C
Storage Temp	-30°C to +70°C
Weight	12 oz. (340 g)
UL / CE	USA: <a href="http://www.heapg.com/Pages/TechSupport/ProductCert.html">http://www.heapg.com/Pages/TechSupport/ProductCert.html</a> Europe: <a href="http://www.horner-apg.com/en/support/certification.aspx">http://www.horner-apg.com/en/support/certification.aspx</a>

Control & Logic Specifications	
Control Language Support	Advanced Ladder Logic Full IEC 1131-3 Languages
Logic Program Size & Logic Scan Rate	1MB, maximum 0.013mS/K
Online Programming Changes	Supported in Advanced Ladder
I/O Support	Digital Inputs 2048 Digital Outputs 2048 Analog Inputs 512 Analog Outputs 512
General Purpose Registers	50,000 (words) Retentive 16,384 (bits) Retentive 16,384 (bits) Non-retentive

Display Specifications	
Display Type	3.5" TFT Transmissive Color
Resolution	QVGA (320x240)
Color	16-bit (65,535)
Screen Memory	64MB
User-Programmable Screens	1023
Backlight	LED – 50,000 hour life
Screen Update Rate	User Configurable within the scan time. (perceived as instantaneous in many cases)

Connectivity	
Serial Ports	1 RS-232 & 1 RS-485 on single Modular Jack
USB mini-B	USB 2.0 (480MHz) Programming & Data Access
USB A	USB 2.0 (480MHz) for USB FLASH Drives (2TB)
CAN	Remote I/O, Peer-to-Peer Comms, Cscape
Ethernet	10/100 Mb (Auto-MDX) Modbus TCP C/S, HTTP, FTP, SMTP, Cscape
Remote I/O	SmartRail, SmartStix, SmartBlock, SmartMod
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
Model 2	12		6	4		4		
Model 3	12	12		4	2	2		
Model 4	24	16		4	2	2		
Model 5	12	12		4	2		2	2

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.

High-Speed Counters	
Number of Counters	2
Maximum Frequency	>500kHz each
Accumulator Size	32-bits each
Modes Supported	
Totalizer	Quadrature
Pulse Meas.	Frequency Meas.
2 Position Controlled Outputs	
1 ON/OFF Setpoint per Output	



OCS combines Control, Operator Interface, I/O and Network - All in One

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