

# BUILT-IN, STREAMLINED I/O



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## INDUSTRY LEADING ALL-IN-ONE CONTROLLER

Our X line of products introduces a series of fixed I/O controllers with exceptional performance and a streamlined ordering and pricing structure. These powerful and efficient controllers are well-suited to perform many of the same high-end applications as our popular XL series at the price point of an introductory component - value engineering hard at work.

With proven success across a wide variety of applications, the X series is ideal for:

- Custom OEM products
- Power management & back-up generation
- Semiconductor applications
- Packaging machinery
- Water treatment
- Compressor control
- Pump control
- Food processing
- Motion control
- Distributed conveyor control
- HVAC/Environmental control
- Mobile machinery
- Automotive parts manufacturing



The X family of products incorporates a similar all-in-one construction as with the XL series. By providing a fixed array of I/O, however, the X Series provides a streamlined approach to the market. Applications that do not require the power of the XL products are perfectly suited to our X line of products.

## POWERFUL, SECURE CSCAPE PROGRAMMING SOFTWARE

The X series (developed using a single, industry-recognized software platform, Cscape) combines graphical ladder logic programming, operator interface development, I/O configuration and network configuration. The user friendly interface provides free form and drag & drop editor, as well as more than 100 functions to choose from. In addition to the Cscape Advanced Ladder offering, Cscape also supports the IEC 1131 programming languages.

From the Horner website, hornerautomation.com, download the Cscape software or software updates at no charge. This free service allows you to avoid costly licensing fees while always having the most up-to-date software version.

## LOWER COSTS, MORE OPTIONS, EASY-TO-USE

With fully integrated hardware and software, the X series offers easy programming, installation, development and set-up. Our controllers have a small footprint and can easily retrofit into an existing system with little effort. None of our X products are limited to their on-board I/O. Many variations of distributed remote I/O, including SmartBlock, SmartStix, and SmartMod can be connected via CsCAN, Ethernet, or Modbus. RTU/Modbus based SmartMod I/O is also a cost effective means of adding a small amount of analog I/O.

The X series utilizes MicroSD™ Data Storage Memory, ideal for data logging, machine recipes, and application files.

## CONNECTIVITY

The X series is designed as a modular system for easy selection and growth; CsCAN (CAN Based) high speed networking and Modbus RTU networking capabilities are standard in both series controllers. Ethernet is standard in our X5 and available as an optional component in our X4. Remote I/O options offer high performance, accurate analog, and easy-to-configure digital only modules. Horner I/O has flexible communication options that easily expand current systems.

## BUILT-IN DIGITAL & ANALOG I/O

	DC In	DC Out	Relay Out	HSC In	Pulse Out	Analog Inputs	Analog Outputs
X2A	12	12		4	2	4 (current)	2 (current)
X2R	12	2	6	4	2	4 (current)	2 (current)
X4A	12	12		4	2	4 (current / RTD)	2 (current)**
X4R	12	2	6	4	2	4 (current / RTD)	2 (current)**
X5	4	4		4	2	4 (current / volts)	

\*High Speed I/O is shared with DC In and DC Out

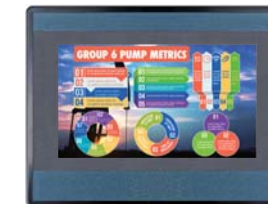
\*\*Use of more than 2 RTD Inputs negates the ability to utilize Analog Outputs



## X SERIES OCS



**FIXED/STANDARD I/O,  
EXCEPTIONAL PERFORMANCE**



FEATURES	
<b>Controller</b>	Ladder Logic Memory
	Logic Scan Rate
	Removable Memory
	Real Time Clock
	Floating Point Support
	AutoTune PID Loops
<b>Operator Interface</b>	Resolution
	Display Technology
	Number of Pages
	Fields or Objects per Page
	Total Keys
	Function Keys
	Built-In Storage
<b>I/O</b>	Built-In I/O points
	High Speed Counter (HSC)
	SmartStix, SmartRail, SmartBlock I/O Support
	Digital Inputs/Outputs, Max
	Analog Inputs/Outputs, Max
	General Purpose Registers (words)
<b>Ethernet/ Internet</b>	Ethernet Support
	Remote Access
	Remote File Access
	WebOCS Compatibility*
	RS-232 Ports/RS-485 Ports
<b>Serial Communications</b>	PLC/Drive Protocols
	RTU/Modbus Master/Slave
	Serial ASCII In/Out
	USB Port A
	USB Port Mini-B
<b>Networking</b>	Integrated CsCAN Network
	Programming Over Network
	Peer-to-Peer Messaging
<b>Physical Specifications</b>	Height (inches/mm)
	Width (inches/mm)
	Depth (inches/mm)
<b>Operating Specifications &amp; Standards</b>	Operating Temperature
	Humidity (non-condensing)
	Voltage
	Environmental Rating

X2	
	256 kB
	1.2 mS/K
	microSD
	Yes
	Yes (32-bit)
	Yes (4 loops)
	128 x 64
	LCD with LED Transflective
	250
	15
	20
	10
	16 MB
	Model A - 30   Model R - 26
	Freq., Pulse, Quad., Total
	Yes - CsCAN
	1024 / 1024
	256 / 256
	5000
	1024
	No
	EnvisionRV
	EnvisionFX
	No
	1 x RS-232 and 1 x RS-485 on shared connector
	Limited
	Yes
	Yes
	No
	Yes (programming)
	Standard
	Yes
	Yes
	4.69" / 119.2 mm
	3.53" 89.7 mm
	1.40" / 35.8 mm
	-10° to 60° C
	5 to 95%
	24 +/- 10% VDC
	IP66, UL Type 3R, 4, 4x, 12, 12k, 13**

X4	
	256 kB
	0.4 mS/K
	microSD
	Yes
	Yes (32-bit)
	Yes (4 loops)
	480 x 272
	LCD with LED 300 nits
	250
	30
	5 (on screen)
	4 (on screen)
	32 MB
	Model A - 30   Model R - 26
	Freq., Pulse, Quad., Total
	Yes - CsCAN & Ethernet
	1024 / 1024
	256 / 256
	5000
	1024
	Standard
	EnvisionRV
	FTP or EnvisionFX
	Coming Soon
	1 x RS-232 and 1 x RS-485 on shared connector
	Limited
	Yes
	Yes
	No
	Yes (programming)
	Standard
	Yes
	Yes
	3.53" 89.7 mm
	4.69" / 119.2 mm
	1.40" / 35.8 mm
	-10° to 60° C
	5 to 95%
	24 +/- 10% VDC
	IP66, UL Type 3R, 4, 4x, 12, 12k, 13**

X5	
	256 kB
	0.013 mS/K
	microSD
	Yes
	Yes (64-bit)
	Yes (32 loops)
	480 x 272
	LCD with LED 450 nits
	1023
	50
	5 (on screen)
	4 (on screen)
	128 MB
	12
	Advanced
	Yes - CsCAN & Ethernet
	2048 / 2048
	512 / 512
	9999 (1024 retentive)
	2048 (1024 retentive)
	Standard
	HTTP or EnvisionRV
	FTP or EnvisionFX
	Yes
	1 x RS-232 and 1 x RS-485 on shared connector
	Yes
	Yes
	Yes
	Yes (flash or hard drive support)
	Yes (programming)
	Standard
	Yes
	Yes
	3.53" 89.7 mm
	4.69" / 119.2 mm
	1.40" / 35.8 mm
	-10° to 60° C (option -40° to 60° C)
	5 to 95%
	10-30 VDC
	IP66, UL Type 3R, 4, 4x, 12, 12k, 13**

\*Licensed option  
\*\*For UL and CE Standards, visit the specific product pages for these items on our website