

# BUILT-IN, STREAMLINED I/O



## GLOBAL HEADQUARTERS

59 S. State Ave.  
Indianapolis, Indiana 46201  
P 317-916-4274  
F 317-639-4279  
TF 877-665-5666  
www.hornerautomation.com  
sales@heapg.com

## INTERNATIONAL OPERATIONS

### HORNER EUROPE

Horner Ireland Limited, Unit 1  
Centrepark, Centrepark Road  
Cork, Ireland  
P +353-21-4321266  
F +353-21-4321826  
info@horner-apg.com  
www.horner-apg.com

### HORNER AUSTRALIA

Unit 15  
104 Ferntree Gully Road  
Oakleigh Victoria 3166  
P 03 9544 0733  
F 03 9544 0977  
jim.callan@heapg.com

### HORNER CHINA

Sales and Tech Support for China  
Room 1001, Nongke Building  
No. 268, Baidilu Road, Nankai District  
Tianjin 300192, P.R. China  
P +86-022-23367571/23360759  
F +86-022-23662715  
info@hornerchina.com.cn  
www.hornerchina.com.cn

### HORNER CANADA

Suite 230, 855 - 42 Avenue SE  
Calgary, Alberta T2G 1Y8  
P (403) 444-0928  
F (403) 265-0966  
info@hornercanada.com  
www.hornercanada.com

### HORNER INDIA

Vaishnavi, No. 3, Domlur 2nd Stage  
3rd Phase, Domlur Main Rd.  
Bangalore 560071  
Karnataka, India  
P +91-80-41263460 / 61 / 62  
F +91-80-41263464  
info@india.horner-apg.com

### HORNER SOUTH AMERICA

Sales and Tech Support for South America  
Rua Bento Gonçalves, 31  
93265-350 - Esteio - RS Brazil  
P +55 51-4042-3037  
F +55 51-4042-3037  
info@hornerbrasil.com.br

## 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)	
X7A	12	12		4	2	4 (current / RTD)	2 (current)**
X7R	12	2	6	4	2	4 (current / RTD)	2 (current)**

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

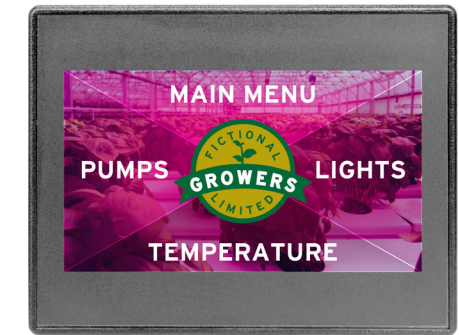
\*\*Use of more than 2 RTD Inputs negates the ability to utilize Analog Outputs



## 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
<b>Operator Interface</b>	AutoTune PID Loops
	Resolution
	Display Technology
	Number of Pages
	Fields or Objects per Page
	Total Keys
	Function Keys
<b>I/O</b>	Built-In Storage
	Built-In I/O points
	High Speed Counter (HSC)
	SmartStix, SmartRail, SmartBlock I/O Support
	Digital Inputs/Outputs, Max
	Analog Inputs/Outputs, Max
<b>Ethernet/Internet</b>	General Purpose Registers (words)
	General Purpose Internal Coils (bits)
	Ethernet Support
	Remote Access
<b>Serial Communications</b>	Remote File Access
	WebOCS Compatibility*
	RS-232 Ports/RS-485 Ports
	PLC/Drive Protocols
	RTU/Modbus Master/Slave
	Serial ASCII In/Out
<b>Networking</b>	USB Port A
	USB Port Mini-B
	Integrated CsCAN Network
<b>Physical Specifications</b>	Programming Over Network
	Peer-to-Peer Messaging
	Height (inches/mm)
	Width (inches/mm)
	Depth (inches/mm)

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

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, 500 kHz
Yes - CsCAN & Ethernet
1024 / 1024
256 / 256
5000
1024
Standard
HTTP or EnvisionRV
FTP or EnvisionFX
Yes - 2 Connections
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

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, 500 kHz
Yes - CsCAN & Ethernet
2048 / 2048
512 / 512
9999 (1024 retentive)
2048 (1024 retentive)
Standard
HTTP or EnvisionRV
FTP or EnvisionFX
Yes - 4 Connections
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

X7
256 kB
0.4 mS/K
microSD
Yes
Yes (32-bit)
Yes (4 loops)
800 x 480
LCD with LED 350 nits
250
30
5 (on screen)
4 (on screen)
32 MB
Model A - 30   Model R - 26
Freq., Pulse, Quad., Total, 500 kHz
Yes - CsCAN & Ethernet
1024 / 1024
256 / 256
5000
1024
Standard
HTTP or EnvisionRV
FTP or EnvisionFX
Yes - 2 Connections
1 x RS-232 and 1 x RS-485 on shared connector
Limited
Yes
Yes
No
Yes (programming)
Standard
Yes
Yes
5.65" / 143.5 mm
7.33" / 186.08 mm
1.34" / 46.6 mm

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