

BUILT-IN, STREAMLINED I/O



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INDUSTRY LEADING ALL-IN-ONE CONTROLLER

Our Micro OCS 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 Micro OCS 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 Micro OCS 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 Micro OCS Series provides a streamlined approach to the market. Applications that do not require the power of the XL products are perfectly suited to our Micro OCS line of products.

POWERFUL, SECURE CSCAPE PROGRAMMING SOFTWARE

The Micro OCS 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 Micro OCS 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 Micro OCS 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 Micro OCS Series utilizes MicroSD™ Data Storage Memory, ideal for data logging, machine recipes, and application files.

CONNECTIVITY

The Micro OCS 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)**
X10A	12	12		4	2	4 (current / RTD)	2 (current)**
X10R	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



MICRO OCS SERIES

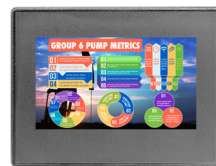


FIXED/STANDARD I/O,
EXCEPTIONAL PERFORMANCE



UL 50E Type 1,
4x, 12, 12K and 13
(indoor use)

MICRO SERIES



FEATURES	
Controller	Ladder Logic Memory
	Logic Scan Rate
	Removable Memory
	Real Time Clock
	Floating Point Support
Operator Interface	AutoTune PID Loops
	Resolution
	Display Technology
	Number of Pages
	Fields or Objects per Page
	Total Keys / Function Keys
I/O	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
	General Purpose Registers (words)
	General Purpose Internal Coils (bits)
Ethernet/Internet	Ethernet Support
	Remote Access
	Remote File Access
	WebMI Compatibility*
Serial Communications	RS-232 Ports/RS-485 Ports on shared connector
	PLC/Drive Protocols
	RTU/Modbus Master/Slave/Serial ASCII In/Out
	USB Port A
	USB Port Mini-B
CAN Networking	Integrated CsCAN Network
	Programming Over Network
	Peer-to-Peer Messaging
Physical Specifications	Height (inches/mm)
	Width (inches/mm)
	Overall Depth (inches/mm)
	Operating Temperature
Operating Specifications & Standards	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 Monochrome
250
15
20 / 10
16 MB
Model A - 30 Model R - 26
Freq., Pulse, Quad., Total, 10 kHz
Yes - CsCAN
1024 / 1024
256 / 256
5000
2048 (retentive 1024)
No
EnvisionRV
EnvisionFX
No
1 x RS-232 and 1 x RS-485
Limited
Yes
No
Programming Only
Standard
Yes
Yes
4.92" / 125 mm
3.78" / 96 mm
1.41" / 35.8 mm
-10° to 60°C
5 to 95%
24 +/- 20% VDC
UL 50E Type 1, 4x, 12, 12k, 13** (Indoor use only)

X4
256 kB
0.4 mS/K
microSD
Yes
Yes (32-bit)
Yes (8 loops)
480 x 272
LCD with LED 350 nits
250
100
5 (on screen) / 4 (on screen)
16 MB
Model A - 30 Model R - 26
Freq., Pulse, Quad., Total, 500 kHz
Yes - CsCAN & Ethernet
1024 / 1024
256 / 256
5000
2048 (retentive 1024)
Standard
WebMI or EnvisionRV
FTP or EnvisionFX
Yes - 2 Connections
1 x RS-232 and 1 x RS-485
Limited
Yes
No
Programming Only
Standard
Yes
Yes
3.79" / 96 mm
4.92" / 125 mm
1.41" / 35.8 mm
-10° to 60°C
5 to 95%
24 +/- 20% VDC
UL 50E Type 1, 4x, 12, 12k, 13** (Indoor use only)

X5
1 MB
0.04 mS/K
microSD
Yes
Yes (64-bit)
Yes (64 loops)
480 x 272
LCD with LED 450 nits
1023
1023
5 (on screen) / 4 (on screen)
128 MB
12
Advanced, 500 kHz
Yes - CsCAN & Ethernet
2048 / 2048
512 / 512
8192 (1024 retentive)
4096 (2048 retentive)
Standard
WebMI, HTTP or EnvisionRV
FTP or EnvisionFX
Yes - 4 Connections
1 x RS-232 and 1 x RS-485
Yes
Yes
Yes (flash or hard drive support)
Programming Only
Standard
Yes
Yes
3.79" / 96 mm
4.92" / 125 mm
1.41" / 35.8 mm
-10° to 60°C (option -40° to 60°C)
5 to 95%
10-30 VDC
UL Class 1 Div II, CE, IP66, UL Type 3R, 4, 4x, 12, 12k, 13**

X7
256 kB
0.4 mS/K
microSD
Yes
Yes (32-bit)
Yes (8 loops)
800 x 480
LCD with LED 300 nits
250
100
5 (on screen) / 4 (on screen)
16 MB
Model A - 30 Model R - 26
Freq., Pulse, Quad., Total, 500 kHz
Yes - CsCAN & Ethernet
1024 / 1024
256 / 256
5000
2048 (retentive 1024)
Standard
WebMI or EnvisionRV
FTP or EnvisionFX
Yes - 2 Connections
1 x RS-232 and 1 x RS-485
Limited
Yes
No
Programming Only
Standard
Yes
Yes
5.65" / 143.50 mm
7.33" / 186.08 mm
2.08" / 52.88 mm
-10° to 60°C
5 to 95%
24 +/- 20% VDC
UL 50E Type 1, 4x, 12, 12k, 13** (Indoor use only)

X10
256 kB
0.4 mS/K
microSD
Yes
Yes (32-bit)
Yes (8 loops)
1024 x 600
LCD with LED 300 nits
250
100
5 (on screen) / 4 (on screen)
16 MB
Model A - 30 Model R - 26
Freq., Pulse, Quad., Total, 500 kHz
Yes - CsCAN & Ethernet
1024 / 1024
256 / 256
5000
2048 (retentive 1024)
Standard
WebMI or EnvisionRV
FTP or EnvisionFX
Yes - 2 Connections
1 x RS-232 and 1 x RS-485
Limited
Yes
No
Programming Only
Standard
Yes
Yes
6.5" / 166.2 mm
10.4" / 263.9 mm
2.2" / 55.8 mm
-10° to 60°C
5 to 95%
10-30 VDC
UL 50E Type 1, 4x, 12, 12k, 13** (Indoor use only)