



CANVAS COLLECTION and HMI CONNECT



**THE WORLD'S MOST ADVANCED
ALL-IN-ONE CONTROLLER
JUST SURPASSED ITSELF!**



Compliant



INDUSTRY LEADING ALL-IN-ONE CONTROLLER

For years, the Horner XL and XL Prime Series have enjoyed a reputation as the most highly functional All-in-one Controllers available anywhere. These products are currently trusted with thousands of applications world-wide.

The NEW Canvas Collection builds upon that proven reputation. Horner's Canvas Series of OCS controllers is just as the name implies - a new canvas for users to utilize a brand new set of enhanced graphics objects in Cscape 10 to give full creative freedom to create screens as technically advanced or as visually stunning as they desire. Take advantage of single touch swipe gestures and a redesigned system menu to build your application for the modern world. The Canvas Series also supports WebMI+ as the next iteration of one of the best remote access tools for your OCS controllers, and also offers MQTT Sparkplug, numerous CAN protocols and Enhanced IEC programming support right out of the box with no licensing fees.

If you are a new automation designer looking for an innovative, reliable control solution - the Canvas Collection offers a fully integrated product in hardware and software. If you are an existing XL Series or XL Prime Series user - your current application program will port straight through in less than 30 seconds. In either case you can't go wrong!

- **ALL-IN-ONE CONTROL** - performs all machine functions in a unified hardware design; logic control, operator interface, I/O and networking.
- **VIBRANT COLOR TOUCHSCREENS** - Design modern and responsive machine control dashboards.
- **ALL NEW GRAPHICS OBJECTS** - Designed from the ground up with all-new graphics. Trending, recipes, alarms - all redesigned with a modern look and fully featured.
- **MULTI-CORE MICROPROCESSOR** - Fast, consistent scan times with separate, dedicated CPU cores for logic and graphics
- **FLEXIBLE LOGIC LANGUAGES** - Use the logic language of your choice - Advanced Ladder Logic or the IEC 6-1131 languages.
- **INDUSTRIAL ETHERNET** - Fast and flexible Ethernet with Ethernet IP, Modbus TCP, BACnet IP; FTP file transfer and Email.
- **IOT & REMOTE CONTROL** - Push data to the cloud with MQTT Sparkplug. Remotely monitor and control the machine with WebMI+ from a web browser. No extra licenses required!
- **OCS360 CLOUD SERVICE READY** - Canvas is pre-configured to support Horner's upcoming OCS360 Cloud Service

PROGRAM CANVAS USING CSCAPE 10

To support all the major innovations we have packed into Canvas, we're introducing Cscape 10 - a major update to our free application development software. With Cscape 10, you'll develop graphics screens in tabs side-by-side with your logic routines. And with Canvas your screens can take advantage of fully redesigned objects such as our all-new Alarm Handler, Recipe Editor and Video Player. If graphs and trends are a critical element of your machine - Canvas offers all-new XY Graphs, Scatter Graphs and Trend Graphs. Trend Graphs support up to 16 pens, multiple Y-Axes and historical logging to microSD.

SMALL FOOTPRINT, EASY-TO-USE WITH PLENTY OF I/O

With fully integrated hardware and software, Canvas offers easier programming, installation and set-up than a separate PLC and HMI in a smaller footprint. Does your system require a lot of I/O? Canvas is not limited to on-board I/O only. Easily expand your I/O system using OCS-I/O, our innovative new Horner I/O system. Or choose one of our other established I/O series including SmartRail, SmartStix or SmartBlock. Add I/O in the same control panel or distribute it on the machine or throughout the facility. Whatever fits your requirements.

CONNECTIVITY

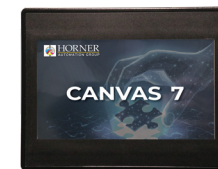
Canvas is designed to connect seamlessly in almost any environment. For the factory, Ethernet IP (Server & HMI) and Modbus TCP (Client/Server) interact with most automation components. BACnet IP is the choice in modern Building Automation systems. With CAN, add I/O (CsCAN), connect to a fieldbus (CANopen) or mobile network (J1939). And with RS232/485 use Modbus RTU or another protocol to interface to variable frequency drives, bar code scanners or legacy equipment.

IOT & AI READY WITH MQTT

Canvas also fully enables your machine for Industry 4.0 - the Industrial Internet of Things (IIoT) revolution. Canvas is pre-configured to connect to the Horner Cloud - OCS360. If you opt-in to this data collection service - you'll be gathering machine data in no time - collecting data you'll need in the future for data hungry advancements like AI Machine Learning. If Inductive Automation® Ignition is your SCADA of choice, Canvas' built-in MQTT Sparkplug will push data to Ignition efficiently.



CANVAS COLLECTION



FEATURES		Canvas 4	Canvas 5	Canvas 7	Canvas 7D
Controller	Ladder Logic Memory	2MB	2MB	2MB	2MB
	Logic Scan Rate	0.02mS/K	0.02mS/K	0.02mS/K	0.02mS/K
	Removable Memory	microSD	microSD	microSD	microSD
	Local Comment Storage	Yes	Yes	Yes	Yes
	Floating Point Support	Yes	Yes	Yes	Yes
	AutoTune PID Capable	Yes	Yes	Yes	Yes
Operator Interface	Characters/Pixels	320x240	480 x 272	800 x 480	800 x 480
	Display Technology	3.5" QVGA	4.3" LCD with LED	7" WVGA	7" WVGA (Std)/TFT Color (-22 opt)*
	Brightness	640 nits	450 nits	420 nits	420 nits (Std)/1000 nits (-22 opt)*
	Character Height	Selectable Fonts	Selectable Fonts	Selectable Fonts	Selectable Fonts
	Number of Screens	1023	1023	1023	1023
	Fields or Objects per Screen	1023	1023	1023	1023
	Function Keys	4 + System Key	4 + System Key (on screen)	5 + System Key (on screen)	5 + System Key
	OEM Faceplate Available	Yes	Yes	Yes	Yes
	Built-in I/O points	22 - 42	12	22-42	22 - 42
I/O	Add on - SmartStix, SmartRail, SmartBlock, SmartMod	CsCAN & Ethernet	CsCAN & Ethernet	CsCAN & Ethernet	CsCAN & Ethernet
	Digital Inputs/Outputs, Max	2048 / 2048	2048 / 2048	2048 / 2048	2048 / 2048
	Analog Inputs/Outputs, Max	512 / 512	512 / 512	512 / 512	512 / 512
	General Purpose Registers (words)*	50,000	50,000	50,000	50,000
	General Purpose Internal Coils (bits)	32768 (16384 ret.)	16384	32768 (16384 ret.)	32768 (16384 retentive)
	LAN Ports	1	1	1	2
Ethernet/ Internet	Factory Protocols	Ethernet IP (Server & HMI), Modbus TCP (Client/Server), BACnet IP (Server), EGD			
	IIoT & Remote Access	MQTT Sparkplug, Horner OCS360 Cloud Service, WebMI via HTML5, Envision RV (OCS360 is an annual subscription service.)			
	Other Protocols	SMTP (Client), NTP (Client), FTP (Server)			
Serial Communications	Serial Ports	2	2	3	3
	RS-232 Ports/RS-485 Ports	RS-232 & RS485 (1 of each)	RS-232 / RS485 (x2)	RS-232 &/or RS485	RS-232 &/or RS485
	PLC/Drive Protocols	Yes	Yes	Yes	Yes
	RTU/Modbus Master/Slave/Serial ASCII In/Out	Yes	Yes	Yes	Yes
	USB Port - USB 2.0 port A	Flash Drive, Camera, Keyboard & Mouse	Flash Drive, Camera, Keyboard & Mouse	Flash Drive, Camera, Keyboard & Mouse	Flash Drive, Camera, Keyboard & Mouse
	USB Port	Mini B - Programming Only	Mini B - Programming Only	Mini B - Programming Only	Type C - Programming Only
Networking	CAN Network Support	CsCAN, CANopen, DeviceNet, J1939	CsCAN, CANopen, DeviceNet, J1939	CsCAN, CANopen, DeviceNet, J1939	CsCAN, CANopen, DeviceNet, J1939
	Maximum CsCAN Distance**	1640 ft.	1640 ft.	1640 ft.	1640 ft.
	Programming Over Network	Yes	Yes	Yes	Yes
	Peer-to-Peer Messaging	Yes	Yes	Yes	Yes
Physical Specifications	Height (inches/mm)	3.78" / 96.0 mm	3.79" / 96 mm	5.66" / 143.8 mm	5.69" / 144.49 mm
	Width (inches/mm)	3.78" / 96.0 mm	4.92" / 125 mm	7.34" / 186.08 mm	8.27" / 210 mm
	Depth (inches/mm)	2.26" / 57.5 mm	1.22" / 31 mm	1.84" / 46.62 mm	3.57" / 90.63 mm
Operating Specifications & Standards	Operating Temperature	-10 to 60°C (-40°C option available)	-10 to 60°C	-10 to 60°C	-10 to 60°C (-40°C option available)
	Humidity (non-condensing)	5 to 95%	5 to 95%	5 to 95%	5 to 95%
	Product Certifications/Approvals	UL Class 1 Div II, CE	UL Class 1 Div II, CE	UL Class 1 Div II, CE	UL Class 1 Div II, CE, Atex (-450 opt)
	Environmental Rating	UL Type 1, 3R, 4, 4x, 12, 12k, 13	UL Type 1, 3R, 4, 4x, 12, 12k, 13	UL Type 1, 3R, 4, 4x, 12, 12k, 13	UL Type 1, 3R, 4, 4x, 12, 12k, 13

*Actual retentive register count may vary from model to model, please contact factory for more details

**Please refer to CsCAN Installation Manual

*22 opt - Sunlight Display - TFT Color, 900 nits



CSCAPE 10



FEATURES

Controller	Ladder Logic Memory
	Logic Scan Rate
	Removable Memory
	Local Comment Storage
	Floating Point Support
Operator Interface	AutoTune PID Capable
	Characters/Pixels
	Display Technology
	Brightness
	Character Height
	Number of Screens
	Fields or Objects per Screen
	Function Keys
	OEM Faceplate Available
	I/O
Add on - SmartStix, SmartRail, SmartBlock, SmartMod	
Digital Inputs/Outputs, Max	
Analog Inputs/Outputs, Max	
General Purpose Registers (words)*	
Ethernet/ Internet	General Purpose Internal Coils (bits)
	LAN Ports
	Factory Protocols
	IIoT & Remote Access
Serial Communications	Other Protocols
	Serial Ports
	RS-232 Ports/RS-485 Ports
	PLC/Drive Protocols
	RTU/Modbus Master/Slave/Serial ASCII In/Out
Networking	USB Port - USB 2.0 port A
	USB Port
	CAN Network Support
	Maximum CsCAN Distance**
Physical Specifications	Programming Over Network
	Peer-to-Peer Messaging
	Height (inches/mm)
	Width (inches/mm)
Operating Specifications & Standards	Depth (inches/mm)
	I/O Module Depth
	Operating Temperature
	Humidity (non-condensing)
	Product Certifications/Approvals
	Environmental Rating

Canvas 10D

2MB
0.02mS/K
microSD
Yes
Yes
Yes
1024 x 600
10.1" WSVGA
300 nits
Selectable Fonts
1023
1023
5 + System Key (on screen)
Yes
22 - 42
CsCAN & Ethernet
2048 / 2048
512 / 512
50,000
32768 (16384 retentive)
2
Ethernet IP (Server & HMI), Modbus TCP (Client/Server), BACnet IP (Server), EGD MQTT Sparkplug, Horner OCS360 Cloud Service*, WebMI via HTML5, Envision RV SMTP (Client), NTP (Client), FTP (Server)
3
RS-232 &/or RS485
Yes
Yes
Flash Drive, Camera, Keyboard & Mouse
Type C - Programming Only
CsCAN, CANopen, DeviceNet, J1939
1640 ft.
Yes
Yes
9.08" / 230.6 mm
11.94" / 303.3 mm
2.43" / 61.7 mm
-10 to 60°C
5 to 95%
UL Class 1 Div II (pending), CE
UL Type 1, 3R, 4, 4x, 12, 12k, 13, ABS

*Actual retentive register count may vary from model to model, please contact factory for more det
**Please refer to CsCAN Installation Manual

*OCS360 is an annual subscription service



BUILT-IN DIGITAL & ANALOG I/O

	DC In	DC Out (+)	Relay Out	HSC In*	Pulse Out**	mA/V In	mA/V RTD/TC (Universal)	mA/V Out
Model 1†	4	4		4	2	4		
Model 0								
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
Model 6	12	12		4	2		6	4

*shared with total DC inputs

† Model 1 applies to the Canvas 5 only

**shared with total DC outputs

CANVAS COLLECTION PART NUMBERS

Model	Model 0 No I/O	Model 2	Model 3	Model 4	Model 5	Model 6
CVS CPU300	HE-CPU300					
Canvas 4	HE-CV-035C-00	HE-CV-035C-02	HE-CV-035C-03	HE-CV-035C-04	HE-CV-035C-05	HE-CV-035C-06
Canvas 5	HE-CV-043C-01					
Canvas 7	HE-CV-070C-00	HE-CV-070C-02	HE-CV-070C-03	HE-CV-070C-04	HE-CV-070C-05	HE-CV-070C-06
Canvas 7D	HE-CV-070D-00	HE-CV-070D-02	HE-CV-070D-03	HE-CV-070D-04	HE-CV-070D-05	HE-CV-070D-06
Canvas 10D	HE-CV-101D-00	HE-CV-101D-02	HE-CV-101D-03	HE-CV-101D-04	HE-CV-101D-05	HE-CV-101D-06

NEW MODULAR CONTROLLERS

What makes Modular Controllers innovative? The headline feature is the ability to "unbolt" the HMI Touchscreen from the All-in-one Controller - mounting it remotely and treating it purely as a hardware component requiring absolutely no setup. We call these new add-on touchscreen components HMI Connect, which simply connect to the Modular Controller using a rugged, 4-pin cable (8m, max) with power, video and touch feedback. If multiple screens are desired - connect an HMI Connect splitter between the CPU and the displays. HMI Connect is powered using automotive technology - NOT consumer technology - ensuring long, reliable operation. HMI Connect touchscreens are available in both IP65/NEMA 4X and IP67 models in sizes from 4" to 15".



Modular Controllers offer other conveniences as well. They are mounted on DIN-rail and support I/O that is snapped on the side, built-in, or both. That means all of your I/O wiring can be buried in the panel, which for many customers is the preferred approach. And if your I/O needs are distributed, up to 16-bases (8 modules each) can be remotely located. Connectivity is extensive, with all models supporting industrial protocols including Ethernet IP (server & HMI), Modbus TCP (client/server), CANopen (master/slave), RTU/ Modbus (master/slave) and more. All models support USB-C for programming. Logic languages supported include traditional Ladder and IEC 6-1131. And all models support Horner's OCS360 cloud service - with remote connectivity, push data, long-term data storage, dashboarding, alarm notifications, and more.



HMI CONNECT (IP65)



FEATURES

	4"	7"	10"	15"
Operator Interface	Part Number	HE959HMI-04	HE959HMI-07	HE959HMI-10
	Characters/Pixels	480 x 272	800 x 480	1024 x 600
	Display Technology	TFT Resistive Touch	TFT Resistive Touch	TFT Resistive Touch
	Brightness	450 nits	420 nits	300 nits
	Function Keys	Virtual	Virtual	Virtual
Physical Specifications	Connection Type	HMI Connect Display Connector	HMI Connect Display Connector	HMI Connect Display Connector
	Height (in / mm)	3.79" / 96mm	5.65" / 143.50mm	6.5" / 166.2mm
	Width (in / mm)	4.92" / 125mm	7.33" / 186.08mm	10.4" / 263.9mm
	Depth (in / mm)	1.41" / 35.8mm	2.08" / 52.88mm	2.2" / 55.8mm
	Weight (lbs / kg)	.79 lbs / .36 kg	1.3 lbs / .59 kg	2.45 lbs / 1.11 kg
	Vesa Mount Support	75 x 75mm or Panel Mount	100 x 100mm or Panel Mount	100 x 100mm or Panel Mount
Operating Specifications	Operating Temperature	-10°C to 60°C	-10°C to 60°C	-10°C to 60°C
	Humidity (non-condensing)	5 to 95%	5 to 95%	5 to 95%
	Environmental Rating	IP65	IP65	IP65

FEATURES

Controller	Controller Class (processor)
	Logic Memory & Scan Rate
Operator Interface	Graphics Class
	Touchscreen Type
	Max Touchscreens
	No. of Pages/Objects per Page
I/O	Built-in I/O Points, Total
	Built-in Analog I/O
	Local I/O Expansion
	Network OCS-I/O Expansion (max)
Communications	No. of Ethernet Ports
	Standard Ethernet Protocols
	Optional Ethernet Protocols
	Remote Access
	CAN Protocols
Physical Specs	RS-232 & RS-485 Ports
	HeightxWidthxDepth (in/mm)
Operating Specs	Typical Mounting Location
	Supply V (A) & Input V
	Operating Temperature/RH%
	Environmental Rating

CPU300

Canvas (dual-core)
2MB @ 0.02 ms/K
Canvas
HMI Connect (remote mounted)
3 Identical Screens (with accessory)
1023/1023
No Built-In I/O
7 Modules, max
16 Bases x 7 Modules, max
2 x 10/100 Mbps
All Protocols on chart are standard
OCS360 Cloud Service, WebMI via HTML5, EnvisionRV
CsCAN, CANopen, & SAE J1939 (std)
Shared RJ45 with RS-485 (half-duplex) and RS-232. Modbus/RTU (master/slave), ASCII & other protocols
4.5" H x 4.92" W x 1.97" D / 114.4mm H x 124.9mm W x 50mm D
DIN-rail (HMI Connect touchscreen mounted remotely)
10-30VDC (1A @ 24V) Supply, 12/24VDC Inputs
-10°C to 60°C/5 to 95%, non condensing
IP20 (HMI Connect touchscreens carry their own rating)



HMI CONNECT (IP67)



FEATURES

Operator Interface	Part Number
	Characters/Pixels
	Display Technology
	Brightness
	Function Keys
Physical Specifications	Connection Type
	Height (in / mm)
	Width (in / mm)
	Depth (in / mm)
	Weight (lbs / kg)
Operating Specifications	Vesa Mount Support
	Operating Temperature
	Humidity (non-condensing)
	Environmental Rating

7" High Bright

HE959AP-07
800 x 480
IPS LCD with PCAP Touch
1000 nits
Virtual
HMI Connect Display Connector
5.8" / 147.32mm
7.8" / 198.12mm
1.2" / 30.48mm
1.6 lbs / .73 kg
75 x 75mm or 100 x 100mm
-40°C to 80°C
5 to 95%
IP67

10" High Bright

HE959AP-10
1280 x 800
IPS LCD with PCAP Touch
1000 nits
Virtual
HMI Connect Display Connector
7.5" / 190.5mm
10.5" / 254mm
2" / 50.8mm
2.0 lbs / .91 kg
75 x 75mm or 100 x 100mm
-40°C to 70°C
5 to 95%
IP67



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