HORNER
AUTOMATION GROUP

REMOTE I/O

I/O EXPANSION FOR
ALL-IN-ONE CONTROLLERS

INDUSTRY LEADING ALL-IN-ONE CONTROLLER

Horner controllers provide the best all-in-one, affordable control solution for OEMs, integrators and end-users by combining robust, reliable control products with operator interface, I/O and networking into a single compact unit. The Horner controllers are designed to provide you with ease of use, cost savings and flexibility for your operation, no matter the application.

With proven success across a wide variety of applications, the XL 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

POWERFUL, SECURE CSCAPE PROGRAMMING SOFTWARE

Horner All-in-One controllers combine 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.

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.

EXPAND I/O CAPACITY OF OCS ALL-IN-ONE CONTROLLERS

By using remote I/O, Horner controllers offer easier programming, installation, development and set-up. Our controllers have a small footprint and can easily retrofit into an existing system with little effort.

OCS I/O

The OCS I/O series features a impressive remote I/O system with support for both asynchronous and synchronous scan. This newest product line features a selection of I/O modules with easy installation and wiring using Horner's signature technology.

SMARTRAIL

SmartRail expands the I/O capacity of OCS all-in-one controllers. SmartRail uses either CANbus or Ethernet communications and can be installed locally or hundreds of meters away.

SMARTBLOCK

Using CsCAN communications, SmartBlock I/O provides easy configuration and network expansion. Designed to complement Horner SmartStix Digital I/O family, these two families can be used to expand the I/O capacity of any OCS.
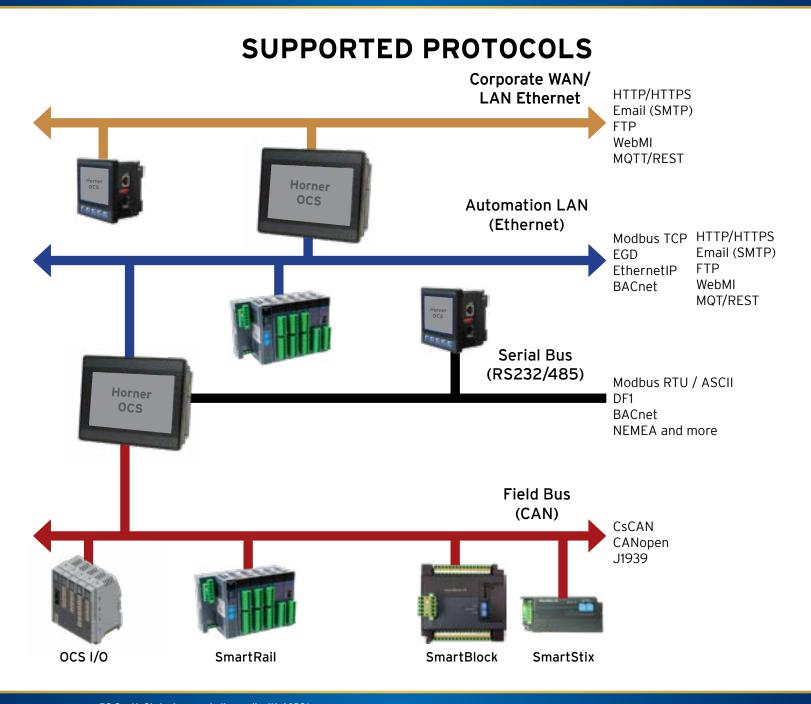
SMARTSTIX

A cost-effective option as expansion or remote I/O and that is extremely compact and also uses CsCAN communications. The SmartStix offers easy configuration through rotary switches and Cscape programming software.

RCC6512

A versatile product for high-speed applications. The RCC6512 combines a control co-processor with high-speed digital and analog I/O with integrated networking.

ADD-ON I/O

Add-on I/O expands digital and analog outputs for OCS all-in-one controllers.

SUPPORTED PROTOCOLS

Corporate WAN/ LAN Ethernet
HTTP/HTTPS
Email (SMTP)
FTP
WebMI
MQTT/REST

Automation LAN (Ethernet)
Modbus TCP
EGD
EthernetIP
BACnet
HTTP/HTTPS
Email (SMTP)
FTP
WebMI
MQT/REST

Serial Bus (RS232/485)
Modbus RTU / ASCII
DF1
BACnet
NEMEA and more

Field Bus (CAN)
CsCAN
CANopen
J1939

OCS I/O   SmartRail   SmartBlock   SmartStix

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Remote I/O Features — OCS I/O, SmartRail Base & SmartRail Modules

Product Preview — OCS I/O* (HE959…)

REMOTE I/O FEATURES		CNX116	ADU100	DAC107	DIM620	DIQ512	DIQ616	DOM502
Communication/ Networks	CsCAN	✓	✓	✓	✓	✓	✓	✓
	CANOpen							
	Ethernet IP							
	Modbus TCP							
	Sychronous		✓	✓	✓	✓	✓	✓
Digital Inputs	12/24VDC Inputs (pos/neg)	2			4			
	5VDC Input Support							
	High-Speed Counter Support							
	Universal Analog/Digital Inputs	1						
	120VAC Inputs (pos)			8				
Digital Outputs	24VDC Outputs (pos)	2				8		
	Relay Outputs						4	4
	SSR Outputs							
	Max Current (A)	3				5	1	1
	High-Speed Output Support							
Analog Inputs	Input Channels	1	4					
	Resolution (bits)	16	16					
	0-10V Support	✓	✓					
	4-20mA Support	✓	✓					
	RTD Support	✓	✓					
	Thermocouple Support	✓	✓					
	mV Support	✓	✓					
	Resolution							
Analog Outputs	Output Channels	1		4				
	Resolution (bits)	12		12				
	0-10V Support	✓		✓				
	+/- 10V Support			✓				
	4-20mA Support	✓		✓				
Power Monitoring	3-Phase 600VAC, 0-5A CTs							
	3-Phase 600VAC, Rogowski Coils							
	1-Phase 0-30 CT Interface							

*CNX116 required

SmartRail Base (HE599…)

REMOTE I/O FEATURES		CNX100	COS100	ETX200	ETX300
Communication/ Networks	CsCAN	✓			
	CANOpen		✓		
	Ethernet IP			✓	
	Modbus TCP				✓

SmartRail Modules* (HE599…)

REMOTE I/O FEATURES		ADC170	DAC101	DAC106	DIM510	DIM610	DIM710	DIQ512	DOM502	DOM506	DOM602	DOM606	DOM706	MIX116	RTD100	THM100
Communication/ Networks	CsCAN	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CANOpen	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Ethernet IP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Modbus TCP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Sychronous															
Digital Inputs	12/24VDC Inputs (pos/neg)				8	16	32	8								
Digital Outputs	24VDC Outputs (pos)								8			16	32			
	Relay Outputs									8	8			16		
	Max Current (A)								2	2	1	2	1	1		
Analog Inputs	Input Channels	4	4												2	4
	Resolution (bits)	12	12												12	12
	0-10V Support	✓													✓	
	4-20mA Support	✓													✓	✓
	RTD Support															✓
	Thermocouple Support			✓												
Analog Outputs	Output Channels	4	4											2		
	Resolution (bits)	12	12													
	0-10V Support	✓													✓	
	+/- 10V Support														✓	
	4-20mA Support			✓												

*SmartRail base required for SmartRail Modules

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Remote I/O Features — SmartBlock, More SmartBlock & SmartStix Modules

SmartBlock Modules (HE579… or HE569DQM…)

REMOTE I/O FEATURES		ACM300	ACM302	ADC570	ADC970	BMS168	DAC107	DAC207	DIQ880	DIQ881	DOM204	DOM205	DOM209	DOM212
Communication/ Networks	CsCAN	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CANOpen													
	Ethernet IP													
	Modbus TCP													
	Sychronous													
Digital Inputs	12/24VDC Inputs (pos/neg)								8	8				
Digital Outputs	24VDC Outputs (pos)												8	
	Relay Outputs				8						8			8
	SSR Outputs								8AC	8DC				
	Max Current (A)								3	1	1	2	25	7
Analog Inputs	Input Channels			6	12									
	Resolution (bits)			16	16									
	0-10V Support			✓	✓									
Analog Outputs	Output Channels						4	8						
	Resolution (bits)						14	14						
	0-10V Support						✓	✓						
	4-20mA Support						✓	✓						
Power Monitoring	3-Phase 600VAC, 0-5A CTs	✓												
	3-Phase 600VAC, Rogowski Coils		✓											
	1-Phase 0-30 CT Interface					16								

More SmartBlock Modules (HE579…)

REMOTE I/O FEATURES		MIX102	MIX105	MIX577	MIX977	RTD100	RTD200	THM100	THM200
Communication/ Networks	CsCAN	✓	✓	✓	✓	✓	✓	✓	✓
Digital Inputs	12/24VDC Inputs (pos/neg)	12	12						
Digital Outputs	24VDC Outputs (pos)	12							
	Relay Outputs	6							
	Max Current (A)	3	1						
Analog Inputs	Input Channels	4	3	4	8	4	8	4	8
	Resolution (bits)	14	14	14	14	16	16	16	16
	0-10V Support	✓	✓	✓	✓				
	4-20mA Support	✓	✓	✓	✓				
	RTD Support					✓	✓		
	Thermocouple Support							✓	✓
	mV Support							✓	✓
Analog Outputs	Output Channels			2	2			4	
	Resolution (bits)			14	14			14	
	0-10V Support			✓	✓				
	4-20mA Support			✓	✓			✓	

SmartStix Modules (HE559…)

REMOTE I/O FEATURES		DIM610	DIM710	DIQ816	DOM602	DOM606	DOM706
Communication/ Networks	CsCAN	✓	✓	✓	✓	✓	✓
Digital Inputs	12/24VDC Inputs (pos/neg)	16	32	16			
Digital Outputs	24VDC Outputs (pos)				16		32
	Relay Outputs					16	
	Max Current (A)			1	2	1	0

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MADE IN USA

RCC Co-processor

Add-on I/O

HE-RCC6512

REMOTE I/O FEATURES		RCC Co-Processor	Add-on I/O*			
			HE-XDAC007	HE-XDAC107	HE-XHSQ	HE-XHSQ-5
Communication/ Networks	CsCAN	✓				
	CANOpen					
	Ethernet IP	✓				
	Modbus TCP	✓				
	Sychronous		✓	✓	✓	✓
Digital Inputs	12/24VDC Inputs (pos/neg)	12				
	5VDC Input Support	✓				
	High-Speed Counter Support	✓				
	Universal Analog/Digital Inputs					
	120VAC Inputs (pos)					
Digital Outputs	24VDC Outputs (pos)	10			2	2 (5VDC)
	Relay Outputs					
	SSR Outputs					
	Max Current (A)				0.5	0.2
	High-Speed Output Support	✓			✓	✓
Analog Inputs	Input Channels	2				
	Resolution (bits)	12				
	0-10V Support	✓				
	4-20mA Support					
	RTD Support					
	Thermocouple Support					
	mV Support					
	Resolution					
Analog Outputs	Output Channels	4	2	4		
	Resolution (bits)		12	12		
	0-10V Support		✓	✓		
	+/- 10V Support	✓	✓	✓		
	4-20mA Support		✓	✓		
Power Monitoring	3-Phase 600VAC, 0-5A CTs					
	3-Phase 600VAC, Rogowski Coils					
	1-Phase 0-30 CT Interface					

*XL OCS required