THE INDUSTRY LEADER IN REMOTE I/O

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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 an 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.

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.

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.

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.

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.eu, 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.

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
MQTT/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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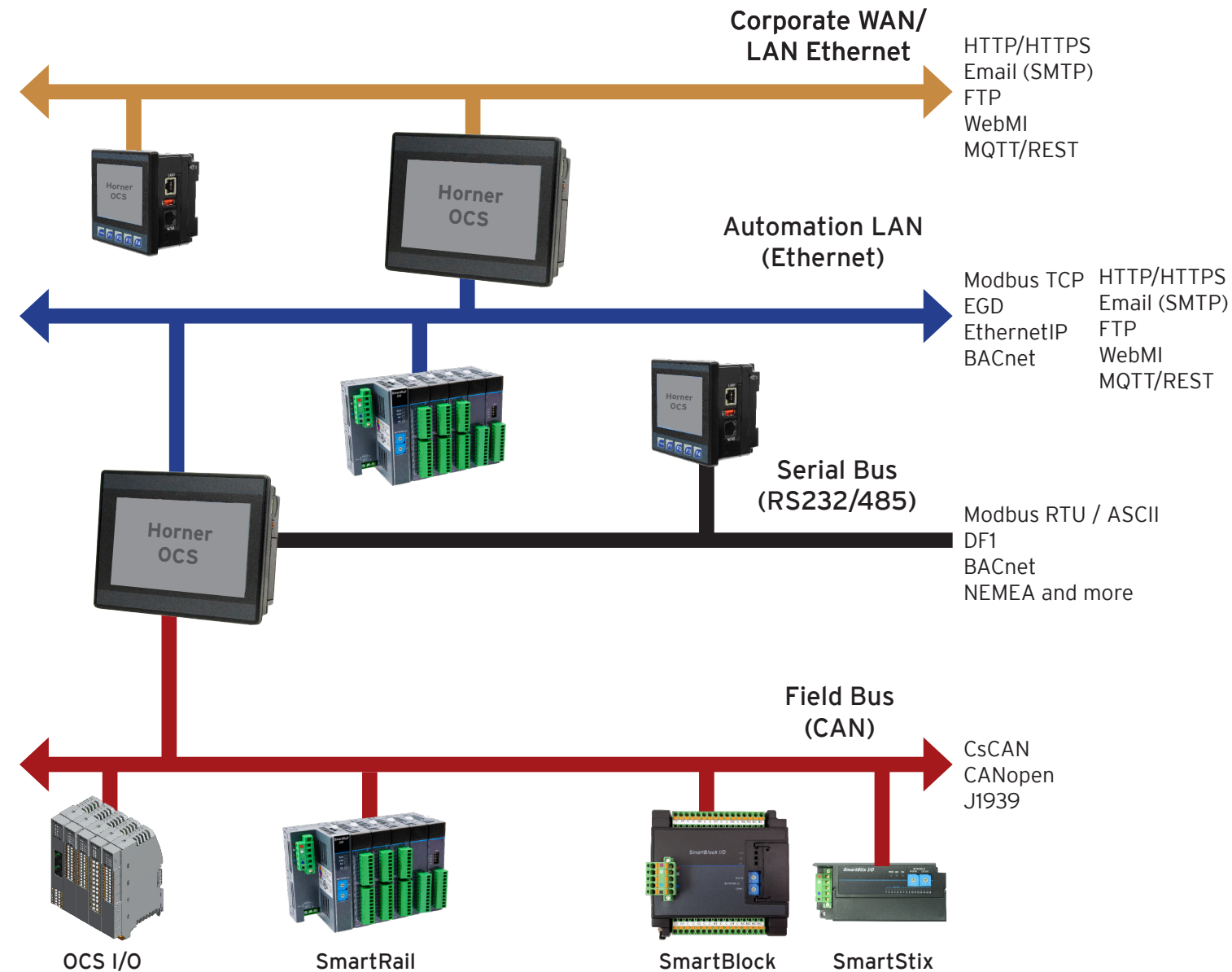
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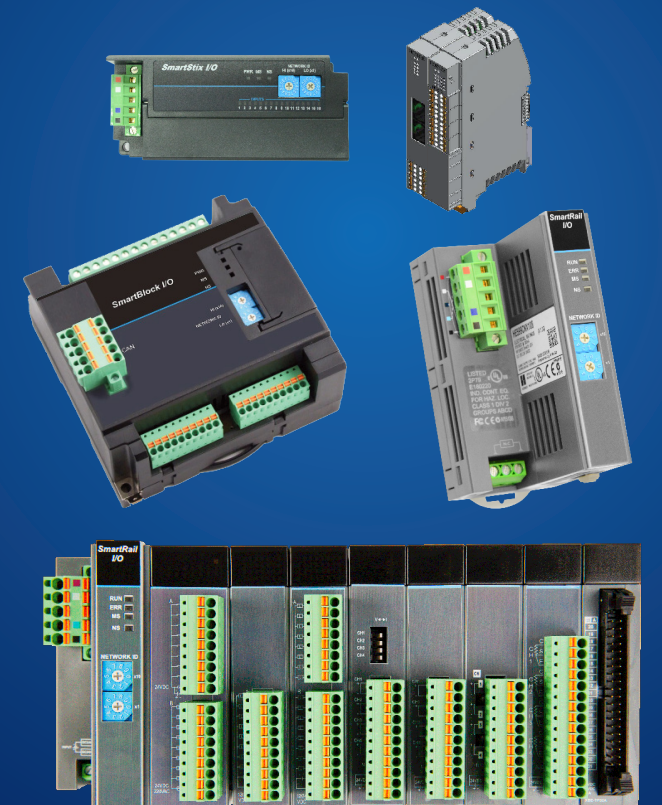
I/O EXPANSION FOR ALL-IN-ONE CONTROLLERS

HORNER AUTOMATION GROUP

Remote I/O Features — Product Comparison

PREVIEW - OCS I/O (HE959...) *CNX116 required

Feature	CNX116	ADU100	DAC107	DIM620	DIO512	DIO616	DQM502
Communication/Networks							
CsCAN	✓	✓	✓	✓	✓	✓	✓
Synchronous		✓	✓	✓	✓	✓	✓
Digital Inputs							
12/24VDC Inputs (pos/neg)	2			4			
Universal Analog/Digital Inputs	1						
120VAC Inputs (pos)				8			
Digital Outputs							
24VDC Outputs (pos)	2					8	
Relay Outputs					4		4
Max Current (A)			3		3	1	5
Analog Inputs							
Input Channels	1	4					
Resolution (bits)	16	16					
0-10V Support	✓	✓					
4-20mA Support	✓	✓					
RTD Support	✓	✓					
Thermocouple Support	✓	✓					
mV Support	✓	✓					
Analog Outputs							
Output Channels	1	4					
Resolution (bits)	12	12					
0-10V Support	✓			✓			
+/- 10V Support				✓			
4-20mA Support	✓						

SmartRail Base (HE599...)

Feature	CNX100	COS100	ETX200	ETX300
CsCAN	✓			
CANOpen		✓		
Ethernet IP				✓
Modbus TCP			✓	

SmartRail Modules (HE599...) *SmartRail base required

Feature	ADC170	DAC101	DAC106	DIM510	DIM610	DIM710	DIO512	DQM502	DQM506	DQM602	DQM606	DQM706	MIX116	RTD100	THM100
Communication/Networks															
CsCAN	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
CANOpen	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ethernet IP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Modbus TCP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
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												2	4	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			✓												

SmartBlock Modules (HE579... or HE569DQM...)

Feature	ACM300	ACM302	ADC570	ADC970	BMS168	DAC107	DAC207	DIO880	DIO881	DQM204	DQM205	DQM209	DQM212
CsCAN	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Digital Inputs													
12/24VDC Inputs (pos/neg)								8	8				
Digital Outputs													
24VDC Outputs (pos)									8				
Relay Outputs								8			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	✓	✓											
4-20mA 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...)

Feature	MIX102	MIX105	MIX577	MIX977	RTD100	RTD200	THM100	THM200
CsCAN	✓	✓	✓	✓	✓	✓	✓	✓
12/24VDC Inputs (pos/neg)	12	12						
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	✓	✓	✓					
+/- 10V Support	✓	✓	✓					
4-20mA Support	✓	✓	✓					

SmartStix Modules (HE559...)

Feature	DIM610	DIM710	DIO816	DQM602	DQM606	DQM706
CsCAN	✓	✓	✓	✓	✓	✓
12/24VDC Inputs (pos/neg)	16	32	16			
24VDC Outputs (pos)			16		16	32
Relay Outputs				16		
Max Current (A)			1	2	1	0

RCC Co-processor

Feature	HE-RCC6512
24VDC Outputs (pos)	10
High-Speed Output Support	✓
Analog Input Channels	2
Input Resolution (bits)	12
Analog Input 0-10V Support	✓
Analog Output Channels	4
Analog Output 4-20mA Support	✓

Add-on I/O *XL OCS required

Feature	HE-XDAC007	HE-XDAC107	HE-XHS0	HE-XHS0-5
CsCAN	✓	✓	✓	✓
Ethernet IP			✓	
Modbus TCP			✓	
12/24VDC Inputs (pos/neg)	12			
5VDC Input Support		✓		
High-Speed Counter Support		✓		
24VDC Outputs (pos)				2 (5VDC)
Max Current (A)			0.5	0.2
High-Speed Output Support			✓	✓
Analog Input Channels	2			
Input Resolution (bits)	12			
Analog Input 0-10V Support	✓			
Analog Output Channels	2	4		
Analog Output Resolution (bits)	12	12		
Analog Output 0-10V Support	✓	✓		
Analog Output +/- 10V Support	✓	✓		
Analog Output 4-20mA Support	✓	✓		

*CNX116 required
*SmartRail base required for SmartRail Modules
*XL OCS required