HORNER
AUTOMATION GROUP

REMOTE I/O

I/O EXPANSION FOR
ALL-IN-ONE CONTROLLERS

OCS I/O

HE959…

REMOTE I/O FEATURES		CNX100*	CNX116*	ADU100	DAC107	DIM620	DIQ512	DIQ616	DQM502	ADC270	DAC207	DIM610	DQM606	DQM602	NTC800	HSC840	MIX105
Communication/ Networks	CsCAN	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CANOpen																
	Ethernet IP																
	Modbus TCP																
	Sychronous*			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Digital Inputs	12/24VDC Inputs (pos/neg)		0-2**				4	8				16				8	4
	5VDC Input Support		✓													✓	
	High-Speed Counter Support															✓	
	Universal Analog/Digital Inputs		1														
	120VAC Inputs (pos)					8											
Digital Outputs	24VDC Outputs (pos)		2						8				16			4	4
	Relay Outputs						4	4						8			
	SSR Outputs																
	Max Current (A)		2				3	1	5							0.5	
	High-Speed Output Support															✓	
Analog Inputs	Input Channels		1-3**	4						8						8	4
	Resolution (bits)		16	16						16							12
	0-10V Support		✓	✓						✓							
	4-20mA Support		✓	✓						✓							✓
	RTD Support		✓**	✓													
	Thermocouple Support		✓**	✓													
	Thermister Support														✓		
	mV Support		✓**	✓													
Analog Outputs	Output Channels		1		4						8						2
	Resolution (bits)		12		12						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																

*Columns header group: OCS I/O**

* Coming in a future update

** CNX116 has 2 flexible inputs that can be configured either as digital Inputs or as 12-bit mA/V analog inputs.

*CNX116 or CNX100 required

HORNER AUTOMATION GROUP

SmartRail Modules
HE599…

SmartRail Base
HE599…*

SmartBlock Modules
HE579…

REMOTE I/O FEATURES		ADC170	DAC101	DAC106	DIM510	DIM610	DIM710	DIQ512	DQM502	DQM506	DQM602	DQM606	DQM706	MIX116	RTD100	THM100	CNX100	COS100	ETX250	MIX102	MIX105	MIX577	MIX977	RTD100	RTD200	THM100	THM200
		SmartRail Modules*															**SmartRail Base**			**SmartBlock Modules**							
Communication/ Networks	CsCAN	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓
	CANOpen	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓									
	Ethernet IP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓								
	Modbus TCP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓								
	Sychronous*																										
Digital Inputs	12/24VDC Inputs (pos/neg)				8	16	32	8												12	12						
	5VDC Input Support																										
	High-Speed Counter Support																										
	Universal Analog/Digital Inputs																										
	120VAC Inputs (pos)																										
Digital Outputs	24VDC Outputs (pos)										8	16	32								12						
	Relay Outputs							8	8	16										6							
	SSR Outputs																										
	Max Current (A)							2	2	1	2	1	1							3	1						
	High-Speed Output Support																										
Analog Inputs	Input Channels	4		4										2	4	4				4	3	4	8	4	8	4	8
	Resolution (bits)	12		12										12	12	12				14	14	14	14	16	16	16	16
	0-10V Support	✓																		✓	✓	✓	✓				
	4-20mA Support	✓												✓						✓	✓	✓	✓				
	RTD Support														✓									✓	✓		
	Thermocouple Support			✓												✓										✓	✓
	Thermister Support																										
	mV Support																									✓	✓
Analog Outputs	Output Channels		4	4										2							2	2	4				
	Resolution (bits)		12	12																	14	14	14				
	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																										

* Coming in a future update

*SmartRail base required for SmartRail Modules

SmartBlock Modules — HE579... or HE569DQM only

SmartStix Modules — HE559...

Add-on I/O

REMOTE I/O FEATURES		ACM300	ADC570	ADC970	BMS168	DAC207	DIQ880	DIQ881	DQM204	DIM610	DIM710	DIQ816	DQM602	DQM606	DQM706	HE-XDAC007	HE-XDAC107	HE-XHSQ	HE-XHSQ-5
		SmartBlock Modules								SmartStix Modules						Add-on I/O*			
Communication/ Networks	CsCAN	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
	CANOpen																		
	Ethernet IP																		
	Modbus TCP																		
	Sychronous*															✓	✓	✓	✓
Digital Inputs	12/24VDC Inputs (pos/neg)						8	8		16	32	16							
	5VDC Input Support																		
	High-Speed Counter Support																		
	Universal Analog/Digital Inputs																		
	120VAC Inputs (pos)																		
Digital Outputs	24VDC Outputs (pos)							8				16		16	32			2	2 (5VDC)
	Relay Outputs				8		8						16						
	SSR Outputs								8AC										
	Max Current (A)						3	1	1			1	2	1	0			0.5	0.2
	High-Speed Output Support																	✓	✓
Analog Inputs	Input Channels		6	12															
	Resolution (bits)		16	16															
	0-10V Support		✓	✓															
	4-20mA Support		✓	✓															
	RTD Support																		
	Thermocouple Support																		
	Thermister Support		✓	✓															
	mV Support																		
Analog Outputs	Output Channels					8										2	4		
	Resolution (bits)					14										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				16														

* Coming in a future update

*XL OCS required

THE INDUSTRY LEADER...

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.

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.

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.

...IN REMOTE I/O

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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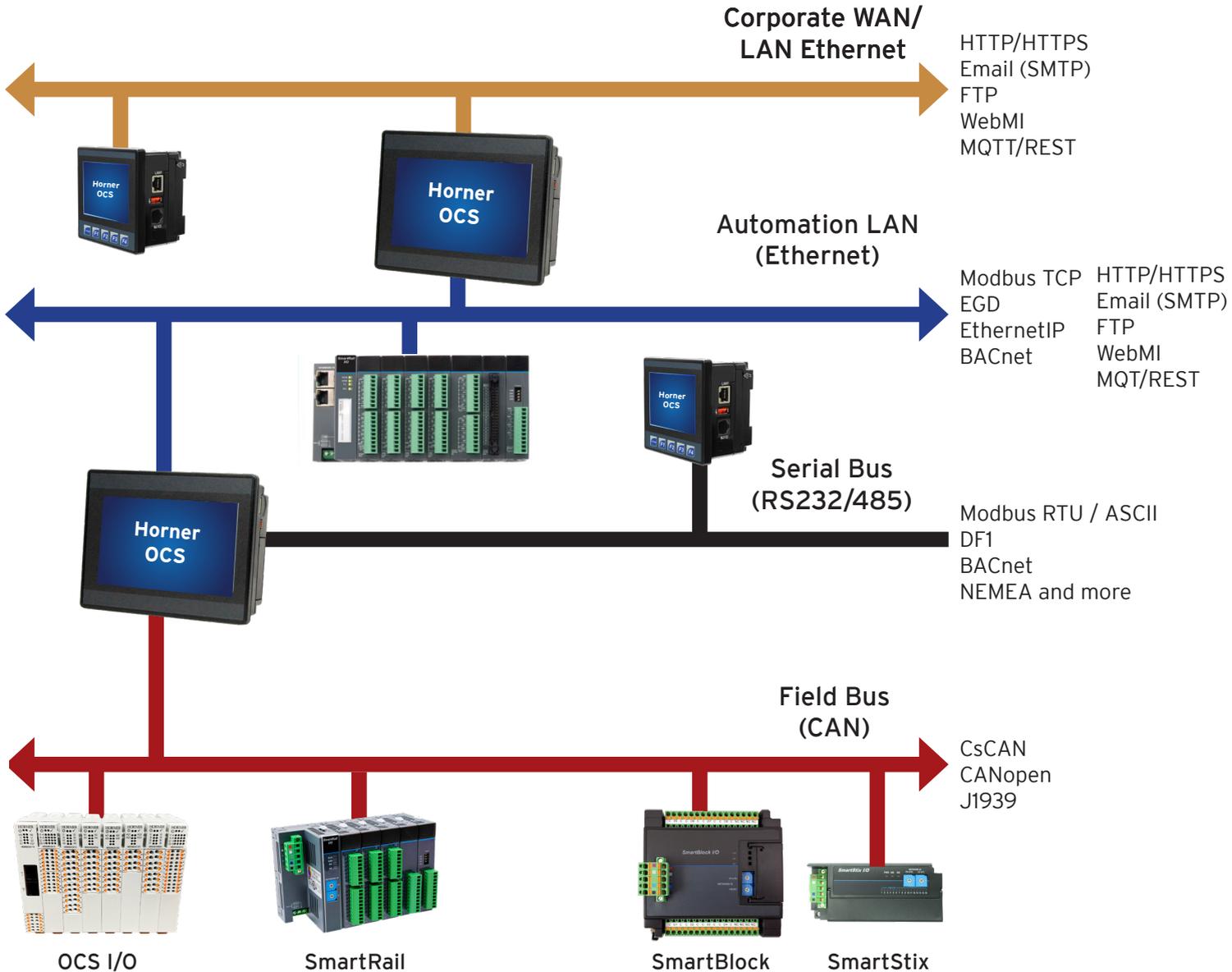
GLOBAL HEADQUARTERS

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
Centrepoint, Centrepark Road
Cork, Ireland
P +353-21-4321266
F +353-21-4321826
info@horner-apg.com
www.hornerautomation.eu

HORNER CANADA

916 42 Avenue SE #120
Calgary, Alberta T2G 1Z2
P (403) 444-0928
F (403) 265-0966
info@hornerautomation.com
www.hornerautomation.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@hornerautomation.in

HORNER AUSTRALIA

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

HORNER
LIGHTING GROUP

HORNER
SOLUTIONS GROUP