

Good Things Come in Small Packages...



GLOBAL HEADQUARTERS

59 South State Avenue
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 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 CANADA

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

HORNER AUSTRALIA

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



OCS-I/O packs a lot of flexibility, capability, and expandability in a small package that makes it the perfect complementary CsCAN solution for OCS platforms.

Maybe You Only Need One More...

Sometimes you only need a little bit. Start with the CNX116 – which includes I/O right on the base! Meant as the perfect small amount of complementary I/O, the CNX116 gives you (2) **Flexible Inputs** (Digital or 12-bit Analog), (2) **Digital Outputs**, (1) 16-bit **Universal Analog Input** and (1) 12-bit **Analog Output** right onboard. Yes, you read that correctly – two inputs that can be used for either digital or analog signals, giving it up to 3 analog inputs without even needing another module!

...Or Maybe You Need A Lot

With expandability up to 7 modules per base and 16 bases per network, OCS-I/O can handle almost any amount of I/O needs. It even includes a CsCAN In and CsCAN Out port to allow you to easily daisy-chain multiple bases without requiring a lot of custom wiring.

Part Number	Description
HE959CNX116	CsCAN Base for up to 7 I/O Modules. Includes Onboard I/O of 2 Flexible Inputs (DI or AI), 2DO, 1Univ. AI, 1AO
HE959CNX100	CsCAN Base with No Onboard I/O
HE959ADU100	4 Universal Analog Inputs (mA/V/Thermocouple/RTD)
HE959DIQ616	8 DC In + 8 DC Out
HE959DQM502	4 Relay Outputs (5A)
HE959DAC107	4 Analog Outputs (+/- 0-10VDC, 4-20mA)
HE959DIQ512	4 DC In + 4 Relay Out (3A)
HE959DIM620	8 AC Inputs (120-160 VAC)
HE959DIM610	16 DC In
HE959DQM606	16 DC Out
HE959DQM602	8 Relay Out (2A)
HE959MIX105	4 DC In + 4 DC Out + 4 Analog In (4-20mA) + 2 Analog Out (4-20mA)
HE959HSC840	8 High Speed In + 4 High Speed Out
HE959ADC270	8 Analog In (0-10V, 4-20mA)
HE959DAC207	8 Analog Out (0-10V, 4-20mA)
HE959NTC800	8 10kΩ Thermistor Inputs

Either Way, Configuration Is a Breeze

Whether it's a little or a lot, OCS-I/O configuration is meant to be simple and effortless. It's configured using Cscape software, so when wired up, it can find the base and autopopulate all installed modules automatically. From there you may only need to tweak a couple of configurations for the base or modules to be ready to go. Cscape also calculates the I/O power usage for you automatically, so you'll never overload an I/O base.

Fieldbus Network - CsCAN, has both a CsCAN In and CsCAN Out in order to easily daisy-chain your CsCAN network with module RJ45 connections.

Expandable up to 7 modules per base & 16 bases per network. Uses sturdy spring-clamp terminals to maintain a low-profile design

Compact Footprint - a loaded up base still fits in a footprint of 90H x 215W (mm) or 3.5H x 8.75W (in.)

OCS-I/O ACCESSORIES

HE-RJTRM121	RJ45 CAN Terminator with 121 ohm resistor
HE-XRJ003	3' - RJ45 to RJ45 Ethernet patch cable. Recommended for connection between Micro OCS and OCS-I/O CNX Base
HE-XRJ009	9' - RJ45 to RJ45 Ethernet patch cable. Recommended for connection between Micro OCS and OCS-I/O CNX Base
HE-XRJ503	3' - RJ45 to 5 Pin Cable. Recommended for connection between XL / XL Prime Series to OCS-I/O CNX Base
HE-XRJ509	9' - RJ45 to 5 Pin Cable. Recommended for connection between XL / XL Prime Series to OCS-I/O CNX Base

Universal Analog Inputs can be configured for 0-20mA, 4-20mA, 0-10V, PT100/1000, and Thermocouple Type J/K/T/E/N/R/S signals.

*Licensed option
**For UL and CE Standards, visit the specific product pages for these items on website.

NEW CPU Options!

The OCS-I/O Lineup is Expanding!

The OCS-I/O lineup of modular and flexible expansion I/O has been extremely popular with our customers. When we started creating these products a few years ago, we always had a vision of a larger family of products in mind for what this lineup could expand to.

CPU250

The CPU250 is Horner's Micro OCS equivalent in the OCS-I/O CPU lineup. Serial, Ethernet, and CAN communications are available as standard, as well as support for WebMI that can be used as a remote interface. It also makes a transition to USB-C for programming purposes, and can even be powered locally by the same connection, in order to easily load a program on your test bench or desk setup! Like the Micro OCS lineup, the CPU250 comes with a great amount of onboard I/O. Up to 34 I/O points – a whopping 16 of which can be configured as analog! And if that isn't enough, as part of the OCS-I/O family it can easily be expanded with up to 7 OCS-I/O modules locally as well.

CPU300

With the all-new CPU300 in Horner's OCS-I/O CPU series, this advanced product really shines with the unseen flexibility of an All-In-One controller design. It starts with a powerful multi-core SOM with performance on par with Horner's Canvas series of controllers and includes a suite of new connectivity including USB Type C, dual ethernet ports with support for a built-in switch, and a new Display connection for remote displays that Horner has branded as "Plug and Play Displays". This connection provides power and display/touch signals to Plug and Play displays in a simplified and robust cable connection, fit for traditional panel builds as well as harsher environments such as mobile applications. It can be used with a variety of available screen sizes and resolutions, while still supporting a local 2.2" display that can be used for advanced diagnostics without the need for an HMI if needed.

CPU250



On top of all the connectivity options is the ability to use OCS-I/O modules as local I/O up to 7 modules, plus an additional dedicated OCS-I/O port that can be used in junction with another rack of OCS-I/O modules (1 base + up to 7 modules) that can also be treated as local synchronous I/O. This dedicated port provides 24V power to the remote I/O base to once again provide a very simplified connection to all of your system hardware and reduce the number of terminal connections needed in your panel wiring.

CPU300



HE959CPU250

2MB Logic capacity, 50,000 %R Holding Registers
8 DC Inputs (4 High Speed), 10 DC Outputs (2 High Speed)
8 Flexible Inputs (Digital or Analog) configured as DC In or 0-10V/4-20mA inputs
8 Analog Outputs (4 x 4-20mA, 4 x 0-10V)
Compatible with OCS-I/O modules for local and remote I/O expansion
Ethernet, RS232/485 and CAN ports, and WebMI-capable
USB-C for programming, Micro SD slot for datalogging

HE959CPU300

Re-thinking the all-in-one controller with simplified optional FPD-Link displays
Able to easily retrofit traditional HMI / PLC installations and still take advantage of programming in the all-in-one Cscape software package
2MB Logic capacity, Multi-Core SOM with dedicated logic and graphics cores
Local 2" display for System Menu and new remote FPD-Link displays
Compatible with OCS-I/O modules for local and remote I/O expansion
Dual Ethernet, RS232/485 serial, 1 CAN port
Dedicated expansion port for 2nd rack of synchronous I/O
USB-C for programming, Micro SD slot for datalogging



OCS-I/O



Highly Expandable & Flexible I/O Solutions for OCS

EXPANDABLE & FLEXIBLE REMOTE I/O

DIGITAL

ANALOG



CNX100

CNX116

HE959CNX100

CsCAN Base with No Onboard I/O

Max Number of Modules	7 per base
Output Voltage Range	10 to 30 VDC

HE959CNX116

CsCAN Base for up to 7 I/O Modules
Includes Onboard I/O of 2 Flexible Inputs (DI or AI),
2DO, 1 Univ AI, 1 AO

Max Number of Modules	7 per base
Flexible Inputs	2 (Digital or Analog)
Input Voltage Range	5V, 12V or 24V
Analog Input Types	0-20mA/4-20mA/0-10V
DC Outputs	2 (2A)
Output Voltage Range	10 to 30 VDC
Operating Air Temp	-40°C to 60°C
Universal Analog In	1
Input Resolution	16-bit
Supported Input Types	RTD/TC/0-20mA/0-10V
Max Error at 25°C	0.2%
Analog Outputs	1
Output Resolution	12-bit
Output Ranges	0-20mA/4-20mA/0-10V



HE959DIM620

8 AC Inputs (120-160VAC)

AC Inputs	8
Commons per Module	1
Input Voltage Range	90 to 240VAC
Absolute Max Voltage	260 VAC
OFF to ON Response	<20ms
ON to OFF Response	<20ms
Operating Air Temp	-40°C to 60°C



HE959DIQ616

8 DC In + 8 DC Out

DC Inputs	8
Input Voltage Range	12 to 24VDC
Input Commons	1
DC Outputs	8 (0.5A)
Absolute Max Voltage	32DC
Output Commons	1
Operating Air Temp	-40°C to 60°C



HE959DQM606

16 DC Out

DC Outputs	16
Commons per Module	2
Max Output Voltage	28VDC
Max Current per Point	0.5A
Max Total Output Current	4A
Expected Life	100K @ Rated Load
Operating Air Temp	-40°C to 60°C



HE959ADU100

4 Universal Analog Inputs (mA/V/Thermocouple/RTD)

Analog Inputs	4
Supported Input Types	RTD, TC, 0-20mA, 0-10V
Resolution	16-bit
Thermocouple Types	J/K/T/E/N/R/S
RTD Types	PT100, PT1000
Max Error at 25°C	0.2%
Operating Air Temp	-40°C to 60°C



HE959DAC207

8 Analog Out (0-10V, 4-20mA)

Analog Outputs	8
Supported Output Types	4-20mA, 0-20mA, 0-10VDC
Nominal Resolution	12-bit
Error % of AI Full Scale	0.2%
Input Impedance	500Ω
Max Input Voltage	+/- 30V
Operating Air Temp	-40°C to 60°C



HE959DIM610

16 DC In

DC Inputs	16
Commons per Module	2
Input Voltage Range	12 to 24VDC
Absolute Max Voltage	32VDC
OFF to ON Response	<10ms
ON to OFF Response	<10ms
Operating Air Temp	-40°C to 60°C



HE959DQM502

4 Relay Outputs (5A)

Relay Outputs	4
Max Current per Relay	8A AC / 5A DC
Max Total Current	16A
Max Output Voltage	240VAC
Expected Life	100K @ Rated Load
Operating Air Temp	-40°C to 50°C



HE959HSC840

8 High Speed In + 4 High Speed Out

High Speed DC Inputs	8
High Speed Input Modes	Frequency, Totalizer, Pulse Width Measurement, Period Measurement, Quadrature (4 max)
Max Input Frequency	500 kHz
High Speed DC Outputs	4
High Speed Output Modes	PWM, PTO, HSC Output, Stepper
Max Output Frequency	500 kHz
Operating Air Temp	-40°C to 60°C



HE959ADC270

8 Analog In (0-10V, 4-20mA)

Analog Inputs	8
Supported Input Types	4-20mA, 0-20mA, 0-10VDC
Nominal Resolution	16-bit
Error % of AI Full Scale	0.2%
Input Impedance	15Ω (Current), 2MΩ (Voltage)
Max Input Voltage	+/- 15V
Operating Air Temp	-40°C to 60°C



HE959MIX105

4 DC In + 4 DC Out + 4 Analog In (4-20mA) + 2 Analog Out (4-20mA)

DC Inputs	4
DC Outputs	4
Analog Inputs	4
Supported Input Types	0-20mA, 4-20mA
Analog Outputs	2
Supported Output Types	0-20mA, 4-20mA
Operating Air Temp	-40°C to 60°C



HE959DIQ512

4 DC In + 4 Relay Out (3A)

Digital Inputs	4
Input Voltage Range	12 to 24VDC
Commons per Module	4
Relay Outputs	4
Max Output Voltage	120VAC
Max Output Current	3A each
Operating Air Temp	-40°C to 60°C



HE959DQM602

8 Relay Out (2A)

Relay Outputs	8
Commons per Module	2
Max Output Voltage	240VAC
Max Current per Relay	2A
Max Current per Common	5A
Expected Life	100K @ Rated Load
Operating Air Temp	-40°C to 60°C



HE959DAC107

4 Analog Outputs (+/- 0-10VDC, 4-20mA)

Analog Outputs	4
Output Ranges	0-20mA, 4-20mA, +/-10V
Resolution	12-bit
Minimum 10V Load	500Ω
Maximum Current Load	500Ω
Max Error at 25°C	0.2%
Operating Air Temp	-40°C to 60°C



HE959NTC800

8 10kΩ Thermistor Inputs

Analog Inputs	8
Supported Input Types	10kΩ Thermistor (Precon Type III)
Nominal Resolution	12-bit
Error % of AI Full Scale	0.2%
Resolution Scaling	0.1 Degree per count
Operating Air Temp	-40°C to 60°C

