



HORNER

AUTOMATION GROUP

OCS-I/O



**Highly Expandable & Flexible
I/O Solutions for OCS**



Compliant



CNX100

HE959CNX100

CsCAN Base with No Onboard I/O

CNX116

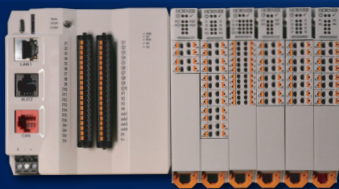


HE959CNX116

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
Output Voltage Range	10 to 30 VDC

Max Number of Modules	7 per base
Flexible Inputs	2 (Digital or Analog)
Input Voltage Range	5V, 12V or 24V
Analog Input Types	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, 4-20mA, 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 132VAC
Absolute Max Voltage	144 VAC
OFF to ON Response	<20ms
ON to OFF Response	<20ms
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
OFF to ON Response	<10ms
ON to OFF Response	<10ms
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



EXPANDABLE & FLEXIBLE REMOTE I/O

DIGITAL



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 Hrs @ Rated Load
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 Hrs @ 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



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 Hrs @ Rated Load
Operating Air Temp	-40°C to 60°C



ANALOG

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/N/E/R/S/B
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	0-20mA, 4-20mA, 0-10VDC
Nominal Resolution	12-bit
Error % of AI Full Scale	0.2%
Input Impedance	500Ω
Operating Air Temp	-40°C to 60°C



HE959ADC270

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

Analog Inputs	8
Supported Input Types	4-20mA, 0-10VDC
Nominal Resolution	16-bit
Error % of AI Full Scale	0.2%
Input Impedance	100Ω (Current), 110kΩ (Voltage)
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



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	±1°C
Resolution Scaling	0.1° per count
Operating Air Temp	-40°C to 60°C



Good Things Come

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, 1 Univ. AI, 1 AO
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 (\pm 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	8-10k Ω Thermistor Inputs

*Not available yet

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 90mmh x 215mmw (3.5" h x 8.75" w)

OCS-I/O ACCESSORIES

HE-RJTRM121	RJ45 CAN Terminator with 121 Ω 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.

in Small Packages...

NEW Modular Controller Base Options!

The Horner Automation Controller Lineup is Expanding!

The OCS-I/O lineup of modular and expansion I/O has been extremely popular with our customers. When we started creating these products several years ago, we had a vision far beyond remote and expansion I/O. The lineup now includes full control capabilities with our new CPUs!

Micro CPU250

The CPU250 is Horner's Micro series equivalent for the new CPUs. Serial, Ethernet and CAN communications are available as standard, as well as support for WebMI for remote monitoring and control (one-time upgrade required). For programming, USB-C is featured - but you can always use Ethernet or even Micro SD to perform laptop-free program loading. The real star of the Micro CPU250 is its onboard I/O. Thirty-four (34) points are built-in, with as many as sixteen (16) available as analog. You can add up to seven (7) local OCS-I/O modules to the side of the CPU250 for further expansion! Also available is a **CPU200** model which is identical other than its lack of onboard I/O - its I/O is strictly via local OCS-I/O.

Prime CPU260

The CPU260 is a modular controller with the performance of an XL Prime, and support for add-on HMI Connect touchscreen(s). 34 built-in I/O points and local I/O expansion using OCS-I/O.

Canvas CPU300

With the innovative Canvas CPU300, this product is a true modular controller - including graphics. On its face, it looks like a traditional PLC - with capabilities including local logic, expansion I/O (via OCS-I/O), and a full array of communications ports including two Ethernet. But don't be fooled - the CPU300 includes logic and graphics and programs using Cscape 10 to a single application file. With the onboard screen strictly for diagnostics - where is the operator interface you ask? With Horner's new HMI Connect touchscreen components (requiring no program or configuration) - they can be located wherever you want them! Connecting via a single, robust cable - HMI Connect touchscreens are available in sizes ranging from 4" to 15", with environmental ratings from IP65/NEMA 4X to IP67. The CPU300 and HMI Connect combine to create the first truly modular All-in-one controller.



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, RS-232/485 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 PNP 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 CPU with dedicated logic and graphics cores
Local 2" display for System Menu and new remote PNP displays
Compatible with OCS-I/O modules for local and remote I/O expansion
Dual Ethernet, RS-232/485 serial, 1 CAN port
Dedicated expansion port for 2nd rack of synchronous I/O
USB-C for programming, Micro SD slot for datalogging



CPU200



CPU250



CPU260 (coming soon)



Compliant



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