

Modular Controllers

Highly Flexible & Expandable Control Solutions



The Latest Innovation from Horner Automation

As the perfectors of the All-in-one Controller (Logic, I/O, HMI + Network) we are introducing our latest innovation - the Modular Controller. These are some of the most flexible controllers available - with individual components placed exactly where you want them - programmed as a single, integrated component using our free, All-in-one software package, Cscape.

What makes Modular Controllers innovative? The headline feature is the ability to “unbolt” the HMI Touchscreen from the All-in-one Controller - mounting it remotely and treating it purely as a hardware component requiring absolutely no setup. We call these new add-on touchscreen components HMI Connect, which simply connect to the Modular Controller using a rugged, 4-pin cable (15m, max) with power, video and touch feedback. If multiple screens are desired - connect an HMI Connect splitter between the CPU and the displays. HMI Connect is powered using automotive technology - NOT consumer technology - ensuring long, reliable operation. HMI Connect touchscreens are available in both IP65/NEMA 4X and IP67 models in sizes from 4” to 15”.

Modular Controllers offer other conveniences as well. They are mounted on DIN-rail and support I/O that is snapped on the side, built-in, or both. That means all of your I/O wiring can be buried in the panel, which for many customers is the preferred approach. And if your I/O needs are distributed, up to 16-bases (8 modules each) can be remotely located. Connectivity is extensive, with all models supporting industrial protocols including Ethernet IP (server & HMI), Modbus TCP (client/server), CANopen (master/slave), RTU/Modbus (master/slave) and more. All models support USB-C for programming. Logic languages supported include traditional Ladder and IEC 6-1131. And all models support Horner’s OCS360 cloud service - with remote connectivity, push data, long-term data storage, dashboarding, alarm notifications, and more.

MODULAR CONTROLLER MODELS

The CPU300 is the flagship Modular Controller, with Canvas Graphics and our fastest logic scan rates on its multi-core processor. For extra connectivity, it offers dual ethernet adapters and a local 2.2” screen for local configuration (IP Address, RUN/STOP, etc.). Its I/O is strictly add-on using OCS-I/O modules (up to 8) snapped on the backplane. Its program includes HMI screens and supports add-on HMI Connect touchscreens. The CPU260 offers flexible, Standard Graphics and strong logic performance. It supports add-on I/O and 34 built-in I/O. Eight of the 34 points are Flexible I/O, configured point-by-point as 5/12/24 Digital In or 4-20mA/0-10V Analog In. Its program also includes HMI screens and supports add-on HMI Connect touchscreens. The CPU250 (34 built-in I/O) and CPU200 (add-on I/O only) are Micro class products which are an excellent value and are designed for applications where a physical HMI is just not required, so HMI Connect support is not included.



CPU300



CPU260



CPU250

HMI Connect Display Options

IP65 Rated:



HE959HMI-04 - 4”



HE959HMI-07 - 7”



HE959HMI-10 - 10”



HE959HMI-15 - 15”

IP67 Rated:



HE959AP-07 - 7”



HE959AP-10 - 10”

Coming Soon



FEATURES		CPU300	CPU260	CPU250	CPU200	
Controller	Controller Class (processor)	Canvas (dual-core)	Prime (single-core)	Micro (single-core)		
	Logic Memory & Scan Rate	2 MB @ 0.02 mS/K		2MB @ 0.4 mS/K		
Operator Interface	Graphics Class	Canvas	Standard	No Operator Interface Functionality		
	Touchscreen Type	HMI Connect (remote mounted)				
	Max Touchscreens	Three (3) Identical screens (with accessory)				
	Number of Pages/Objects per Page	1023/1023				
I/O	Built-In I/O points, Total	No Built-in I/O	34 (8 DC In, 8 Flexible In, 10 DC Out, 8 Analog Out)		No Built-in I/O	
	Built-in Analog I/O		0-8 In (4-20mA or 0-10V), 4 Out (4-20mA), 4 Out (0-10V)			
	Local OCS-I/O Expansion	7 modules, max				
	Network OCS-I/O Expansion (max.)	16 bases x 7 modules, max				
Communications	Number of Ethernet Ports	2 (10/100Mbps)		1 (10/100Mbps)		
	Standard Ethernet Protocols	All Protocols on chart are standard	EtherNet/IP (server), Modbus TCP (client/server), FTP (server), SMTP (client)			
	Optional Ethernet Protocols		BACnet IP & MQTT Sparkplug	BACnet IP		
	Remote Access	OCS360 Cloud Service, WebMI via HTML5, EnvisionRV				
	CAN Protocols	CsCAN, CANopen & SAE J1939 (std)		CsCAN (std), CANopen & SAE J1939 (opt)		
	RS-232 & RS-485 Ports	Shared RJ45 with RS-485 (half-duplex) and RS-232. Modbus/RTU (master/slave), ASCII & other protocols				
Physical Size & Mounting	Typical Mounting Location	DIN-rail (HMI Connect touchscreen mounted remotely)		DIN-rail		
	Height x Width x Depth (in/mm)	4.5" H x 4.92" W x 1.97" D / 114.4mm H x 124.9mm W x 50mm D				
Operating Specifications	Supply V (A) & Input V	10-30VDC (1A @ 24V) Supply, 12/24VDC Inputs				
	Operating Temperature/RH%	-40° to 60°C / 5 to 95%, non condensing				
	Environmental Rating	IP20 (HMI Connect touchscreens carry their own rating)		IP20		

OCS-I/O BASES & MODULES

Model HE959	DC In	AC In	DC Out	Relay Out			Analog In		Analog Out	
				2A	3A	5A	Univ	mA	mA	mA
								V	±V	V
CNX100 Base										
CNX116 Base	2*		2				1	2*		1
DIM610	16									
DIM620		8								
DQM606			16							
DQM502						4				
DQM602				8						
DIQ616	8		8							
DIQ512	4				4					
ADU100							4			
ADC270								8		
DAC107									4	
DAC207										8



*2 Flexible inputs can each be set to 5/12/24V DC In or mA/V Analog In