



A Next Generation OCS

XL Series OCS



**Compact
All-in-One
Control Solutions
with Controller,
Graphics,
Built-in I/O,
Networking
and Removable
Mass Storage
for Industrial
Applications**

New Low-Cost Compact “All-in-One” Controller

Introducing the XL Series Operator Control Station (OCS), an “all-in-one” controller small enough to fit in the palm of your hand (only 3.75” square). Costing less than a PLC and operator interface, these devices include an Operator Interface, Built-in I/O, Networking and Removable Mass Data Storage. OCS is a robust, reliable control product that combines a traditional controller (programmed with ladder logic or IEC language) with an operator interface, I/O and networking into an integrated, all-in-one unit using a single industry-recognized software package called Cscape™.



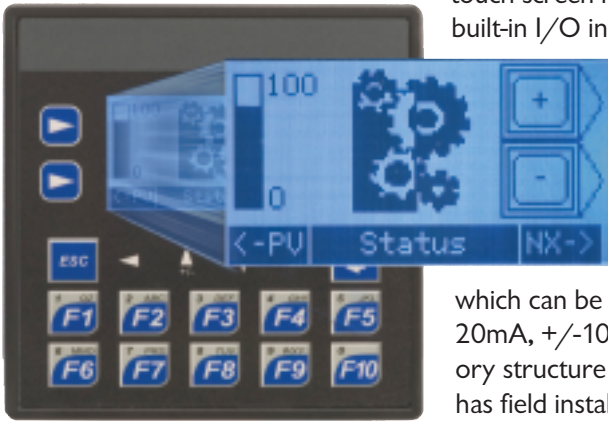
An industry-first! The XL Series can store data or easily upload programs via MicroSD™ memory card.

First with Removable MicroSD™ Memory

The XL Series are the first industrial products to include support for the latest standard in Removable Mass Storage. This dime-sized memory, to date only found on video-enabled cellular phones, is available in densities ranging from 128MB to 2GB. This is ideal for storing process data, machine recipes, and application files. Users can easily update their XL Series application program through this memory device — allowing logic and screen updates to be made in a single step with transportable media.

Graphical LCD Displays with Built-in I/O and Networking

The XL Series offers two graphical LCD options: XLe, a key-based unit (128x64 pixels) or XLt, a touch screen model (160x128 pixels). All XL models with built-in I/O include digital, analog, and high speed I/O.



With one single FREE software program, Cscape™, you can easily program, debug and display graphics on the 128 x 64 backlit LCD.

For machine control, the high speed I/O can provide totalizing, frequency measurement, PWM generation and pulse outputs. The available Universal Analog I/O is ideal for process control applications with high-resolution inputs

which can be configured for Thermocouple, RTD, 4-20mA, +/-100mV, and 0-10V signals. The XL Series memory structure supports over 5000 I/O. The XL Series also has field installable communications options. An internal 10/100MBit Ethernet card makes machine data and XL Series programming accessible at a plant-wide or world-wide basis. In addition, the XL Series is available with an internal 57.6k telephone, radio or cell modem. While Ethernet and modems are optional, dual RS-232/RS-485 serial ports and an integrated CAN-based network (CsCAN™) are standard.

Benefits

- More compact and affordable than separate PLC and Operator Interfaces
- Best of Class Graphical LCD or Touchscreen displays for better process visualization and machine indication
- Built-in I/O with removable terminal blocks with silkscreening for easy wiring
- Removable mass data storage (MicroSD) in an entry level product
- Two serial ports and downloadable protocols interface with almost any PLC or Drive
- Ethernet, telephone, radio and cell modem option cards



Two Mounting Options Standard: on a DIN rail or in a Panel (less than 4” H x 4” W x 2.5” D)

Applications

As a compact, powerful controller — the XL Series can be used in literally thousands of applications. From OEM machine control to machine monitoring in a plant environment, the XL Series can be instrumental in keeping you or your customer's automation activities running smoothly. Future expansion is not a concern, because the XL Series is part of the wide ranging OCS product line — programmable throughout with a single FREE software package, Cscope™. The XL Series is designed with an attractive, generic look so it will fit in with most panel or console designs. You can even have your company's logo added to the overlay or specify a custom keypad altogether.



Temperature Control

With built-in RTD and Thermocouple available, along with auto-tune PID, the XL Series can perform advanced temperature control and much more on any machine.



Packaging

The XL Series compact size, affordable price, and fast response make it a natural for packaging machinery of all types.



Agriculture

A small rugged package, 12Vdc compatibility, and removable mass storage are ideal for the agricultural environment.

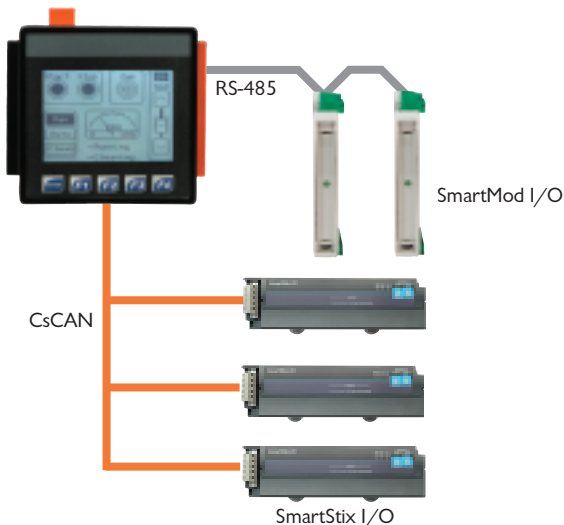


Water Treatment

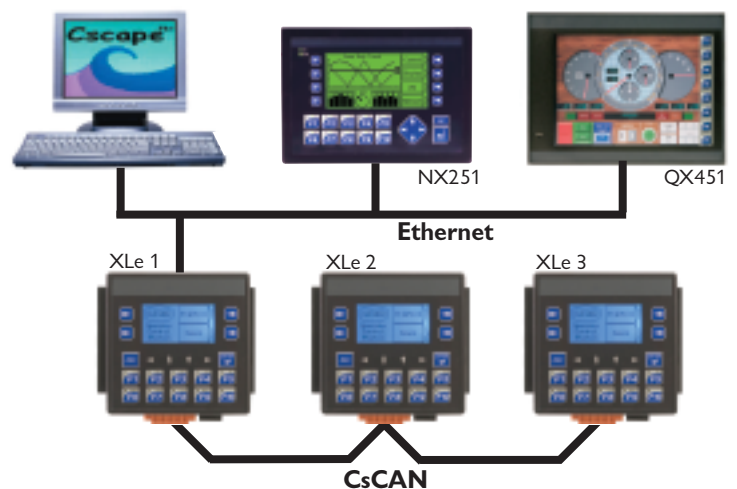
The XL Series offers the perfect I/O mix, size, and communications capability for Pump Control, Tank Monitoring and Remote Telemetry in general.

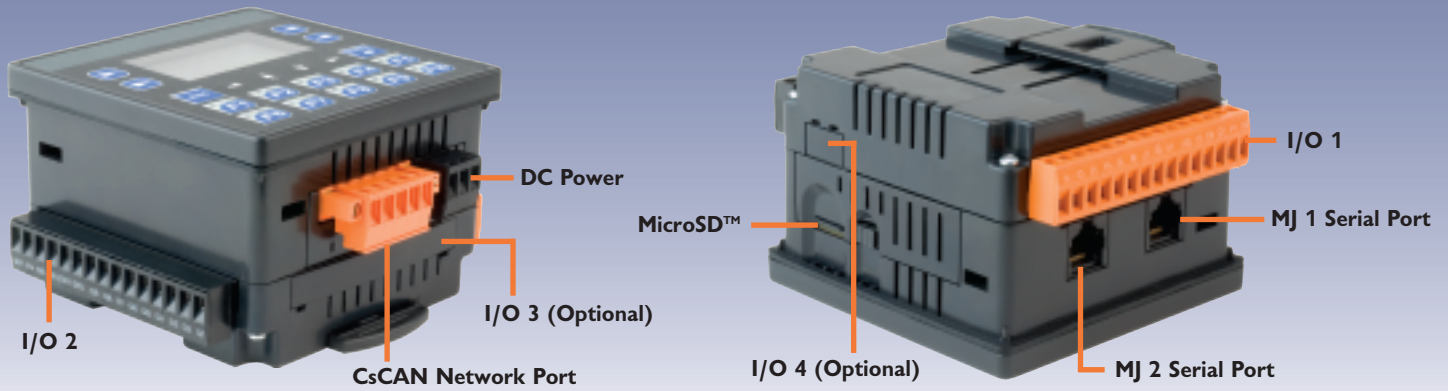
Connectivity

I/O Expansion. XL Series I/O expansion is not limited to its Built-in I/O. SmartStix I/O is high-speed and can be local or highly distributed. RTU/Modbus based SmartMod I/O is a cost effective means of adding specialty or a mix of I/O types.



Architecture. The XL Series supports CsCAN high-speed networking as standard, and Ethernet networking as a field-installable option. Single-point-of-connect allows seamless communications between the computer and any controller. In the diagram below, XLe 2 and XLe 3 are accessed by the PC over Ethernet and CsCAN through XLe 1.





Ordering Information

Part Number		Description		
XLe	XLt		HE-XRC9	900 MHz Wireless Modem Option
HE-XE102	HE-XT102	12 DC In (4 HSC), 6 Relay Out, 4 Analog In		
HE-XE103	HE-XT103	12 DC In (4 HSC), 12 DC Out (2 PWM), 2 Analog In		
HE-XE104	HE-XT104	24 DC In (4 HSC), 16 DC Out (2 PWM), 2 Analog In		
HE-XE105	HE-XT105	12 DC In (4 HSC), 12 DC Out (2 PWM), 2 Universal Analog In (T/C, RTD, mV, mA, V) & 2 Analog Out (mA, V)		
HE-XE100	HE-XT100	XLe OR XLt with all standard features but no built-in I/O		
HE-XEC		10/100 Ethernet Option	HE-XRC9	900 MHz Wireless Modem Option
HE-XMC		57.6 K Telephone Modem Option	HE-XRZ2	2.4 GHz Wireless Modem Option
HE-MC1		Removable Memory Card 256MB or larger	HE200GPS183	GPS Satellite Receiver

Specifications

Display	XLe	XLt
Graphics/Text	Yes/Yes	Yes/Yes
Pixels	128 X 64	160 X 128
Display Technology	Backlit LCD	Daylight Readable Touchscreen
Character Height	Adjustable	Adjustable

Keypad Touchscreen	XLe	XLt
Total Keys	20	5
Function Keys	10	4
Numeric Keys	Shared	Pop-up Keypad
OEM Faceplate Availability	Yes	Yes

Controller	
Ladder Logic Memory	256KB
Logic Scan Rate	1.2 mS/K
Memory Card Slot	Yes (up to 2GB)
Local Comment Storage	Yes
Floating Point Support	Yes
AutoTune PID Capable	Yes

I/O Support	
Built-In I/O	Yes
SmartStack I/O	Yes via CsCAN
SmartStix I/O	Yes via CsCAN
SmartMod I/O	Yes via Modbus Serial
FOX Expansion I/O	No

Serial Communications	
Total Active Ports	2
RS-232 Ports / RS-485 Ports	Yes/Yes
PLC/Drive Protocols	Yes
RTU/Modbus Master/Slave	Yes
Serial ASCII In/Out	Yes

Networking	
Integrated CsCAN Network	Yes
Maximum CsCAN Distance	6000 feet
Programming Over Network	Yes
Peer-to-Peer Messaging	Yes
DeviceNet/PROFIBUS Master	No

Ethernet/Internet/Wireless	
Ethernet Support	Optional
Telephone Modem Support	Optional
Wireless Modem Support	Optional
Cell Modem Support	Optional

General Specifications	
Height (in/mm)	3.7" (95.1)
Width (in/mm)	3.7" (95.1)
Depth (in/mm)	2.5" (63.9)
Weight (oz/kg)	12.5 (.354)
Environmental	0 to 50 C or greater
Washdown	NEMA 4X Equivalent



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Horner is dedicated to saving you both time and money by providing the industry's widest range of all-in-one controllers