

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™.



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

With built-in RTD, auto-tune PID and the option for thermocouple, the XL series can perform advanced temperature control and more.

Compact size, affordable pricing and fast response time make the XL Series a natural fit for packaging machinery of all types.

The XL Series offers the perfect I/O mix, size and communications capability for pump control, tank monitoring and remote telemetry.

Customizations

OCS is designed to look like a 'generic' operator station, fitting in with most cabinet and console designs and color schemes. However, often times customization with an individualized look can mean a world of difference in the overall usefulness of an operator station and the marketing of your machine or system. Customizations on your OCS stations can include:

- » Application of a label on the overlay to add your company logo
- » Substitution of a custom keypad with your company's logo, colors and industry terms
- » Design of overlays in any language



	DC In	DC Out (+)	Relay Out	HSC In	PWM Out	mA/V In	mA/V RTD/TC	mA/V Out	Built-in Digital & Analog I/O
Model 2	12		6	4		4			Digital & Analog I/O
Model 3	12	12		4	2	2			
Model 4	24	16		4	2	2			
Model 5	12	12		4	2		2		
Model 6	12	12		4	2		6	4	

	DC In	DC Out	mA/V In	mA/V Out	Relay	mA/V RTD/TC	RTD In	Tcp/MV In	Block style Analog & Specialty I/O - CsCAN Network I/O	
SmartStix										
HE559ADC970			12						Block style Analog & Specialty I/O - CsCAN Network I/O	
HE559MIX577			4	2						
HE559MIX977			8	4						
SmartBlock										
HE579DAC107				4					Block style Analog & Specialty I/O - CsCAN Network I/O	
HE579DAC207				8						
HE579MIX102	12		4		6					
HE579MIX105	12	12		2		2				
HE579MIX577			4	2						
HE579MIX977			8	4						
HE579RTD100							4			
HE579RTD200							8			
HE579THM100							4			
HE579THM200							8			
HE579ACM300	AC Power Monitor - 3CT & 3PT									
HE579ADC570	6 mA/V Thermistor In									
HE579ADC970	12 mA/V Thermistor In									

	DC In	DC Out (+)	DC Out (-)	Relay Form A	Relay Form C	AC SSR Out	Block style Digital I/O - CsCAN Network I/O
SmartStix							
HE559DIM610	16						Block style Digital I/O - CsCAN Network I/O
HE559DIM710	32						
HE559DQM602				16			
HE559DQM606		16					
HE559DQM706		32					
HE559DIQ811	16		16				
HE559DIQ816	16	16					
SmartBlock (open frame)							
HE569DQM209					8@20A		
HE569DQM212					8@16A		
HE569DQM204						8@3A	
HE569DQM205		8@5A					

	DC In	DC Out	Relay Form A	mA/V In	V Out	mA Out	RTD In	T/C In	Modular style Digital & Analog I/O - CsCAN Network or Ethernet I/O
SmartRail									
HE599DIM510	8								Modular style Digital & Analog I/O - CsCAN Network or Ethernet I/O
HE599DIM610	16								
HE599DIM710	32								
HE599DQM506		8							
HE599DQM606		16							
HE599DQM706		32							
HE599DQM502			8						
HE599DQM602			16						
HE599DIQ512	8		8						
HE599ADC170				4			8@3A		
HE599DAC101		8@5A			4				
HE599DAC106						4			
HE599MIX116				2	2				
HE599RTD100							4		
HE599THM100							4		
HE599CNX100	CsCAN Base; 8 modules/base, 16 base/system max								
HE599COS100	CANOpen Base; 8 modules/base, 16 base/system max								
HE599ETX200	Ethernet Base; 8 modules/base, 16 base/system max								
HE599PBX100	Profibus Base; 8 modules/base max								

Model	No I/O	Model 2	Model 3	Model 4	Model 5	Model 6	XL Series Part Numbers
XLe	HE-XE100	HE-XE102	HE-XE103	HE-XE104	HE-XE105	HE-XE106	XL Series Part Numbers
XLt	HE-XT100	HE-XT102	HE-XT103	HE-XT104	HE-XT105	HE-XT106	
XL4	HE-XC1E0	HE-XC1E2	HE-XC1E3	HE-XC1E4	HE-XC1E5	HE-XC1E6	
XL6	HE-XL100	HE-XL102	HE-XL103	HE-XL104	HE-XL105	HE-XL106	
XL6e	HE-XL1E0	HE-XL1E2	HE-XL1E3	HE-XL1E4	HE-XL1E5	HE-XL1E6	
XL7	HE-XW1E0	HE-XW1E2	HE-XW1E3	HE-XW1E4	HE-XW1E5	HE-XW1E6	
XL10e	HE-XV1E0	HE-XV1E2	HE-XV1E3	HE-XV1E4	HE-XV1E5	HE-XV1E6	

Model	XL Series COM Options
HE-XDAC007	2-channel Analog Out (mA/V)
HE-XDAC107	4-channel Analog Out (mA/V)
HE-XEC	Add-on Ethernet
HE-XPBS	Profibus DP Slave
HE-XRC9	900MHz 1 W Radio Modem
HE-GSM04*	GSM/GPRS Cellular Modem
HE200GPS183**	GPS Receiver
HE-XHSQ	24V Dual High Speed Output
HE-XHSQ-5	5V VDC Dual High Speed Output
HE-XMC	14.4K Telephone Modem

*add ANT suffix to include antenna **external unit

XL Series OCS

The industry leader in all-in-one control



All-in-one intelligent & powerful controls

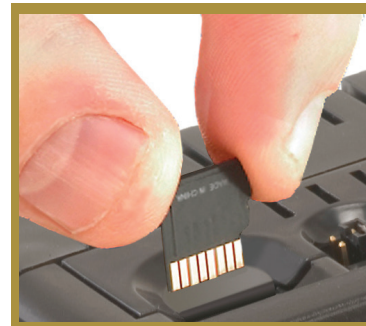


Low cost, compact all-in-one controllers

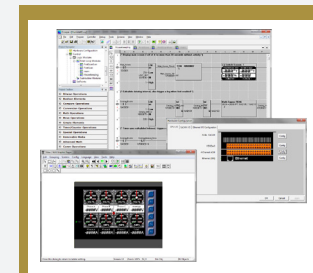
The XL Series of Operator Control Stations (OCS) offer robust, reliable control that combine a traditional controller with an operator interface, built-in I/O, networking and removable mass data storage into an integrated, all-in-one unit. The XL series products are cost-effective, provide significantly more functionality than a PLC and operator interface and are programmed using a single industry-recognized software package, Cscape™.

Industry first, MicroSD data storage memory

The XL Series is the first industrial product to use the latest standard in removable mass storage, MicroSD™. This is ideal for data logging, machine recipes, and application files. Users can easily update their XL Series application program through this memory device.



The XL Series can store data or easily upload programs via MicroSD memory card, an industry first.



Our Cscape software & software updates are always complimentary. Simply download from our website and you can easily program, debug and display graphics on any XL Series OCS product.

Graphical LCD displays, built-in I/O and add-on communications

The XL Series offers five graphical display sizes:

- » 2.25" LCD with a keypad (128x64 pixels - mono)
- » 3.5" touchscreen (160x128 pixels - mono or 320x240 pixels - color)
- » 5.7" touchscreen (320x240 pixels - grayscale or color)
- » 7" touchscreen (800x480 pixels - color)
- » 10.4" touchscreen (640x480 pixels - color)



XL Series models with built-in I/O have 22-44 points and include digital, analog and high speed I/O. Using expansion I/O, the XL Series supports over 5000 I/O. For machine control, the built in high speed I/O can provide totalizing, frequency measurement, PWM generation and pulse outputs. The universal analog I/O is ideal for process control applications with high resolution inputs. They can be configured for Thermocouple, RTD, 4-20mA, +/-100mV and 10V signals.

Two RS-232/RS-485 serial ports and an integrated CAN-based network (CsCAN™) are included on XL Series models. The XL4 and higher models add USB programming and FLASH drive ports. Plus, all models support add-on field installable communication options such as radio or cell modems. For XLe, XLt, XL6 and XL6m, an add-on 10/100Mbit Ethernet card makes machine data and programming available plant wide or worldwide. All other models come with Ethernet standard supporting Modbus/TCP master/slave, Ethernet/IP IO, HTTP, web serving, SMTP and FTP capabilities.

Benefits

- » More compact & affordable than a separate PLC and Operator Interface
- » Operates on 12 VDC and 24 VDC power
- » Better screen visualization - outdoor readable (XLe/XLt)
- » Built in I/O with color-coded, removable terminal blocks for simple wiring
- » Easy data logging & program updates with Removable MicroSD data storage
- » Compatible interfacing with nearly any PLC or drive
- » Ethernet, Profibus, radio and cell modem option cards
- » Support of web-serving using HTTP and file-sharing with FTP on the XL4, XL6e, XL7 and XL10e
- » Superior motion control integration, control any motor or drive

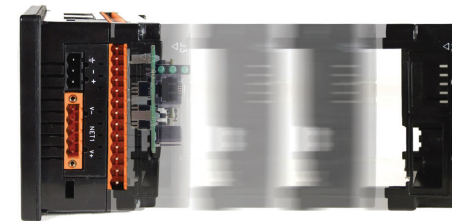
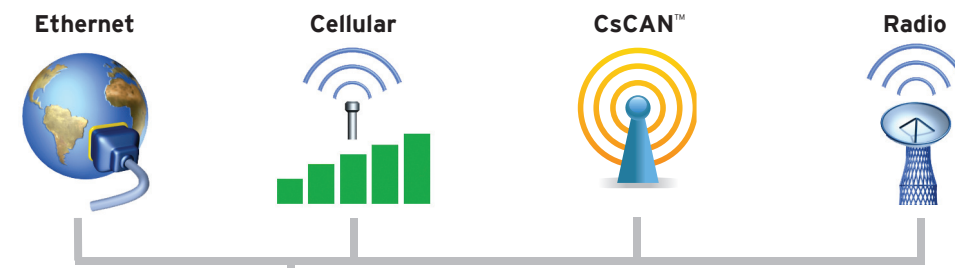


Compact and robust, the XL Series can be mounted in a variety of locations. For example, the XLe and XLt can be mounted on DIN rail or in a panel, taking less than 4" H x 4" W x 2.4" D.

Communication options

The XL Series offers a wide range of field installable communications options, including: 10/100Mbit Ethernet, Profibus DP slave, GSM/GPRS cellular and 900MHz radio modem. All modem options support Modbus master and slave. Both Ethernet and GSM/GPRS cellular support Modbus/TCP slave. A GPS receiver unit is also available for mobile applications.

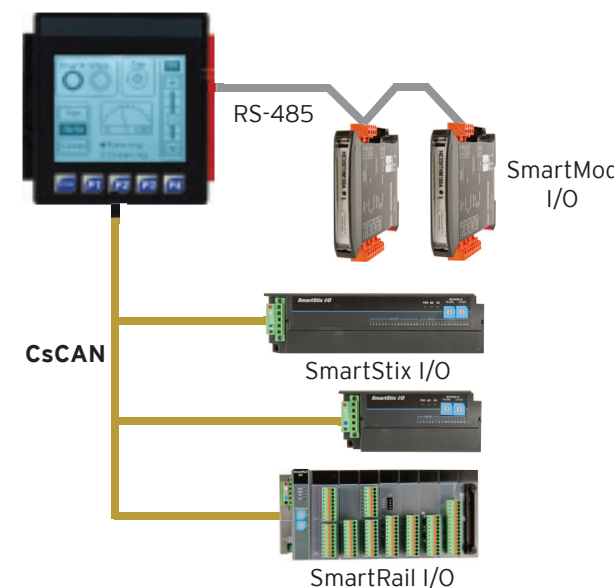
Built-in options include DeviceNet and SAE/J1939 as a factory upgrade and CANopen as a field software update.



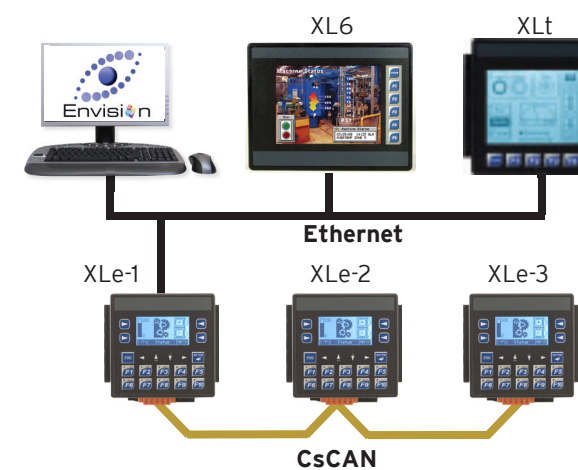
Ethernet and modem cards are easily field installable. One screwdriver does it. Simply install the card and attach the extended rear cover supplied. The XL4, XL6e, XL7 and XL10e all come with on-board Ethernet as standard.

Connectivity

I/O Expansion: XL Series I/O is not limited to its 22-44 built-in I/O. Block style SmartStix and Modular SmartRail I/O connect to the high speed CsCAN network and can be local or distributed. RTU/Modbus based SmartMod I/O is a cost effective means of adding a small amount of analog I/O.



Architecture: The XL Series supports CsCAN high speed networking as standard and Ethernet networking as an option. Single-point-of-connect allows seamless communications between a computer and all networked controllers. In the diagram below, XLe-2 and XLe-3 are accessed by the PC over Ethernet and CsCAN through XLe-1. Through the optional use of Cscape EnvisionRV, you can view and access your OCS remotely via a PC interface.



XL Series at a glance

	Built-in I/O, expandable	Display Size	Touchscreen	Logic Size	MicroSD™ Memory, Datalog	USB	Built-in Ethernet
XLe	✓	2.25" mono	×	256kB	✓	×	×
XLt	✓	3.5" mono	✓	256kB	✓	×	×
XL4	✓	3.5" color	✓	1MB	✓	✓	✓
XL6m	✓	5.7" gray	✓	256kB	✓	✓	×
XL6	✓	5.7" color	✓	256kB	✓	✓	×
XL6e	✓	5.7" color	✓	256kB	✓	✓	✓
XL7	✓	7.0" color	✓	1MB	✓	✓	✓
XL10e	✓	10.4" color	✓	256kB	✓	✓	✓

