OCS Operator Control Station

XL Series OCS

The industry leader in all-in-one control





Discover the advantages of OCS...

By combining a controller, operator interface, I/O and networking into a single compact unit, OCS (Operator Control Station) provides a better solution for original equipment manufacturers, integrators and end-users alike. More and more, there is a move to all-in-one controllers because of ease of use, cost savings and flexibility.

Since 1998, OCS has led the way in this emerging market with the largest installed base and product selection ranging from small text based screens to large colour touchscreens. OCS has been used successfully in a variety of applications, including:

- Custom OEM products
- Power Management and Backup Generation
- Semiconductor Applications
- Packaging Machinery
- Water Treatment
- Compressor Control
- Pump Control
- Food Processing

- Motion Control
- Distributed Conveyor Control
- HVAC/Environmental Control
- Mobile Machinery
- Automotive Parts Manufacturing
- Renewable Energy
- Building Controls
- Energy Montoring and Control

Lowers costs, more options and easy to use

OCS applications are developed with a powerful and secure programming package called Cscape™. It supports logic programming, operator interface development, I/O configuration and network configuration in a single software package.

Offering many security features, users can be required to enter passwords to access protected operations (such as upload, download, verify and controller mode).

Cscape™ can be downloaded free: www.horner-apg.com It has no costly licensing fees so you don't have to pay for software upgrades. With fully integrated hardware and software, OCS offers easier programming, installation, development and set-up.

You can also save time and money with an OCS because less panel space is needed. It is designed as a modular system for easy selection and growth and it has embedded CAN, ethernet and Modbus RTU networking capabilities.



Customise the OCS to your specific needs

OCS is designed to look like a "generic" operator station, fitting in with most cabinet and console designs and colour schemes. But sometimes adding an individualised look can make a world of difference in the overall usefulness of an operator station and the marketing of your machine or system.

You can customise an off the shelf OCS in many inexpensive ways to give you this advantage:

- Apply a label on the overlay to add your company logo
- Substitute a custom keypad or overlay with your company's logo, colours and industry terms - our advanced manufacturing techniques make this available to low and high volume users alike
- Program the OCS to operate in several languages, such as English, French, German, Spanish, Italian and more via our easy to use multi-language feature

We can also provide more extensive customisation such as:

- Modifying existing I/O modules
- Designing new I/O configurations and control functions
- Adding protocol or communication options
- Designing a custom control station from the ground up

Product support is as important as the product itself

World wide support

Replacement parts and support are available from local Horner offices and our network of OCS resellers located all over the world.

Technical support and FREE training

You can come to us or our partners for technical or product support for OCS.

Whether it's a quick phone call or online information, many OCS services are available at no charge.

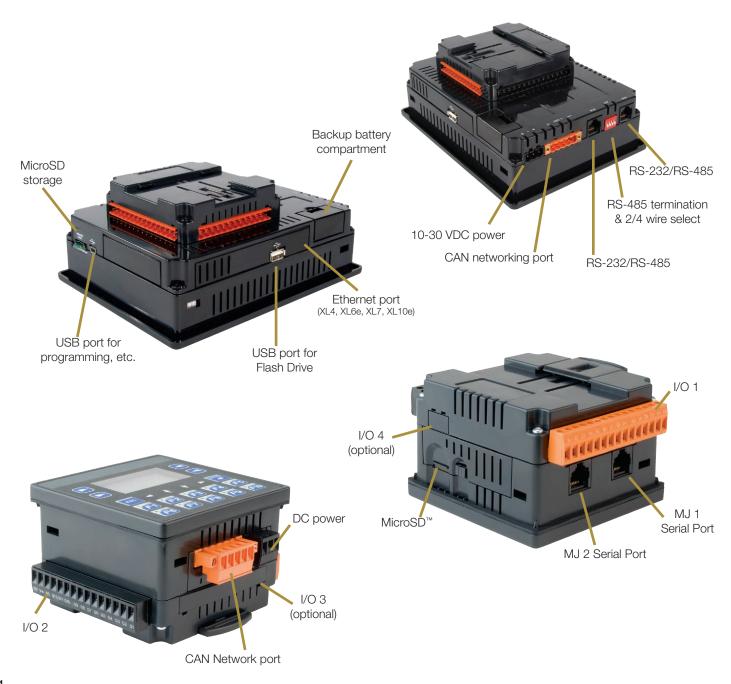
Engineering services such as programming assistance, packaged solutions and site surveys can be provided at low cost:

- Web site for comprehensive product information, application examples, sample programmes, training guides and manuals - www.horner-apg.com
- Free OCS training classes
- 2 year warranty
- Network of worldwide Sales Associates for parts, service or support
- Online helpdesk
- Free download of software updates



XL Series Hardware at a glance

	Built-in I/O, expandable	Display Size	Touchscreen	Logic Size	MicroSD [™] Memory, Datalog	USB	Serial Port	Built-in Ethernet	CAN Port
XLe	✓	2.25" mono	×	256kB	1	×	✓	×	✓
XLt	✓	3.5" mono	✓	256kB	✓	×	✓	×	✓
XL4	✓	3.5" colour	✓	1MB	✓	✓	✓	✓	✓
XL6	✓	5.7" colour	✓	256kB	✓	✓	✓	×	✓
XL6e	✓	5.7" colour	✓	256kB	√	✓	✓	✓	✓
XL7	✓	7.0" colour	✓	1MB	✓	✓	✓	√ (2)	√ (2)
XL10e	1	10.4" colour	✓	256kB	1	1	✓	1	/

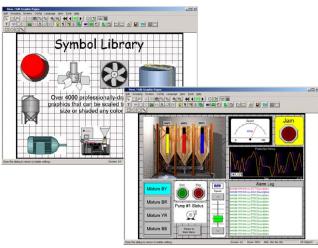


Software ties it all together!

Cscape[™]...exceptional software

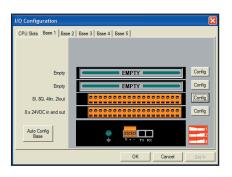
Cscape™ software combines graphical ladder diagram programming (based on IEC-61131) with operator interface development to completely integrate the control package. Its straightforward approach to programming combines logic with messaging and networking and offers:

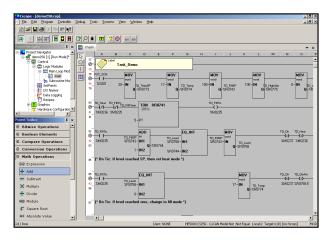
- All IEC 61131 programming languages (LD, ST, IL, FBD, SFC)
- Floating point math
- Motion commands
- Serial read and write functions
- Auto tune PID
- Modem and networking functions



I/O configuration

Configure all your I/O from Cscape™ manually or automatically - with many I/O modules to choose from. Built-in expansion and remote I/O are all handled in a straightforward manner.



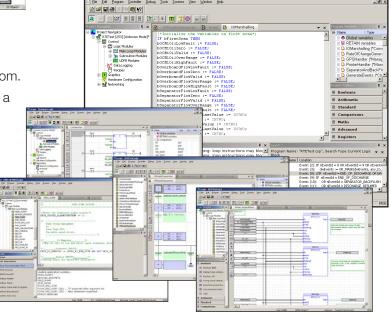


Logic

Cscape[™] features a powerful IEC-61131 style free form, drag and drop editor. Nearly 100 functions to choose from, including conversion, string handling, advanced math, flow control and more.

Operator interface

Designed to simplify development of your operator interface screens while you develop your control logic. Screens can be called up from logic or operate independently. Use a single set of I/O references—no duplication of effort.



All the networking options you need... in a single product!

- Flexible, easy to use CsCAN Network
- Connect to Industrial Networks: CANOpen, ModBus TCP/IP, Ethercat, Profibus, Devicenet, SAE J1939, BACNet and Modbus RTU
- Versatile serial ports with downloadable drivers for connection to many PLC's, Drives, Serial Devices and I/O
- Web connectivity via inbuilt GPRS or Ethernet, send Email with attachments, Web and FTP server, push Data to Cloud and much more
- Send and Receive SMS with embedded data
- Datalog to MicroSD or USB Drive
- Video Input via USB
- Optional inbuilt GPRS Modem
- GPS Support
- Remote Programming and Control over a variety of media



EnvisionRV - remotely... view, monitor, control and update

Access your OCS at your PC

With EnvisionRV, graphical objects look and behave the same on the PC as they do on the OCS. This feature reduces your training costs, and can significantly speed up your implementation by using the familiar configuration tool CscapeTM to develop OCS screens or screens specifically for the PC.



- View and interact with Horner OCS controllers. Remote access to unit's screens, alarms and any graphical objects
- Easy to use intuitive interface, simple configuration and two display modes (synchronous & asynchronous)

 Single point of connection. Monitor several units on the network by connecting to just one unit



Transfer files with EnvisionFX

EnvisionFX enables you to transfer files between your PC and OCS via a graphical interface.

I/O and Communications Selection Guide



Fixed I/O - factory fitted inside XL units

XL Series I/O (built in) XLe, XIt and XL6 models								
	DC In	DC Out Pos	Relay Out	HSC In	PWM Out	mAV In	mA/V RTD/ TC	mA/V Out
Model 0	-	-	-	-	-	-	-	-
Model 2	12		6	4		4		
Model 3	12	12		4	2	2		
Model 4	24	16		4	2	2		
Model 5	12	12		4	2		2	2

Model Selection						
XLe	XLt	XL4	XL6	XL6e	XL7	XL10e
HEXE220	HEXT240	HEXT251	HEXT350	HEXT351	HEXT391	HEXT501

	Model 0	Model 2	Model 3	Model 4	Model 5
No CAN (XLe)	C000	C012	C013	C014	C015
CsCAN	C100	C112	C113	C114	C115
CANOpen	C200	C212	C213	C214	C215
Devicenet	C400	C412	C413	C414	C415
J1939	C500	C512	C513	C514	C515

Note:

XIe, Model 2, CsCAN Full Part Number HEXEC220C112
XIe, Model 2, CANOpen Full Part Number HEXEC220C212

No Can is only available on XIe Devicenet is not available for XIe XL7 has two Ports, Cscan on Port 1, Port 2 Selectable



Plug in communications and I/O options

XL series communications - field installable						
	Description					
HE-XEC	Ethernet Communications option card					
HE-XMC	57.6k Telephone Modem option card					
HE-GSM04	Quad-Band GSM / GPRS Modem					
HE-GPS183	GPS Satellite Receiver					
HE-PBS	Profibus Slave Module					
HE-XDAC007	2-channel Analog Out (mA/V)					
HE-XDAC107	4-channel Analog Out (mA/V)					
HE-XHSQ	24V Dual High Speed Output					
HE-XHSQ-5	5V VDC Dual High Speed Output					

I/O and Communications Selection Guide



SmartRail™ Remote I/O - adds I/O using CSCAN, CANOpen, Ethernet



SmartStix[™] remote I/O - add I/O to any unit using CsCAN



SmartBlock[™] Remote I/O - add I/O to any unit using CSCAN



SmartMod[™] add remote I/O to any unit using Modbus

SmartRail								
	DC In	DC Out	Relay Form A	mA/V In	V Out	mA Out	RTD In	T/C In
HE599DIM510	8							
HE599DIM610	16							
HE599DIM710	32							
HE599DQM506		8						
HE599DQM606		16						
HE599DQM706		32						
HE599DQM502			8					
HE599DQM602			16					
HE599DIQ512	8		8					
HE599ADC170				4				
HE599DAC101					4			
HE599DAC106						4		
HE599MIX116				2		ectable r mA		
HE599RTD100							4	
HE599THM100								4
HE599C0S100		CANOpen Base; 8 modules/base, 16 base/system max						
HE599CNX100		CsCAN Base; 8 modules/base, 16 base/system max						
HE599ETX200		Ethernet Base; 8 modules/base, 16 base/system max						

SmartStix digital & analogue I/O							
	DC In	DC Out	DC Out	Relay	mA/V In	mA/V Out	
		Pos	Neg	Out			
HE559DIM610	16						
HE559DIM710	32						
HE559DQM606		16					
HE559DQM706		32					
HE559DQM602				16			
HE559DIQ816	16	16					
HE559DAC207						8	
HE559ADC970					12		
HE559MIX577					4	2	
HE559MIX977					8	4	

SmartBlock									
	DC In	DC	mA/V	mA/V	Relay	mA/V	RTD	Tcpl/	
		Out	In	Out		RTD/TC	In	MV In	
HE579DAC107				4					
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 m/AV	Thermi	stor In			

SmartMod digital & analogue I/O							
	DC In (Neg)	Relay Out	mA In	V In	mA/V Out	T/C	RTD
HE359DIM610	12						
HE359DIQ512	4	4					
HE359ADC120/220			4/8				
HE359ADC107/207				4/8			
HE359DAC201				8			
HE359DAC007					2		
HE359DAC107					4		
HE359THM100/200						4/8	
HE359RTD100							4

Choose the level of functionality you need







		XLe	XLt	XL4	
	Characters/Pixels	128 x 64	160 x 128	320 x 240	
	Display Technology	backlit LCD	3.5" transflective LCD	3.5" TFT, 65000 colours	
Display	Character Height (mm)		ble fonts	selectable fonts	
	Number of Pages		023	1023	
	Fields or Objects per Page		50	1023	
	Total Keys	20	5	5	
Keypad/	Function Keys	10	4	4	
Touchscreen	Numeric Keys	shared	pop-up keypad	pop-up keypad	
Todonsorcen	OEM Faceplate Available		es	yes	
	Ladder Logic Memory	-	6kB	1MB	
	Register Memory		2kB	32kB	
	Logic Scan Rate		ms/k	0.013ms/k	
Controller	Removable Memory Local Comment Storage		(Transflash)	microSD (Transflash)	
Controller		-	es	yes	
	Floating Point Support		es	yes	
	AutoTune PID Capable Motion Commands		es	yes	
		-	es	yes	
	Removable Flash Drive Support		10	yes	
	Built-in I/O	У	es	yes	
	SmartStixTM, SmartRailTM,				
-	SmartBlockTM, SmartModTM	У	es	yes	
Input/Output	I/O Support	0046	1/00/40	0040/0040	
Support	Digital Inputs/Outputs		3/2048	2048/2048	
	Analogue Inputs/Outputs		2/512	512/512	
	General Purpose Registers		999	49999	
	General Purpose Internal Bits		096	32,768	
	Total Active Ports		2	2	
	RS-232 Ports/RS-485 Ports	•	-232 or RS-485	1 RS-232 & 1 RS-485 on Single RJ45 Jack	
Serial	PLC/Drive Protocols	-	es	yes	
Communications	RTU/Modbus Master/Slave	-	es	yes	
	Serial ASCII In/Out	У	es	yes	
	USB A and Mini B	1	10	yes	
	Integrated CAN (CsCAN or CANopen) Network	star	ndard	standard	
Networking	Maximum CsCAN Distance	18	00m	1800m	
	Programming Over Network	У	es	yes	
	Peer-to-Peer Messaging	У	es	yes	
	Ethernet Support	HE	-XEC	standard	
Ethernet/Internet	Remote Access	via Env	visionRV	HTTP or EnvisionRV	
	Remote File Access	via Env	visionFX	FTP or EnvisionFX	
	Height, mm (inches)	96mm	(3.780")	96mm (3.780")	
	Width, mm (inches)	96mm	(3.780")	96mm (3.780")	
Physical	Depth, mm (inches)	57.5mm	n (2.264")	57.5mm (2.264")	
Specifications	I/O Madula Danth	Communication	ons Option adds	Communications Option adds	
	I/O Module Depth	Depth 13mm (0.5") depth		13mm (0.5") depth	
	Operating Temperature	0 to 50°C	-10 to 60°C	-10 to 60°C	
İ	Humidity (non-condensing)	5 to 95% non-c		condensing	
Operating	Product Certifications			t Design Assessed (PDA). All OCS Controllers are CE II ABCD & C-UL Listed (or equivalent).	
Specifications and Standards	Equivalent Wash Down Rating	All OCS Controllers are sui	table for IP65 and NEMA12 Ap	plications. Most OCS Controllers are also suitable for Horner APG Factory for recommendations in	
	Extended Operating Environment	Many OCS contro	nding Operating Temperatures in some cases		







XL6	XL6e	XL7	XL10		
320	0 x 240	800x480	640x480		
5.7" TFT, 3	32000 colours	7" WVGA TFT, 65000 colours	10.4" VGA TFT, 32000 colours		
select	able fonts	selectable fonts	selectable fonts		
-	1023	1023	1023		
	100	1023	300		
	6	6	8		
	5	5	7		
pop-u	ıp keypad	pop-up keypad	pop-up keypad		
	yes	yes	yes		
2	56kB	1MB	256kB		
3	32kB	32kB	32kB		
0.:	2ms/k	0.013ms/k	0.2ms/k		
microSD	(Transflash)	microSD (Transflash)	microSD (Transflash)		
	yes	yes	yes		
	yes	yes	yes		
	yes	yes	yes		
	yes	yes	yes		
	yes	yes	yes		
	yes	yes	yes		
yes		yes	yes		
204	8/2048	2048/2048	2048/2048		
51	2/512	512/512	512/512		
9	999	49999	9999		
4	1096	32,768	4096		
	2	3	2		
each port RS	S-232 or RS-485	RS-232 & RS-485;RS-232/RS-485	each port RS-232 or RS-485		
	yes	yes	yes		
	yes	yes	yes		
	yes	yes	yes		
	yes	yes	yes		
sta	andard	standard (2 Ports)	standard		
18	800m	1800m	1800m		
	yes	yes	yes		
	yes	yes	yes		
HE-XEC	Standard	Standard (2 Ports)	Standard		
via EnvisionRV	HTTP or EnvisionRV	HTTP or EnvisionRV	HTTP or EnvisionRV		
via Envision FX	FTP or EnvisionFX	FTP or EnvisionFX	FTP or EnvisionFX		
143.6r	nm (5.65")	143.8mm (5.66")	230.6mm (9.08")		
186.1r	nm (7.33")	210.1mm (8.27")	303.3mm (11.94")		
71.45m	nm (2.813")	69.1mm (2.72")	61.7mm (2.43")		
Communications Optic	on adds 13mm (0.5") depth	Communications Option adds 13mm (0.5") depth	Communications Option adds 13mm (0.5") depth		
-10	to 60°C	-10 to 60°C -10 to 60°C			
		5 to 95% non-condensing			
	We are divided to the Property of the Property	Collins (ADO) Built and During Advanced (CDA) All Co	000		

XLe and XLt: American Bureau of Shipping (ABS) Product Design Assessed (PDA). All OCS Controllers are CE marked and most are UL Class 1, Division II ABCD & C-UL Listed (or equivalent).

All OCS Controllers are suitable for IP65 and NEMA12 Applications. Most OCS Controllers are also suitable for NEMA4 and NEMA4X applications. Contact the Horner APG Factory for recommendations in Wash Down applications.

Many OCS controllers can be provided with Extending Operating Temperatures in some cases from -40° to 60° C - please contact us for more details

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