

# QX Color-Touch OCS

## Powerful All-In-One Controller with Vibrant Color Graphics, Embedded Ethernet, and Snap-on I/O

The QX Color-Touch OCS series features a fast, powerful logic engine, SVGA resolution touchscreens and optional snap-on I/O. OCS (Operator Control Station) is a robust, reliable control product that combines a traditional controller... programmed in ladder logic... operator interface, I/O and networking into an integrated, all-in-one unit using a single software package.

The QX has three screen sizes (8.4", 10.4", and 12.1"), and a typical logic scan rate of 0.2mS/K. In addition, the QX has embedded Ethernet and supports many Internet capabilities such as remote data access, programming, hosting HTML-based Web pages, and FTP sites. Plus, it has a built-in CompactFLASH® slot that allows users to easily store machine or process data (up to 2GB). Programs can be updated and loaded through CompactFLASH...a real advantage for OEMs or those supporting distant sites.

The QX Color-Touch OCS has optional I/O and video add-on features too. Base QX units provide control, operator interface, and communication functionality while the optional QX Backpack (BP) units provide I/O connectivity. Video connectivity can be achieved with the VIM400, the video input option. This modularity allows the I/O or video functions to be omitted or added to more precisely meet the application requirements.

## Backpack Options Add Local and Remote I/O

There are two Backpack options for the QX (HE-BP41 & HE-BP43, with high speed counter). Both are compact and easy-to-install on the back of the QX base unit. With any Backpack installed, up to two SmartStack I/O modules can be snapped on. In addition, Backpack users can connect hundreds of local or remote I/O using our Fiber Optic (FOX) Expansion I/O and our SmartStix terminal-type I/O modules. If the HE-BP43 Backpack is selected, a 500 KHz High Speed Counter (with PWM) is included. For smaller applications, the QX with Backpack creates a single, compact package that includes control, display, networking, and up to two snap-on SmartStack I/O modules.

## Video Input Option Allows Machine Viewing and More Security

The advanced feature of video input functionality (VIM400) for the QX Color-Touch OCS is being used more and more by companies who need to integrate security, view machinery in remote locations, or need to incorporate a machine vision monitor with their control system. The video input option allows four channels of NTSC or PAL video to be connected to the QX (QX451, QX551, QX651) to provide video viewing and capture capability. Users can view video with the full frame rate at VGA resolution. Video can also be viewed freeze frame, and/or saved as a single frame to CompactFLASH. A separate control register allows the controller to automatically freeze or save video snap-shots based on the machine state.



QX451 Color-Touch OCS



QX Series Color Touchscreen OCS has vibrant, high-resolution graphics (480K pixels and 32K colors), and 8.4", 10.4" and 12.1" sizes are available.

Fast Logic Scan & Screen Updates

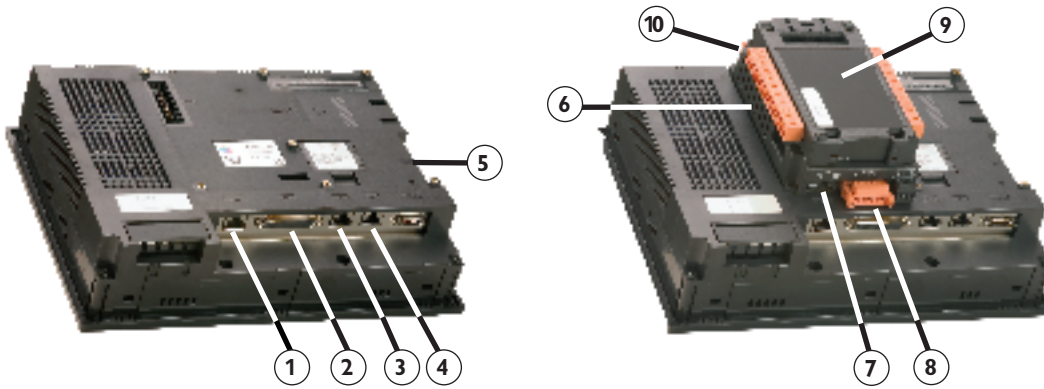
Bright TFT Screens  
SVGA Resolution  
and 32K Colors

Snap-on I/O with  
Optional Backpack

CompactFLASH®

Embedded Ethernet  
and Web-enabled

Free Software



QX Base Unit	
1	Ethernet Port
2	Serial Port 3 (25 pin)
3	Serial Port 2 (RJ-45)
4	Serial Port 1 (RJ-45)
5	CompactFLASH Slot

QX Base Unit Plus Backpack and I/O	
6	Backpack Unit
7	FOX Fiber Optic I/O Expansion
8	CsCAN Network Port
9	SmartStack Snap-on I/O
10	HSC and PWM Inputs/Outputs

Part Number	Description
HEQX451	QX Operator Control Station Base Unit with 8.4" SVGA TFT Screen
HEQX551	QX Operator Control Station Base Unit with 10.4" SVGA TFT Screen
HEQX651	QX Operator Control Station Base Unit with 12.1" SVGA TFT Screen
HE-BP41	QX Backpack with support for SmartStack (2), FOX I/O and CsCAN
HE-BP43	QX Backpack with support for SmartStack (4), FOX I/O, CsCAN and HSC/PWM
HE-VIM400	Video Backpack with support for four (4) NTSC/PAL Video Inputs

## Specifications

Specification Base Unit	QX451	QX551	QX651
App. Programming Environment	Cscape (logic plus screen development—ladder or full IEC-1131)		
Display Size	8.4"	10.4"	12.1"
Display Technology	LCD TFT Display with SVGA (800 x 600) Resolution & 32K Colors		
CompactFLASH Slot	Yes	Yes	Yes
Ladder Logic Memory	256K Bytes	256K Bytes	256K Bytes
Register (Reference) Memory	32K Bytes	32K Bytes	32K Bytes
Logic Scan Rate	0.2mS/K (typical)*	0.2mS/K (typical)*	0.2mS/K (typical)*
Embedded Ethernet	10/100Mbit	10/100Mbit	10/100Mbit
Web Server & FTP Server	Yes	Yes	Yes

Specification Backpack	BP41	BP43
SmartStack I/O Support	2 Modules**	4 Modules**
CsCAN Network Support	Yes	Yes
SmartStix I/O Support	Yes	Yes
FOX Fiber Optic I/O Support	Yes	Yes
1 MHz HSC and PWM Support	No	Yes

Specification Video Input Option	VIM400
Provides Four (4) NTSC or PAL Video Inputs. Can be used with Base alone, or with Base and BP41 or BP43 Backpack.	

\* Total Ladder scan is impacted by several factors – logic, I/O, screen, and communications updates.  
\*\* If SmartStack I/O modules will be snapped on a QX Backpack, order plastic SmartStack I/O modules.

PLC/Drive Protocols

Optional  
>500 KHz HSC and  
PWM

Complex Graphical  
Objects

Full Alarming Package

Downloadable Fonts

Four Selectable  
Languages



Optional BP43 Backpack  
includes HSC/PWM

### Horner APG

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20 Years of Innovation