

GE

GFK-2847B

Intelligent Platforms

QuickPanel+ Operator Interface

IC755CSW07CDA (7" QuickPanel+)

IC755CSS12CDA (12" QuickPanel+)

User Manual



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Warning



Indicates a procedure, condition, or statement that, if not strictly observed, could result in damage to or destruction of equipment.

Caution



Indicates a procedure, condition, or statement that should be strictly followed to improve these applications.

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Additional information	http://www.ge-ip.com/
Solution Provider	solutionprovider.ip@ge.com

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Online Technical Support	http://support.ge-ip.com
Phone	1-800-433-2682
International Americas Direct Dial	1-780-420-2010 (if toll free 800 option is unavailable)
Technical Support Email	support.ip@ge.com
Customer Care Email	customercare.ip@ge.com
Primary language of support	English

Europe, the Middle East, and Africa

Online Technical Support	http://support.ge-ip.com
Phone	+ 800-1-433-2682
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Technical Support Email	support.emea.ip@ge.com
Customer Care Email	customercare.emea.ip@ge.com
Primary languages of support	English, French, German, Italian, Czech, Spanish

Asia Pacific

Online Technical Support	http://support.ge-ip.com
Phone	+ 86-400-820-8208
	+ 86-21-3217-4826 (India, Indonesia, and Pakistan)
Technical Support Email	support.cn.ip@ge.com (China)
	support.jp.ip@ge.com (Japan)
	support.in.ip@ge.com (remaining Asia customers)
Customer Care Email	customercare.apo.ip@ge.com
	customercare.cn.ip@ge.com (China)

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1 Introduction

The QuickPanel+ operator interface is an all-in-one microcomputer designed for maximum flexibility. The design, based on an advanced ARM core microprocessor, brings together a high-resolution touchscreen operator interface with a variety of communications options. You can connect to most industrial equipment through the QuickPanel+ communications ports.

The QuickPanel+ operator interface is equipped with several memory types to satisfy the most demanding applications. A section of DRAM is split between the operating system, an object store and application memory. Functioning as a virtual hard drive, a section of non-volatile flash memory is divided between the operating system and persistent storage for application programs. The retentive memory consists of a battery-backed SRAM for data storage, protecting your valuable data during a power failure.

1.1 Specifications

1.1.1 General Specifications

		IC755CSW07CDA	IC755CSS12CDA
Processor		Freescall i.MX535 (1GHz ARM Cortex A8)	
Memory	RAM	DDR2 SDRAM 512 MB	DDR3 SDRAM 1GB
	ROM	SLC NAND 256 MB	SLC NAND 512 MB
	SRAM	512 KB (with Battery backup)	
Operating System		Microsoft Windows Embedded Compact 7	
Display	Type	7" Widescreen TFT LCD	12.1" Std TFT LCD
	Resolution	800(W) x 480(H) pixels WVGA	800(W) x 600(H) pixels SVGA
	Color	65,536	
	Brightness	310 cd/m ²	450 cd/m ²
	Backlight	LED	
Touchscreen	Touch Panel Type	Projected Capacitive	
	Multi-touch	Two-point	
Communications	Ethernet Port	1x 10/100BaseT (RJ-45)	
	Serial Port	1x RS-232 UART Port (5-Pin Connector)	1x RS-232 UART Port, 1x RS-232/422/485 Port (10-Pin Connector)
	USB, Host	2x USB2.0 (Type-A) Max. Power (5 V at 0.5 A)	
	USB, Device	1x USB 2.0 (Mini Type-B)	
Storage		1x SD/SDHC Card Slot	
Audio		1x Mic In (mono) (3.5 mm Jack)	1x Line Out (Stereo) (3.5 mm Jack)
		1x Line Out (Stereo) (3.5 mm Jack)	
Noise Immunity		Noise voltage: 1500 V p-p Pulse Duration: 1µs, Rise time: 1ns	
Input power	Rated Voltage	+24 V dc ±20% (3-Pin Connector)	+12/24 V dc ±20% (3-Pin Connector)
	Power Consumption	15 W (max), 0.625 A	30 W (max), 2.5/1.25 A
	Frame Ground	Frame GND is connected to Signal GND internally	

1.1.2 Physical Specifications and Mounting

		IC755CSW07CDA	IC755CSS12CDA
Dimensions (L×W×D)		192 × 137 × 36 mm (7.56 × 5.39 × 1.42 in)	314 × 248 × 65 mm (12.36 × 9.76 × 2.56 in)
Weight		0.800 kg (1.76 lbs)	3 kg (6.61 lbs)
Mounting Options	Panel cutout dimensions	183.5 × 128.5 mm (7.22 × 5.06 in)	302 × 228 mm (11.89 × 8.98 in)
	VESA mount	75 x 75 mm (2.95 x 2.95 in)	100 x 100 mm (3.94 x 3.94 in)

1.1.3 Environmental Specifications

For additional product standards and agency approvals, refer to [Appendix A](#).

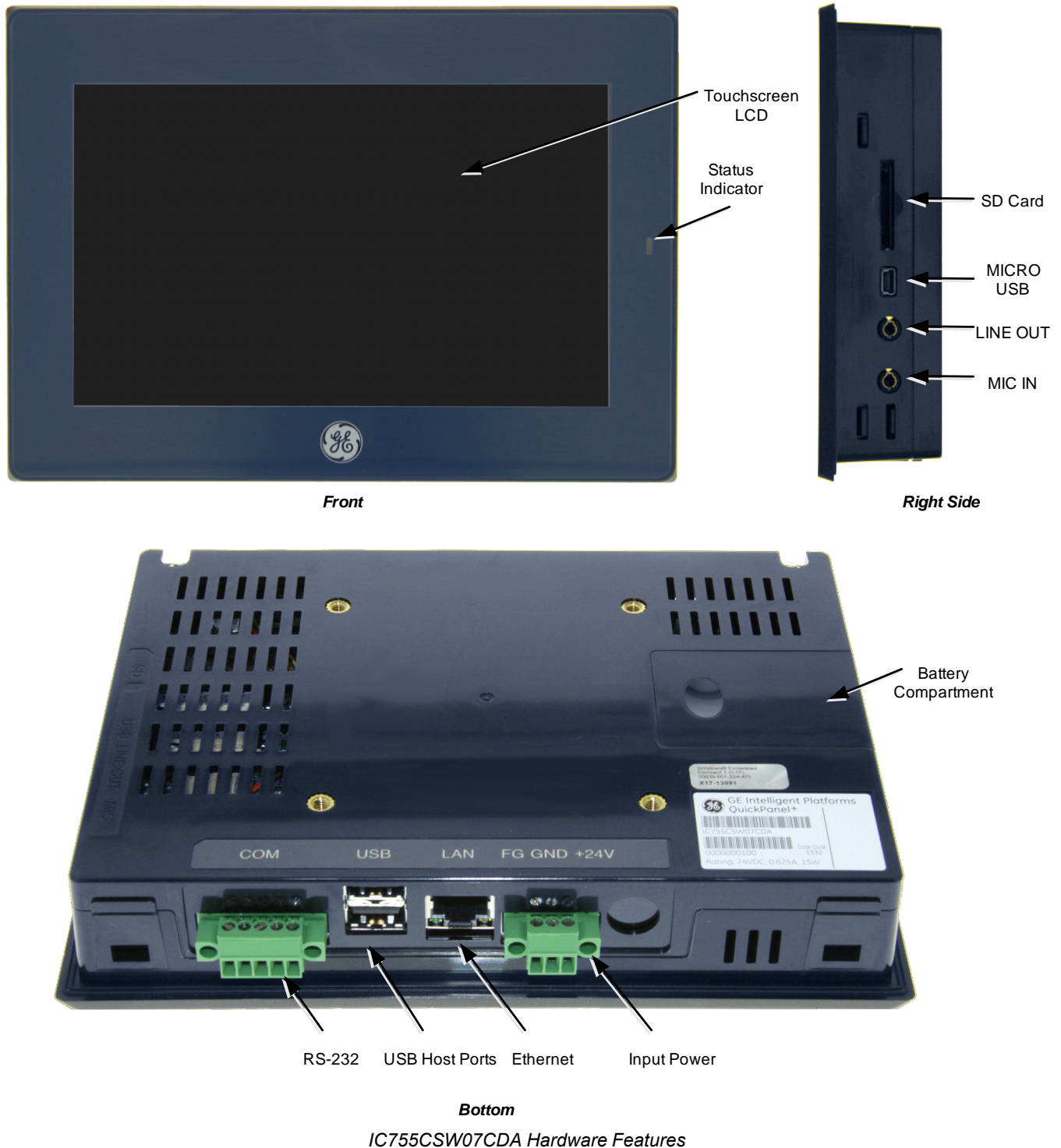
Note The QuickPanel+ should be installed in a location that is well ventilated and not exposed to dust, corrosive gases or liquids, flammable gases, rain, strong ultraviolet light or direct sunlight, and that meets the environmental specifications listed in the following table.

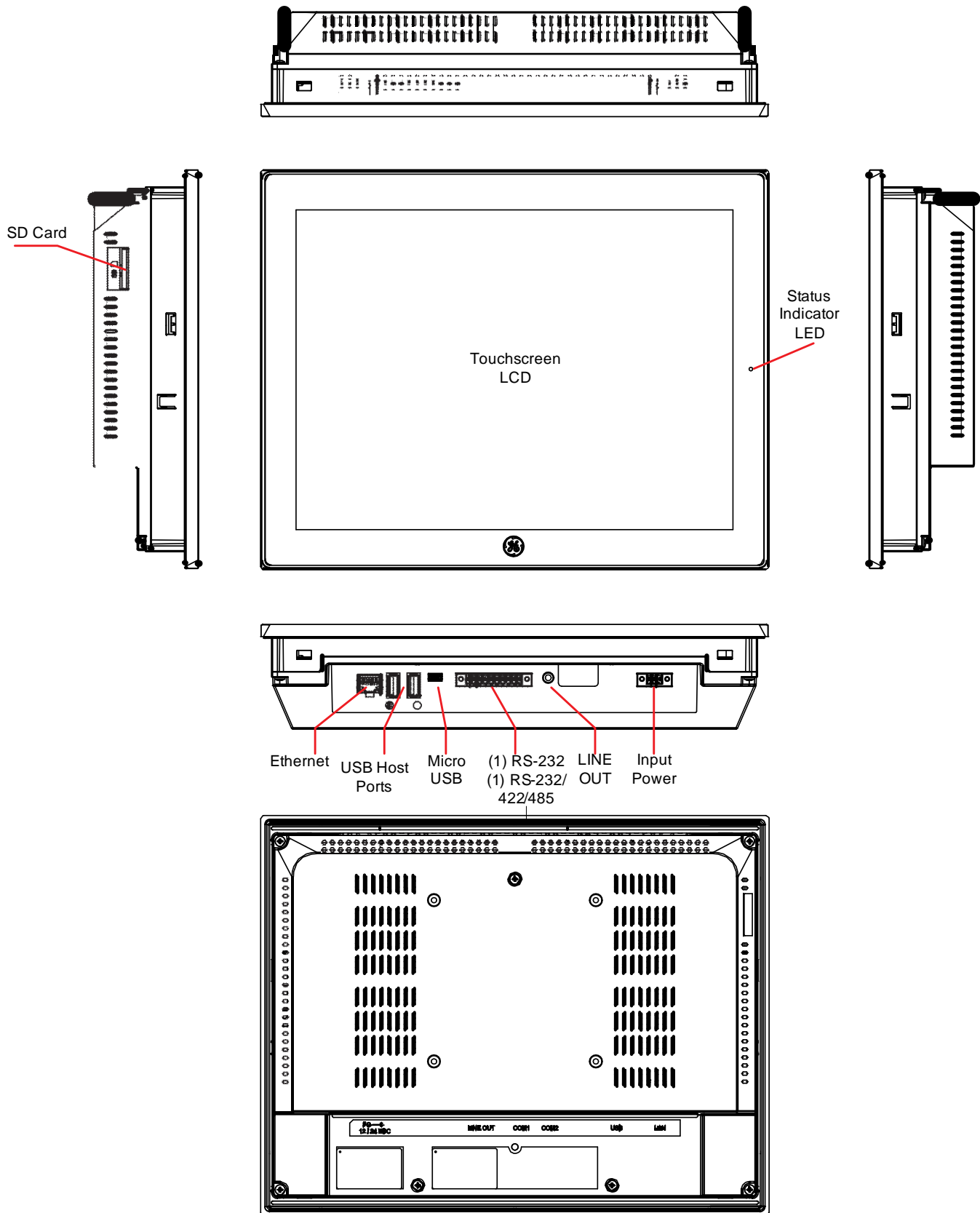
	IC755CSW07CDA	IC755CSS12CDA
Cooling	Natural convection	
Ambient Operating Temperature	0 to +55°C (32 to 131 °F)	
Ambient Storage Temperature	-10 to +60°C (14 to 140 °F)	
Ambient Humidity (Operating and Storage)	85% RH Non-condensing, wet-bulb temperature: 30°C (86 °F) or less	
Environment	Pollution Degree 2, Indoor use only	
Vibration Resistance	5 to 9 Hz single-amplitude 3.5 mm (0.14 in) 9 to 150 Hz constant-accelerated velocity 9.8 m/s ² X, Y, Z directions 10 time (100 minutes) (Compliance 3502, IEC61131-2 JIS B)	
Altitude	800~1114 hPa, altitude up to 2000 m (6561.68 ft)	
ROHS	Compliant with EU RoHS Directive 2002/95/EC using the following exemptions identified in the Annex: 7(a), 7(c)-I, & 7(c)-III.	
Enclosure Rating	IP65 in panel mount only	

1.2 QuickPanel+ Hardware User Features

In addition to the primary touchscreen interface, the QuickPanel+ supports a variety of communication ports. The following diagrams display the physical layout of the QuickPanel+ including locations of status LEDs, communications ports, and connectors.

1.2.1 Overview





IC755CSS12CDA Hardware Features

1.2.2 Status Indicators for IC755CSW07CDA and IC755CSS12CDA

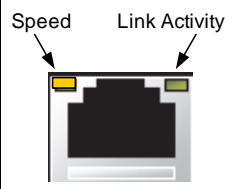
The QuickPanel+ operator interface has a tri-color LED that provides visual status indications. Only the IC755CSW07CDA has on-board buzzer for audio indications.

1.2.2.1 QuickPanel+ Status LED Operation

LED State	QuickPanel+ State
Amber, steady	Operating system starting
Green, steady	Normal operating state
Green, blinking	Backlight off
Red, blinking	Backlight fail
Off	Power not applied to the QuickPanel+

1.2.2.2 Ethernet Port LED Operation

The Ethernet port has two LED indicators: SPEED and LINK ACTIVITY.

	LED	LED State	Operating State
	Speed	On, Yellow	10/100
	Link Activity	On, Green	Link status

Notes

2 Getting Started

This chapter contains information for performing a pre-installation check of your QuickPanel+ operator interface.

Before installing and using the QuickPanel+, the following steps should be completed:

- [Unpacking and Inspection](#)
- [Basic Setup](#)
- [Initial Startup](#)
- [Runtime Setup](#)
- [Firmware Updates](#)
- [Shutdown](#)

2.1 Unpacking and Inspection

Upon receiving your QuickPanel+ operator interface carefully inspect all shipping containers for damage. If any part of the system is damaged, notify the carrier immediately. The damaged shipping container should be saved as evidence for inspection by the carrier.

As the consignee, it is your responsibility to register a claim with the carrier for damage incurred during shipment. However, we will fully cooperate with you should such action be necessary.

For phone numbers and email addresses, refer to the section, [Contact Information](#).

After unpacking the unit, **record all serial numbers**. Serial numbers are required if you need to contact Customer Care during the warranty period. Shipping containers and packing material should be saved in case it is necessary to transport or ship the unit. Verify that all components of the system have been received and that they agree with your order. If the system received does not agree with your order, contact Customer Care.

Before you attempt to power up the operator interface for the first time, inspect the unit for loose or damaged components. If damage is found (for example, in the form of bent component leads or loose components), contact GE Intelligent Platforms for additional instructions.

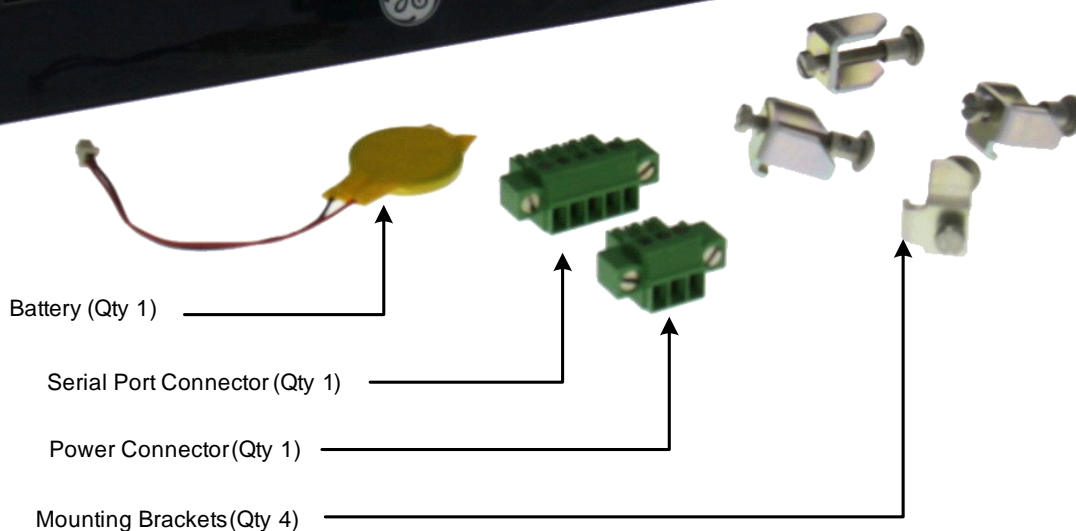


Caution

Do not apply power to the unit if it has visible damage.
Applying power to a unit with damaged components could cause additional damage.



QuickPanel+ Operator Interface



Battery (Qty 1)

Serial Port Connector (Qty 1)

Power Connector (Qty 1)

Mounting Brackets (Qty 4)

Protective Sheet (Qty 1) (not shown)

Gasket (Qty 1) (not shown, pre-installed)

IC755CSW07CDA Package Contents

2.2 Basic Setup

The QuickPanel+ operator interface is shipped ready for use after a few configuration steps. To power up, connect a dc power supply using the supplied quick-connect plug. Depending on your application, you may also want to connect and configure optional input devices, communications ports, and expansion adapters.



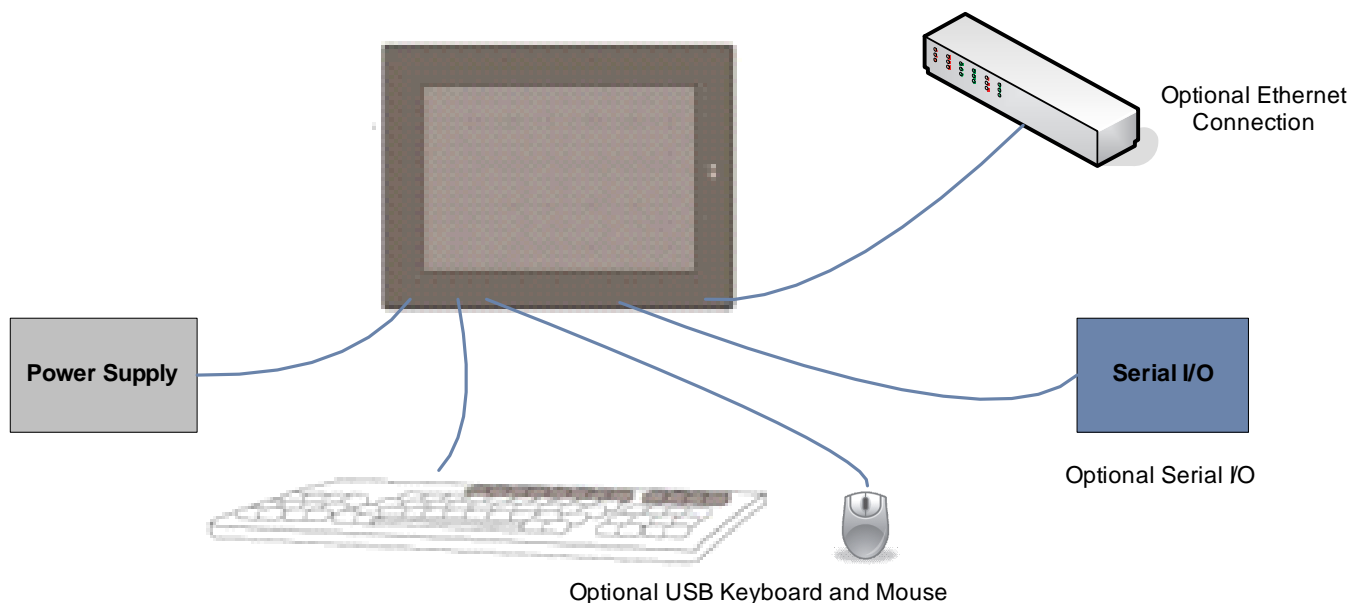
Warning

Electrical Shock Hazard: To avoid personal injury or damage to equipment, ensure that the dc supply is disconnected from power and that the leads are not energized before attaching them to the unit's power supply plug.



Warning

If this equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.



Basic Setup Diagram

2.3 Initial Startup

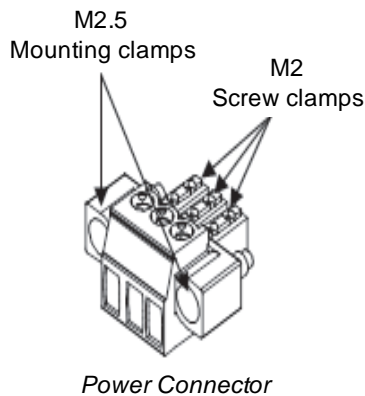
For voltage and requirements, refer to the specifications for Input Power in the table, [General Specifications](#).

You will need the following:

- An SELV and Limited Energy Circuit or SELV and Class 2 dc power supply.
- A power terminal block is supplied.
- The mating power terminal block supports stranded 30-14 AWG (0.05 – 2.00 mm²) wires. User must calculate proper gauge wiring for current carrying capacity and loss according to local regulations.
- At a minimum, the cable must be rated for 75°C (167 °F) or more.
- USB-compatible keyboard (optional)
- USB-compatible mouse (optional)

2.3.1 Connecting Input Power

➤ To connect input power




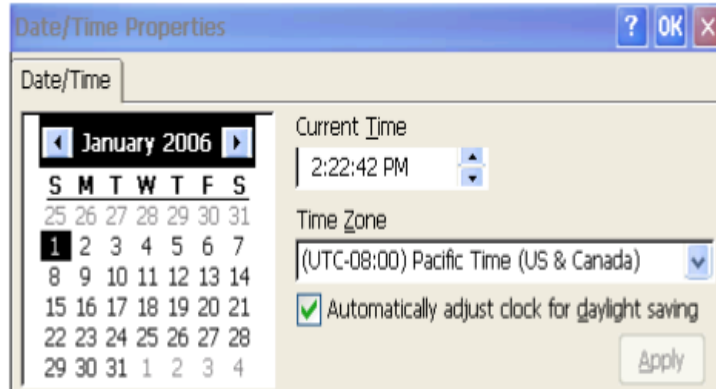
1. Verify that the power cable is not energized.
2. Loosen the screw clamps on the mating power connector
3. Strip the insulation from the power cables.
4. Secure the power cable to the mating connector while noting polarity and tighten the screw clamps. The torque for the attaching screws is 0.3 Nm (2.66 in-lb).
5. Apply dc power to the unit. During normal powerup and operation, the QuickPanel+ Status LED display is:
 - *Solid amber* while the QuickPanel+ unit is starting up
 - *Solid green* during normal operation
6. Once power is applied, the QuickPanel+ begins initializing. The first thing to display is the splash screen.
To skip running any programs included in the StartUp folder, tap **Don't run StartUp programs**.
7. The Microsoft Windows Embedded Compact 7 operating system starts automatically.

2.3.2 Initial Configuration

When you first start up the QuickPanel+, a few configuration steps are necessary.

➤ **To configure the QuickPanel+**

1. Tap **Start**  , point to Settings and then tap **Control Panel**
2. In the Control Panel, double-tap **Date and Time** to configure the system clock.



3. In the Control Panel, double-tap **System** to configure a network Device Name. Many applications, including Proficy Historian require a unique Device Name.

Note It is recommended to set a unique Device Name for the QuickPanel+ to avoid future conflicts.

4. In the Control Panel, double-tap **Network and Dial-up Connections** to configure network settings.
5. To save the settings, run **Backup**.

2.4 Runtime Setup

To download an application to a QuickPanel+ unit, you must set up a data link between it and your development workstation. For more information, see 4.6.2, “Ethernet.” “Downloading a Machine Edition Project” in the Machine Edition online help.

2.5 Firmware Updates

Updates to the QuickPanel+ firmware are available on the Support web site. This allows you to update the unit to the most recent released version of the firmware with the latest feature updates and issues addressed.

2.6 Shutdown

There are no specific dangers associated with a power failure or other unplanned shutdown of the QuickPanel+. In general, programs are retained in flash memory and user data can be retained in battery-backed SRAM. Some operating system settings are retained only with user intervention. We recommend the following procedure to shut down the QuickPanel+.

➤ **To shut down the QuickPanel+**

1. Quit any programs that are running and wait for all file operations to complete.
2. If you have not changed operating system settings (for example, brightness or touchscreen sensitivity) or do not want to save the changes, remove ac power from the dc supply.
3. To save changes to operating system settings run Backup. When the Backup dialog box displays *Completed Successfully*, remove power from the dc power supply connected to the QuickPanel+.

3 QuickPanel+ Software

This chapter provides general information on the QuickPanel+ software and procedures for completing some of the most common tasks.

3.1 Operating System

For detailed information about using the operating system, refer to <http://windows.microsoft.com>.

Microsoft Windows Embedded Compact 7 is the operating system for the QuickPanel+. It is a full 32-bit O/S with a graphical user interface. The QuickPanel+ operating system is stored in flash memory and copied to a block of DRAM for execution. The operating system starts automatically following a powerup or reset of the QuickPanel+.

3.2 Backup Utility

Backup saves changes that you make to the Windows Registry or Desktop to Flash memory. This utility is required because the QuickPanel+ is not battery powered. Specifically, Backup does the following:

- Stores the Windows Embedded Compact 7 registry (including any control panel settings) in Flash memory.
- Stores any changes (or additions) made to the *Windows* sub-tree of the file system in the user block of flash memory.



Attention

Run Backup whenever you make configuration changes to the operating system or installed applications, and before shutting down the QuickPanel+.

3.3 Storage Manager

Storage Manager, accessed from the Control Panel folder, is a Microsoft product for which on-line help is available.

Use Storage Manager to repair or format lost or corrupted data volumes. Storage Manager can repair data volumes existing either in SD Card, battery-backed SRAM (BBSRAM), or USB Flash Keys (thumb drives). Data volumes existing in the main flash file system of the QuickPanel+ may not be repaired by Storage Manager.

3.4 Copy Project to SD Card

This is a custom utility for transferring Proficy Machine Edition View and Control projects between compatible QuickPanel+ units via SD cards.



Ensure that the copy or update operation is complete such as no busy or wait cursor displays) before disconnecting power.

Caution

➤ **To copy a Machine Edition project to SD card**

1. Ensure there is a blank SD card in the SD card port.
2. Double tap the **Copy Project to SD Card** icon on the desktop.
3. Tap **Yes** when the *Copy Project Query* confirmation dialog box appears.



Copying a project while the Proficy Machine Edition runtimes are active may cause an incomplete copy to be created if the runtimes are also writing to files in the project folders. The utility can detect this situation and will notify you to stop the runtimes before making the backup. You will not be able to create a backup while the runtimes are writing files.

Caution

3.5 Updating a Machine Edition Project

You can update a Machine Edition application currently stored on the QuickPanel+ with a revision stored on a flash device, such as a SD card.

➤ To update a Machine Edition project

1. Insert the flash device containing an upgraded version of the Machine Edition project into the appropriate port.
2. Reboot the machine.

Note Depending on options set, the update may or may not be enabled, or may automatically update. If there is more than one flash device with a valid project copy present, a *Select Media* confirmation dialog displays, allowing you to choose which flash device to update with. Select the device from the list and select **OK** to continue. When a valid project is found on the flash device, you will be prompted to install the project or skip it. Tap **OK** to install or **Cancel** to skip the install and continue to boot. If an invalid project is found, an error message appears in a dialog box. This dialog box must be closed before boot will continue.

3. Remove the flash device from the port.

3.6 FTP Server

The FTP Server included with the QuickPanel+ supports standard (RFC 959). It does not support SFTP or implicit FTPS, which uses different ports and is based on SSH rather than SSL.

The configuration of the FTP server is accomplished with the Quick Panel+ Setup Tool. By default, the server is not enabled. Once enabled, a background program will run, waiting for clients to connect. Up to ten connections are supported. Sessions that are idle for five minutes are terminated by the server.

The server supports non-secure operation. All information including username, password, and data is transmitted with no encryption and susceptible to packet sniffing and various FTP attacks.

Note If the server status is changed, the QuickPanel+ must be re-booted before changes take effect.

The FTP root directory is available from the QuickPanel+ as \ and is the root of the flash device.

3.6.1 Authentication of Remote Users

The server only supports anonymous login: Anonymous with password requested (but not validated). This may prevent some types of attacks and is required by some clients. Once connected, a remote user is logged into the FTP root directory.

3.6.2 FTP with Removable Flash Devices

All removable flash devices appear to remote FTP users as directories off the FTP root directory. Computer Flash card partitions display as directories such as *\SDMemory* and USB Flash Keys as directories such as *\Hard Disk*. Full access privileges are granted for the client in these folders/devices.

Removable flash device directories are captured when a session is opened and are not changed while the session exists. If you start without an SD Card installed, you will have to close your session and login again to see the SD Card directory. If the SD Card existed when you logged in and is removed and inserted, it will still work, provided the SD Card's device name did not change during reinsertion.

3.7 HTTP Server

The HTTP Server included with the QuickPanel+ supports standard (RFC 2616). The configuration of the HTTP server is accomplished with the Quick Panel+ Setup Tool. By default, the server is not enabled. Once enabled, a background program will run, waiting for clients to connect. The default web page is located in *\Windows\www\wwwpub* on the QuickPanel+ operator interface.

The server supports non-secure port 80 operation.

Note If the server status is changed, the QuickPanel+ must be re-booted before changes take effect.

4 *Installation*

This chapter provides the following procedures for installing the QuickPanel+ unit:

- [*Installing the Protective Sheet*](#)
- [*Choosing a Mounting Location*](#)
- [*Panel Mounting*](#)
- [*Mounting on a VESA Arm*](#)
- [*Installing and Replacing the Battery*](#)
- [*Connectors*](#)

4.1 *Installing the Protective Sheet*

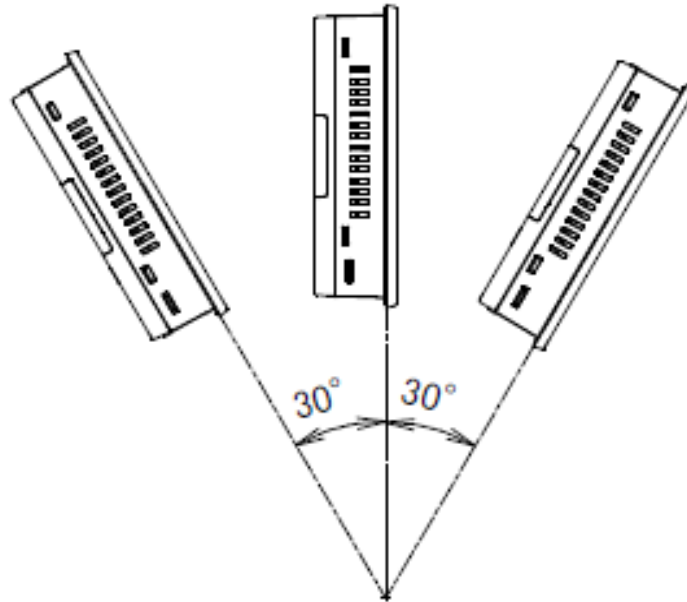
➤ **To install the protective sheet**

1. Remove the protective film on the screen of the QuickPanel+ if present.
2. Wipe the display of any dust or fingerprints.
3. Peel a corner of the clear side of the protective sheet.
4. Begin applying the corner to the display.
5. Slowly apply the rest of the protective sheet, smoothing out as you go.
6. Peel the green curing film off the protective sheet.

4.2 Choosing a Mounting Location

When mounting the QuickPanel+ unit, make sure that the mounting area allows room to insert and remove the SD card, cables, and mounting brackets. Choose a location that will allow natural convection air flow from bottom to top of the QuickPanel+ unit. The QuickPanel+ unit should not be mounted at an angle more than 30° from the vertical, as illustrated in the following figure.

Refer to the section,
[Environmental Specifications](#).



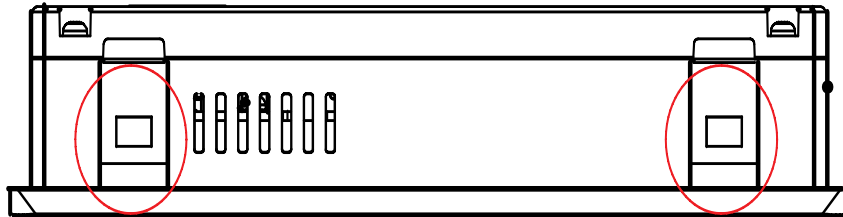
Mounting Angle

4.3 Panel Mounting

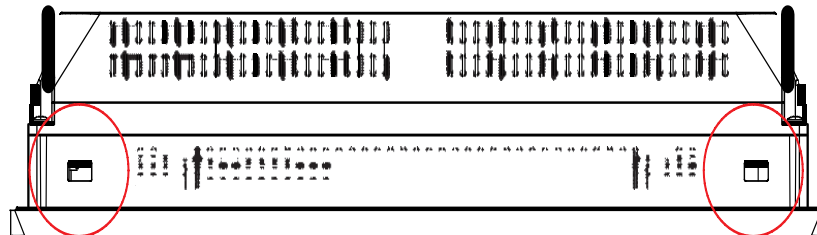
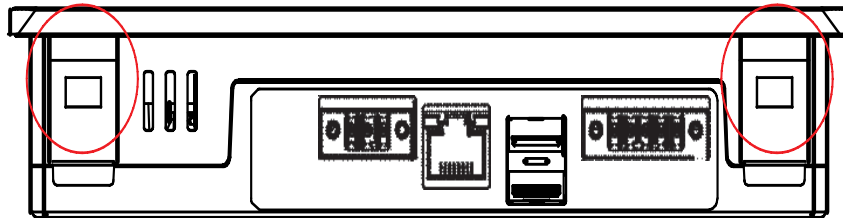
To mount the QuickPanel+ in an enclosure, you will need:

- One #2 Phillips head screwdriver
- Four mounting brackets (supplied)

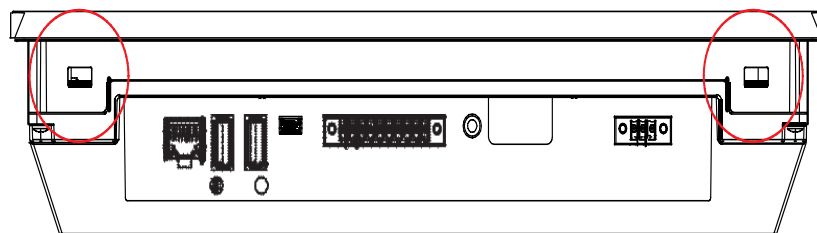
The QuickPanel+ has four mounting holes located on the top and bottom of the unit, as indicated in the following figures.



IC755CSW07CDA Top and Bottom Mounting Holes



IC755CSS12CDA Top and Bottom Mounting Holes



4.4 Installation Procedure

To order replacement gaskets, refer to the part number listed in [Appendix B](#).

Observe the following guidelines to properly mount and install the QuickPanel+ unit:

- To properly mount the QuickPanel+ unit, the enclosure should be of metal material.
- The metal enclosure panel should ensure proper thickness and rigidity suitable to minimize impact to the QuickPanel+ unit.
- To avoid gasket degradation, limit repeated insertions or removals of the unit and retightening of the mounting clips. For full protection, always use a fresh gasket.
- The unit will not fit through the cutout with any cables connected, or with the power supply plug inserted in the socket.



When installing the QuickPanel+ into the panel, pay careful attention in handling the unit so that it does not drop and cause personal injury.

Warning

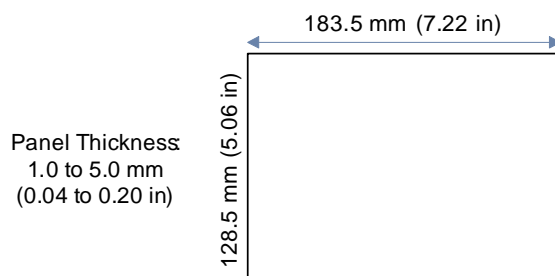


When installing the QuickPanel+ unit into the panel, pay careful attention in handling the unit so that it does not drop and cause damage to the unit.

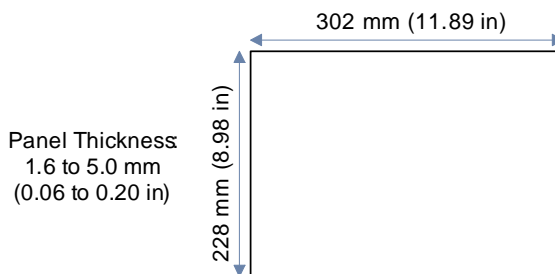
Caution

➤ To install the QuickPanel +

1. Cut an opening in the panel according to the specifications in the following figures.

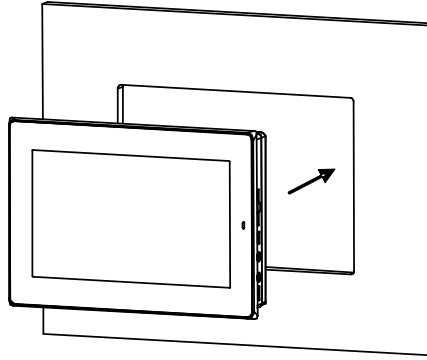


Panel Cutout Dimensions for IC755CSW07CDA

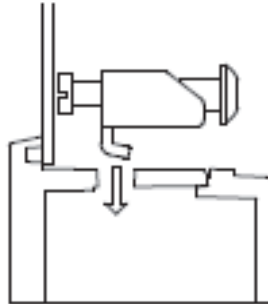


Panel Cutout Dimensions for IC755CSS12CDA

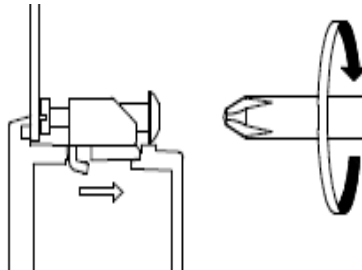
2. Verify that the gasket is present and properly seated in the bezel channel located on the sides of the QuickPanel+ unit.



3. Insert the QuickPanel+ unit into the mounting panel cutout.
4. Insert the hook of the mounting bracket into the mounting hole as displayed in the following figure.



5. Tighten the screws on the mounting bracket in the clock-wise direction.

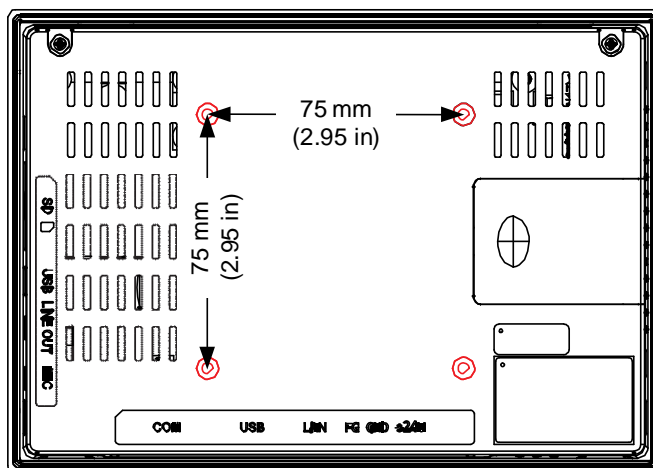


Note The torque range for the mounting clamp screws is (0.3 Nm, (2.66 in-lb) for the IC755CSW07CDA and (1.0 - 1.2 Nm, 8.9 - 10.6 in-lb) for the IC755CSS12CDA.

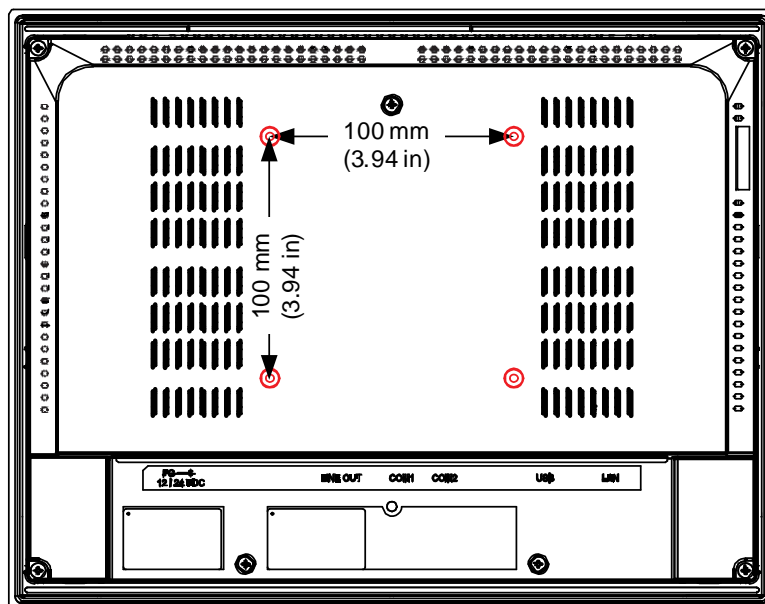
4.5 Mounting on a VESA Arm

The QuickPanel+ can be installed on a commercially available Video Electronics Standards Association (VESA) MIS-D arm, stand, or apparatus that is listed to comply with the UL1678 standard. To mount the QuickPanel+, use the mounting holes located on the back of the unit. The mounting holes attach with M4 screws that are 6 mm (0.24 in) or less in length.

Note The torque range for the mounting M4 screws is (0.7 – 0.8 Nm). Refer to the mounting arm manual for instructions.



IC755CSW07CDA VESA Mounting Holes



IC755CSS12CDA VESA Mounting Holes

4.6 Installing and Replacing the Battery

The Caution label on the unit pertains to the following battery cautions:



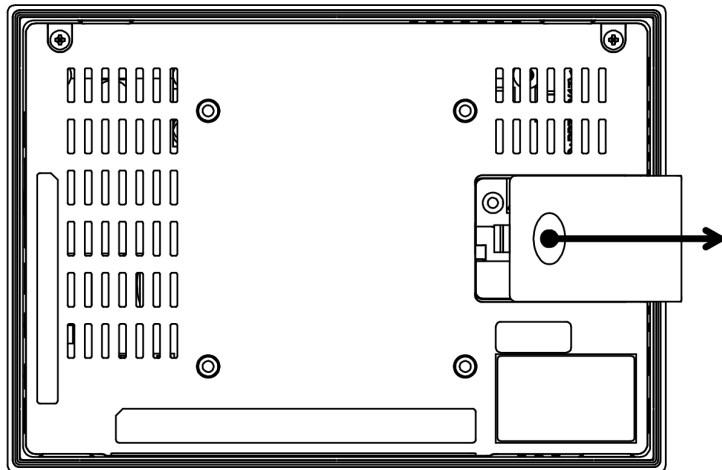
Caution

- 1) Replacing the battery should only be performed by trained personnel.
- 2) If the QuickPanel+ unit is VESA mounted, detach from the VESA arm when replacing the battery.
- 3) The battery should only be replaced when the unit is powered off.
- 4) Care should be taken to protect and insert the battery with correct polarity.
- 5) Do not use any metallic item to remove the battery (such as screwdrivers, knives, pliers, and so forth).
- 6) Be careful to not drop the battery or any associated screws into the unit.
- 7) Be careful of edges on internal sides of the enclosure and frame.

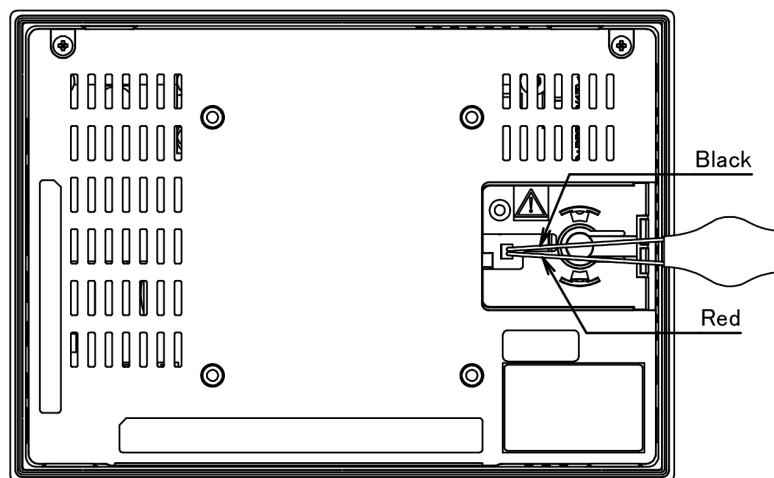
4.6.1 IC755CSW07CDA

➤ To install or replace the battery for the IC755CSW07CDA

1. Remove the battery cover by pressing down while sliding outward.

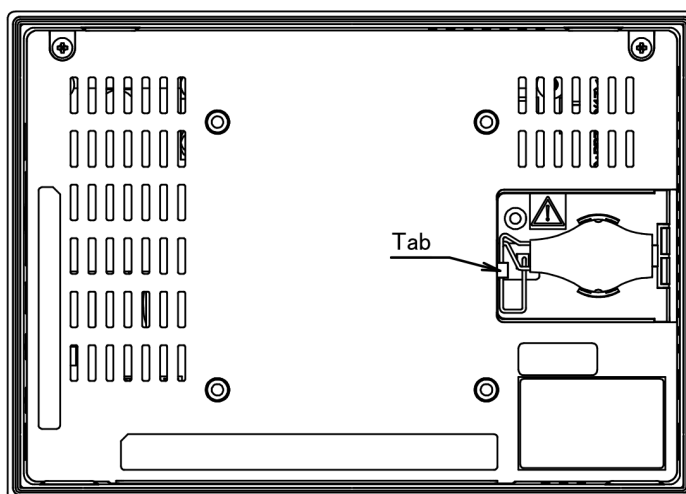


2. Connect the harness connector of the battery to the header, noting keyed orientation.



Battery Part Number IC755ACCBATT

3. Verify that positive (red) is down and negative (black) is up.
4. Wrap harness connector around to match the following figure. Do not let the harness connector go above the tab.



5. Slide the battery cover into place, taking care not to pinch the harness connector.

4.6.2 IC755CSS12CDA

- To install or replace the IC755CSS12CDA



Warning

Batteries may present a risk of fire, explosion, or chemical burn if mistreated. Do not crush, disassemble, short-circuit, or dispose of in fire.

Use of batteries not specified for use with the QuickPanel+ product may present a risk of fire or explosion.

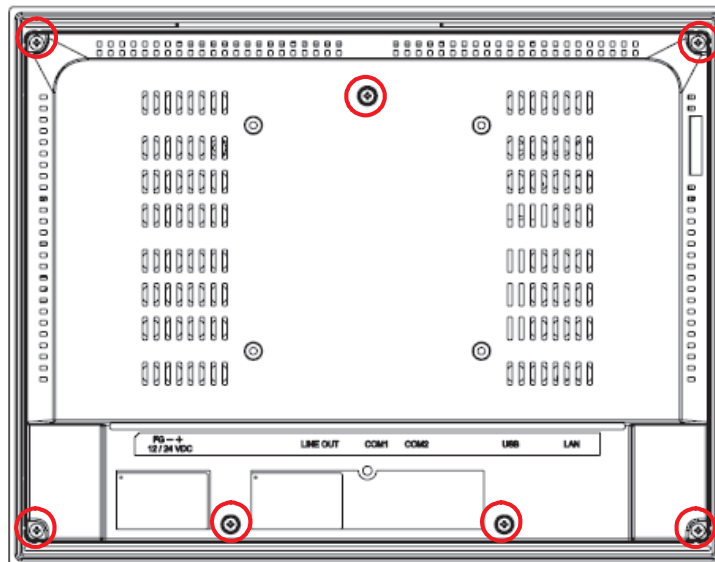


Warning

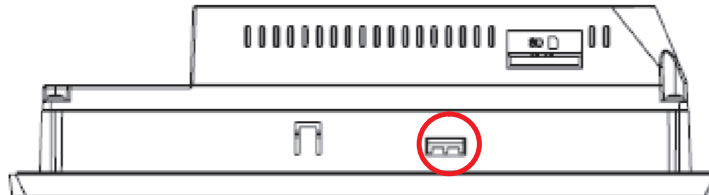
Do not recharge, disassemble, heat or incinerate lithium batteries.

Dispose of lithium batteries in accordance with federal, state, and local regulations. Be sure to consult with the appropriate regulatory agencies before disposing of batteries.

1. Remove seven screws from the back cover.



2. Gently press on either side tab to release the back cover.



3. Lift up the back cover to remove.

4. The battery will be exposed in the middle on the back of the unit.



Battery Part Number IC755ACCBATTNL

5. Gently remove the coin battery and replace with a new one while noting the polarity of the battery.
6. Replace cover and tighten all screws to 0.5 Nm (4.4 in-lb).

4.7 Connectors

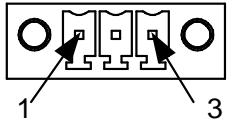
4.7.1 Power Connector Pin-out for IC755CSW07CDA and IC755CSS12CDA

To connect the power supply, refer to the section, [Connecting Input Power](#).

Interface: 24 V dc IN (IC755CSW07CDA), +12/24 V dc IN (IC755CSS12CDA)

Connector: Terminal Euro (Tyco Electronics 284539-3)

Mating Connector: (Tyco Electronics 284510-3)

Pin #	Signal Name	Pin-out
1	+24 V dcf	
2	GND	
3	FG	
† IC755CSS12CDA supports both +12 V dc or +24 V dc IN		

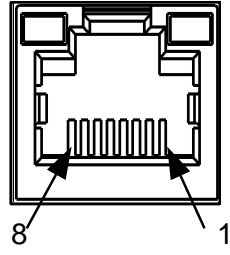
4.7.2 Ethernet for IC755CSW07CDA and IC755CSS12CDA

Refer to the section, [Ethernet Port LED Operation](#).

The QuickPanel+ is equipped with one 10BaseT/100-BaseTX Ethernet port. You can connect an Ethernet network cable (unshielded, twisted pair, UTP CAT 5) to the unit through the RJ-45 connector on the bottom of the enclosure. LED indicators on the port indicate channel status. The port can be accessed by Windows Embedded Compact 7 network communications or by your application.

4.7.2.1 Ethernet Port Details

Interface: Ethernet 10BASE-T/100BASE-TX

Pin #	Signal Name	Pin-out
1	TX+	
2	TX-	
3	RX+	
4	NC	
5	NC	
6	RX-	
7	NC	
8	NC	

4.7.2.2 Setting an IP Address

The QuickPanel+ provides two methods for setting an IP address:

- **DHCP (Dynamic Host Configuration Protocol)** — The network server assigns an IP address while the QuickPanel+ is initializing. (You must be connected to the network). There must be a DHCP server on the connected network for a valid IP address to be assigned. Contact your network administrator to ensure correct DHCP server configuration.
- **Manual method** — Specify the numeric addresses obtained from your network administrator for the QuickPanel+ IP Address, Subnet Mask and Default Gateway (if applicable).

Note To save the settings, run the Backup utility.

4.7.3 Serial Port

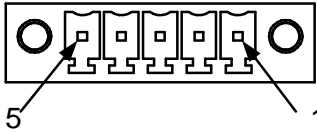
4.7.3.1 IC755CSW07CDA Serial Port Details

- A terminal block is supplied.
- The mating terminal block supports stranded 30-14 AWG (0.05 – 2.00 mm²) wires.
- At a minimum, the cable must be rated for 75°C (167 °F) or more.
- Secure the serial cable to the mating connector while noting signal orientation and tighten the screw clamps.
- The torque for the attaching screws is 0.3 Nm (2.66 in-lb).

Interface: x1 RS 232

Connectors: Euro Terminal (Tyco Electronics 284539-5)

Mating Connector: (Tyco Electronics 284510-5)

Pin #	Signal Name	Pin-out
1	TXD	
2	RXD	
3	RTS	
4	CTS	
5	SGND	

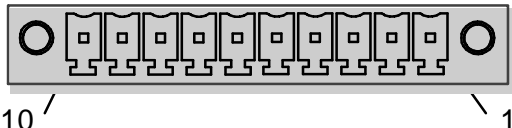
4.7.3.2 IC755CSS12CDA Serial Port Details

- A terminal block is supplied.
- The mating terminal block supports stranded 30-14 AWG (0.05 – 2.00 mm²) wires.
- At a minimum, the cable must be rated for 75°C (167 °F) or more.
- Secure the serial cable to the mating connector while noting signal orientation and tighten the screw clamps.
- The torque for the attaching screws is 0.3 Nm (2.66 in-lb).

Interface: x1 RS 232, x1 RS-232/422/485 (default is RS-485)

Connectors: Euro Terminal (Tyco Electronics 1-284539-0)

Mating Connector: (Tyco Electronics 1-284510-0)

Pin #	Signal Name	Pin-out
COM1		
1	TXD	
2	RXD	
3	RTS	
4	CTS	
5	SGND	
COM2		
6		
7		
8		
9		
10		

4.7.4 Universal Serial Bus (USB) Ports

4.7.4.1 USB Host Port Details for IC755CSW07CDA and IC755CSS12CDA

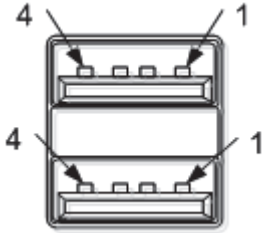
The QuickPanel+ has two full-speed USB 2.0 host ports. A variety of third party USB peripheral devices are available. Each connected USB device requires a specific driver. The driver supplied with the QuickPanel+ is for optional keyboard or mouse support; other devices require the installation of custom driver software.

Interface: USB 2.0

Number of Ports: Two

Connectors: Type-A connector

Maximum Supply Current: 0.5 A (per port)

Pin #	Signal Name	Pin-out
1	USB_VCC	
2	USB_D-	
3	USB_D+	
4	USB_GND	

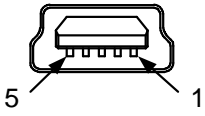
4.7.4.2 USB Device Port Details for IC755CSW07CDA and IC755CSS12CDA

The USB device port allows the QuickPanel+ operator interface to be used as slave device.

Interface: USB 2.0

Number of Ports: One

Connectors: Type-B Mini connector

Pin #	Signal Name	Pin-out
1	VCC	
2	D-	
3	D+	
4	NC	
5	GND	

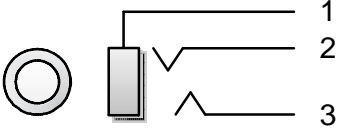
4.7.5 Audio (LINE OUT) Details for IC755CSW07CDA and IC755CSS12CDA

Interface: LINE OUT (stereo)

Number of Ports: One

Connectors: $\phi 3.5$ mm (0.1 in) jack

Maximum output level: 1 Vrms

Pin #	Signal Name	Pin-out
1	GND	
2	Lineout R	
3	Lineout L	

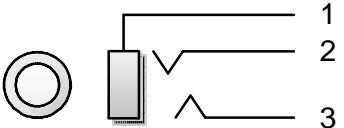
4.7.6 4.6.6 Audio (MIC IN) Details (only applicable to IC755CSW07CDA)

Interface: MIC IN (monaural)

Number of Ports: One

Connectors: $\phi 3.5$ mm (0.1 in) jack

Maximum output level: 250 mVrms

Pin #	Signal Name	Pin-out
1	GND	
2	Lineout R	
3	Lineout L	

4.7.7 SD Card Slot

The QuickPanel+ is equipped with one standard SD Card port. SD/SDHC memory cards are supported. The SD card slot is spring loaded for easy insertion and removal.

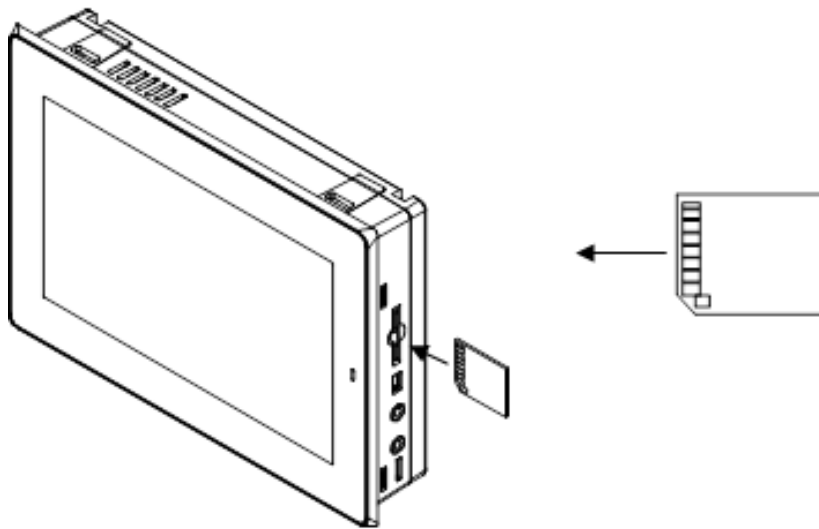
4.7.7.1 Storage Details

Connectors: SD card slot (push in - push out method)

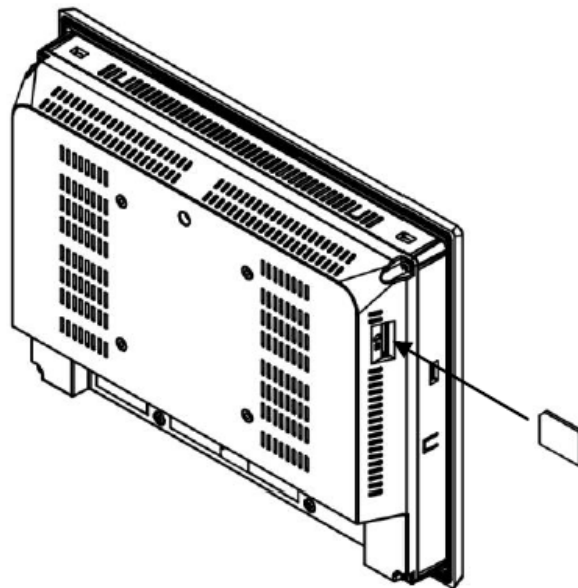
Card support: SD / SDHC memory card

Maximum capacity: 32 GB

Note Observe the orientation of the SD card in the following diagram when inserting.



IC755CSW07CDA SD Card Location



IC755CSS12CDA SD Card Location

Notes

5 Detailed Operation

5.1 Touchscreen Display

The QuickPanel+ features a LED Backlit LCD touchscreen display with two point touch. The touch technology is based on projected capacitance. This allows tracking of the finger without pressured contact conducive to smooth scrolling and multi-touch gesturing capability. Display brightness and backlight operation can be set using the operating system Control Panel.



Caution

Although we recommend the use of the protective sheet, do not operate the touchscreen with any hard materials such as a screwdriver, and such. This could damage the touch display.

5.1.1 Adjusting the Display Brightness

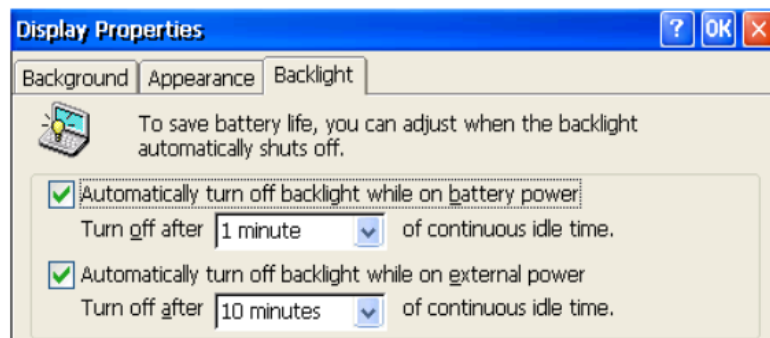
➤ To adjust the display brightness

1. In the Control Panel, double tap **Display** and choose the **Brightness** tab. The Brightness dialog box appears.
2. Drag the Brightness slider between Lowest and Highest.
3. Tap **OK** to exit the control panel.
4. To save the settings, run the Backup utility.

5.1.2 Configuring the Backlight

➤ To configure the backlight

1. In the Control Panel, double-tap **Display** and choose the **Backlight** tab. The Backlight dialog box is displayed.



2. Select **Auto turn off backlight** while on external power.
3. Tap **OK** to exit the control panel.

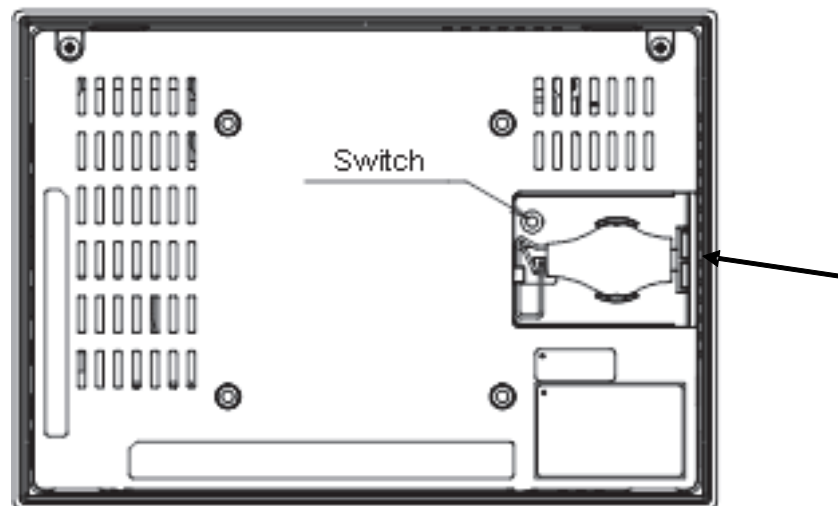
4. To save the settings, run the Backup utility.

5.1.3 Calibrating the Touchscreen

The touchscreen on the QuickPanel+ comes out of the box pre-calibrated but may need to be recalibrated if there are any issues with touchscreen responsiveness.

➤ **To calibrate the touchscreen**

1. Go to the **QuickPanel+ Setup** tool.
2. Click on the **TouchPanel** tab.
3. Select **Recalibrate Touch Screen**.
4. After this is complete, select **Recalibrate Touch Sensor**.
5. During the calibration of the IC755CSW07CDA touchscreen sensor a prompt to activate a switch located in the battery compartment will appear. This is not applicable to the other panel sizes.
6. Remove the battery cover and press the switch.



7. Replace the battery cover.

5.2 Keyboard

The QuickPanel+ can be configured to use either or both a hardware keyboard and a software emulation keyboard as operator data input devices. Typically, an external hardware keyboard is used when in a development mode, while the included Soft Input Panel is more applicable in an operational environment.

5.2.1 External Keyboard (Optional)

Any USB-compatible keyboard can be used as an input device for the unit. The USB driver for the keyboard is included with the operating system and no setup is required. To use an external keyboard, simply plug and play.

5.2.2 Soft Input Panel

The Soft Input Panel (SIP) is a touch screen version of a standard keyboard, which can be used in place of a standard hardware keyboard. An icon in the system tray lets you view or hide the SIP.

- **To show/hide the Soft Input Panel:** From the system tray of the task bar, tap on the icon, and select **Hide Input Panel**.

Note When the SIP is visible, it can be dragged around the screen by its title bar to reveal different parts of the screen that would be obstructed from view by the SIP.

5.3 Mouse

Any USB-compatible mouse can be used as an input device for the unit. The USB driver for the mouse is included with the operating system and no setup is required. To use an external mouse, simply plug it into the appropriate port

5.4 Memory

5.4.1 DRAM Memory

The QuickPanel+ is equipped with dynamic RAM. Part of the DRAM is reserved for the Windows operating system and is not accessible by user applications. The remaining memory is split between two functions: an object store for temporary file storage and the main memory for running programs.

Typically, compressed programs stored in flash memory are expanded and moved to DRAM for execution. Temporary storage of program variables or data files is also provided by DRAM. Any data stored in DRAM is not retained through a power cycle or reboot.

The split between program memory and storage memory can be adjusted as necessary to make more room for one or the other, depending on your specific application needs. For example, if you find that an application is short of memory, use the System Properties dialog box to alter DRAM memory allocation.



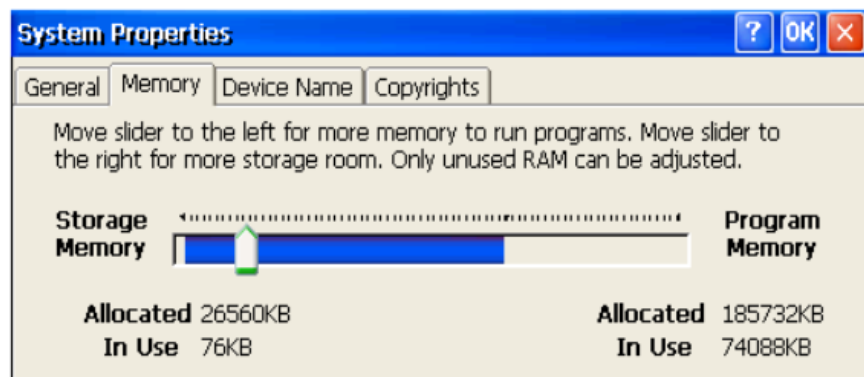
Caution

Setting Program Memory too low may prevent additional applications from starting, or may cause currently running applications to fail due to lack of memory. Setting Storage Memory too low may prevent the saving of files into the object store portion of the file system, which may also cause application failures.

5.4.2 Changing the Memory Allocation

➤ To change the memory allocation

1. In the Control Panel, double-tap **System** to display the System Properties window.





2. From the **Memory** tab, drag the slider to divide into Storage and Program memory. The amount of memory allocated to and used by each area is shown in the dialog box. The blue bar indicates the current amount of unallocated SDRAM and determines the boundaries within which the slider can move.
3. Tap **OK** to apply the new setting.
4. To save the settings, run the Backup utility.

Appendix A Product Certifications and Installation Guidelines

The QuickPanel+ operator interface is intended for use in industrial environments and when properly installed shall comply with the following agency approvals.

Note The agency approvals listed in the following table and on the Declaration of Conformities are believed to be accurate; however, a product's agency approvals should be verified by the marking on the unit itself.

Agency Approvals

Description	Agency Marking	Comments
N.A. Safety for Programmable Controller		Certification by Underwriter's Laboratories to UL61010-2-201 and CSA C22.2 No 142 – M1987
Electromagnetic Compatibility Directive European EMC for Industrial Control Equipment		Self-Declaration in accordance with European Directives; Refer to Declaration of Conformity found at http://www.ge-ip.com/ for a complete list of approved products

Government Regulations

The FCC requires the following note to be published according to FCC guidelines:

Note This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Changes or modifications to this unit that are not expressly approved by GE Intelligent Platforms could void the user's authority to operate the equipment.

Industry Canada requires the following note to be published:

Note This Class A digital apparatus complies with Canadian CAN ICES 3 (A)/NMB 3 (A).

Notes

Appendix B Orderable Part Numbers

Part Number	Description
IC755CSW07CDA	QuickPanel+, 7" Color TFT Widescreen with Multi-touch Projected Capacitive Screen, 24 V dc Powered
IC755CSS10CDA	QuickPanel+ View & Control, 10" Color TFT with Multi-touch Projected Capacitive Screen, 24 V dc Powered
IC755CSS15CDA	QuickPanel+ View & Control, 15" Color TFT with Multi-touch Projected Capacitive Screen, 24 V dc Powered
IC755ACC07GAS	QuickPanel+ 7" Replacement Gasket
IC755ACC10GAS	QuickPanel+ 10" Replacement Gasket
IC755ACC12GAS	QuickPanel+ 12" Replacement Gasket
IC755ACC15GAS	QuickPanel+ 15" Replacement Gasket
IC755ACC07MNT	QuickPanel+ 7" Accessory Kit - Replacement Mounting Clips, Power & Serial Port Connectors
IC755ACC10MNT	QuickPanel+ 10" Accessory Kit - Replacement Mounting Clips, Power & Serial Port Connectors
IC755ACC12MNT	QuickPanel+ 12" Accessory Kit - Replacement Mounting Clips, Power & Serial Port Connectors
IC755ACC15MNT	QuickPanel+ 15" Accessory Kit - Replacement Mounting Clips, Power & Serial Port Connectors
IC755ACC07PRO	QuickPanel+ 7" Replacement Screen Protectors, Package of 3
IC755ACC10PRO	QuickPanel+ 10" Replacement Screen Protectors, Package of 3
IC755ACC12PRO	QuickPanel+ 12" Replacement Screen Protectors, Package of 3
IC755ACC15PRO	QuickPanel+ 15" Replacement Screen Protectors, Package of 3
IC755ACCBATT	QuickPanel+ Replacement Battery Pack for 7"
IC755ACC07ADP	QuickPanel+ Panel Adapter Kit - 8" QuickPanel View/Control to 7" QuickPanel+
IC755CSS12CDA	QuickPanel+ 12" Color TFT with Multi-touch Projected Capacitive Screen, 12/24 V dc Powered
IC755ACC12GAS	QuickPanel+ 12" Replacement Gasket
IC755ACC12MNT	QuickPanel+ 12" Accessory Kit - Replacement Mounting Clips, Power & Serial Port Connectors
IC755ACC12PRO	QuickPanel+ 12" Replacement Screen Protectors, Package of 3
IC755ACCBATTNL	QuickPanel+ Replacement Battery for 10", 12", 15"

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