

Instructions to printer

DO NOT PRINT THIS PAGE

This document is intended to be printed in *color* as an
A5-size booklet with stapled binding.

Use high-quality, glossy 20lb (75 g/m²) paper.

Print double-sided.

Fold a sheet of A4-size paper in two,
trim length and staple spine.

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QuickPanel+2

IC762CxS07Cxx (7" Display)

IC762CxS10Cxx (10" Display)

IC762CxS12Cxx (12" Display)

IC762CxS15Cxx (15" Display)



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WARNING

Warning notices are used in this publication to emphasize that hazardous voltages, currents, temperatures, or other conditions that could cause personal injury exist in this equipment or may be associated with its use.

In situations where inattention could cause either personal injury or damage to equipment, a Warning notice is used.

If the surface of QuickPanel+2 gets dirty, wipe with a dry, soft cloth dampened with a neutral detergent then wrung dry. Do not use thinner or organic solvents.

CAUTION

Caution notices are used where equipment might be damaged if care is not taken.

Physical Characteristics

The following diagrams illustrate the physical layout of the QuickPanel+2, including locations of status LEDs, communications ports, and connectors.

Figure 1: IC762CxS07Cxx Profile and Hardware Features

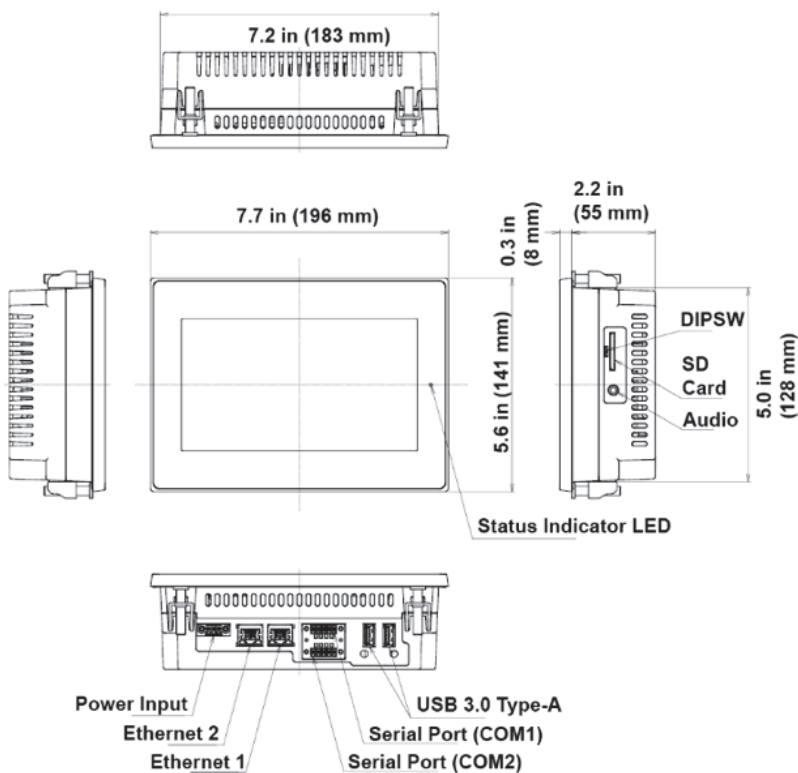


Figure 2: IC762CxS10Cxx Profile and Hardware Features

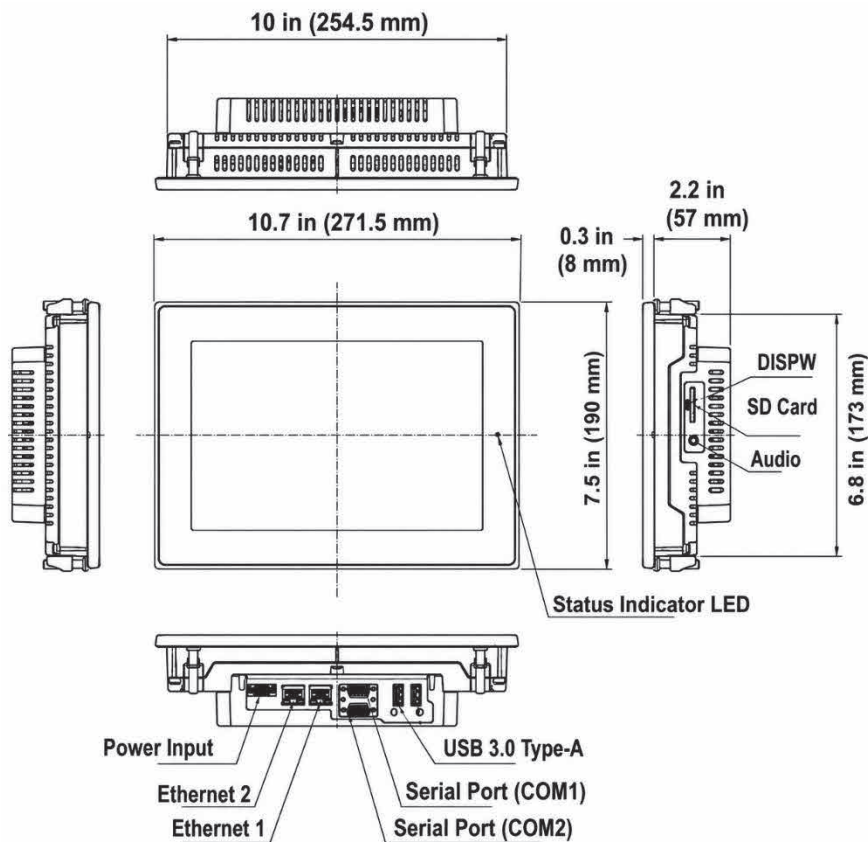


Figure 3: IC762CxS12Cxx Profile and Hardware Features

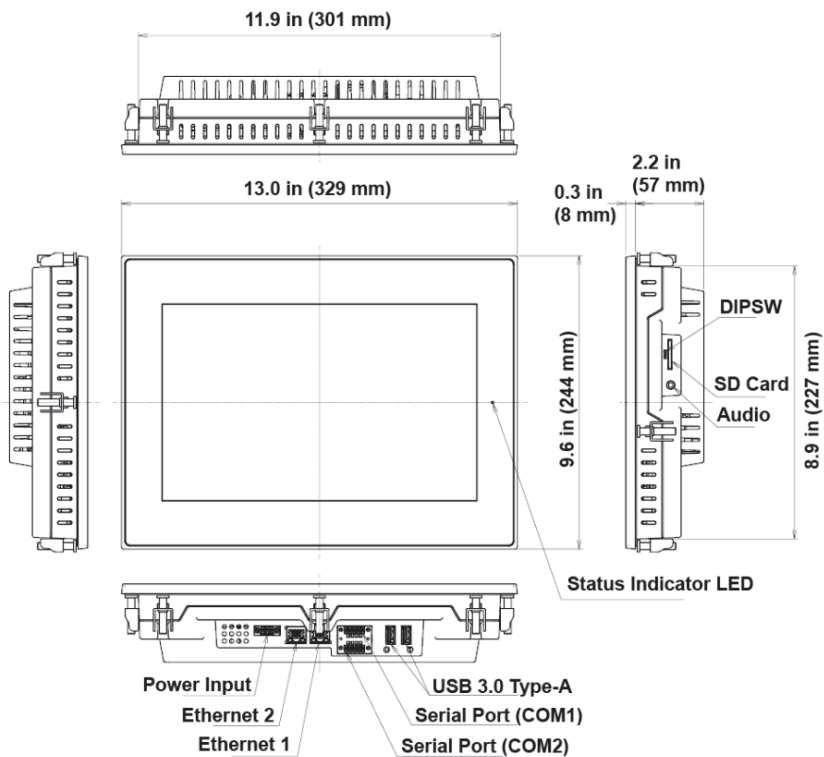
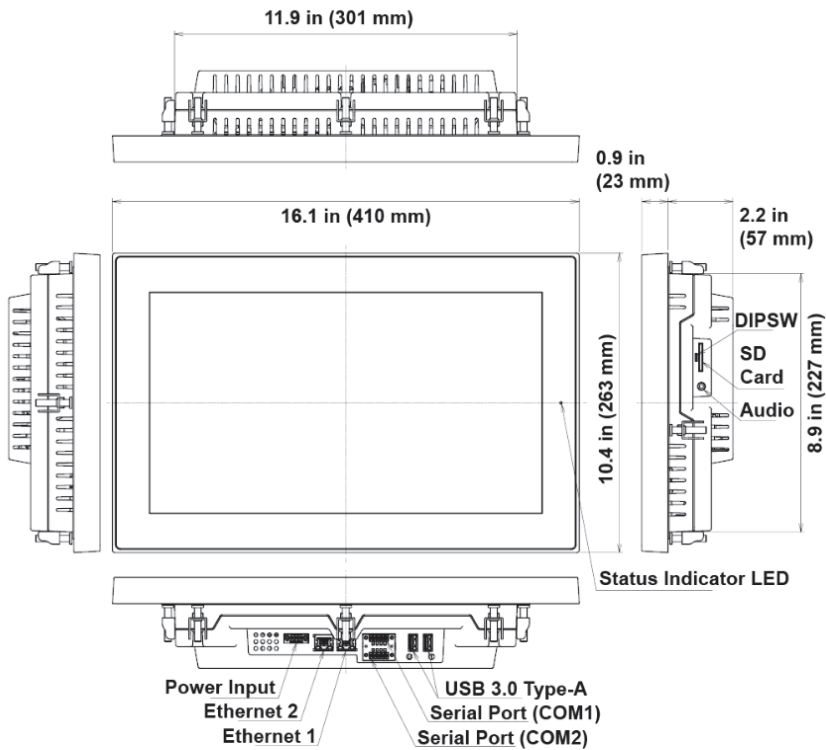


Figure 4: IC762CxS15Cxx Profile and Hardware Features



Specifications

Size (Inch)		7"	10"	12"	15"
Processor		i.MX8M Plus (ARM Cortex-A53 1.6GHz QC)			
Operating Systems		Windows 10 IoT Enterprise LTSC 2021			
Main Memory		LPDDR4 SDRAM with ECC 4GB			
Storage		eMMC 64GB			
Back-up Memory		Battery Backup RAM 512KB			
Buzzer		On-board buzzer			
Display	Type	7" Standard/SLR Luminance	10.1" Standard/SLR Luminance	12.1" Standard/SLR Luminance	15.6" Standard/SLR Luminance
	Resolution	1024 x 600 (WSVGA)	1280 x 800 (WXGA)	1280 x 800 (WXGA)	1920 x 1080 (FHD)
	Color	65,536	65,536	65,536	65,536
	Brightness For Standard LCD	500 cd/m ²	500 cd/m ²	600 cd/m ²	450 cd/m ²
	Brightness For SLR Luminous	1000 cd/m ²	1200 cd/m ²	1000 cd/m ²	1200 cd/m ²
	Backlight	LED	LED	LED	LED
Touchscreen	Touch Panel Type	Projected Capacitive Touch Panel			
	Input Method	Finger			
	Multi-touch	Max. 10 points			
Interface	USB	USB3.0 x 2 (TYPE-A)			
	Ethernet	10BASE-T/100BASE-TX/1000 BASE-Tx2 (RJ-45)			
	Serial	RS232 x 1			
		RS422 /485 x 1			
		(Terminal Block)			
	Memory Card	SDXC x 1			
	Audio	MIC-IN / Sound-OUT x 1 (3.5mm Jack connector)			



Size (Inch)		7"	10"	12"	15"
	Battery	Primary battery			
	RTC	RTC / back-up battery			
Input power	Rated Voltage	DC 12/24 V			
	Power Consumption for Standard Luminance	25 W	30 W	36 W	40 W
	Power Consumption for SLR Luminance	27 W	35 W	36 W	50 W
	Insulation	Charge (DC IN, GND) and FG (Frame GND) are insulated FG (Frame GND) is connected to SG (Signal GND) internally			
	Voltage Endurance	AC1000V 20mA for 1minute (Between charge and FG terminals)			
	Insulation Resistance	10M Ω or higher at DC500V (Between charge and FG terminals)			
Dimensions Outline (WxHxD,mm)		196x141 x63	271.5x190 x65	329x244 x65	410x263 x80
Weight (Kg) for Standard Luminance		1.2	1.8	2.8	4.2
Weight(kg) for SLR Luminance		1.2	1.8	2.8	4.0
Mounting Options	Panel Cut (WxH,mm)	183.5x128.5	255.5x174	302x228	302x228
	Vesa Mount(mm)	75x75		100x100	
Back-up Battery		BR2032			

Environmental Specifications

Note: Install the **QuickPanel+2** in a well-ventilated location that is not exposed to dust, corrosive gases or liquids, rain, strong ultra-violet light or direct sunlight, and meets the following specifications.

Specification	7"	10"	12"	15"
Ambient Operating Temperature	-20 to 60 °C			
Air Pressure	800hPa to 1114hPa (altitude upf to 2000m)			
Ambient Humidity	10RH to 85% (non-condensing, wet-bulb temperature: 39 °C or less)			
Storage Temperature	-20 to 60°C			
Storage Humidity	10RH to 85% (non-condensing, wet-bulb temperature: 39 °C or less			
Dust	No Ingress of Dust			
Corrosive Gases	Free of Corrosive Gas			
Pollution Altitude	Pollution Degree 2, Indoor Use			
Vibration Resistance	IEC61131-2 Compliant 5 to 9Hz single-amplitude 3.5mm 9Hz to 150 Hz constant-accelerated velocity 9.8 m/s ² X, Y, Z directions 10 times (100 minutes)			
RoHS	Compliant			
Enclosure Rating	IP66 Rating for Front Surface UL Type 4x indoor use only for front surface Note: "IP66 is not part of UL certification"			

Note: For additional product standards and agency approvals, refer the section Product Certifications and Installation Guidelines.

Initial Startup

For installation requirements, complete installation procedures, and operating information, refer to the QuickPanel+2 User Manual (GFK-3317).

Note:

- *Make sure power wiring is complete before turning on the power.*
- *Apply DC power to the unit.*
- *The status LED will turn solid amber.*
- *Momentarily status LED will become Green and OS will boot up.*
- *The Product must be installed by a skilled person only.*

⚠CAUTION

The QuickPanel+2 power supply must meet the requirements for SELV (safety extra-low voltage) / LPS (limited power source) or ES1/PS2 appropriately rated for the ambient and altitude of the application.

In environments with ambient temperatures of 50 °C or higher, operate while wearing gloves.

⚠WARNING

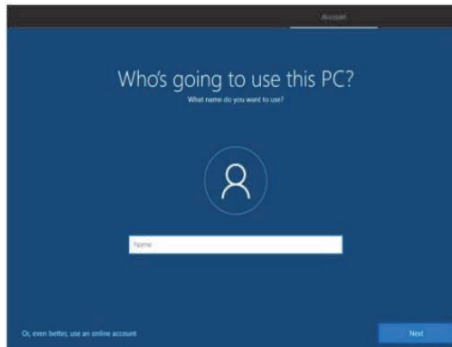
ELECTRICAL SHOCK HAZARD

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

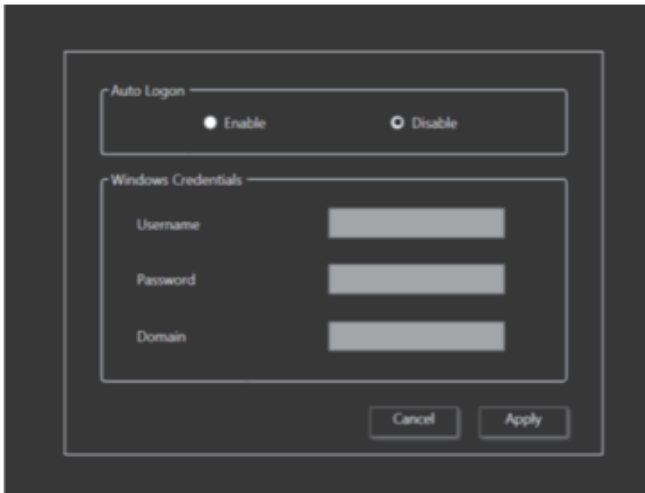
1. Plug in the Power Cable to QuickPanel+2 Device and power on the device. The following precautions are to be taken to power the device:

- Use only the SELV (Safety Extra-Low Voltage) and LIM (Limited Energy Circuit) for connection.
 - The power terminal block is supplied with the product.
 - The mating power terminal block supports stranded 24 to 16 AWG (0.2 to 1.3 mm²) wires.
 - The user calculates proper gauge wiring for current carrying capacity and loss according to local regulations.
 - At a minimum, the cable must be rated for 90°C (194°F) or more.
2. On powering up for the first time, the following Out of Box Experience (OOBE) screen will be displayed. Select the region and then click **Yes**. Follow the remaining steps of the OOBE wizard to complete setup. This may take several minutes.

Figure 5: Who's going to use this PC?



3. Once the QuickPanel+2 is configured and ready to use, the AutoLogon tool will run automatically in full-screen mode as shown below.

Figure 6: AutoLogon

4. The following steps need to be performed to enable the Auto logon process for the current user:
 - a) In the Auto Logon section, select **Enable**. This allows the user to log in to the QuickPanel+2 automatically after every reboot, without entering credentials.
 - b) Enter the Username, Password, and Domain (if applicable), then click Apply. If the credentials are valid, Auto Logon will be enabled for that user. You will then be prompted to either Reboot Now or reboot later.
 - c) If the credentials are invalid, an appropriate error message will be displayed.
-

Tip

The Auto Logon feature can be enabled or disabled after subsequent startups by launching the QuickPanel+2 OIUtilities from the desktop icon and navigating to the Auto Logon page after application startup.

QuickPanel+2 Windows Activation

The preloaded Windows 10 IOT Enterprise 2021 LTSC image on QuickPanel+2 is activated by default. The product key is embedded with Windows.

Mounting and Installation

This Section provides the following procedures to mount and install the QuickPanel+2:

- Mounting Location
- Panel Mounting
- VESA Arm Mounting
- Battery Installation and Replacement
- Connectors

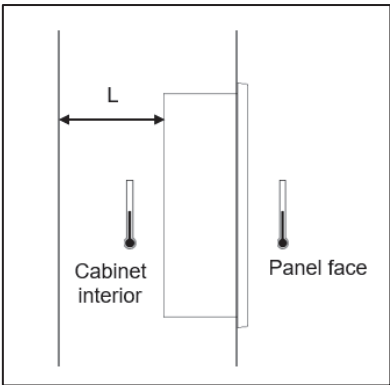
Mounting Location

When mounting on the panel, please provide the following minimum clearance at the back side to ensure good ventilation.

Panel size	Minimum Clearances
QuickPanel+2 7", 10"	L=5cm
Quick Panel Pro 12", 15"	L=10cm

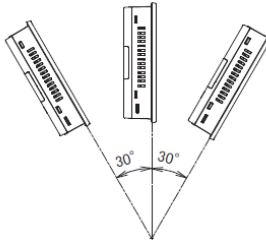
Be sure that the ambient operation temperature and the ambient humidity are within the specified ranges.

Figure 7: Minimum Clearances



“Ambient operation temperature” refers to both the temperature at the panel face and the temperature inside the cabinet or enclosure.

When mounting the QuickPanel+2, ensure the installation area provides enough space to insert and remove the SD card, cables, and mounting brackets. Select a location that allows natural bottom-to-top convection airflow around the QuickPanel+2 enclosure. Do not mount the unit at an angle greater than 30° from vertical as shown in

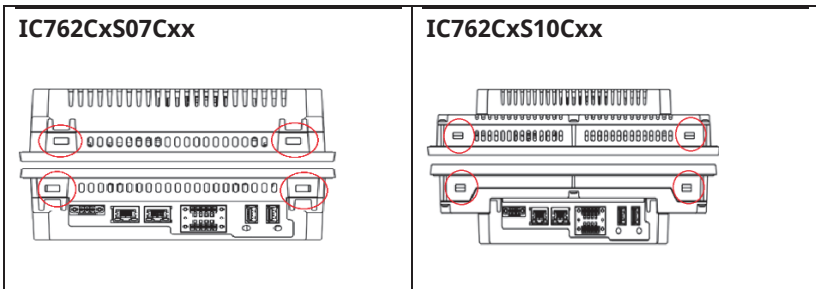
Figure 8: Mounting Angle

Panel Mounting

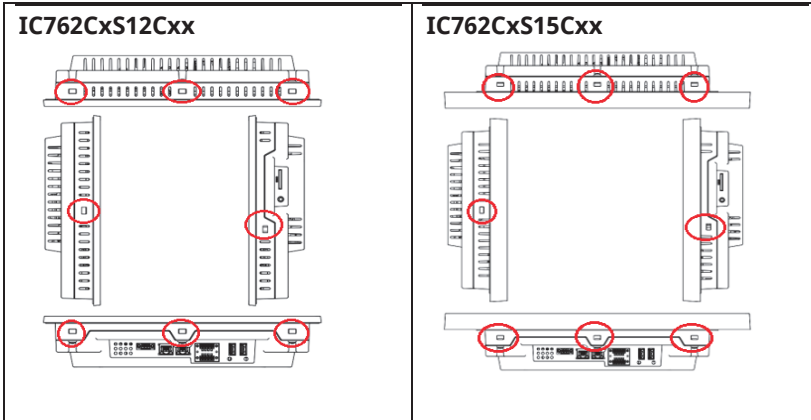
To mount the QuickPanel+2 in an enclosure, you will need the following equipment:

- One #2 Phillips head screwdriver
- Mounting brackets (supplied)

The mounting holes for the: IC762CxS07Cxx, IC762CxS10Cxx are located on the top and bottom sides of the unit.

Figure 9: Mounting Holes (Top and Bottom Edges)

Note: The IC762CxS12Cxx and IC762CxS15Cxx mounting holes are located on the top, bottom, and sides of the unit.

Figure 10: Mounting Holes (Top, Bottom Edges and Sides)

Mounting and Installation Procedure

Observe the following guidelines to properly mount and install the QuickPanel+2:

- The enclosure should be of metal material.
- The metal enclosure panel should ensure proper thickness and rigidity suitable to minimize impact to the QuickPanel+2 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.

 CAUTION

When installing the QuickPanel+2 into the panel, pay careful attention while handling the unit so it does not drop and damage the unit.

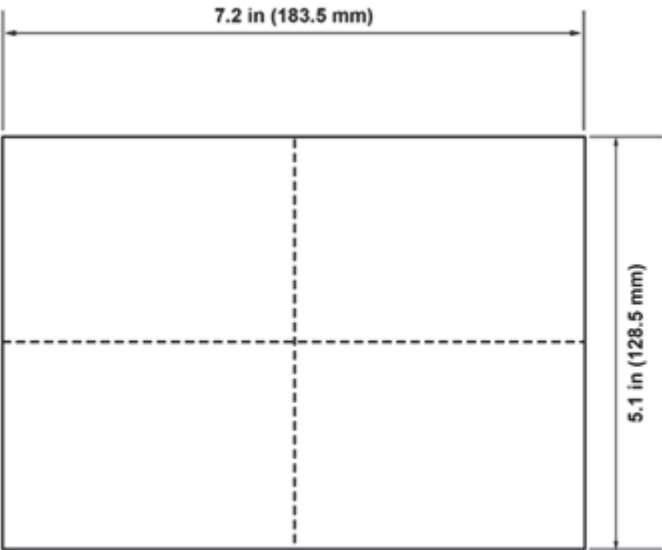
The product must be installed by a skilled person only.

To Install the QuickPanel+2

- 1. Cut an opening in the panel according to the specifications in the following figures.
Note: Panel cutout tolerances are +1.00mm/-0.00 mm (+0.039 in/-0.00 in).
Enclosure proper panel thicknesses for each unit:

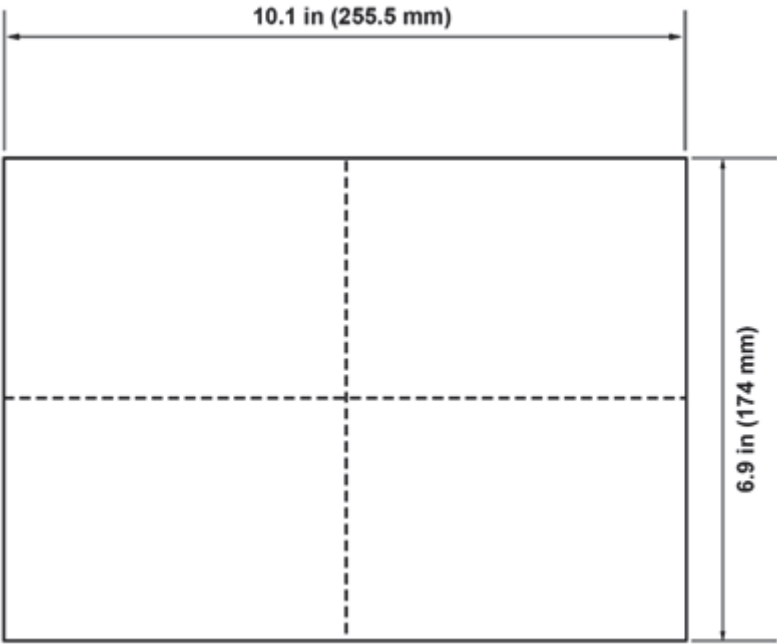
Panel Size			Panel Thickness
7"			1.6 mm – 4 mm (14 to 8 gauge for stainless steel panel)
10"	12"	15"	1.6 mm – 5 mm (14 to 6 gauge for stainless steel panel)

Figure 11: IC762CxS07Cxx Panel Cutout Dimensions



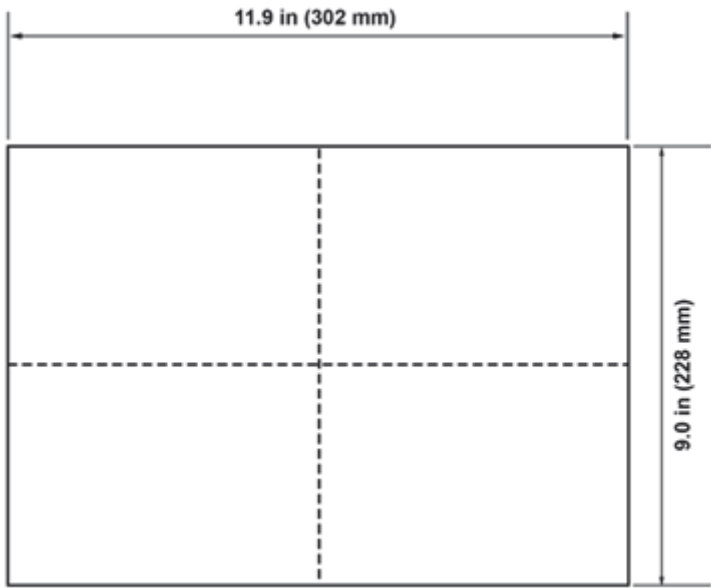
Panel Cutout Dimensions

Figure 12: IC762CxS10Cxx Panel Cutout Dimensions

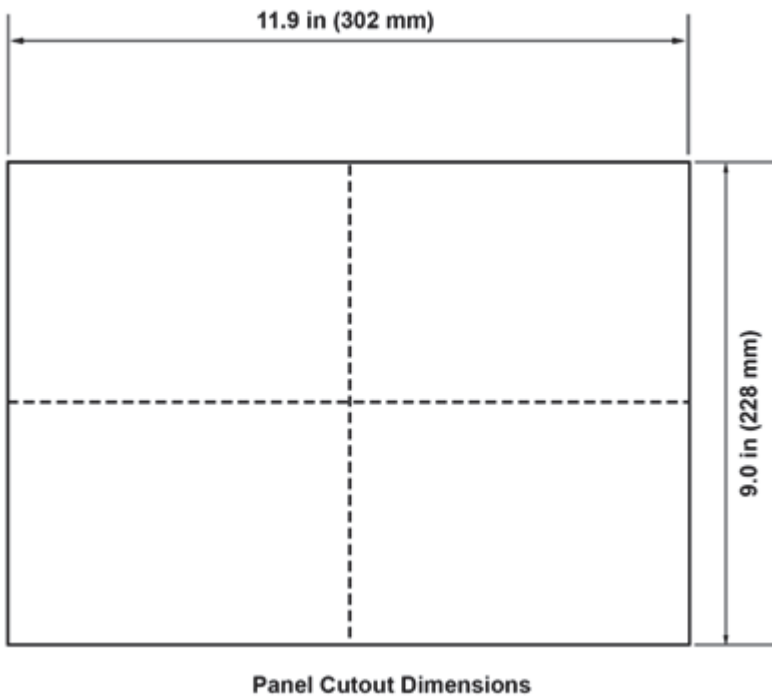


Panel Cutout Dimensions

Figure 13: IC762CxS12Cxx Panel Cutout Dimensions

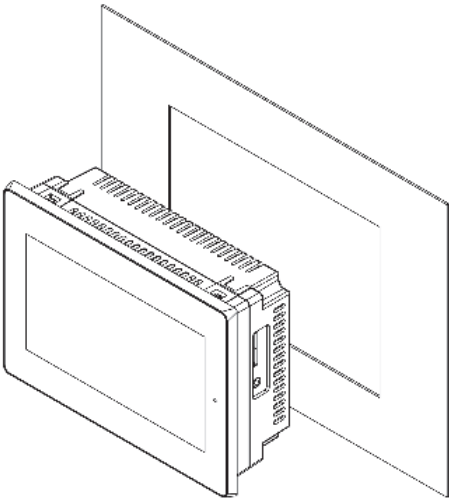


Panel Cutout Dimensions

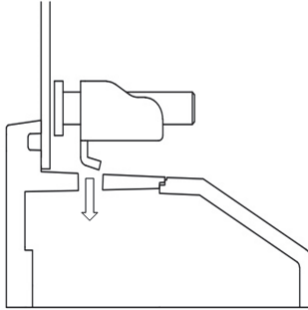
Figure 14: IC762CxS15Cxx Panel Cutout Dimensions

2. Verify that the gasket is present and properly seated in the bezel channel located on the sides of the unit.
3. Insert the QuickPanel+2 into the mounting panel cutout.

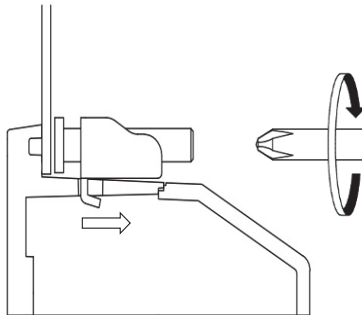
Figure 15: Cutout for QuickPanel+2



4. Insert the hook of the mounting bracket into the mounting hole as displayed

Figure 16: Hook of Mounting Bracket

5. Tighten the screws on the mounting bracket in a clockwise direction. Torque specifications are available on the next page.

Figure 17: Mounting bracket screw turning

Torque Range for Mounting Clamp Screws

Model	Torque Range
7 inch	4.4 in-lb (0.5 Nm)
10 inch	8.9 in-lb (1.0 Nm)
12 inch	8.9 in-lb (1.0 Nm)
15 inch	8.9 in-lb (1.0 Nm)

Note: Panel-mount the device only in enclosures that require a tool for access and are installed in areas with minimal risk of mechanical impact.

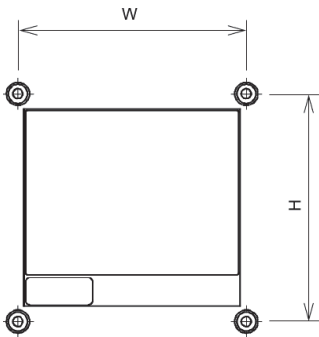
VESA Arm Mounting

The QuickPanel+2 can be installed on a commercially available Video Electronics Standards Association (VESA) MIS-D arm, stand, or apparatus that complies with the UL1678 standard.

To mount the QuickPanel+2, use the mounting holes located on the back of the unit.

The mounting holes for IC762CxS07Cxx, IC762CxS10Cxx, IC762CxS12Cxx, IC762CxS15Cxx attach with M4 screws that are 6 to 8mm in length.

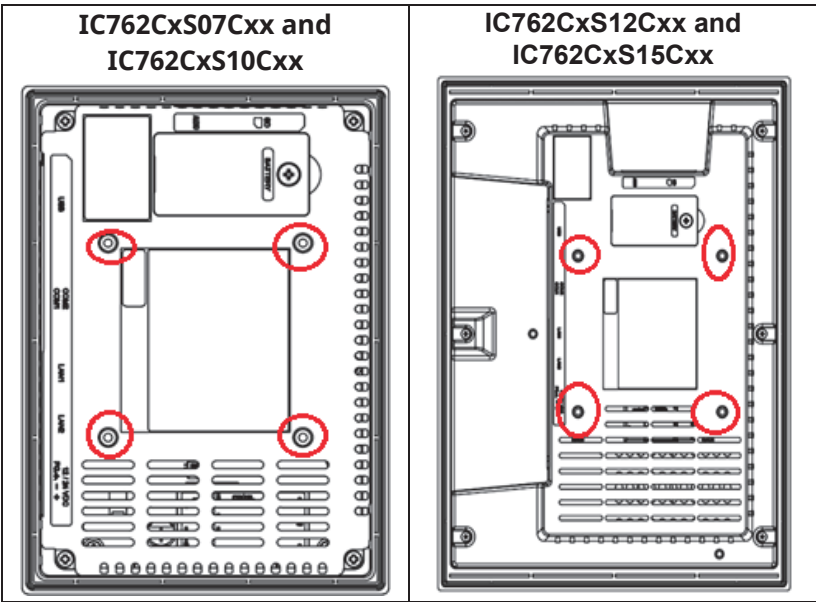
Figure 18: VESA Mounting Holes Dimensions



Torque Range for Mounting M4 Screws

Model (LCD Size)	Mounting Holes Dimensions	Screw Lengths	Torque Range
7 "	75 mm x 75 mm	6 to 8mm	0.8 Nm
10.1"	75 mm x 75 mm	6 to 8mm	0.8 Nm
12.1"	100 mm x100 mm	6 to 8mm	0.8 Nm
15.6"	100 mm x100 mm	6 to 8mm	0.8 Nm

Figure 19: VESA Mounting Holes



Note: For user manuals, product updates, and other information, use the support links provided at the end of this document.

Battery Installation

⚠ 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+2 product may present a risk of fire or explosion.

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.

⚠ CAUTION

Replacing the battery should only be performed by trained personnel and in a non-hazardous location.

If the QuickPanel+2 is VESA mounted, detach from the VESA arm when replacing the battery.

The battery should only be replaced when the unit is powered off.

Care should be taken to protect and insert the battery with the correct polarity.

Do not use any metallic item to remove the battery (such as screwdrivers, knives, pliers, and so forth).

Be careful not to drop the battery or any associated screws into the unit.

Be careful of edges on the internal sides of the enclosure and frame.

Note:

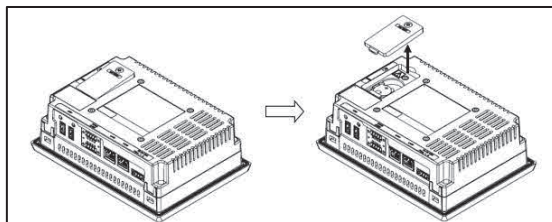
1. The PC controller does not start automatically when the battery is replaced in QuickPanel+2. After battery replacement, start the controller using the #Command in the PAC Machine Edition runtime.
2. The symbol near the battery is for safety messages about replacing the battery. See "QuickPanel+2 Battery Installation".

CAUTION

Replace the battery for the **IC762CxS07Cxx**, **IC762CxS10Cxx**, **IC762CxS12Cxx**, **IC762CxS15Cxx** only with Emerson battery part number IC762ACCBATT.

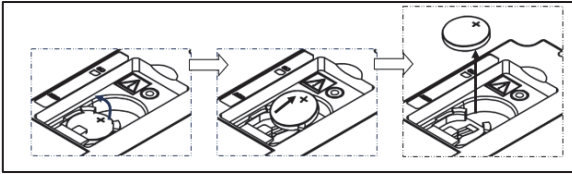
1. Loosen the screw and remove the battery cover.

Figure 20: IC762CxS07Cxx, IC762CxS10Cxx, IC762CxS12Cxx and IC762CxS15Cxx Battery Cover Removal



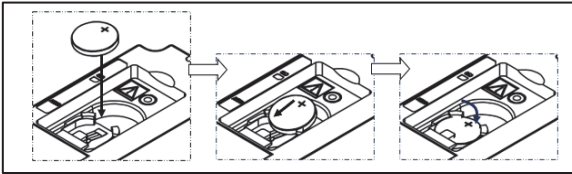
2. Remove the old battery.

Figure 21: IC762CxS07Cxx, IC762CxS10Cxx, IC762CxS12Cxx and IC762CxS15Cxx Remove Old Battery



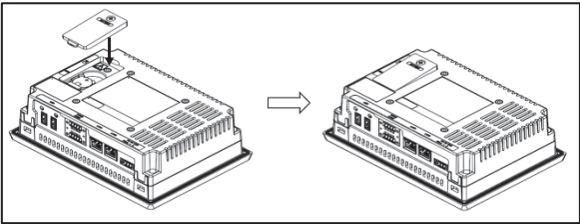
3. Install new batteries

Figure 22: IC762CxS07Cxx, IC762CxS10Cxx, IC762CxS12Cxx and IC762CxS15Cxx Install new batteries



Note: Check the polarities and make sure it is not inserted in the wrong direction.

Figure 23: IC762CxS07Cxx, IC762CxS10Cxx, IC762CxS12Cxx and IC762CxS15Cxx Install battery cover



Note: Tightening torque: 0.8Nm

Connectors

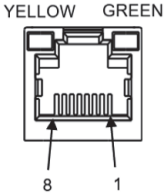
Power Connector Details

Pin #	Signal Name	Pin-out
1	+24 V dc [†]	
2	GND	
3	FG	
[†] IC762CxSxxCDx supports both +12 V dc or +24 V dc IN		

Ethernet Port Details

Connector: RJ-45 Connector

Interface: Ethernet 10BASE-T/100BASE-TX and 1000BASE-T

Pin No.	Signal		Pin Arrangement
	10Base-T/100Base-T	1000Base-T	
1	TX+	TP0+	
2	TX-	TP0-	
3	RX+	TP1+	
4	NC	TP2+	
5	NC	TP2-	
6	RX-	TP1-	
7	NC	TP3+	
8	NC	TP3-	

USB Host Port Details

Interface: USB 3.0 Type- A connector, Maximum supply current: 0.9A/port

Pin No.	Signal	Pin No	Signal	Pin Arrangement
1	VBUS (5V)	5	SSRX-	
2	D-	6	SSRX+	
3	D+	7	SG	
4	SG	8	SSTX-	
		9	SSTX+	

Serial Port Details

IC762CxSxxCxx, Serial Port COM1/COM2 , Connector: 3.5mm pitch Terminal Block

Pin No.	Signal		Pin Arrangement
COM1	RS232		
A1	TXD		
A2	RXD		
A3	RTS		
A4	CTS		
A5	SG		
COM2	RS422	RS485	
B1	TXD+	DATA+	
B2	TXD-	DATA-	
B3	RXD+	NC	
B4	RXD-	NC	
B5	SG	SG	

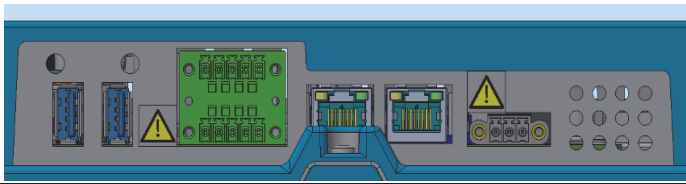
Connecting Terminal Block

To connect input power and serial

1. Verify that the power and serial cable are not energized.
2. Loosen the screw clamps on the mating power and serial connector.
3. Strip the insulation from the power and serial cables. Use only copper conductors.
4. Secure the power and serial cable to the mating connector, noting polarity, and tighten the screw clamps. Below is the Connection specification.

Note: The symbols near connectors indicate wire metallurgy information. See "Connecting terminal block".

Figure 24: Layout



Item	Power Connector	Serial Connector
Mounting Screw Tightening torque	0.3 N·m (2.65 lb-in).	0.3 N·m (2.65 lb-in)
Clamp Screw Tightening torque	0.25 N·m (2.2 lb-in)	0.19 N·m (1.7 lb-in)
Conductor size*1	AWG 24-16	AWG 28-16
Wire Stripping Length	7 mm	7 mm

5. Apply dc power to the unit. During normal startup and operation, the QuickPanel+2 status LED indicator displays as follows:
 - *Solid amber* while the QuickPanel+2 unit is starting up
 - *Solid green* during normal operation
6. Once power is applied, the QuickPanel+2 enters OOBE (Out-Of-Box Experience) for initial configuration.

Product Certifications and Installation Guidelines for Conformance

The QuickPanel+2 is intended for use in industrial environments and, when properly installed, shall comply with the following agency approvals.

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

Agency Approvals

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

Description	Agency Marking	Comments
N.A. Safety for Programmable Controller for use in Hazardous locations Class I Division 2 Groups A, B, C, D, Temp Code T4A; Class II Division 2 Groups F, G, Class III Division 1 and Division 2		Certification by Underwriter's Laboratories (UL) to UL 61010-1; UL 62368-1; CAN/CSA C22.2 No. 62368-1 UL 61010-2-201; CSA C22.2 No 142-1987; CSA 61010-1; CSA 61010-2-201 UL 121201 and CSA C22.2 No. 213-17
Explosive Atmospheres Safety for Hazardous Areas		The IECEx IEC 60079-0, IEC 60079-7, IEC 60079-31

Description	Agency Marking	Comments
Equipment Group II, Category 3, Gas Groups IIC, Dust Group IIIC		Part numbers: IC762CxS07Cxx, IC762CxS10Cxx, IC762CxS12Cxx, IC762CxS15Cxx
Electromagnetic Compatibility Directive European Electromagnetic Compatibility (EMC) for Industrial Control Equipment	CE	Self-declaration in accordance with European Directives EN61000-6-2, EN61000-6-4

Conditions of Safe Use for Installation in Hazardous Locations

The following information applies to products bearing the UL marking for Hazardous areas and the ATEX marking for Zone 2 explosive atmospheres:

- Suitable for use in Class I Division 2 Groups A, B, C, D; Class II Division 2 Groups F, G; Class III Division 1 and Division 2.
- Suitable for Group II, Category 3, Gas Groups IIC, Dust Group IIIC
 1. The equipment shall only be used in an area of at least pollution degree 2, as defined in IEC 60664-1.

Note: *Pollution degree 2 can be achieved when the installation is in a controlled environment with suitably controlled condensation or airborne pollution.*

2. The equipment shall be installed in an enclosure that provides a minimum ingress protection of IP 54 in accordance with IEC 60079-0 and is only accessible with the use of the tool.

3. Transient protection shall be provided that is set at a level not exceeding 140% of the peak rated voltage value at the supply terminals to the equipment.

WARNING

- **EXPLOSION HAZARD** - Do not connect or disconnect equipment power, communication, audio, or battery unless power has been removed or the area is known to be non-hazardous.
 - **EXPLOSION HAZARD** - Substitution of components may impair suitability.
 - **POTENTIAL ELECTROSTATIC HAZARD** - To prevent accidents caused by static electricity, implement static electricity counter-measures such as using a static wrist strap.
 - **SAFETY INSTRUCTION – INTENDED USE:** This equipment is not designed for use by children. Do not allow children to play with, install, or operate this product. Keep the product and its accessories out of reach of children. Improper use may result in electric shock, fire, or injury.
 - **RESTRICTED USE NOTICE:** This equipment is intended for professional users only. It is not suitable for use by children or persons without appropriate supervision.
 - Do not connect to the audio terminals, as this will invalidate the IECEx/ATEX, UL/cUL (NRAG/7), and CCC certifications.
-

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 is required to correct the interference at their own expense.

Changes or modifications to this unit that are not expressly approved by Emerson 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).

EMC Installation and Operation Considerations

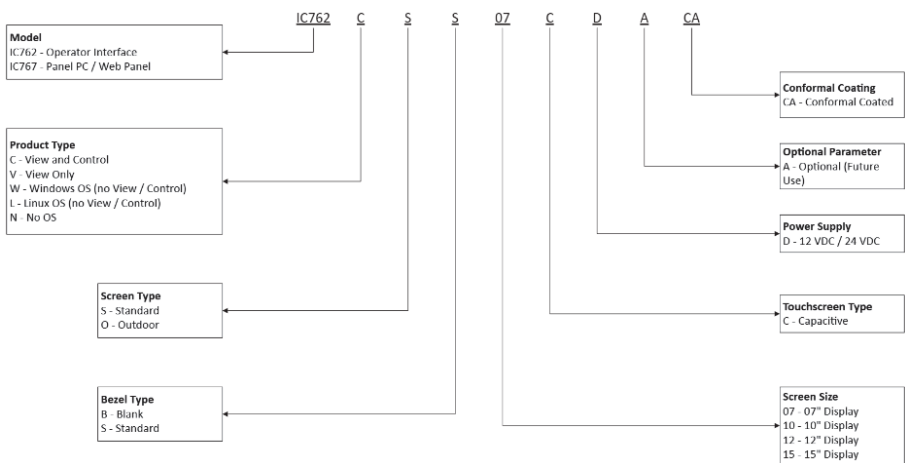
This equipment is intended for industrial use only and complies with a minimum level of EMC performance as defined by EN 61000-6-2 and EN 61000-6-4 standards. To meet these requirements, the following installation and operation considerations are to be considered:

- Use shielding USB cables (3 m or less)
- Limiting RS-232 cables to 15 m (49.2 ft) in length
- Using Audio ports only during operational maintenance

Although these considerations were deliberated during testing, actual EMC environments vary greatly. Therefore, these considerations may not be necessary. Likewise, additional measures, such as filtering, wire separation, and cable routing, may need to be considered to ensure the intended operation of the overall system.

Nomenclature

Figure 25: Part Number Diagram



Contact Information and Support Guide
Questions? We are here to help.

If you have a question, try the following:

Search our Knowledge Base	Open a Support Ticket	Register for a Customer Account
 pacsystems.co/knowledge	 pacsystems.co/support	 pacsystems.co/signup

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 pacsystems.co/customercenter	 pacsystems.co/commercial	 pacsystems.co/contactus