VersaView 6300B Wall Mount Box PCs

Bulletin Numbers 6300B-PBCx and 6300B-PBDx

Allen-Bradley
by ROCKWELL AUTOMATION

User Manual Original Instructions

Important User Information

Read this document and the documents listed in the additional resources section about installation, configuration, and operation of this equipment before you install, configure, operate, or maintain this product. Users are required to familiarize themselves with installation and wiring instructions in addition to requirements of all applicable codes, laws, and standards.

Activities including installation, adjustments, putting into service, use, assembly, disassembly, and maintenance are required to be carried out by suitably trained personnel in accordance with applicable code of practice.

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

In no event will Rockwell Automation, Inc. be responsible or liable for indirect or consequential damages resulting from the use or application of this equipment.

The examples and diagrams in this manual are included solely for illustrative purposes. Because of the many variables and requirements associated with any particular installation, Rockwell Automation, Inc. cannot assume responsibility or liability for actual use based on the examples and diagrams.

No patent liability is assumed by Rockwell Automation, Inc. with respect to use of information, circuits, equipment, or software described in this manual.

Reproduction of the contents of this manual, in whole or in part, without written permission of Rockwell Automation, Inc., is prohibited.

Throughout this manual, when necessary, we use notes to make you aware of safety considerations.

WARNING: Identifies information about practices or circumstances that can cause an explosion in a hazardous environment, which may lead to personal injury or death, property damage, or economic loss.

ATTENTION: Identifies information about practices or circumstances that can lead to personal injury or death, property damage, or economic loss. Attentions help you identify a hazard, avoid a hazard, and recognize the consequence.

IMPORTANT Identifies information that is critical for successful application and understanding of the product.

Labels may also be on or inside the equipment to provide specific precautions.

SHOCK HAZARD: Labels may be on or inside the equipment, for example, a drive or motor, to alert people that dangerous voltage may be present.

BURN HAZARD: Labels may be on or inside the equipment, for example, a drive or motor, to alert people that surfaces may reach dangerous temperatures.

ARC FLASH HAZARD: Labels may be on or inside the equipment, for example, a motor control center, to alert people to potential Arc Flash. Arc Flash will cause severe injury or death. Wear proper Personal Protective Equipment (PPE). Follow ALL Regulatory requirements for safe work practices and for Personal Protective Equipment (PPE).

Safety Guidelines

The VersaView® 6300B wall mount PCs in this publication must be operated only by qualified personnel. Qualified personnel are those who, based on their training and experience, are able to identify risks and potential hazards while working with these computers.

The VersaView 6300B wall mount PCs are only for indoor use. The computers can be damaged if operated outdoors.

The VersaView 6300B wall mount PCs are open equipment, which means the following:

- This equipment can only be integrated in housings or cabinets where the computer is operated from the front panel.
- The housing or cabinet in which the computer is mounted can only be accessed with a key or tool, and only by qualified personnel.
- Before a housing or cabinet can be opened, all power must first be disconnected.

Proper Disposal of the Computer

You cannot dispose of computer equipment like other waste material. Most computers and monitors contain heavy metals that can contaminate the earth. Therefore, check with local health and sanitation agencies for ways to dispose of computer equipment safely.

Battery Removal

This computer contains a sealed lithium battery that could need replacement during the life of the computer. At the end of its life, collect the battery that is contained in this computer separately from any unsorted municipal waste.

Waste Electrical and Electronic Equipment (WEEE)

At the end of its life, collect this equipment separately from any unsorted municipal waste.

Notes:

This manual is a user guide for VersaView® 6300B wall mount box PCs. It provides procedures to the following:

- Install the computer.
- Make computer connections.
- Operate the computer.
- Troubleshoot the computer.

A general knowledge of automation technology is needed to understand and follow the instructions in this publication.

Knowledge of personal computers and Microsoft Windows® operating systems is required to understand and follow the instructions in this publication.

Catalog Numbers

This publication is applicable to these VersaView 6300B wall mount box PCs. For your catalog number, see the product label on the side of your computer.

VersaView 6300B wall mount PCs with one expansion slot	6300B-PBCx
VersaView 6300B wall mount PCs with up to three expansion slots	6300B-PBDx

Additional Resources

These documents contain additional information about related products from Rockwell Automation.

Resource	Description
VersaView 6300B Wall Mount PCs Installation Instructions, publication 6300B-IN002	Provides basic installation guidelines and instructions for VersaView 6300B wall mount PCs.
VersaView 6300 Industrial Computer and Monitor Specifications Technical Data, publication IC-TD003	Provides technical specifications about all VersaView 6300 industrial PCs, thin clients, and monitors.
Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1	Provides general guidelines for installing a Rockwell Automation industrial system.
Product Certifications website, rok.auto/certifications	Provides declarations of conformity, certificates, and other certification details.

You can view or download publications at rok.auto/literature.

Notes:

About the Wall Mount Box PC

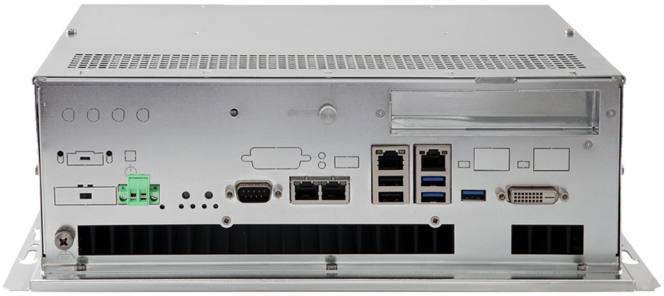
The Allen-Bradley® VersaView® 6300B wall mount box PCs with Intel Core i3 and i7 processors are available in designs with or without fans. Fan-cooled units perform well in challenging environments with elevated temperatures. All wall mount PCs can be paired with FactoryTalk® View SE software to provide the optimal human machine interface (HMI) experience within the Rockwell Automation® Connected Enterprise.

The following features are available for the Cat. No. 6300B-PBCx VersaView wall mount PCs:

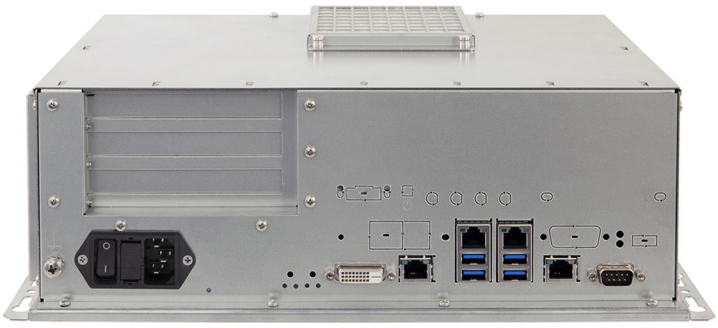
- Microsoft Windows 10 IoT Enterprise 2019 LTSC operating system(1)
- Storage up to 1 TB 2.5-in. SSD SATA III (mSATA interface)(1)
- 4 x Ethernet (RJ45), 3 x USB 3.0 (Type A), 2 x USB 2.0 (Type A), 1 x RS-232 (DB9M), and 1 x DVI-D (full HD) ports
- One PCIe x4 expansion slot
- Fanless design for 24V DC SELV input power

The following features are available for the Cat. No. 6300B-PBDx VersaView wall mount PCs:

- Microsoft Windows 10 IoT Enterprise 2019 LTSC
- Storage up to 1 TB 2.5-in. SSD SATA III (M.2 2280 interface)
- 4 x Ethernet (RJ45), 4 x USB 3.0 (Type A), 1 x RS-232 (DB9M), and 1 x DVI-D (full HD) ports
- Up to three PCIe expansion slots (1 x PCIe x16 + 1 x PCIe x4 + 1 x PCIe x1)
- Fan cooled design for 100/230V AC input power



A Cat. No. 6300B-PBCx Wall Mount Box PC With DC Input Power



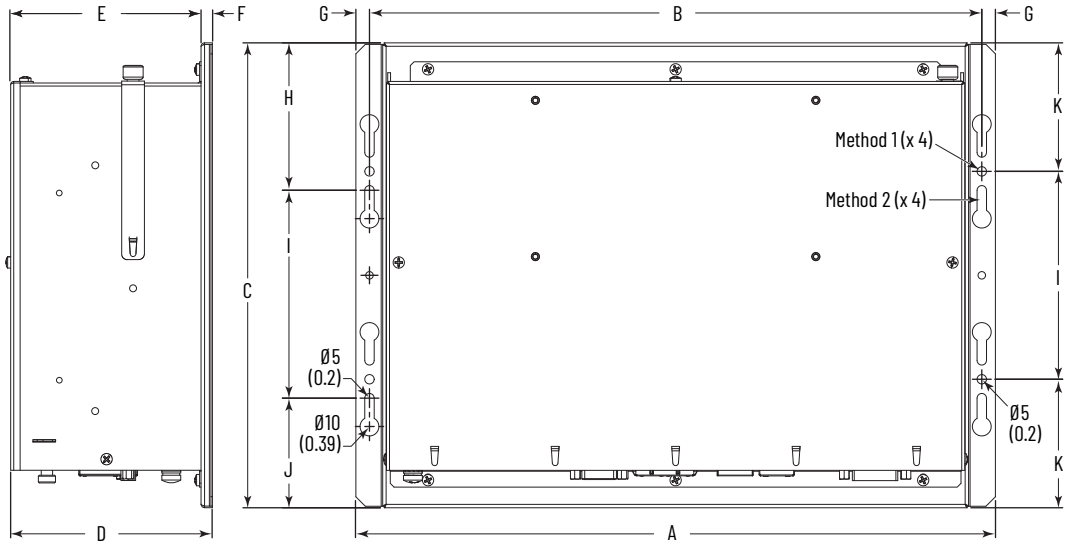
A Cat. No. 6300B-PBDx Wall Mount Box PC With AC Input Power

(1) Two wall mount box PCs, Cat. Nos. 6300B-PBCDNB-7BNBNNNNNNNNN-NN1S and 6300B-PBDAFK-7BNENNNNNNNNN-NN1S, are available with no storage drive and no Windows operating system.

Computer Dimensions

The following figure shows the dimensions of the VersaView 6300B wall mount box PCs. All dimensions are in mm (in.).

Figure 1 - VersaView 6300B Wall Mount PC Dimensions

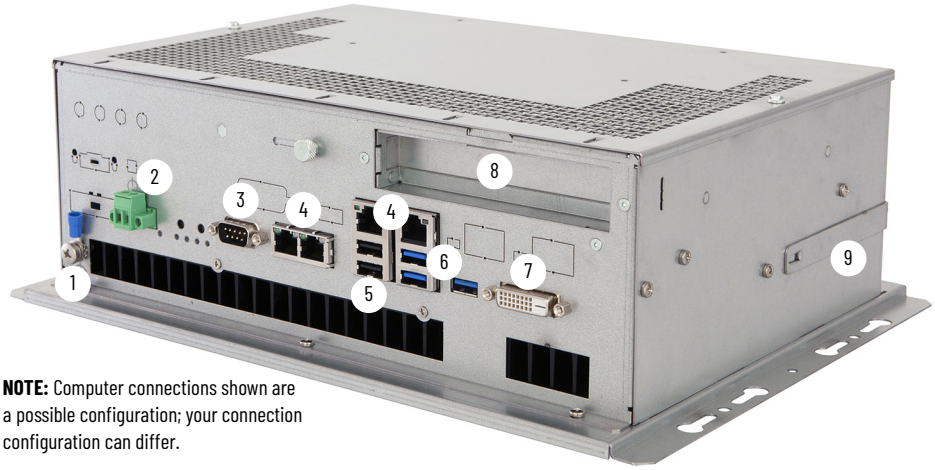


Bull. No.	Dimensions in mm (in.)										
	A	B	C	D	E	F	G	H	I	J	K
6300B-PBCx	338.4 (13.32)	324 (12.75)	246 (9.69)	75.8 (2.98)	69.8 (2.75)	6 (0.24)	7.2 (0.28)	78 (3.07)	110 (4.33)	58 (2.28)	68 (2.68)
6300B-PBDx	377 (14.84)	362 (14.25)	232 (9.13)	128 (5.04)	122 (4.8)	6 (0.24)	7.5 (0.3)	51 (2)	150 (5.9)	31 (1.22)	41 (1.61)

Computer Connections

Figure 2 and Figure 3 on page 11 show the computer connections of VersaView 6300B wall mount box PCs.

Figure 2 - VersaView 6300B-PBCx Wall Mount Box PC Computer Connections

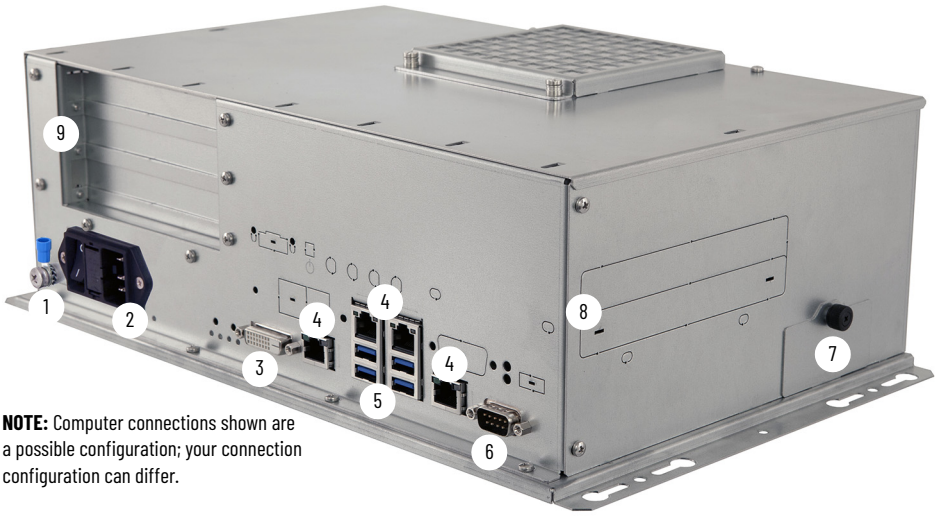


NOTE: Computer connections shown are a possible configuration; your connection configuration can differ.

No.	Description
1	Ground screw
2	DC input power connection
3	Serial port, RS-232 (DB9M)
4	4 x Ethernet LAN port, RJ45
5	2 x USB 2.0 port, Type A

No.	Description
6	3 x USB 3.0 port, Type A
7	DVI-D port, full HD
8	PCIe x4 expansion slot
9	CFast card slot

Figure 3 - VersaView 6300B-PBDx Wall Mount Box PC Computer Connections



NOTE: Computer connections shown are a possible configuration; your connection configuration can differ.

No.	Description
1	Ground screw
2	AC input power connection
3	DVI-D port, full HD
4	4 x Ethernet LAN port, RJ45
5	4 x USB 3.0 port, Type A

No.	Description
6	Serial port, RS-232 (DB9M)
7	CFast card slot
8	2 x SSD drive slot (optional)
9	3 x PCIe expansion slot

Notes:

Install the Wall Mount Box PC

Follow these guidelines and procedures to help you plan your installation, and mount and power up the VersaView® 6300B wall mount box PC.

Unpack the Computer

Before you unpack the computer, inspect the shipping carton for damage. If damage is visible, immediately contact the shipper and request assistance. Otherwise, proceed with unpacking.

Keep the original packing material in case you must return the computer for repair or transport it to another location.

Parts List

The wall mount box PC ships with the following items.

Item	Description
Hardware	• For Cat. No. 6300B-PBCx models: DC power connector assembly kit • For Cat. No. 6300B-PBDX models: A grounded, 3-prong IEC60320-C13 power cord
Document	VersaView 6300B Wall Mount Box PCs Installation Instructions, publication 6300B-IN002

Prepare for Installation

Read and follow these precautions before you install the wall mount box PC.

Environment and Enclosure Information

ATTENTION: This equipment is intended for use in a Pollution Degree 2 industrial environment, in overvoltage Category II applications (as defined in IEC 60664-1), at altitudes up to 2000 m (6561 ft) without derating.

This equipment is considered Group 1, Class A industrial equipment according to IEC/EN 61326-1. Without appropriate precautions, there can be potential difficulties with electromagnetic compatibility in other environments due to conducted as well as radiated disturbance.

This equipment is considered open equipment, which means it must be mounted in an enclosure where the equipment can be operated from the front panel.

The enclosure in which this equipment is installed must be accessed only with a key or tool, and only by trained and authorized personnel.

In addition to this publication, see the following:

- Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1, for more installation requirements
- UL 50, CSA C22.2 No. 94.1, and IEC 60529, as applicable, for explanations of the degrees of protection provided by enclosures

UL/cUL Mark Compliance

Equipment with the UL/cUL mark complies with the requirements of UL 61010-1, UL 61010-2-201, CSA C22.2 No. 61010-1, and CSA C22.2 No. 61010-2-201. A copy of the certificate of compliance is available at rok.auto/certifications.

European Union Directive Compliance

This computer meets the European Union Directive requirements when installed within the European Union or EEA regions and have the CE marking. A copy of the declaration of the conformity is available at rok.auto/certifications.

ATTENTION: This equipment is intended to operate in an industrial or control room environment, which uses some form of power isolation from the public low-voltage mains. Obtain permission from the local power authority before you connect any computer configuration that draws more than 75 W of AC power directly from the public mains.

All I/O cables must be used only indoors.

Connect peripheral cables to the appropriate I/O ports on the computer. To comply with EN 61326-1, see Connect Peripheral Cables on page 16 for the required cable types.

Installation Guidelines

Follow these guidelines to make sure that your computer provides service with excellent reliability.

- When choosing the installation site, consider the following:
  - The site must have sufficient power
  - The site must be indoors
  - The site must not expose the computer to direct sunlight
- The computers can operate in a surrounding air temperature range as follows:
  - 0…50 °C (32…122 °F) for 6300B-PBCx wall mount box PCs with the Intel Core i3 processor
  - 0…45 °C (32…113 °F) for 6300B-PBCx wall mount box PCs with the Intel Core i7 processor
  - 0…50 °C (32…122 °F) for 6300B-PBDx wall mount box PCs with the Intel Core i3 and Intel Core i7 processors
- The surrounding air temperature must not exceed the maximum temperature for your computer, especially when the computer is mounted in an enclosure.
- The computers can be stored in a surrounding air temperature range of -10…+60 °C (14…140 °F).
- The humidity of the ambient air must not exceed 80% noncondensing.

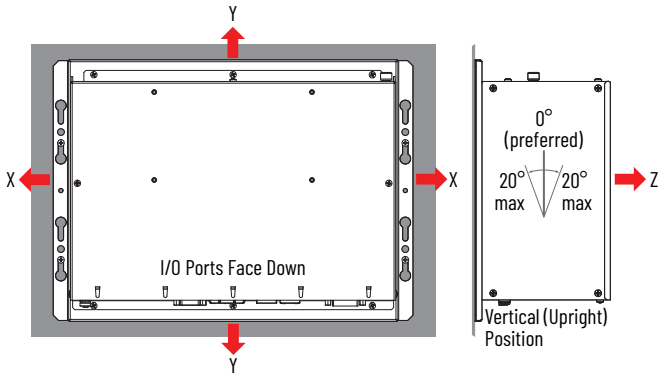
Mounting Requirements

Follow these requirements to mount the VersaView 6300B wall mount box PC.

- Choose a suitable mounting height
- For optimal performance, mount the computers in the vertical (upright) position, so the I/O ports face down.

IMPORTANT	The vertical position can be tilted up to 20° forward or backward from the upright position. However, any tilt angle reduces the maximum operating temperature by 5 °C (41 °F).

- To help prevent overheating and to provide access to the I/O ports for cable connections, mount the computer so there are the following minimum clearances:
  - X and Z directions: 7 cm (2.75 in.)
  - Y direction: 10 cm (3.94 in.)



Required Tools and Hardware for Installation

The following tools and hardware are needed for wall mount installations.

- A drill and drill bit
- #2 Phillips screwdriver
- Four M4x20 stainless steel screws (customer supplied)
- Safety glasses

Install the Wall Mount Box PC

There are two preferred methods to install the computer.

Install Method 1

1. See Method 1 in Figure 1 on page 10 to locate and drill holes for the four M4x20 stainless steel screws.
2. Align the holes on both computer brackets with the four drilled holes.
3. Install the computer with the four customer-supplied screws.
4. Tighten the four screws.

Install Method 2

1. See Method 2 in Figure 1 on page 10 to locate and drill holes for the four M4x20 stainless steel screws.
2. Install the four customer-supplied screws but leave enough space to hang the brackets.
3. Align the four keyhole slots on both computer brackets with the four installed screws.

4. Slide each bracket downward until all four screws are at the top of each keyhole slot.
5. Tighten the four screws.

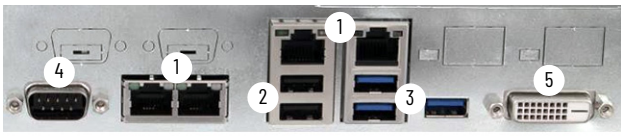
Connect Peripheral Cables

Connect peripheral cables to the appropriate I/O ports on the computer. To comply with EN 61326-1, use the following for cable types. All I/O cables must be used only indoors, and USB cables must be less than 3 m (9.84 ft) long.

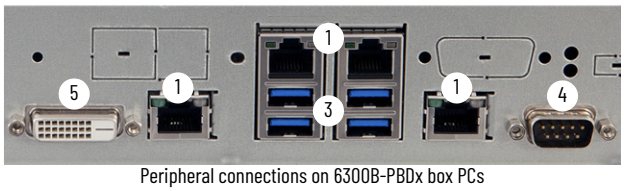
Item No.	Cable Type	Required Attribute
1	LAN	Shielded
2	USB 2.0	
3	USB 3.0	
4	RS-232 DB9M	
5	DVI-D	

Item No.	Cable Type	Required Attribute
–	AC power(1)	Unshielded
	DC power(2)	

(1) Applies to 6300B-PBDx models.
(2) Applies to 6300B-PBCx models.



Peripheral connections on 6300B-PBCx box PCs



Peripheral connections on 6300B-PBDx box PCs

Grounding and Bonding

Whenever two connected pieces of equipment are far apart, it is possible that their ground connections could be at different potential levels.

To overcome possible grounding problems, the following bonding methods are recommended:

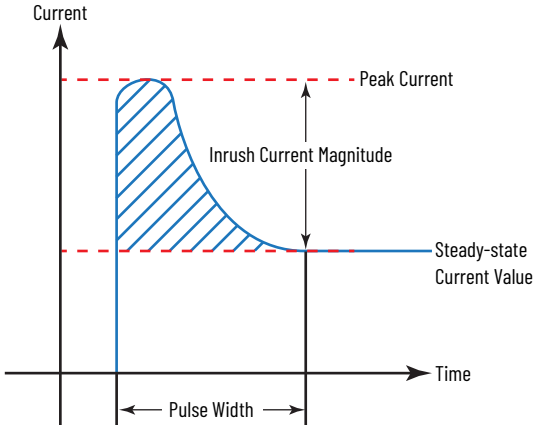
- Method 1: Connect the data cable shields to the equipotential bonding rail on both sides before you connect the cable to the interfaces.
- Method 2: Use an equipotential bonding cable (16 mm^2 or 6 AWG) to connect the grounds between this VersaView 6300B box PC and a connected monitor.

DC Power Supply Guidelines

Follow these guidelines to select the DC power supply for the computer.

IMPORTANT The following DC power supply guidelines apply only to Cat. No. 6300B-PBCx models. For Cat. No. Cat. No. 6300B-PBDx PC models, see Connect AC Power (for Cat. Nos. 6300B-PBDx Wall Mount PCs) on page 20.

- The computer must be powered with a voltage of 24V DC (18...32V DC SELV input voltage range).
- The nominal output power must be 25% larger than the drained power.
- The output voltage rise time has to be less than 100 ms.
- Consider the working temperature and the thermal derating of the power supply.
- The inrush current can be represented by the figure at right, where the peak current is 10 A and the pulse width time is 400 µs.



Power Consumption

The following table shows the power consumption in watts of various components in VersaView 6300B wall mount box PCs.

Component	Description	Power (W)
Motherboard	–	10.5
Processor	Intel Core i3-7100E	45.8
	Intel Core i7-7820EQ	58.8
SSD	mSATA2	2.0
	2.5-in. SATA MLC	5.2
Serial port	RS-232 DB9M	1.3
Expansion slot	PCI half-size or PCIe x4	6.5(1)

Component	Description	Power (W)
USB ports	2.0 Type A, each port	2.5
	3.0 Type A, each port	4.5
Memory card	CFast SATA	1.3
Ethernet	10/100/1000 Mbps	1.3
RAM	4 GB	3.9
	8 GB	4.6
	16 GB	5.9
	32 GB	8

(1) 5W is the maximum that the card can use.

WARNING: Do not exceed 120 W for the total system configuration. Power consumption greater than 120 W can overpower the external and internal power supplies, which can lead to component damage or, in extreme cases, electrical fires.

Install the Ground Wire

1. Turn off the main power switch or breaker.
2. Remove the supplied nut, eyelet terminal, and washers from the ground screw.
3. For earth ground, fasten a 2.5 mm^2 (14 AWG) or larger external wire to the eyelet terminal.

   Use a ground wire with an insulation color that is approved by local inspection authority.
4. Install the ground wire to the ground screw in the following sequence.

Sequence No.	Description
1	Toothed washer
2	Eyelet terminal
3	Washer

Sequence No.	Description
4	Lock washer
5	Nut

5. Tighten the nut to the ground screw.

Connect Power

ATTENTION: When you connect power to the computer for the first time, these actions occur:

- The default UEFI setting automatically starts the computer after it is plugged into a power source.
- For VersaView 6300B wall mount box PCs with a Microsoft Windows operating system (OS), you must read and accept an End User Setup procedure.

  Do not disconnect power from the system until after the Windows Setup procedure is completed. If power is disconnected during this procedure, it can result in a corrupted system image.

Operate the wall mount box PC in an industrial or control room environment, which uses some form of power isolation from the public, low-voltage mains.

ATTENTION: For VersaView 6300B wall mount box PCs with a Windows OS, perform the following:

- Supply the computer with its own disconnect. Use an uninterruptible power source (UPS) to help protect against unexpected power failure or power surges.
- Always shut down the Windows OS before you disconnect power to the computer to minimize performance degradation and operating system failures.

Connect DC Power (for Cat. Nos. 6300B-PBCx Wall Mount PCs)

All VersaView DC powered models require a safety extra low voltage (SELV)(1) power supply per UL. The power supply is internally protected against reverse polarity.

To minimize ground loop currents and noise, Allen-Bradley® recommends that DC powered models use only one grounded connection. For the ground connection on these model, see Figure 2 on page 10.

Follow these steps to connect the computer to a DC power source.

You need the following tools for this installation:

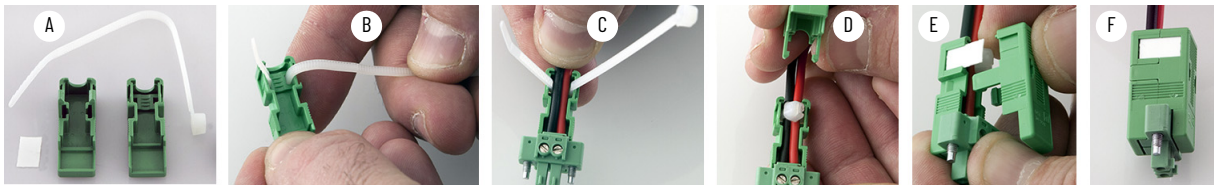
- Small screwdriver
- Wire stripper, cutter, and crimper tool
- Cutting pliers

Install the Factory-supplied DC Power Connector Assembly

This connector assembly provides strain relief for the DC power wires by reducing their movement. To assemble and attach the connector assembly, perform the following steps.

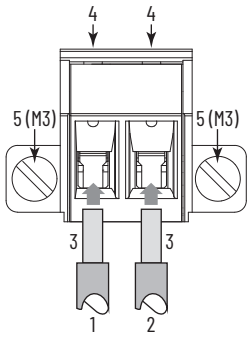
IMPORTANT DC power wires must be of stranded copper and sized according to Table 1 on page 19.

1. Remove the DC terminal block from the computer chassis.
   For the terminal block location, see Figure 2 on page 10.
2. Open the power connector assembly kit that ships with the computer (A).
3. Insert the cable tie through the slots of the appropriate connector half (B).
4. Strip the end of each DC power wire to the length in Table 1 on page 19.
5. Insert each stripped end into the DC terminal block as shown in Table 1 on page 19.



(1) Where SELV is as defined in IEC 61010-2-201.

Table 1 - DC Terminal Block Connection Specifications



Cat. Nos. 6300B-PBCx Wall Mount PCs
DC Terminal Block (Green)

Item	Description	6300P-PBCx Models
1	DC+ (24V DC nominal) recommended power wire size	2.5 mm^2 (14 AWG)
2	DC- (0V DC) recommended power wire size	
3	Stripped wire length	7 mm (0.275)
4	Torque range to secure DC power wires	0.5...0.6 N•m (0.37...0.4 ft•lb)
5	Torque value to reinstall DC terminal block to computer	0.3 N•m (0.22 ft•lb)

6. Tighten the screws on top of the terminal block to secure the DC power wires to the torque value in Table 1.
7. Slide the connector half with the attached tie onto the end of the DC terminal block (C).

IMPORTANT	The DC terminal block in the photos is only for illustrative purposes. Your DC terminal block can differ in size, shape, and color to what is shown in the photos.

8. Tighten the cable tie so it is snug against the terminal wires.
9. Use cutting pliers to cut the excess part of the cable tie (D).
10. Install the white label supplied with the kit (E).

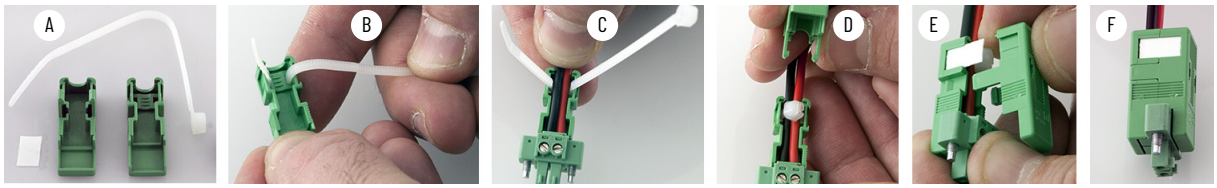
The white label can be used for identification or other information.

11. Align and install the other connector clamp half to complete the assembly (F).

When installed correctly, both clamp tabs snap into place.

12. Reconnect the DC terminal block with the connector assembly to the computer chassis.

    Torque the DC terminal block flange screws to the values in Table 1.
13. Turn on the main power switch or breaker.
14. See Connect Power on page 17 for what happens during initial computer power-up.



Connect AC Power (for Cat. Nos. 6300B-PBDx Wall Mount PCs)

Operate the computer in an industrial or control room environment, which uses some form of power isolation from the public, low voltage mains.

To connect AC power to the computer, perform the following steps.

AC Power Input Port

1. Connect the appropriate end of the supplied power cord to the power input port on the computer.
2. Connect the other end of the supplied power cord to an AC power source with an input voltage of 110...230V AC, 50/60 Hz.
3. Turn on the power switch in the power input port of the computer.
4. See Connect Power on page 17 for what happens during initial computer power-up.

Operate the Wall Mount Box PC

Operating Guidelines

Follow these operating guidelines for your VersaView® 6300B wall mount box PC.

- When the box PC is mounted in an enclosure, keep the enclosure door closed during operation so dust and other airborne contamination do not infiltrate the computer. Open the door only for routine maintenance.
- For box PCs with a Microsoft Windows® operating system (OS), always use the proper power down procedures as required, such as the Shut Down command in the Windows OS.
- Do not apply power again until shutdown is complete.

Start the Wall Mount Box PC

Follow these steps to start your VersaView 6300B wall mount box PC.

IMPORTANT	The following steps apply to when the box PC must be started manually, and power has been connected already. See Connect Power on page 17 for when power is applied to the box PC for the first time.

1. Make sure that all necessary peripheral devices are connected to the corresponding I/O ports on the box PC.
2. Make sure any connected components with separate power supplies (such as an external display) are turned on first.
3. To power on the box PC, perform the following:
   - AC powered models: Turn on the power switch, which is on the bottom of the box PC chassis.
   - DC powered models: Turn on the main power switch or breaker.

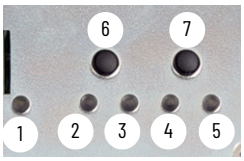
Light-emitting Diode and Button Descriptions

After a VersaView 6300B wall mount box PC is powered on, various light-emitting diodes (LEDs) monitor its state. Use these LEDs to determine if they are lit and what color they emit.

There are also buttons on the computer to reset computer states that are monitored by the LEDs.

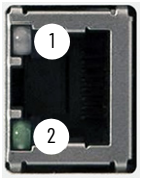
The following tables detail what LEDs and buttons are on the bottom of the rear panel of each wall mount box PC.

Table 2 - LEDs and Buttons



No.	Description	Color	Function
1	Power supply LED	No color	The computer is not powered.
		Green	The computer is on and powered by the main power supply.
		Flashing green	The computer is on and powered by a UPS.
		Yellow	If a UPS is connected, verify that the UPS connection is secure or that the UPS battery is not faulty.
2	Over temperature/ battery fault LED	Red	The computer has exceeded its operating temperature. For more information, see Thermal Alarms on page 29.
		Flashing red	The real-time clock (RTC) battery is lower than 2.5V. Replace before the battery goes lower and risks loss of date and time.
3	Watchdog LED	Red	The watchdog timer has expired.
4	Mass storage LED	Yellow	When lit, access to a mass storage device (SSD or CFast) is happening through a SATA channel.
5	On/off/standby/UPS LED	No color	The computer is powered off or the CPU is not starting.
		Green	• The computer is powered on. • The system is in a low-power state, and current session information is being stored in the RAM.
		Yellow	The computer is safe to power off; the operating system has been shut down successfully.
		Flashing green	The computer is powered but a UPS is powering the system while main power is missing.
6	System reset button	–	Forces an internal reset, as if power was lost temporarily and then returned. **IMPORTANT:** Use this button only if there are no better options, like keyboard or mouse commands, or if the resumed DC power does not restart the computer. System reset can cause data loss and possible corruption to the operating system.
7	Watchdog reset button		Turns off the watchdog LED (item 3).

Table 3 - LAN LEDs



No.	Description	Color	Function
1	Data link	No color	No data link is present.
		Green	Data link is established.
		Flashing green	Data link is established and there is data transfer.
2	Data speed	No color	10 Mbps
		Green	100 Mbps
		Yellow	1000 Mbps (1 Gbps)

Restart or Reset the Wall Mount Box PC

Restart the VersaView 6300B Wall Mount Box PC

IMPORTANT A connected keyboard, mouse, and display are needed for some of the following steps.

Use either of the following methods to restart the box PC.

- From the Start menu, click or choose Restart.
- Press Ctrl+Alt+Delete, and then click or choose Restart.

During a restart, the box PC does the following:

- Clears the RAM.
- Starts the POST.
- Initializes peripheral devices.
- Loads the Windows OS.

Use a connected display to view the progress of the POST, initializing of any peripheral devices, and the startup dialogs for any installed Windows OS.

Reset the VersaView 6300B Wall Mount Box PC

IMPORTANT	Use this method only if there are no better options, like keyboard or mouse commands. System reset can cause data loss and possible corruption to the operating system.

Use this method when power has been interrupted temporarily, and the box PC is unresponsive when power returns.

If methods to restart the box PC are unsuccessful, then press the system reset button on the front panel of the box PC.

For the system reset button location, see Table 2 on page 22.

Shut Down the Wall Mount Box PC

IMPORTANT	A connected keyboard, mouse, and display are needed for the following steps.

Use either of the following methods to shut down the box PC.

- From the Start menu, click or choose Shut Down.
- Press Ctrl+Alt+Delete, and then click or choose Shut Down.

Notes:

Configure the UEFI (BIOS) Settings

Each VersaView® 6300B wall mount box PC has a set-up utility, which is a hardware configuration program that is built into the universal extensible firmware interface (UEFI). In this chapter, UEFI replaces Basic Input/Output System (BIOS) to describe the system firmware except where BIOS is used.

You can run the set-up utility to do the following:

- Change the system configuration.
- Set the time and date as part of a commissioning step.

  A commissioning step is one of the following situations:
  - When the VersaView 6300B wall mount box PC is powered up initially
  - When the Windows OS image is restored
  - When the UEFI set-up utility is upgraded
- Redefine communication ports to help prevent any conflicts.
- Read the current amount of system memory.
- Change the boot drive order.
- Set or change the password or make other changes to the security settings.

Access the Set-up Utility

Follow these steps to access the set-up utility in your computer.

IMPORTANT	To perform these steps, an external display and keyboard must be connected to the computer.

1. Start or restart your computer.
2. During POST, press F2 to access the set-up utility.
3. The following screens are accessible through the set-up utility:
   - Main (default screen when you access the utility)
   - Advanced
   - Chipset
   - Security
   - Boot

     If you wish to change the boot order temporarily, press F10 during POST to access the boot menu directly.
   - Save and Exit

Common Set-up Modifications

With pre-arranged configurations, there is usually no need to change specific items. Some exceptions are as follows:

- Change the system date and time
  - Change these settings through the Microsoft Windows® Control Panel > Date and Time
- View BIOS version and system memory
  - Under BIOS Information on the Main menu
  - With the Microsoft Windows OS, you can view these settings by Windows > System Information
- Modify the boot device order
  - Under the Boot menu; use to prioritize storage devices
- Modify network configuration
  - Under the Advanced menu; use when a LAN with a pre-boot execution environment (PXE) is needed
- Add passwords
  - Under the Security menu; use when system security is needed

Clean the Wall Mount Box PC

For optimal performance, it is important to clean the VersaView® 6300B wall mount box PCs periodically.

Clean the Vent Holes

Perform the following steps to clean VersaView 6300B wall mount box PCs.

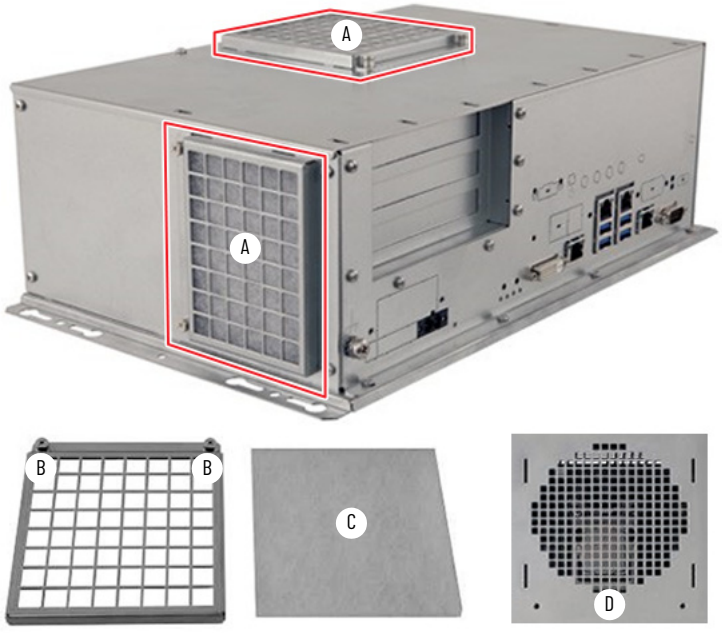
1. Disconnect power from the computer at the power source.
2. Vacuum dust and debris from any vent holes or heatsink.
3. Reconnect power to the computer at the power source.

Clean the Fan Filters

Cat. Nos. 6300B-PBDx VersaView 6300B wall mount box PCs have two filters. Inspect these filters every three months or earlier if environmental conditions require it.

To access the filters, perform the following steps.

1. Disconnect power from the computer at the power source.
2. Locate the two filter plates (A).



3. Loosen the two screws (B) that secure each filter plate to the box PC.
4. Remove each filter plate and filter from the box PC.
5. Remove the filter (C) from each filter plate.

6. Inspect each filter. Replace if dirty.

IMPORTANT	If dirty filters cannot be replaced immediately, Rockwell Automation recommends that you do one of the following: • Use a vacuum cleaner • Wash them with warm water and a mild detergent (such as dishwashing liquid), rinse, and then air dry However, both procedures decrease the efficiency of the filter. Therefore, it is best to replace the filter as soon as possible.

7. Check the vent holes (D) that the filter plates cover.
   If necessary, vacuum dust and debris from them.
8. Install the new filters or cleaned filters in each filter plate.
9. Reinstall both filter plates on the box PC.
10. Tighten the two screws on each filter plate.
11. Reconnect power to the computer at the power source.

Troubleshoot the System

Thermal Alarms

The VersaView 6300B wall mount PCs have light-emitting diode (LEDs) that light when the computer reaches its operating temperature limit. See Table 2 and Table 3 on page 22 for where these LEDs are.

Temperatures are measured at two points on the motherboard; near the CPU and near the fan. The table at right lists the thermal limits for both points.

Measuring Point	Thermal Limit
CPU	85 °C (185 °F)
Fan	70 °C (158 °F)

Follow these steps to determine where an operating threshold has been reached.

1. Shut down the computer according to Shut Down the Wall Mount Box PC on page 23.
2. Apply power to the computer.
3. During POST, press F2 to access the UEFI set-up utility:
4. On the Main screen, click Advanced.
5. On the Advanced screen, click Thermal.
   Use this menu to determine if there is an issue with internal voltages or component temperatures.

Troubleshooting

Follow these steps to identify and isolate an issue with computer operation.

1. Shut down the computer according to Shut Down the Wall Mount Box PC on page 23.
2. Disconnect power to the computer.
3. Disconnect all peripheral devices from the computer.
4. If a keyboard and mouse are used, verify that they are properly connected.
5. If an external display is used, verify that it is properly connected.
6. Connect power to the computer. During POST, one of three events occurs:
   - The startup process is completed.
   - A nonfatal error occurs and the related error message is displayed.
   - A fatal error occurs and the startup process terminates.

If	Then
The computer starts	Reconnect all peripheral devices one at a time until the issue occurs.
The issue is with a specific software or driver	Reinstall the software or driver.

If an issue cannot be identified by the above steps or a fatal error occurs, see Rockwell Automation Support on the back page for technical support.

Load the System Defaults

If the computer fails after you make changes in the set-up menus, load the system default settings to correct the error. These default settings have been selected to optimize computer performance.

Follow these steps to load the system defaults.

IMPORTANT	An external display, keyboard, and mouse must be connected to perform these steps.

1. Restart the computer as specified in Restart the VersaView 6300B Wall Mount Box PC on page 22.
2. During POST, press F2 to access the UEFI set-up utility.
3. On the Main screen, press F9 to select the Optimized Default settings, which are the system defaults.
4. Press F10 to save your changes and exit.

   The change resets the system automatically.

Ship or Transport the Computer

If you must ship the computer via common carrier or otherwise transport it to another location for service or any other reason, you must first uninstall the computer and place it in its original packing material.

ATTENTION: Do not ship or transport the computer when it is installed in a machine, panel, or rack. To avoid damage to the computer, you must uninstall the computer and place it in its original packing material before you ship it.

Rockwell Automation is not responsible for damage to a computer that is shipped or transported while installed in a machine, panel, or rack.

Replace Components

VersaView® 6300B wall mount box PCs have replacement parts and upgrade accessories. This chapter explains how to replace or add these components to the wall mount box PCs.

Replacement Parts

You can view a list of replacement parts at https://www.rockwellautomation.com/en-us/products/hardware/allen-bradley/industrial-computers-monitors/industrial-computers.html.

Review the specifications of a new component before you install it to verify that it is compatible with the computer. Record the model, serial number, and any other pertinent information of new components for future reference.

IMPORTANT We recommend that you use only Allen-Bradley® approved replacement parts.

Voltage Precautions

The computers contain line voltages. Disconnect all power to the computer before you install or remove components.

SHOCK HAZARD: Failure to disconnect power can result in severe electrical shock to an individual or damage to the computer.

RISQUE D'ÉLECTROCUTION: Couper l'alimentation électrique afin d'éviter de provoquer des chocs électriques graves ou d'endommager l'ordinateur.

Electrostatic Discharge Precautions

ATTENTION: Electrostatic discharge (ESD) can damage static-sensitive devices or microcircuitry:
- Disconnect all power before you work on the computer as detailed in Voltage Precautions.
- Observe proper packaging and grounding techniques to help prevent damage.

Follow these ESD precautions:

- Transport the computer and replacement parts in static-safe containers, such as conductive tubes, bags, or boxes.
- Keep electrostatic-sensitive parts in their containers until they arrive at the designated static-free work area.
- Cover the designated work area with approved static-dissipating material:
  - Use an anti-static wriststrap that is connected to the work surface.
  - Use properly grounded tools and equipment.

- Keep the designated work area free of nonconductive materials, such as ordinary plastic assembly aids and foam packing.
- Avoid contact with pins, leads, or circuitry.
- Always hold components with a printed circuit board (PCB) by its edges and place it with the assembly side down.

Pre-configuration

IMPORTANT Before you install hardware or perform maintenance procedures that require access to internal components, we recommend that you first back up all computer data to avoid loss.

ATTENTION: Make sure to read and understand all installation and removal procedures before you configure the computer hardware.

Follow these steps before you remove the computer cover or replace a hardware component.

1. Shut down the computer and all peripherals that are connected to it.
2. To avoid exposure to high energy levels, disconnect all cables from power outlets.

   If necessary, label each cable to expedite reassembly.
3. Disconnect all peripheral cables from the I/O ports.
4. Loosen the mounting screws and remove the computer from its mounting.

Post-configuration

Follow these steps after you install or replace a hardware component.

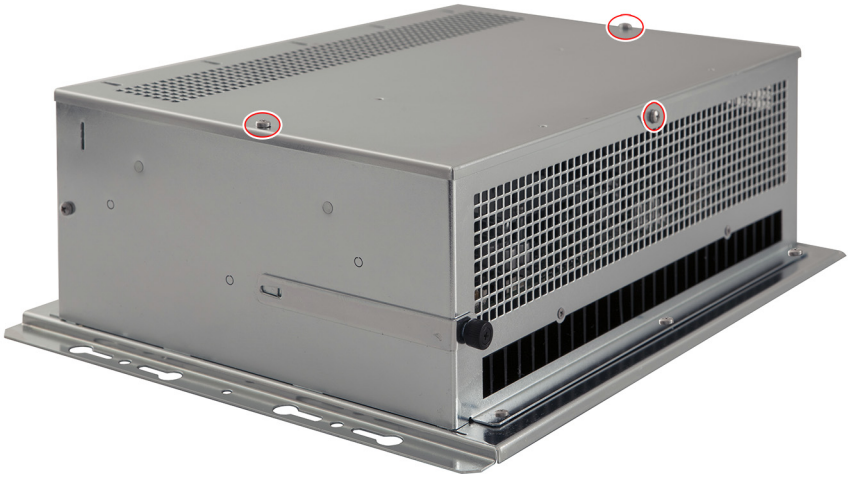
1. Reinstall the computer to its mounting.
2. Tighten the mounting screws.
3. Reinstall any peripherals and system cables that were previously removed.
4. Reconnect all external cables and power to the computer.
5. Turn on the main power switch or breaker.

Remove the Cover

To install, replace, or upgrade internal computer components, you must first remove the cover.

You need a 2.5 mm Phillips screwdriver to loosen the cover screws.

1. Follow the steps for Pre-configuration on page 32.
2. **Cat. No. 6300B-PBCx models:** Remove the three screws that secure the back cover of the computer.



Cat. No. 6300B-PBDx models: Remove the two screws that secure the back cover of the computer.

3. Remove the cover.
4. After you install, replace, or upgrade internal computer components, perform the steps in Reinstall the Cover on page 36.

Replace the Battery

IMPORTANT Battery replacement requires work near static-sensitive equipment. Therefore, only service personnel must replace the battery.

All VersaView 6300B wall mount box PCs use nonvolatile memory that requires a real-time clock (RTC) lithium battery to retain system information when power is removed.

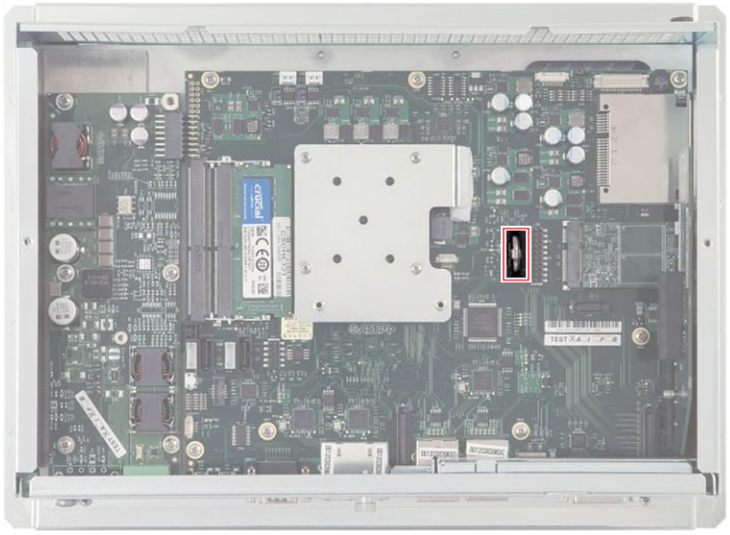
This battery must be replaced during the life of the computer. The battery life depends on the amount of time the computer is on, or on-time.

The thermal light-emitting diode (LED) on a VersaView 6300B wall mount box PC flashes red when the RTC battery is lower than 2.5V. For the battery fault LED location, see Table 2 on page 22.

Follow these steps to replace the RTC battery.

1. Perform the steps in Remove the Cover on page 33.
2. Locate the battery on the motherboard.

Cat. No. 6300B-PBCx Models

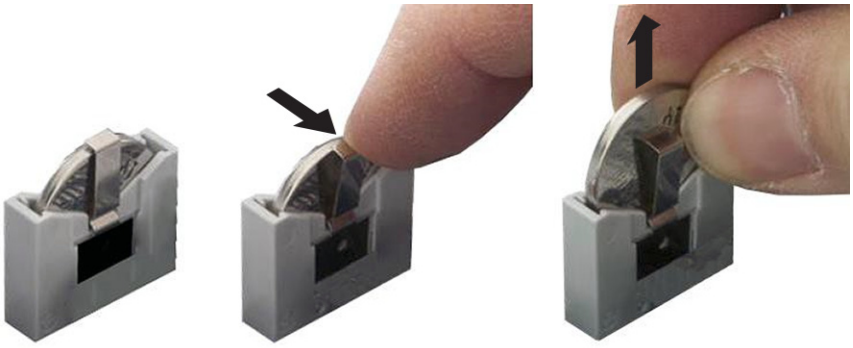


Cat. No. 6300B-PBDx Models

3. Remove the battery and replace it with the same model (Lithium CR2032 3v coin).

   Use caution to not damage the battery terminal during the battery exchange.

   Before you remove the battery, observe the battery polarity so you insert the new battery in the same direction.



WARNING: Replace the battery with the same model. There is a risk of explosion if the battery is replaced with the wrong type.

AVERTISSEMENT: Remplacer la batterie par le même modèle, sinon il y a risque d'explosion.

4. Follow the steps in Post-configuration on page 32.

IMPORTANT If you replace the battery, then all UEFI settings return to their default settings. UEFI settings other than default must be reconfigured after you replace the battery.

At the end of its life, collect the battery that is contained in this computer separately from any unsorted municipal waste.

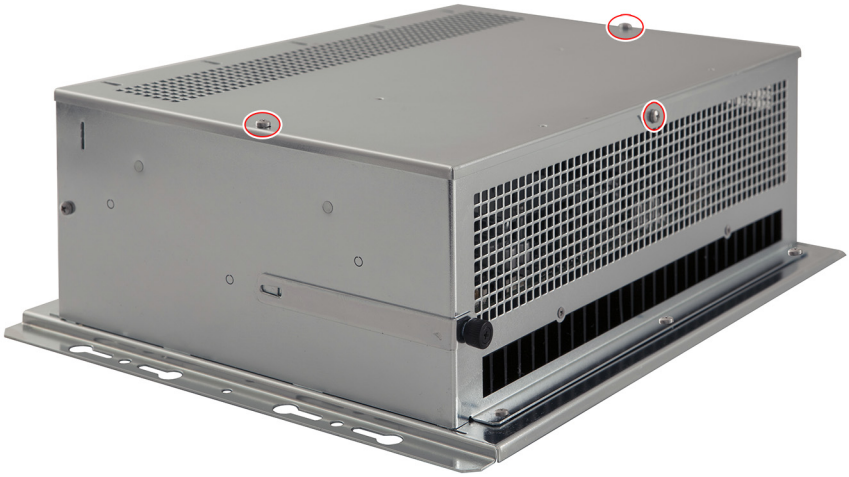
5. After you install, replace, or upgrade internal computer components, perform the steps in Reinstall the Cover.

Reinstall the Cover

To reinstall the cover, perform the following steps.

You need a 2.5 mm Phillips screwdriver to reinstall the cover screws.

1. Reinstall the cover.
2. **Cat. No. 6300B-PBCx models:** Reinstall the three screws that secure the back cover of the computer.



Cat. No. 6300B-PBDx models: Reinstall the two screws that secure the back cover of the computer.

3. Follow the steps for Post-configuration on page 32.

Rockwell Automation Support

Use these resources to access support information.

Technical Support Center	Find help with how-to videos, FAQs, chat, user forums, and product notification updates.	rok.auto/support
Knowledgebase	Access Knowledgebase articles.	rok.auto/knowledgebase
Local Technical Support Phone Numbers	Locate the telephone number for your country.	rok.auto/phonesupport
Literature Library	Find installation instructions, manuals, brochures, and technical data publications.	rok.auto/literature
Product Compatibility and Download Center (PCDC)	Download firmware, associated files (such as AOP, EDS, and DTM), and access product release notes.	rok.auto/pcdc

Documentation Feedback

Your comments help us serve your documentation needs better. If you have any suggestions on how to improve our content, complete the form at rok.auto/docfeedback.

Waste Electrical and Electronic Equipment (WEEE)

At the end of its life, collect this equipment separately from any unsorted municipal waste.

Rockwell Automation maintains current product environmental information on its website at rok.auto/pec.

Rockwell Otomasyon Ticaret A.Ş. Kar Plaza İş Merkezi E Blok Kat:6 34752, İçerenköy, İstanbul, Tel: +90 (216) 5698400 EEE YÖnetmeliğine Uygundur

Connect with us.

rockwellautomation.com — expanding **human possibility**™

AMERICAS: Rockwell Automation, 1201 South Second Street, Milwaukee, WI 53204-2496 USA, Tel: (1) 414.382.2000, Fax: (1) 414.382.4444
EUROPE/MIDDLE EAST/AFRICA: Rockwell Automation NV, Pegasus Park, De Kleetlaan 12a, 1831 Diegem, Belgium, Tel: (32) 2 663 0600, Fax: (32) 2 663 0640
ASIA PACIFIC: Rockwell Automation, Level 14, Core F, Cyberport 3, 100 Cyberport Road, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846

Publication 6300B-UM002A-EN-P - October 2020