PE400D Series
Embedded Computer

User Manual

Contents

Chapter 1: Getting to know your Edge Computer

Chapter 2: Using your Edge Computer

Chapter 3: Upgrading your Edge Computer

Appendix

About this manual

This manual provides information about the hardware and software features of your Edge Computer, organized through the following chapters:

Chapter 1: Getting to know your Edge Computer

This chapter details the hardware components of your Edge Computer.

Chapter 2: Using your Edge Computer

This chapter provides you with information on using your Edge Computer.

Chapter 3: Upgrading your Edge Computer

This chapter provides you with information on how to upgrade the memory modules, wireless modules, and hard disk drive / solid state drive of your Edge Computer.

Chapter 4: Booting up your Edge Computer

This chapter tells how to boot up your Edge Computer.

Appendix

This section includes notices and safety statements your Edge Computer.

Conventions used in this manual

To highlight key information in this manual, some text are presented as follows:

IMPORTANT! This message contains vital information that must be followed to complete a task.

NOTE: This message contains additional information and tips that can help complete tasks.

WARNING! This message contains important information that must be followed to keep you safe while performing certain tasks and prevent damage to your Edge Computer's data and components.

Typography

Bold text   Indicates a menu or an item to select.

Italic   This indicates sections that you can refer to in this manual.

Package contents

Your Edge Computer package contains the following items:

PE400D Series

Power terminal block to power jack adapter

Desk mount with screw pack

IO port dust covers

Remote power button terminal block

DIO terminal block

NOTE:

- • *The bundled Adapter cable may vary by model and territories.
- • Some bundled accessories may vary with different models.
- • The device illustration is for reference only. Actual product specifications may vary with models.
- • If the device or its components fail or malfunction during normal and proper use within the warranty period, bring the warranty card to the ASUS Service Center for replacement of the defective components.

1

Getting to know your Edge Computer

1.1 Features

1.1.1 Front view

LTE Wireless antenna jack

WLAN Wireless antenna jack

Microphone input jack

WLAN Wireless antenna jack

LTE Wireless antenna jack

USB 3.2 Gen 1 ports

LAN ports

Audio output jack

LED indicators

Isolated DIO connector

Power button

Remote Power button connector

Power input connector

Serial Ports

HDMI™ ports

DisplayPort

LAN port

USB 3.2 Gen 2 ports

Storage device bays

Expansion card slots

Functional Earth Ground

Top: Nano SIM card slots
Bottom: CFast slot

1.1.2   I/O ports and LEDs

WD   **Watchdog LED**

This LED is used to indicate a watchdog time out event.

LED color	Status	Description
Green	On	WDTO (Watch dog timeout) event
	Off	No WDTO event

CFast   **CFAST LED**

This LED is used to indicate a CFAST read/write activity.

LED color	Status	Description
Green	On	CFAST is reading/writing data
	Off	Module is not transmitting data

U2   U1
U4   U3   **User defined LED**

These LEDs have programmable LED behavior and allows the user to define the LED behaviour as well as their function.

Item	LED color	Status	Description
U1	Red	On/Blink	User defined
		Off	User defined
U2	Red	On/Blink	User defined
		Off	User defined
U3	Yellow	On/Blink	User defined
		Off	User defined
U4	Yellow	On/Blink	User defined
		Off	User defined

ANT. 1
ANT. 4

LTE Wireless antenna jack

The LTE wireless antenna jack allows you to connect a wireless antenna for LTE signals.

> **NOTE:** The LTE wireless antenna is optional and may not come bundled.

ANT. 2
ANT. 3

WLAN Wireless antenna jack

The WLAN wireless antenna jack allows you to connect a wireless antenna for Wi-Fi signals.

> **NOTE:** The WLAN wireless antenna is optional and may not come bundled.

🎤

Microphone input jack

The microphone input jack is used to connect your Edge Computer to an external microphone.

🎧

Audio output jack

This stereo audio jack is used to connect the system's audio out signal to amplified speakers.

DI
DO

Isolated DIO connector

The Isolated Digital Input/Output (DIO) connector provides electrical isolation (up to 2500 VDC) of digital input and output signals, which allow micro controllers to detect and output logic states. The high voltage protection can be used in industrial level uses. Please refer to the illustration below for the pin definition of the Isolated DIO connector.
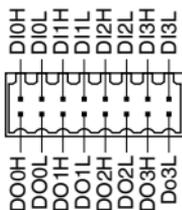
Power button

The power button allows you to turn the Edge Computer on or off. You can use the power button to put your Edge Computer to sleep mode or press it for four (4) seconds to force shutdown your Edge Computer.

Nano SIM card / CFast card combo slot

This combo slot allows you to insert two (2) Nano SIM cards to the top slot or a CFast card to the bottom slot.

NOTE:

- This slot is covered with a metal cover. Ensure to remove and replace the metal cover when installing a Nano SIM card and/or CFast card. For more information on removing and replacing the metal cover, please refer to **Installing a nano SIM card** or **Installing a CFast card**.
- We recommend using the CFast card for OS storage.

LAN port

The Intel I210-AT Gigabit Ethernet controllers with 8-pin RJ-45 LAN port supports a standard Ethernet cable for connection to a local network.

USB 3.2 Gen 2 port

The USB 3.2 Gen 1 (Universal Serial Bus) port provides a transfer rate up to 10 Gbit/s.

USB 3.2 Gen 1 port

The USB 3.2 Gen 1 (Universal Serial Bus) port provides a transfer rate up to 5 Gbit/s.

1   Serial (COM) connector

The 9-pin RS232/422/485 serial (COM) connector allows you to connect devices that have serial ports such as bar code scanner, modem, or printers. Please refer to the table below for the pin definitions of the different COM connectors.

NOTE: Default set to RS-232.
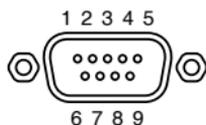
Pin	RS-232	RS-422	RS485
1	DCD#	TX-	D-
2	RXD	TX+	D+
3	TXD	RX+	NA
4	DTR	RX-	NA
5	GND	GND	GND
6	DSR	NA	NA
7	RTS	NA	NA
8	CTS	NA	NA
9	RI	NA	NA

4 **Serial (COM) connector**

The 9-pin RS232/422/485/CANBUS serial (COM) connector allows you to connect devices that have serial ports such as bar code scanner, modem, or printers. Please refer to the table below for the pin definitions of the different COM connectors.

NOTE: Default set to RS-232, can be configured to CANBUS through the onboard jumper.
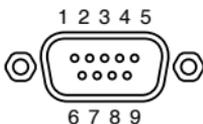
Pin	RS-232	RS-422	RS485	CANBUS
1	DCD#	TX-	D-	-
2	RXD	TX+	D+	CAN_L
3	TXD	RX+	NA	CAN_H
4	DTR	RX-	NA	-
5	GND	GND	GND	-
6	DSR	NA	NA	-
7	RTS	NA	NA	-
8	CTS	NA	NA	-
9	RI	NA	NA	-

HDMI 1 **HDMI™ 1.4 port**

The integrated 19-pin HDMI (High Definition Multimedia Interface) port with a receptacle connector can support resolutions up to 4096 x 2160 @ 30 Hz on external display devices.

HDMI 2 **HDMI™ 2.0 port**

The integrated 19-pin HDMI (High Definition Multimedia Interface) port with a receptacle connector can support resolutions up to 4096 x 2160 @ 60 Hz on external display devices.

Dual-mode DisplayPort

The 20-pin DisplayPort 1.2 port can support resolutions up to 4096 x 2304 @ 60 Hz on external display devices, and supports DVI or HDMI™ adapters.

> **NOTE:** Default 4096x2304 @60Hz and supports 3 independent displays at the same time.

EXT PWRBTN   Remote Power button connector

The bundled terminal block allows you to connect an external power button for remotely powering your Edge Computer on or off.

Power input

This power input jack allows you to connect the bundled power terminal block to power jack adapter. Power supplied through this jack supplies power to the Edge Computer.

Functional Earth Ground

The Functional Earth Ground provides you with a grounding point.

1.2 Motherboard Overview

1.2.1 Motherboard layout

The PE400D is an Edge Computer based on a Pico-ITX motherboard. Please refer to the table for the page numbers of the numbered items.
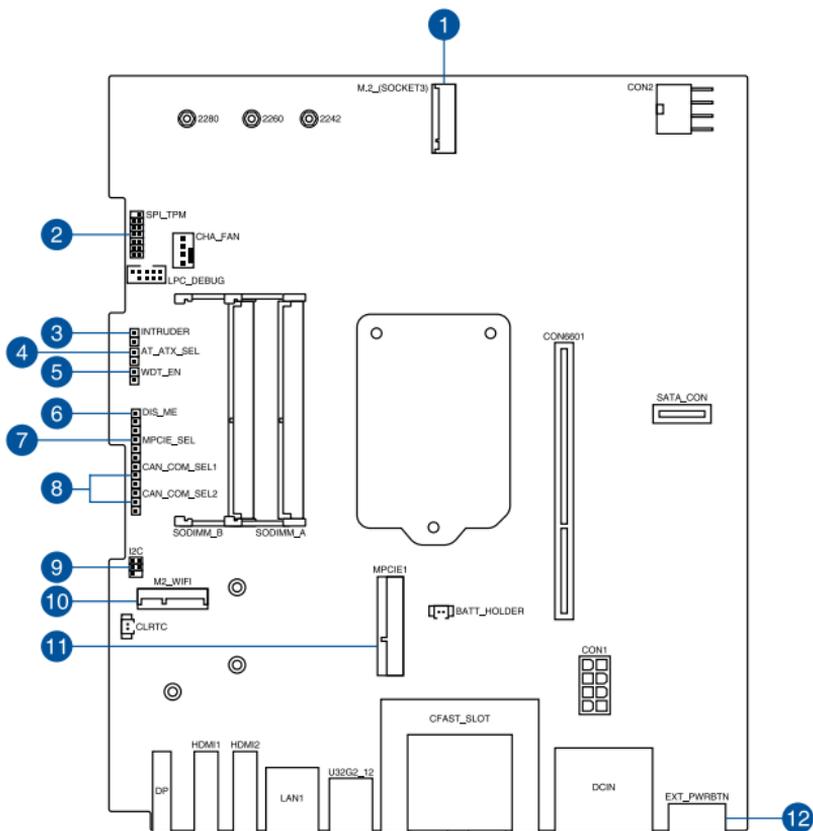
Layout contents	Page
1. M.2 M-key slot	18
2. SPI TPM header	19
3. Chassis Intrude header	20
4. AT / ATX power selection	21
5. HW WDT Enable jumper	22
6. ME Lock jumper	23
7. Mini PCIe / mSATA switch jumper	24
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9. I2C header	26
10. M.2 E-key slot	27
11. Mini PCIe / mSATA slot	28
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1. **M.2 M-key slot**

   The M.2 M-key slot allows you to install an M.2 module (M-key, type 2242/2260/2280) or M.2 B+M key TPU module.

M.2(SOCKETS)

PIN 1
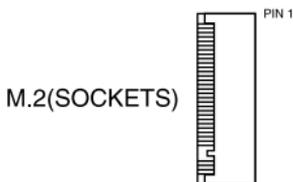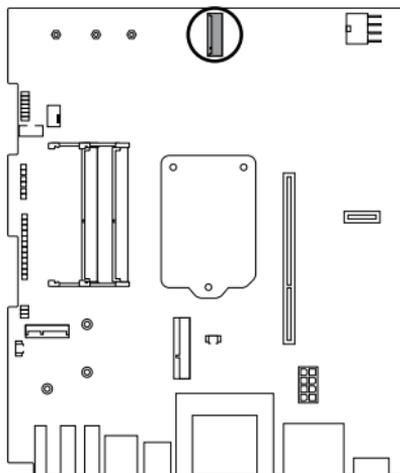
Pin	Signal	Pin	Signal
1	PCH_M2_M/PRESENT#	2	+3V
3	GND	4	+3V
5	PCH_M2_1_RXN3	6	NC
7	PCH_M2_1_RXP3	8	NC
9	GND	10	M2_LED_Q
11	PCH_M2_1_TXN3_C	12	+3V
13	PCH_M2_1_TXP3_C	14	+3V
15	GND	16	+3V
17	PCH_M2_1_RXN2	18	+3V
19	PCH_M2_1_RXP2	20	NC
21	GND	22	NC
23	PCH_M2_1_TXN2_C	24	NC
25	PCH_M2_1_TXP2_C	26	NC
27	GND	28	NC
29	PCH_M2_1_RXN1	30	NC
31	PCH_M2_1_RXP1	32	NC
33	GND	34	NC
35	PCH_M2_1_TXN1_C	36	NC
37	PCH_M2_1_TXP1_C	38	M2_DEVSLP4_R
39	GND	40	NC
41	PCH_M2_1_RXP0_R	42	NC
43	PCH_M2_1_RXN0_R	44	NC
45	GND	46	NC
47	PCH_M2_1_TXN0_C	48	NC
49	PCH_M2_1_TXP0_C	50	M2_SSD_RST#
51	GND	52	CLKREQ_M2_SSD#
53	CK_PCIE_M2N	54	X_WAKE#
55	CK_PCIE_M2P	56	NC
57	GND	58	NC
59	Key	60	Key
61	Key	62	Key
63	Key	64	Key
65	Key	66	Key
67	NC	68	NC
69	M.2_SSD_PEDET	70	+3V_M2
71	GND	72	+3V_M2
73	GND	74	+3V_M2
75	GND		

2. SPI TPM header

The SPI TPM header supports a Trusted Platform Module (TPM) system, which can securely store keys, digital certificates, passwords, and data. A TPM system also helps enhance network security, protects digital identities, and ensures platform integrity.
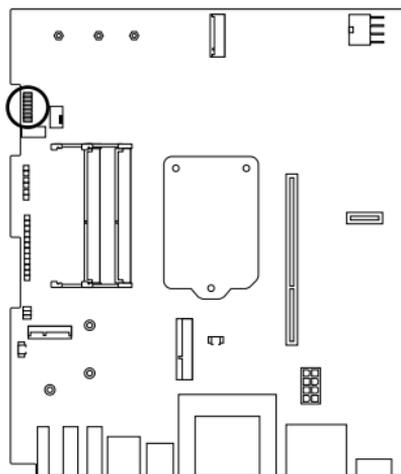
SPI_TPM

	T_SPI_HOLD#
T_SPI_MOSI	T_SPI_MISO
T_SPI_CLK	S_SPI_CS0#
GND	+3VSB_SPI
T_SPI_BIOS_WP#	NC
S_SPI_TPM_CS2#	S_PLTRST#
S_SPI_TPM_IRQ#	+VCC_SPI_TPM

PIN 1

3. **Chassis Intrusion header**

   The Chassis Intrusion header allows you to connect a intrusion sensor or microswitch for the chassis intrusion detection feature. When you remove any chassis component, the sensor or microswitch triggers and sends a high level signal and records a chassis intrusion event.

   INTRUDER

   Chassis Intruder - Close
   (Default)

   Chassis Intruder - Open
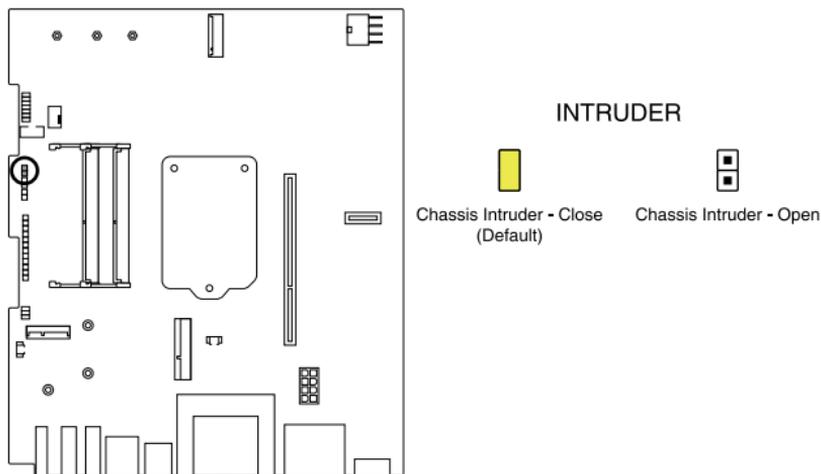
   NOTE: The default setting for this jumper is set to Chassis intruder - Close with a jumper cap attached.

4. AT / ATX power selection

The AT_ATX_SEL jumper allows you to configure between AT or ATX power mode. If the jumper is attached, ATX power mode is set, if the jumper is removed, AT power mode will be set.

AT_ATX_SEL

ATX MODE
(Default)

AT MODE
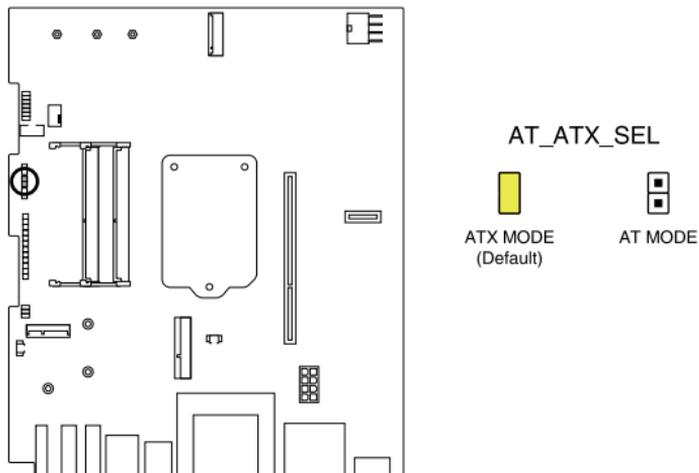
NOTE: The default setting for this jumper is set to ATX mode with a jumper cap attached.

5. **HW WDT Enable jumper**

    A watchdog timer is an electronic timer that is used to detect and recover from computer malfunctions. The HW WDT (watchdog timer) Enable jumper allows the HW watchdog resets the system automatically even when the system crashes.

WDT_EN

Enable
(Default)

Disable
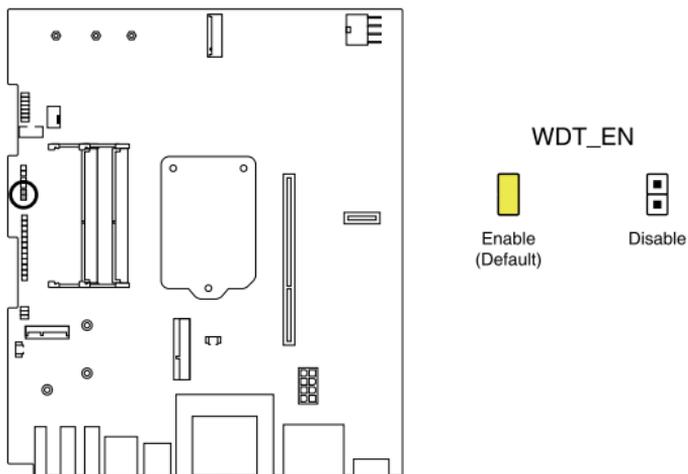
NOTE: The default setting for this jumper is set to HW WDT enabled with a jumper cap attached.

6. ME Lock jumper

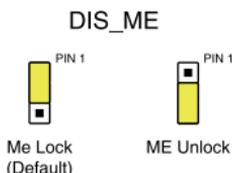This jumper is used to lock the Intel® Management Engine (IME). When the Intel® ME is locked, no changes can be made to the Intel® ME. This jumper should only be set to ME Unlock when there is an important update available from Intel®.

DIS_ME

PIN 1

Me Lock (Default)

PIN 1
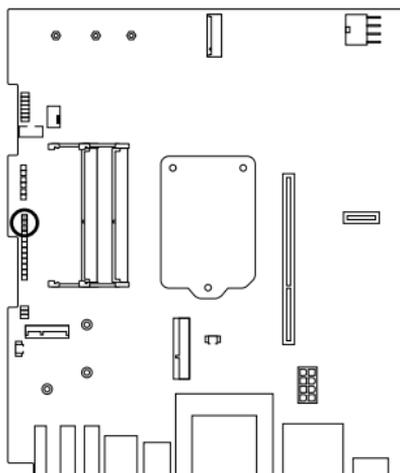
ME Unlock

IMPORTANT! Setting this jumper to ME Unlock and changing the Intel® ME without proper instructions may cause the BIOS to crash.

NOTE: The default setting for this jumper is set to Me Lock with a jumper cap attached.

7. **Mini PCIe / mSATA switch jumper**

The Mini PCIe / mSATA switch jumper allows you to set the Mini PCIe /mSATA slot to either support a Mini PCIe card or mSATA card.

MPCIE_SEL

PIN 1

PCIE mode

PIN 1
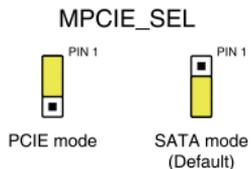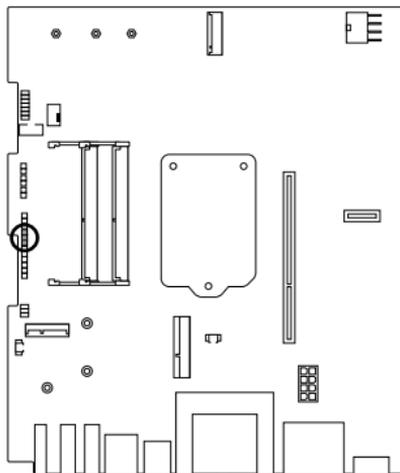
SATA mode
(Default)

NOTE: The default setting for this jumper is set to SATA mode with a jumper cap attached.

8. **CAN / COM switch jumpers**

The CAN / COM switch jumpers allows you to set COM4 to CAN bus or COM port. Both jumpers need to be set to the setting for the configuration to take effect.

CAN_COM_SEL1
CAN_COM_SEL2

PIN 1   PIN 1

COM port   CAN bus
(Default)
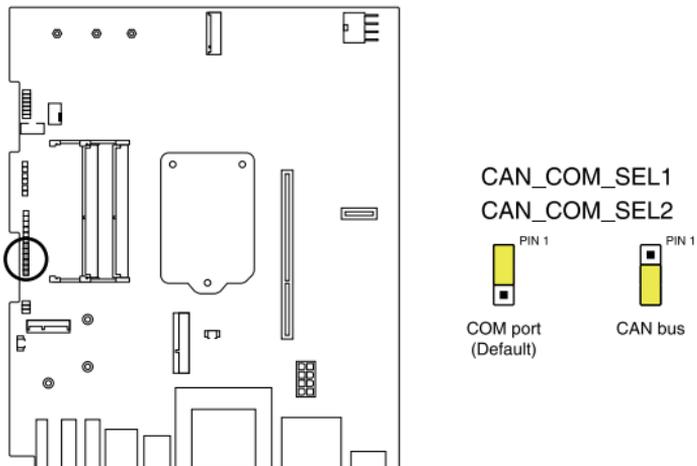
NOTE: The default setting for these jumpers are set to COM port with jumper caps attached.

9. **I2C header**

The I2C (Inter-Integrated Circuit) header allows you to connect an I2C compatible IoT security module.

I2C

PIN 1

I2C1_SCL — +3V
I2C1_SDA — NC
GND —
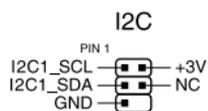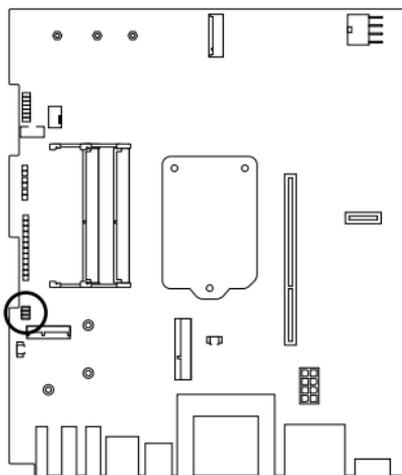
10. M.2 E-key slot

The M.2 E-key slot allows you to install an M.2 Wi-Fi module (E-key, type 2230), or M.2 A+E key TPU module.

M2(WIFI)

PIN 1

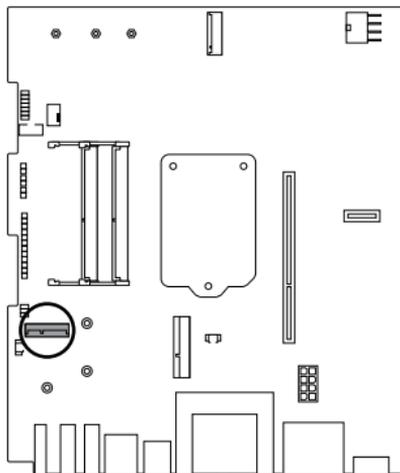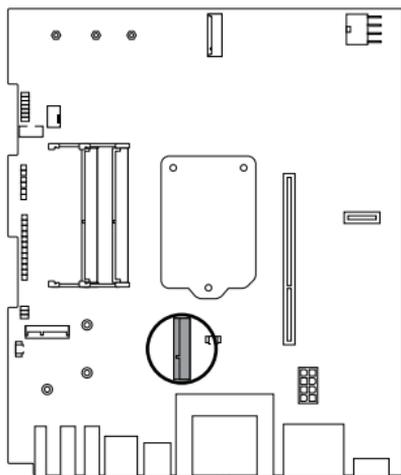| Pin	Signal	Pin	Signal
1	GND	2	+3VSB_WIFI
3	S_USB_PP11_CN	4	+3VSB_WIFI
5	S_USB_PN11_CN	6	NC
7	GND	8	M.2_BT_PCMCLK
9	CNV_WR_1_DN	10	M.2_CRF_RST#
11	CNV_WR_1_DP	12	M.2_BT_PCMIN
13	GND	14	M.2_WIFI_CLKREQ
15	CNV_WR_0_DN	16	NC
17	CNV_WR_0_DP	18	GND
19	GND	20	NC
21	CNV_WR_CLK_DN	22	CNV_BRI_RSP_R
23	CNV_WR_CLK_DP	24	Key
25	Key	26	Key
27	Key	28	Key
29	Key	30	Key
31	Key	32	CNV_RGI_DT_R
33	GND	34	CNV_RGI_RSP_R
35	S_WIFI_TXP_C	36	CNV_BRI_DT_R
37	S_WIFI_TXN_C	38	CL_RST#
39	GND	40	CL_DATA
41	S_WIFI_RXP	42	CL_CK
43	S_WIFI_RXN	44	CNVI_GNSS_R
45	GND	46	MFUART2_TXD_R
47	CK_WIFI_CLKP	48	MFUART2_RXD_R
49	CK_WIFI_CLKN	50	S_SUSCLK_R
51	GND	52	S_PLTRST#
53	CK_REQ_M2_WLAN#_R	54	S_BT_DISABLE_N
55	X_WAKE#_WIFI	56	S_WIFI_DISABLE_N
57	GND	58	NC
59	CNV_WT_1_DN	60	NC
61	CNV_WT_1_DP	62	NC
63	GND	64	CNV_CLKIN_XTAL_R
65	CNV_WT_0_DN	66	NC
67	CNV_WT_0_DP	68	NC
69	GND	70	NC
71	CNV_WT_CLK_DN	72	+3VSB_WIFI
73	CNV_WT_CLK_DP	74	+3VSB_WIFI
75	GND		

11. Mini PCIe / mSATA slot

The Mini PCIe / mSATA slot allows you to install an LTE mPCIe module, mPCIe Coral TPU module or mSATA storage module. This slot can only support either Mini PCIe or mSATA, this can be adjusted with the Mini PCIe / mSATA switch jumper.

MPCIE

PIN 1
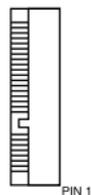
Pin	Signal	Pin	Signal
1	WAKE#_mPCIe	2	+3VSB_mPCIe
3	NC	4	GND
5	NC	6	+1.5V
7	CLKREQ#_WWAN	8	SIM_VCC
9	GND	10	SIM_IO
11	CK_PCIE_WWAN#_R	12	SIM_CLK
13	CK_PCIE_WWAN_R	14	SIM_RST
15	GND	16	NC
17	NC	18	GND
19	NC	20	S_mPCIe_W_DISABLE_N
21	GND	22	mPCIE_RST#_R
23	S_WWAN_RXP_R	24	+3VSB_mPCIe
25	S_WWAN_RXN_R	26	GND
27	GND	28	+1.5V
29	GND	30	NC
31	S_WWAN_TXN_C	32	NC
33	S_WWAN_TXP_C	34	GND
35	GND	36	S_USB_PN9_CN
37	GND	38	S_USB_PP9_CN
39	+3VSB_mPCIe	40	GND
41	+3VSB_mPCIe	42	NC
43	GND	44	NC
45	NC	46	NC
47	NC	48	+1.5V
49	NC	50	PCH_MPCIE1/PRESENT#
51	NC	52	+3VSB_mPCIe
53	GND	54	GND

12. Remote Power Button connector

The External Power Button connector allows you to attach the External power button terminal block to connect to an external power button.

EATX_PWRBTN

PIN 1
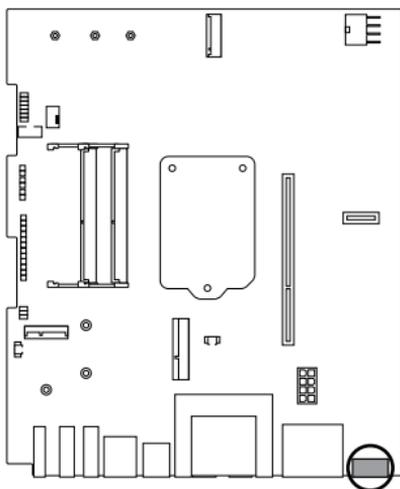
GND
EXT_PWRBTN#

2
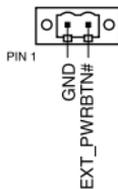
Using your Edge Computer

2.1 Getting started

2.1.1 (optional) Connect the AC power adapter to your Edge Computer

If your Edge computer package comes bundled with a power adapter, you may follow the steps below to set up your Edge computer using the power adapter.

NOTE: This section depends on the availability of the power adapter. The power adapter is optional and may not come bundled.

A. Connect the power cord to the AC power adapter.

B. Connect the power terminal block to power jack adapter to the AC adapter.

C. Connect the power terminal block to power jack adapter to your Edge Computer's power (DC) input, then secure it with the two screws on the power terminal block to power jack adapter cable.

D. Plug the AC power adapter into a 100V~240V power source.
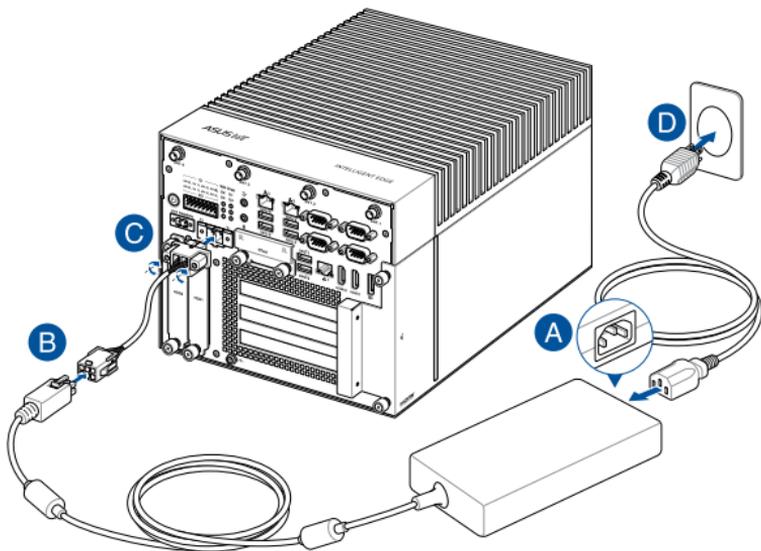
IMPORTANT!

- We strongly recommend that you use only the AC power adapter and cable that came with your Edge Computer.
- We strongly recommend that you use a grounded wall socket while using your Edge Computer.
- The socket outlet must be easily accessible and near your Edge Computer.
- To disconnect your Edge Computer from its main power supply, unplug your Edge Computer from the power socket.

NOTE:

- Please refer to the following for more information on the adapter:
  330W Power adapter
  - Input voltage: 100-240 Vac
  - Input frequency: 50-60 Hz
  - Rating output current: 13.75A (65.0 W)
  - Rating output voltage: 24.0V

- If you are using another power supply, ensure to use a 9Vdc-36Vdc, 36.66A-9.16A power supply.

2.1.2 Connect a display panel to your Edge Computer

You can connect a display panel or projector to your Edge Computer that has the following connectors:

• HDMI™ connector

• DisplayPort connector

To connect a display panel to your Edge Computer:

Connect one end of an HDMI™ cable to an external display, and the other end of the cable to your Edge Computer's HDMI™ port.

Connect display via HDMI™ port

Connect display via DisplayPort
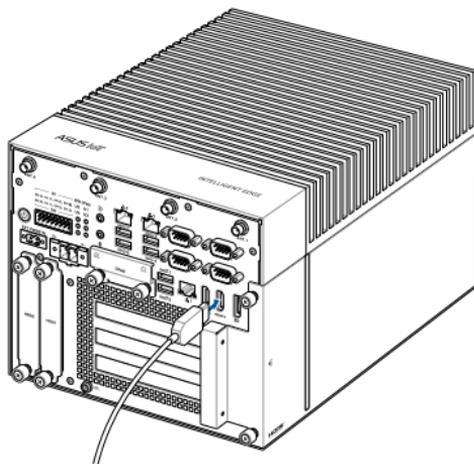
2.1.3 Connect the USB cable from keyboard or mouse

You can connect generally any USB keyboard and mouse to your Edge Computer. You can also connect a USB dongle for a wireless keyboard and mouse set.

To connect a keyboard and mouse to your Edge Computer:

Connect the USB cable from your keyboard and mouse to any of the USB ports of your Edge Computer.

NOTE:

- The keyboard varies with country or region.
- The keyboard and mouse are purchased separately.
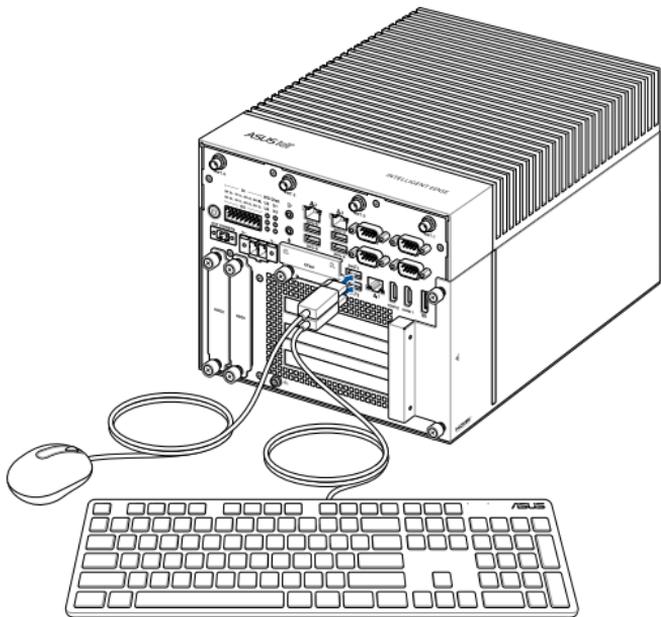
2.2   Installing the desk mount

You can install your Edge Computer to a suitable surface using the desk mounts.

Align the desk mount with the screw holes on the bottom of the Edge Computer, then secure the desk mount to your Edge Computer using the bundled screws.

IMPORTANT! When installing the Edge Computer into a cabinet or on the ground, we strongly recommend installing your Edge Computer so that the Edge Computer sits upright with the top of the Edge Computer facing upwards to allow for efficient heat dissipation.

Desk Mount Screw

7.7 mm

6.0 mm

Length: 6.0 mm
Diameter: 7.7 mm
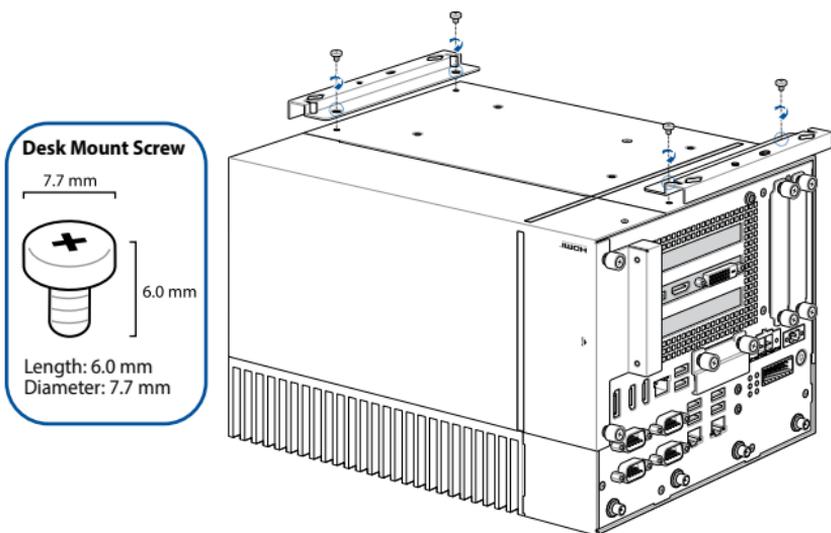
2.3   Turning your Edge Computer off

If your Edge Computer is unresponsive, press and hold the power button for at least four (4) seconds until your Edge Computer turns off.

2.4   Putting your Edge Computer to sleep

To put your Edge Computer on Sleep mode, press the Power button once.

Upgrading your Edge Computer

IMPORTANT!

- Ensure that your hands are dry before proceeding with the rest of the installation process. Before installing any of the features in this guide, use a grounded wrist strap or touch a safely grounded object or metal object to avoid damaging them due to static electricity.

- Turn off the power of your Edge Computer, and allow it to cool for at least 10 minutes before performing any installation/ uninstallation process.

NOTE: The illustrations in this section are for reference only. The slots may vary depending on model.

3.1   Removing the side cover

1. Turn off your Edge Computer then disconnect all cables and peripherals, then place the Edge Computer on a flat stable surface, with its top side facing down.

2. Remove the screw from the bottom of the Edge Computer.

3. Loosen the two (2) thumbscrews on the rear of the Edge Computer securing the side cover.
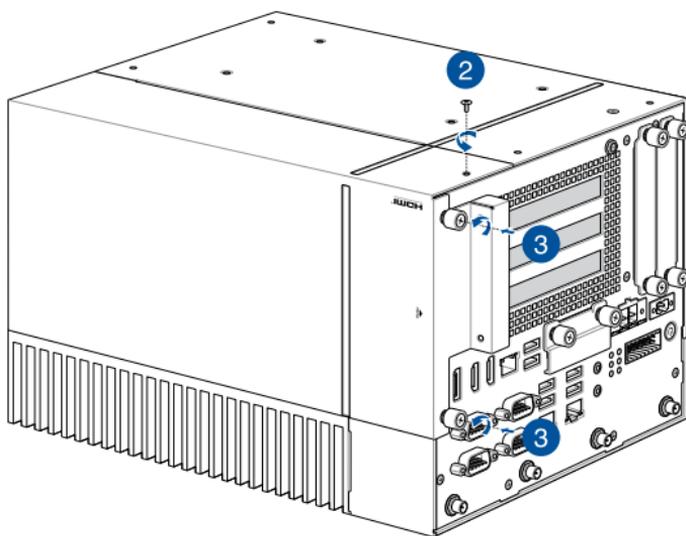
4. Push the side cover towards the rear of the Edge Computer (A), then remove the side cover (B).
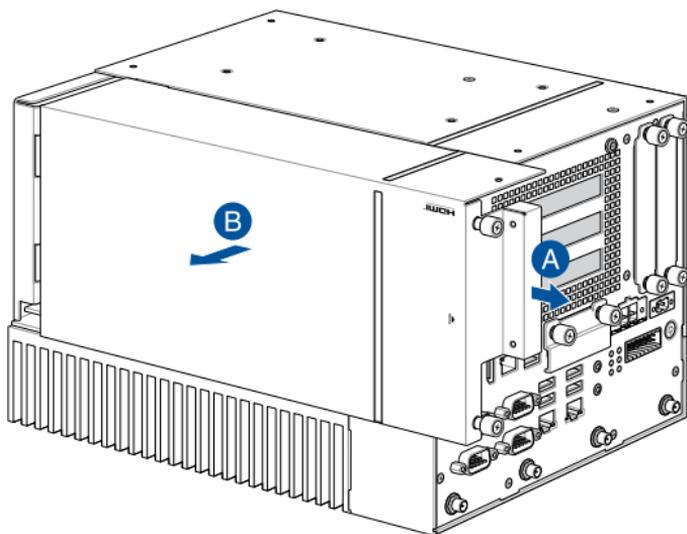
3.2   Replacing the side cover

1.   Align the side cover with the latch holes on the chassis (A), then replace
     the side cover (B) and push it towards the front of the Edge Computer
     (C).
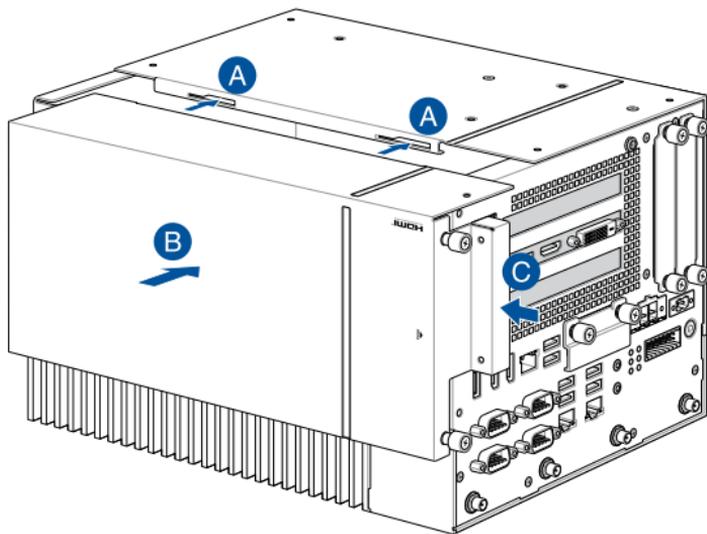
2. Secure the side cover with the two (2) thumbscrews on the rear of the Edge Computer (A), and the screw removed previously on the bottom of the Edge Computer (B).
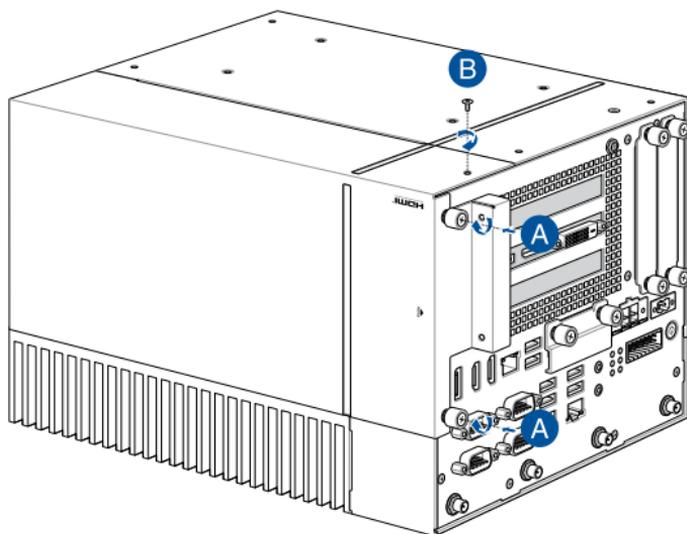
3.3 Installing memory modules

Your Edge Computer comes with a SO-DIMM memory slot that allow you to install two (2) DDR4 SO-DIMMs, ECC*, with a maximum of 64GB.

NOTE: ECC only available when using Xeon CPU.

Align and insert the memory module into the slot (A) and press it down (B) until it is securely seated in place.
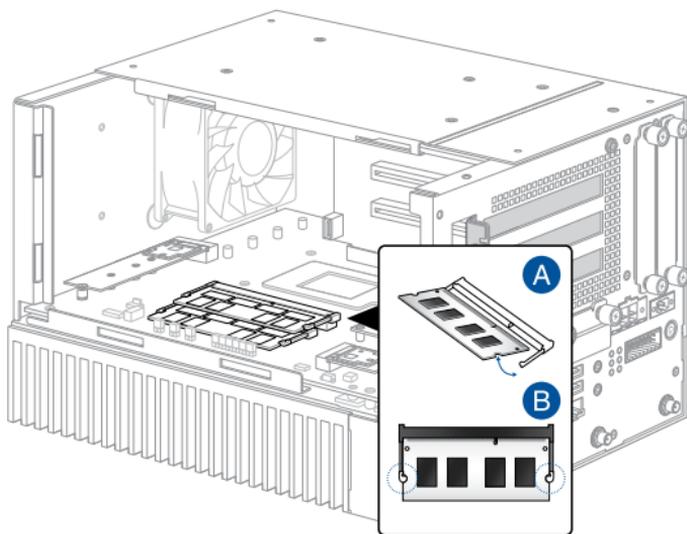
3.4 Installing an mPCIe / mSATA module

Your Edge Computer comes with a mini PCIe / mini SATA slot that allow you to install an LTE mPCIe module, mPCIe Coral TPU module or mSATA storage module.

To install an LTE mPCIe module:

1. Align and insert the LTE mPCIe module into the slot, press it down and secure it in place using two (2) screws.

2. Connect the antennas to your LTE mPCIe module.
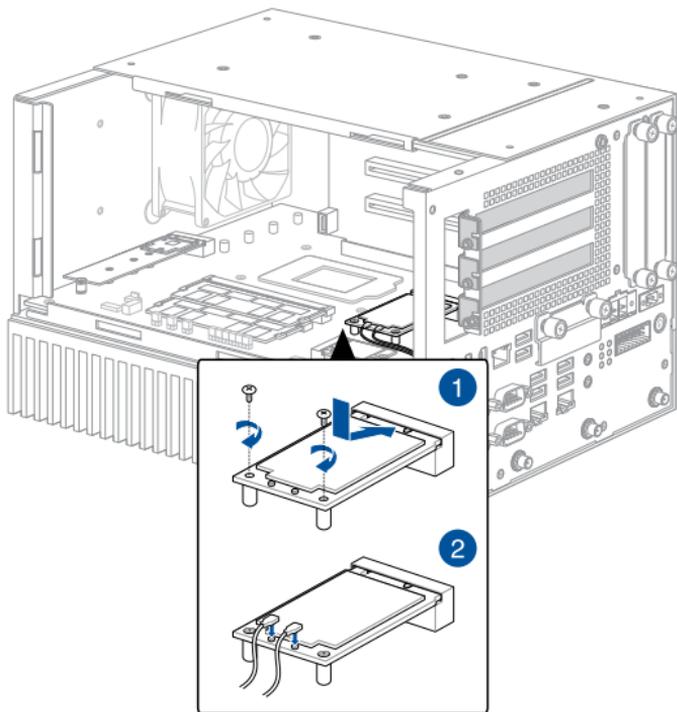
To install an mPCIe TPU module:

Align and insert the mPCIe TPU module into the slot, press it down and secure it in place using two (2) screws.
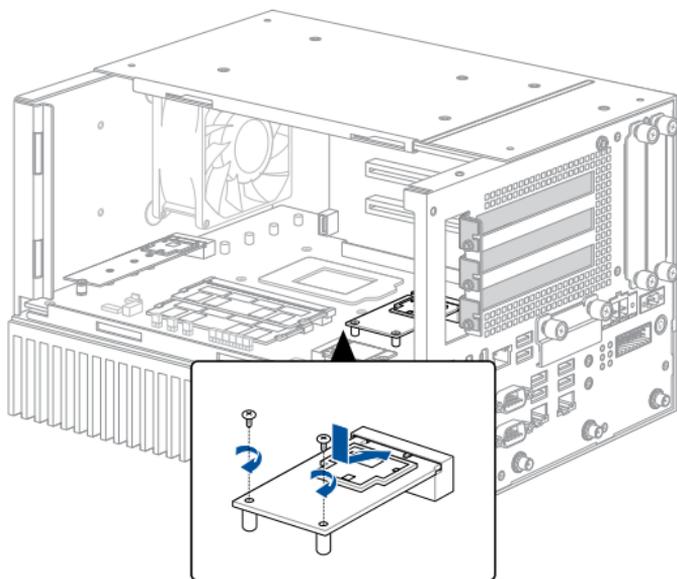
To install an mSATA storage module

Align and insert the mSATA storage module into the slot, press it down and secure it in place using two (2) screws.

3.5   Installing an M.2 E key module

Your Edge Computer comes with an M.2 (E-key) slot that allow you to install an M.2 Wi-Fi module or M.2 A+E key Coral TPU module.

To install an M.2 Wi-Fi module:

1.   Align and insert the M.2 Wi-Fi module into the slot, press it down and secure it in place using a screw.

2.   Connect the antenna to your M.2 Wi-Fi module.
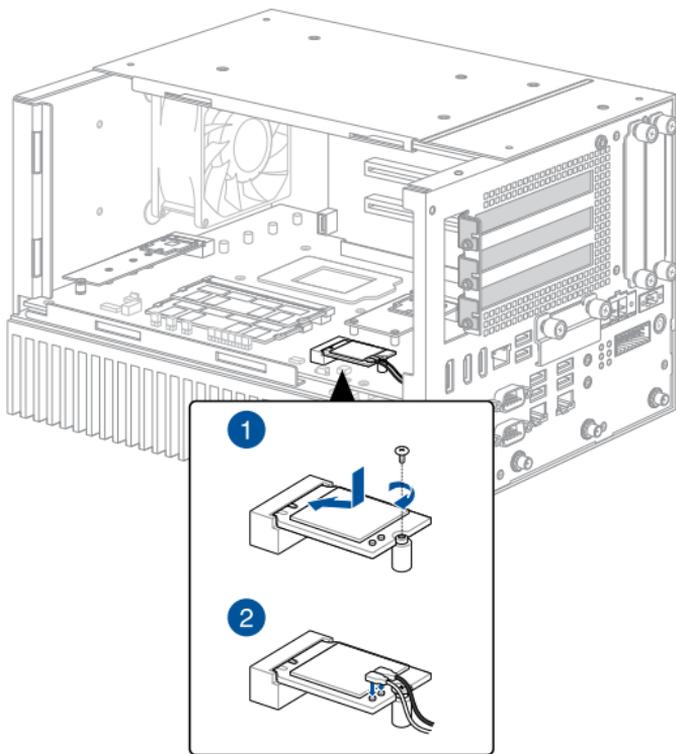
To install an M.2 A+E key TPU module:

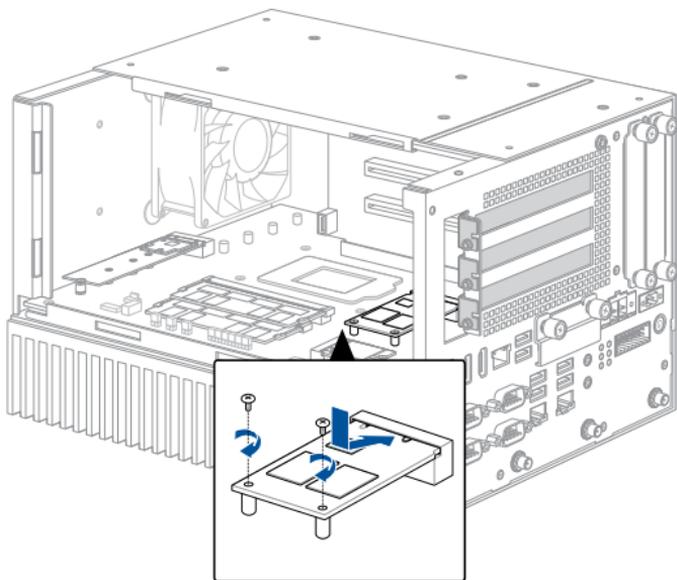Align and insert the M.2 A+E key TPU module into the slot, press it down and secure it in place using a screw.
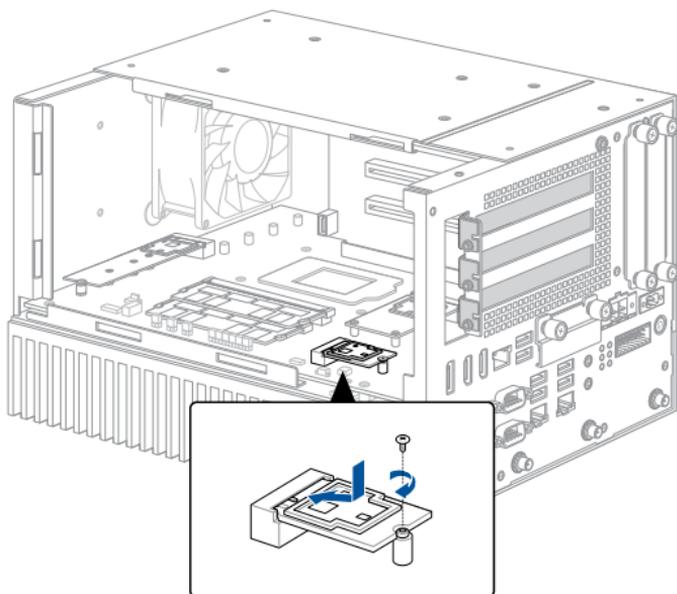
3.6   Installing an M.2 M key module

Your Edge Computer comes with an M.2 (M-key) slot that allow you to install an M.2 SSD (M-key, supports 2242/2260/2280 PCIe x4 or SATA) module or M.2 B+M key Coral TPU module.

To install an M.2 SSD module:

1. Install the stand screw to a slot which matches the length of your M.2 SSD module.

2. Align and insert the M.2 SSD into its slot inside the Edge Computer, then gently push down the M.2 SSD on top of the stand screw hole and fasten it using a screw.
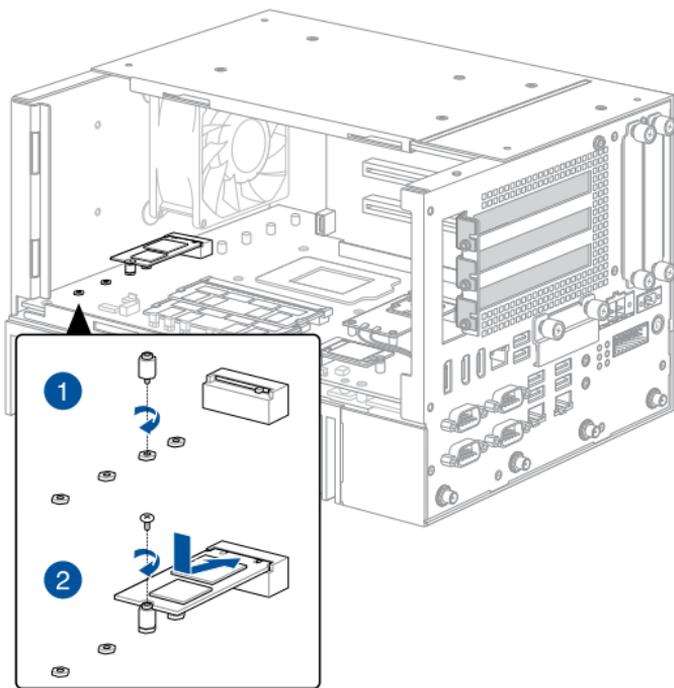
To install an M.2 B+M key TPU module:

Align and insert the M.2 B+M key TPU module into the slot, and secure it in place using a screw.
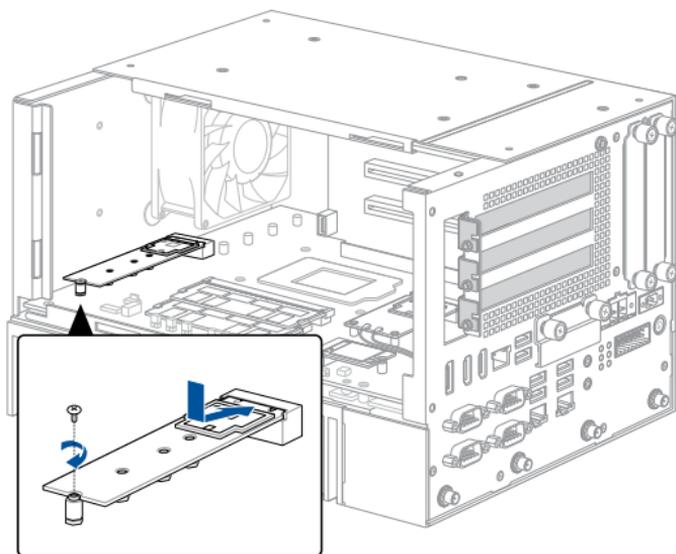
3.7   Installing a PCIe expansion card

Your Edge Computer comes with three (3) PCIe expansion slots which will auto-detect the expansion card installed and adjust bandwidth between 1 x PCIex16 + 1 x PCIex4 or 2 x PCIex8 + 1 x PCIex4.

NOTE: Supports max. length < 192mm, and max. 100W supply from mainboard for three (3) slots in total.

To install a PCIe expansion card:

1. Remove the screw securing the metal bracket of the PCIe expansion slot from the front of the Edge Computer, then remove the metal bracket.
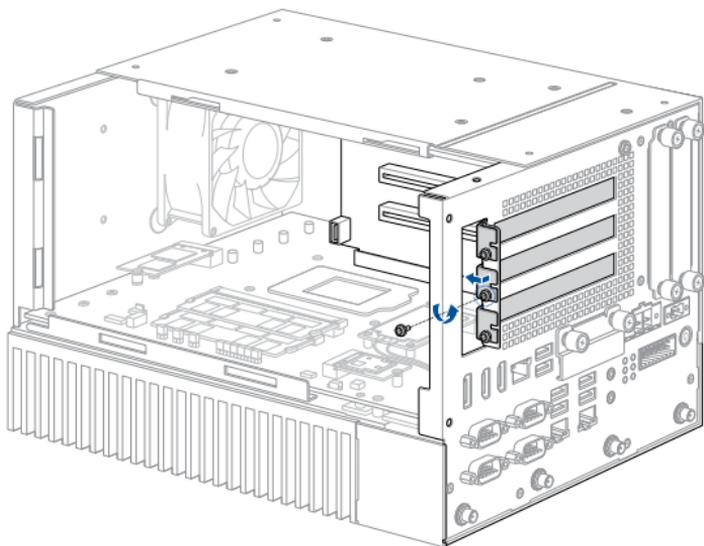
2. Insert your PCIe expansion card to an empty PCIe slot and ensure the bracket of the PCIe expansion card is properly aligned to the opening on the front of the Edge Computer.
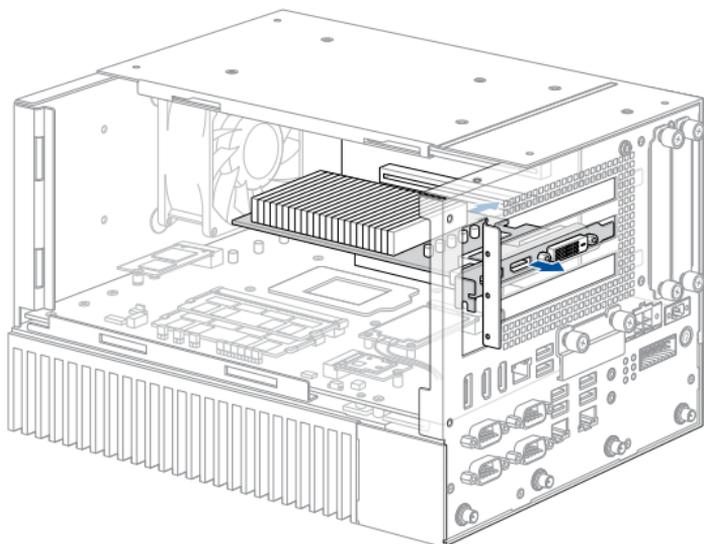
3. Secure the PCIe expansion card using the screw removed previously.
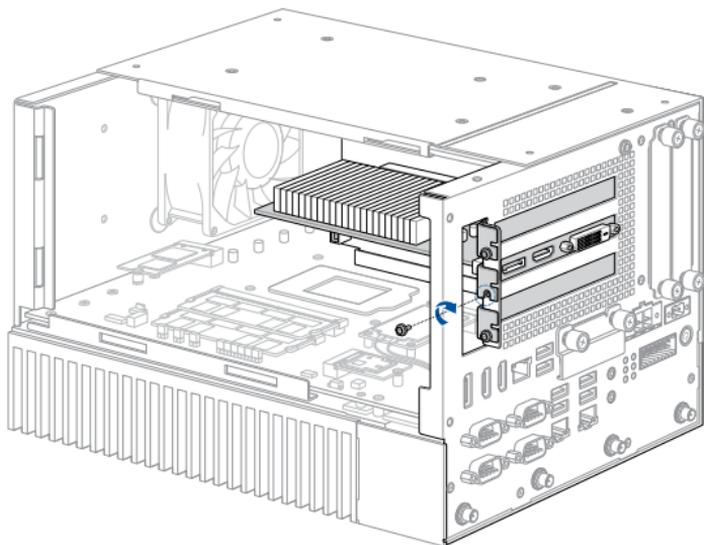
3.8 Installing a storage device

Your may install up to two (2) 2.5" storage devices (hot-swappable, 7~7.5mm) to your Edge Computer.

1. Loosen the two (2) thumbscrews of the storage device tray located on the front of your Edge Computer.

2. Pull the storage device tray out of the chassis.
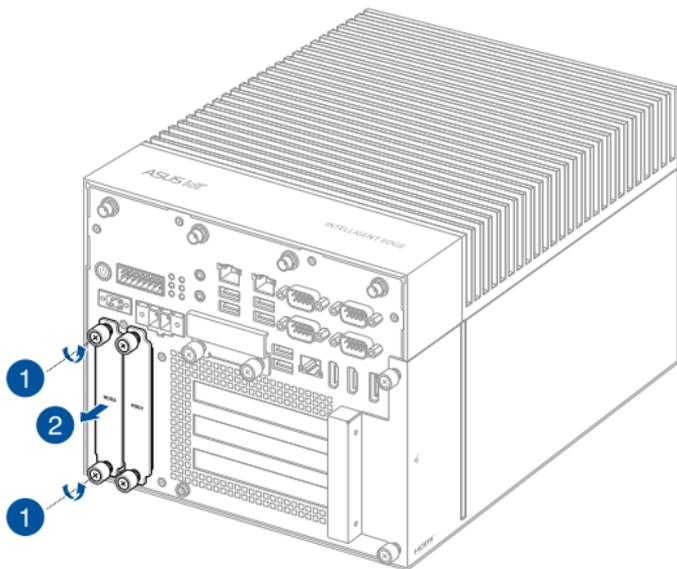
3. Install your storage device to the storage device tray, then secure it with four (4) screws.
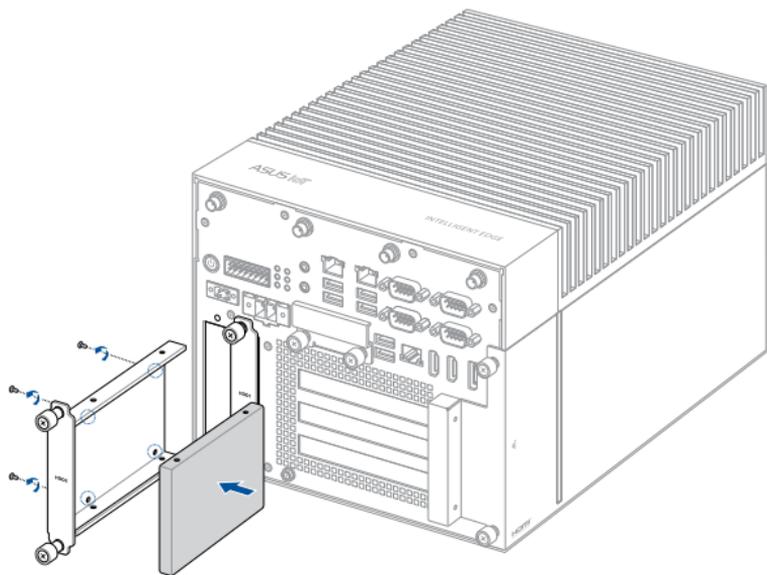
4. Replace the storage device tray. To ensure that the connector of the storage device is properly connected inserted to the HDD slot inside the Edge Computer, the thumbscrews on the storage device tray should be properly aligned to the screw holes on the front of the Edge Computer when replacing the storage device tray.

5. Push the thumbscrews down then tighten them to secure the storage device tray.
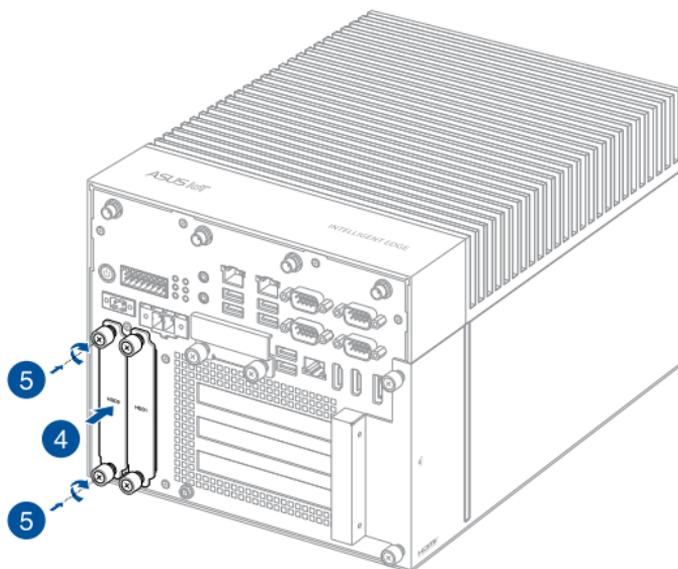
3.9   Replacing the CMOS battery

1. Loosen the two (2) thumbscrews on the metal cover of the nano SIM card / CFast card combo slot.

2. Carefully remove the metal cover.

    CAUTION! The battery is attached to the metal cover, please take caution when removing it so as not to damage the battery.
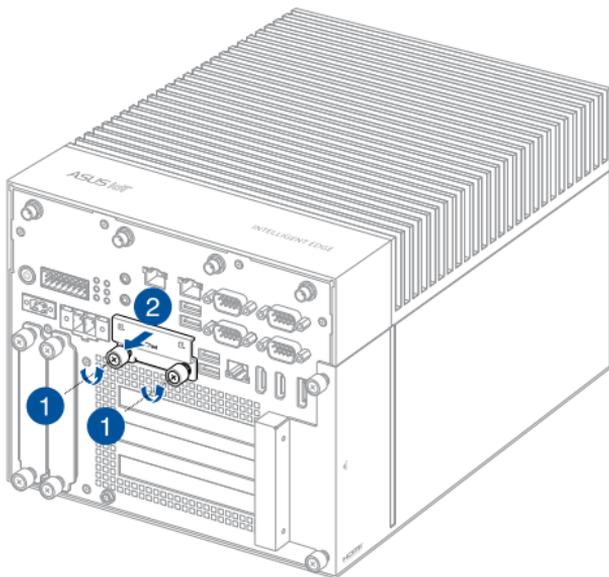
3. Carefully pull the battery cable outwards until the extension cable connector can be seen, then disconnect the battery cable from the extension cable.

4. Remove the battery from the battery compartment on the metal cover.
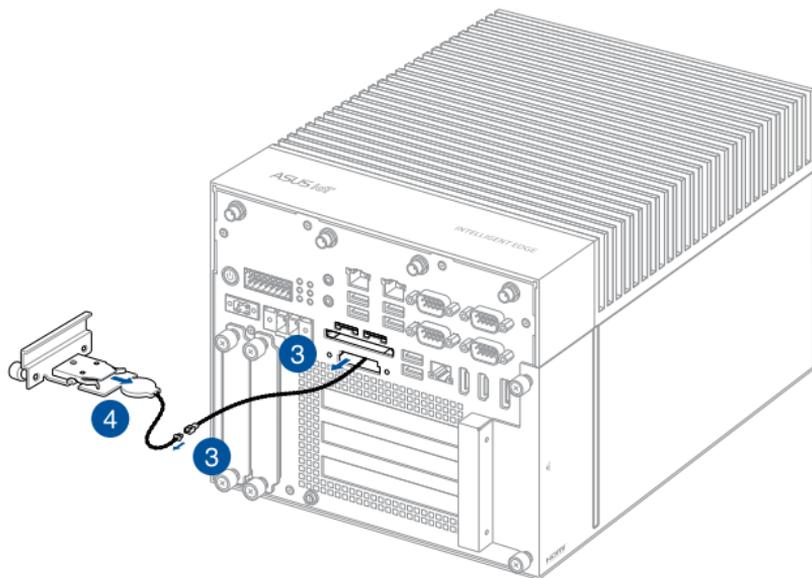
5. Push the new battery into the battery compartment.

6. Connect the battery cable to the extension cable, then slowly push the cable into the Edge Computer chassis.

    NOTE: You may remove the side cover to make it easier for you to push the extension cable into the Edge Computer chassis. For more information on removing the side cover, please refer to **Removing the side cover**.
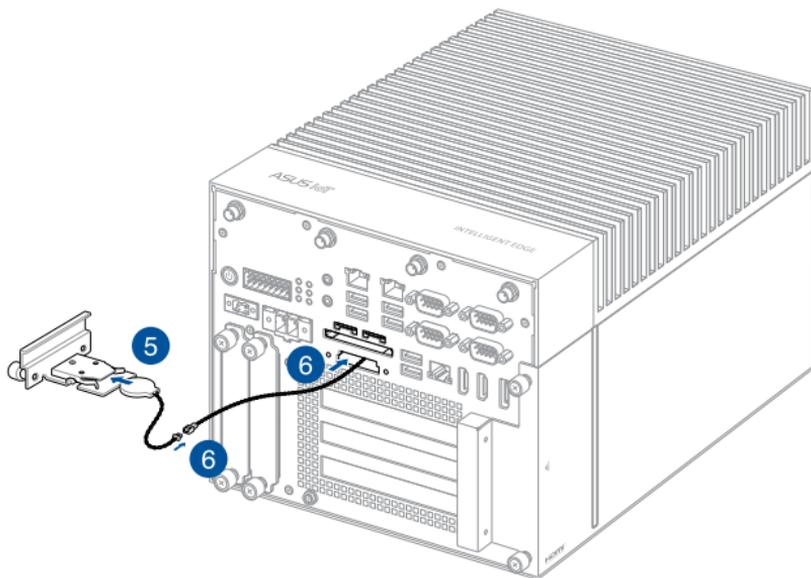
7. Carefully replace the metal cover of the nano SIM card / CFast card combo slot.

CAUTION! The battery is attached to the metal cover, please take caution when replacing it so as not to damage the battery.

8. Push down on the two (2) thumbscrews, then tighten them to secure the metal cover.
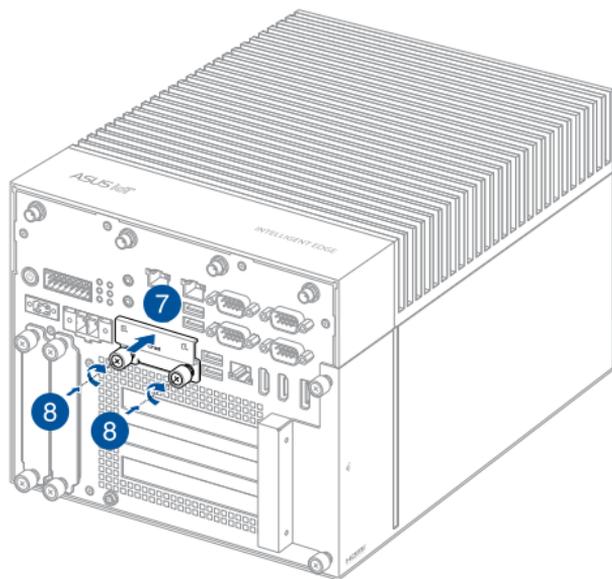
3.10 (optional) Installing a nano SIM card

> **NOTE:** The Nano SIM card is purchased separately.

Your Edge computer comes with two (2) nano SIM card slots.

1. Follow steps 1 and 2 of **Replacing the CMOS battery** to remove the metal cover of the nano SIM card / CFast card combo slot.

2. Insert your nano SIM card(s) into the nano SIM card slot(s). Ensure that the nano SIM card is pushed all the way into the nano SIM card slot.
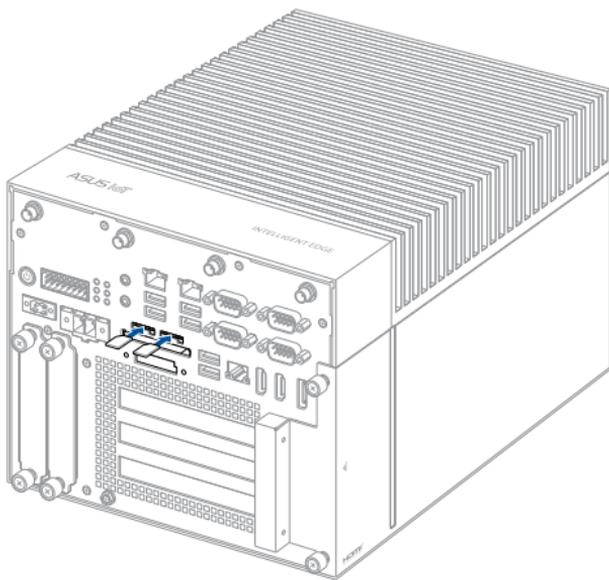
3. Follow steps 7 and 8 of **Replacing the CMOS battery** to replace the metal cover of the nano SIM card / CFast card combo slot.

3.11 Installing a CFast card

Your Edge computer comes with a Type II CFast card slot.

NOTE: We recommend using the CFast for OS storage.

1. Follow steps 1 and 2 of **Replacing the CMOS battery** to remove the metal cover of the nano SIM card / CFast card combo slot.

2. Insert your CFast card into the CFast card slot. Ensure that the CFast card is pushed all the way into the CFast card slot.
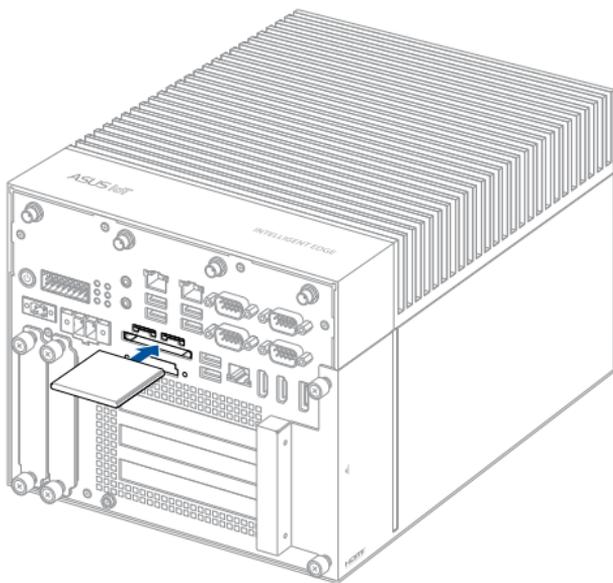
3. Follow steps 7 and 8 of **Replacing the CMOS battery** to replace the metal cover of the nano SIM card / CFast card combo slot.

Appendix

Safety information

Your Edge Computer is designed and tested to meet the latest standards of safety for information technology equipment. However, to ensure your safety, it is important that you read the following safety instructions.

Setting up your system

- Read and follow all instructions in the documentation before you operate your system.
- Do not use this product near water or a heated source.
- Set up the system on a stable surface.
- Peripherals with extended temperature tolerance (such as industrial grade DRAM, SSD, etc.) will allow this product to be used in environments with ambient temperatures between -20˚C and 60˚C.
- If you use an extension cord, make sure that the total ampere rating of the devices plugged into the extension cord does not exceed its ampere rating.
- This equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body.
- Restricted Access Location:

    The equipment should only be installed in a Restricted Access Area where both these conditions apply:

    - access can only be gained by USERS who have been instructed about the reasons for the restrictions applied to the location and about any precautions that shall be taken; and
    - access is through the use of a TOOL or lock and key, or other means of security, and is controlled by the authority responsible for the location.
- This device shall not be connected to an Ethernet network with outside plant routing.

Care during use

- Do not walk on the power cord or allow anything to rest on it.

- Do not spill water or any other liquids on your system.

- When the system is turned off, a small amount of electrical current still flows. Always unplug the power cord from the power outlets before cleaning the system.

- If you encounter the following technical problems with the product, unplug the power cord and contact a qualified service technician or your retailer.

    – The power cord or plug is damaged.

    – Liquid has been spilled into the system.

    – The system does not function properly even if you follow the operating instructions.

    – The system was dropped or the cabinet is damaged.

    – The system performance changes.

Lithium-Ion Battery Warning

CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

NO DISASSEMBLY

The warranty does not apply to the products that have been disassembled by users

DO NOT throw the Edge Computer in municipal waste. This product has been designed to enable proper reuse of parts and recycling. This symbol of the crossed out wheeled bin indicates that the product (electrical, electronic equipment, and mercury-containing button cell battery) should not be placed in municipal waste. Check local technical support services for product recycling.

Regulatory notices

COATING NOTICE

IMPORTANT! To provide electrical insulation and maintain electrical safety, a coating is applied to insulate the device except on the areas where the I/O ports are located.

Federal Communications Commission Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received including interference that may cause undesired operation.

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.

IMPORTANT! Outdoor operations in the 5.15~5.25 GHz band is prohibited. This device has no Ad-hoc capability for 5250~5350 and 5470~5725 MHz.

CAUTION! Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

RF exposure warning

This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provide with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

End Product Labeling

This transmitter module is authorized only for use in device where the antenna may be installed such that 20cm may be maintained between the antenna and users. The final end product must be labeled in a visible area with the following:

Contains FCC ID: TX2-RTL8822CE and Contains IC:6317A-RTL8822CE

ISED Radiation Exposure Statement for Canada

This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. To maintain compliance with ISED RF exposure compliance requirements, please avoid direct contact to the transmitting antenna during transmitting. End users must follow the specific operating instructions for satisfying RF exposure compliance.

Operation is subject to the following two conditions:

- This device may not cause interference and
- This device must accept any interference, including interference that may cause undesired operation of the device.

Compliance Statement of Innovation, Science and Economic Development Canada (ISED)

This device complies with Innovation, Science and Economic Development Canada licence exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

CAN ICES-003(A)/NMB-003(A)

Déclaration de conformité de Innovation, Sciences et Développement économique Canada (ISED)

Le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

CAN ICES-003(A)/NMB-003(A)

Wireless Operation Channel for Different Domains

N. America	2.412-2.462 GHz	Ch01 through CH11
Japan	2.412-2.484 GHz	Ch01 through Ch14
Europe ETSI	2.412-2.472 GHz	Ch01 through Ch13

KC: Korea Warning Statement

Class A:
사용자 안내문
이 기기는 업무용 환경에서 사용할 목적으로 적합성평가를 받은 기기로서 가정용 환경에서 사용하는 경우 전파간섭의 우려가 있습니다.

VCCI: Japan Compliance Statement

Class A ITE

この装置は、クラスA機器です。この装置を住宅環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。　　　　　　　　　　　　　**VCCI－A**

Japan RF Equipment Statement

屋外での使用について

本製品は、5GHz帯域での通信に対応しています。電波法の定めにより
5.2GHz、5.3GHz帯域の電波は屋外で使

用が禁じられています。

法律および規制遵守

本製品は電波法及びこれに基づく命令の定めるところに従い使用してください。日本国外では、その国の法律ま

たは規制により、本製品の使用ができないことがあります。このような国では、本製品を運用した結果、罰せられ

ることがありますが、当社は一切責任を負いかねますのでご了承ください。

HDMI Compliance Statement

The terms HDMI, HDMI High-Definition Multimedia Interface, and the
HDMI Logo are trademarks or registered trademarks of HDMI Licensing
Administrator, Inc.

Declaration of compliance for product environmental regulation

ASUS follows the green design concept to design and manufacture our products, and makes sure that each stage of the product life cycle of ASUS product is in line with global environmental regulations. In addition, ASUS disclose the relevant information based on regulation requirements.

Please refer to http://csr.asus.com/Compliance.htm for information disclosure based on regulation requirements ASUS is complied with:

EU REACH and Article 33

Complying with the REACH (Registration, Evaluation, Authorization, and Restriction of Chemicals) regulatory framework, we publish the chemical substances in our products at ASUS REACH website at http://csr.asus.com/english/REACH.htm

EU RoHS

This product complies with the EU RoHS Directive. For more details, see http://csr.asus.com/english/article.aspx?id=35

Japan JIS-C-0950 Material Declarations

Information on Japan RoHS (JIS-C-0950) chemical disclosures is available on http://csr.asus.com/english/article.aspx?id=19

India RoHS

This product complies with the "India E-Waste (Management) Rules, 2016" and prohibits use of lead, mercury, hexavalent chromium, polybrominated biphenyls (PBBs) and polybrominated diphenyl ethers (PBDEs) in concentrations exceeding 0.1% by weight in homogenous materials and 0.01% by weight in homogenous materials for cadmium, except for the exemptions listed in Schedule II of the Rule.

Vietnam RoHS

ASUS products sold in Vietnam, on or after September 23, 2011,meet the requirements of the Vietnam Circular 30/2011/TT-BCT.

Các sản phẩm ASUS bán tại Việt Nam, vào ngày 23 tháng 9 năm2011 trở về sau, đều phải đáp ứng các yêu cầu của Thông tư 30/2011/TT-BCT của Việt Nam.

Turkey RoHS

AEEE Yönetmeliğine Uygundur

ASUS Recycling/Takeback Services

ASUS recycling and takeback programs come from our commitment to the highest standards for protecting our environment. We believe in providing solutions for you to be able to responsibly recycle our products, batteries, other components as well as the packaging materials. Please go to http://csr.asus.com/english/Takeback.htm for detailed recycling information in different regions.

Ecodesign Directive

European Union announced a framework for the setting of ecodesign requirements for energy-related products (2009/125/EC). Specific Implementing Measures are aimed at improving environmental performance of specific products or across multiple product types. ASUS provides product information on the CSR website. The further information could be found at https://csr.asus.com/english/article.aspx?id=1555.

ENERGY STAR complied product

ENERGY STAR is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy helping us all save money and protect the environment through energy efficient products and practices.

All ASUS products with the ENERGY STAR logo comply with the ENERGY STAR standard, and the power management feature is enabled by default. The monitor is automatically set to sleep within 10 minutes of user inactivity; the computer is automatically set to sleep within 30 minutes of user inactivity. To wake your computer, click the mouse, press any key on the keyboard, or press the power button.

Please visit http://www.energystar.gov/powermanagement for detail information on power management and its benefits to the environment. In addition, please visit http://www.energystar.gov for detail information on the ENERGY STAR joint program.

NOTE: Energy Star is NOT supported on FreeDOS and Linux-based products.

Service and Support

Visit our multi-language website at https://www.asus.com/support/.

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Authorised representative in Europe	ASUSTeK Computer GmbH	
	Address:	Harkortstrasse 21-23, 40880 Ratingen, Germany
Authorized Representative in United Kingdom	ASUSTEK (UK) LIMITED	
	1st Floor, Sackville House, 143-149 Fenchurch Street, London, EC3M 6BL, England, United Kingdom	