PV100A Series

Embedded Computer

User Manual

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Contents

Appendix

About this manual

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

Chapter 1: Getting to know your Embedded Computer

This chapter details the hardware components of your Embedded Computer.

Chapter 2: Using your Embedded Computer

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

Chapter 3: Upgrading your Embedded 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 Embedded Computer.

Chapter 4: Booting up your Embedded Computer

This chapter tells how to boot up your Embedded Computer.

Appendix

This section includes notices and safety statements for your Embedded Computer.

Conventions used in this manual

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

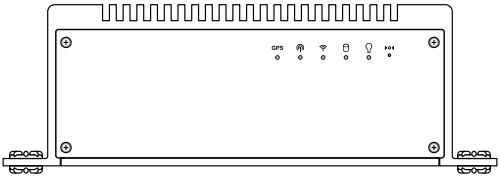
IMPORTANT! This message contains vital information that must be followed to complete a task.

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

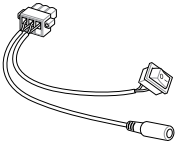
WARNING! This message contains important information that must be followed to keep you safe while performing certain tasks and prevent damage to your Embedded Computer's data and components.

Package contents

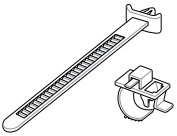
Your Embedded Computer package contains the following items:



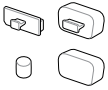
PV100A Series



Adapter cable with switch



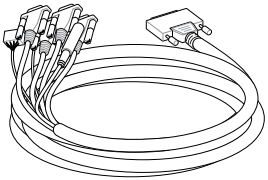
Cable mount and tie



IO port dust covers

Additional rubber shock absorbers

Optional items



High Density cable

NOTE:

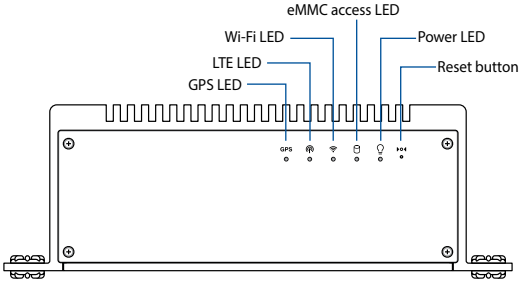
- Some bundled accessories may vary with different models.
- The device illustration is for reference only. Actual product specifications may vary with models.
- If the device or its components fail or malfunction during normal and proper use within the warranty period, bring the warranty card to the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

1

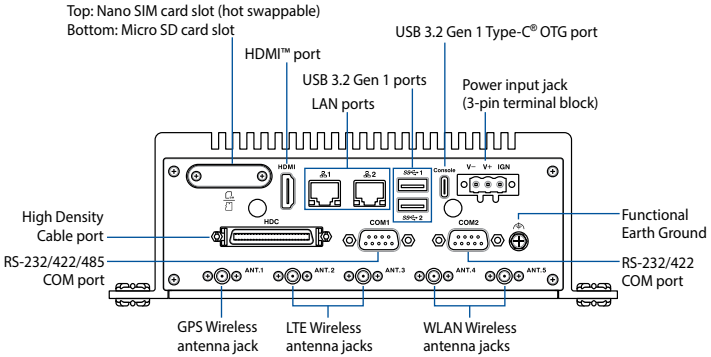
Getting to know your Embedded Computer

1.1 Features

1.1.1 Front view



1.1.2 Rear view



1.1.3 I/O ports and LEDs

GPS

GPS LED

This LED is used to indicate GPS activity.

LED color	Status	Description
Red	User defined	User defined
Green	Blink	Module is transmitting/receiving data
Off		Module is not transmitting/receiving data

LTE LED

This LED is used to indicate LTE activity.

LED color	Status	Description
Red	User defined	User defined
Green	Blink	Module is transmitting/receiving data
Off		Module is not transmitting/receiving data

Wi-Fi LED

This LED is used to indicate Wi-Fi activity.

LED color	Status	Description
Red	User defined	User defined
Green	Blink	Module is transmitting/receiving data
Off		Module is not transmitting/receiving data

eMMC access LED

This indicator lights up when your Embedded Computer is accessing the internal storage drives.

LED color	Status	Description
Green	Blink	eMMC is reading/writing data

Power LED

This LED lights up depending on the current power status of your Embedded Computer.

LED color	Status	Description
Red	On	Embedded Computer is connected to a power source
Green	On	SOC Power on

Reset button

The reset button allows you to reset the Embedded Computer.

Nano SIM card / Micro SD card combo slot

This combo slot allows you to insert a Nano SIM card to the top slot or a Micro SD 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 Micro SD card. For more information on removing and replacing the metal cover, please refer to **Installing a nano SIM card to the rear of the Embedded Computer** or **Installing an SD card**.
- The Nano SIM card slot is hot swappable.

HDMI

HDMI™ port

The integrated 19-pin HDMI™ (High Definition Multimedia Interface) port with a receptacle connector can support resolutions up to 3840 x 2160 @ 60 Hz on external display devices.

LAN port

The 8-pin RJ-45 LAN port supports a standard Ethernet cable for connection to a local network.

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, and provides a maximum of 5V/0.9A output.

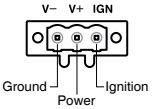
Console

USB 3.2 Gen 1 Type-C® OTG port

This USB Type-C® OTG (Universal Serial Bus) port provides a transfer rate of up to 5 Gbit/s, and provides a maximum of 5V/1.5A output. This port supports OTG mode that can be taken to replace UART debug console.

Power input jack

This power input jack allows you to connect the bundled adapter cable. Power supplied through this jack supplies power to the Embedded Computer.

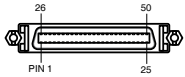


HDC

High Density Cable (HDC) port

The HDC port allows you to connect a high density cable that supports various high density interfaces. This port supports 4 x isolated DI, 4 x isolated DO, 2 x RS-232/422/485, 1 x Mic-in, 1 x Line-out, 2 x CANbus (CAN2.0 A/B, CANOpen, J1939, OBDII).

NOTE: The HDC port must be used in conjunction with an HDC cable, which is optional and may not come bundled. To purchase an HDC cable, contact your ASUS IOT sales representative.

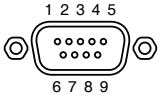


Pin	Definition	Pin	Definition
1	DI1	26	DI2
2	DI3	27	DI4
3	DI_COM	28	DI_COM
4	DIO_GND	29	DIO_GND
5	DO1	30	DO2
6	DO3	31	DO4
7	DO_PWR	32	DO_PWR
8	DIO_GND	33	DIO_GND
9	/	34	/
10	/	35	/
11	PWR_IN	36	GND
12	CAN1_H	37	CAN1_L
13	GND	38	GND
14	CAN2_H	39	CAN2_L
15	GND	40	GND
16	RS4C_DCD	41	RS4C_RXD
17	RS4C_RTS	42	RS4C_DTR
18	RS4C_TXD	43	RS4C_CTS
19	CAR_WHEELTICK_R	44	GND
20	RS4D_DCD	45	RS4D_RXD
21	RS4D_RTS	46	RS4D_DTR
22	RS4D_TXD	47	RS4D_CTS
23	CAR_FWD_R	48	GND
24	AGND	49	AGND
25	LOUT_L_CONN	50	MIC_IN_CONN

COM1

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.

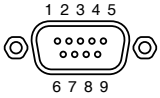


Pin	RS-232	RS-422	RS485
1	NA	TX-	D-
2	RXD	TX+	D
3	TXD	RX+	NA
4	NA	RX-	NA
5	GND	GND	GND
6	NA	NA	NA
7	RTS	NA	NA
8	CTS	NA	NA
9	NA	NA	NA

COM2

Serial (COM) connector

The 9-pin RS232/422 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.



Pin	RS-232	RS-422
1	NA	TX-
2	RXD	TX+
3	TXD	RX+
4	NA	RX-
5	GND	GND
6	NA	NA
7	NA	NA
8	NA	NA
9	RI	NA

Functional Earth Ground

The Functional Earth Ground provides you with a grounding point.

ANT.1

GPS Wireless antenna jack

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

NOTE: The GPS wireless antenna is optional and may not come bundled.

ANT.2
ANT.3

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.4
ANT.5

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.

2

Using your Embedded Computer

2.1 Getting started

2.1.1 (optional) Connect the AC power adapter

If your Embedded Computer package comes bundled with a power adapter, you may follow the steps below to set up your Embedded 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.
- Recommended wire diameter: 12-24AWG

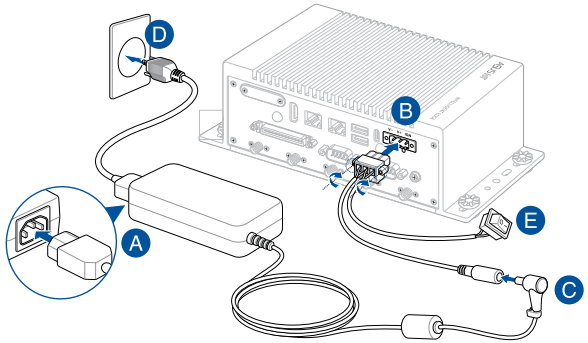
A. Connect the power cord to the AC power adapter.

B. Connect the adapter cable to your Embedded Computer's power input jack, then secure it with the two screws on the adapter cable.

C. Connect the power adapter to the adapter cable.

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

E. Toggle the power switch on the adapter cable to On.



IMPORTANT!

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

NOTE:

- Please refer to the following for more information on the adapter:
  65W Power adapter
  - Input voltage: 100-240 Vac
  - Input frequency: 50-60 Hz
  - Rating output current: 5.417A (65.0 W)
  - Rating output voltage: 12.0V
- If you are using another power supply, ensure to use a 9Vdc-36Vdc, 7.22A-1.8A power supply.

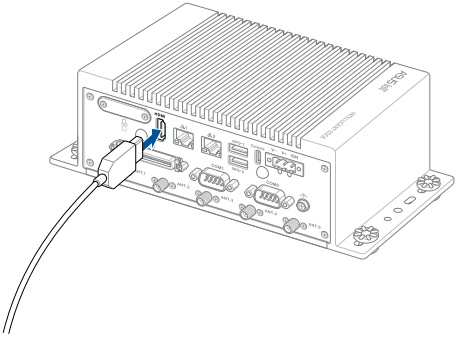
2.1.2 Connect a display panel to your Embedded Computer

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

- HDMI connector

To connect a display panel to your Embedded Computer:

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



2.1.3 Connect the USB cable from keyboard or mouse

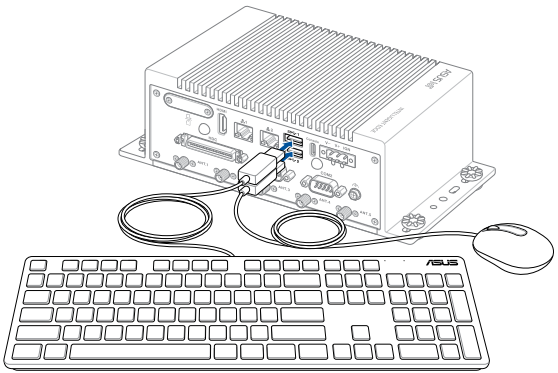
You can connect generally any USB keyboard and mouse to your Embedded Computer. You can also connect a USB dongle for a wireless keyboard and mouse set.

To connect a keyboard and mouse to your Embedded Computer:

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

NOTE:

- The keyboard varies with country or region.
- The keyboard and mouse are purchased separately.

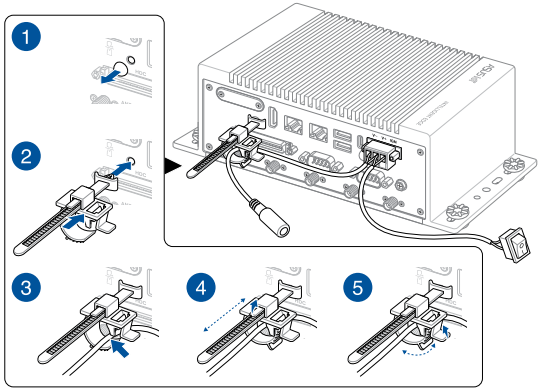


2.1.4 Install the cable tie and mount

You can install the bundled cable tie and mount which may be used to organize your cables.

To install the cable tie and mount to your Embedded Computer:

1. Remove the two (2) rubber plugs from the holes reserved for the cable tie and mount from your Embedded Computer.
2. Insert the cable tie into the cable mount, then install the cable tie and mount to your Embedded Computer.
3. You can organize the cables using the cable mount.
4. You can adjust the position of the cable mount by lifting the tab securing the mount to the tie upwards then sliding the cable mount along the cable tie while the tab is lifted. When you have adjusted the cable mount to a preferred position, let go of the tab.
5. You can adjust the tightness of the cable mount cable holder by lifting the tab and tightening or loosening the cable mount cable holder.



2.2 Installing your Embedded Computer with the wall mount

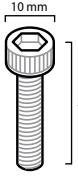
You can install your Embedded Computer to a suitable surface using the wall mounts.

Insert four (4) screws into the rubber shock absorbers on the Embedded Computer, then securing the Embedded Computer onto your selected surface using the four (4) screws.

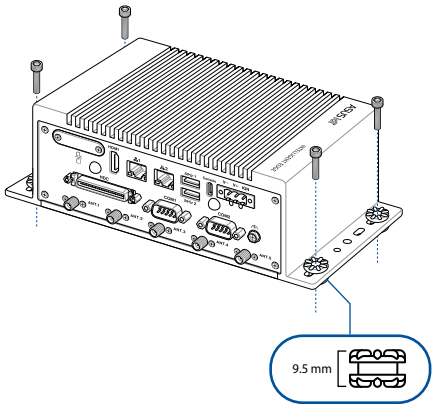
IMPORTANT! We strongly recommend installing your Embedded Computer so that the Embedded Computer sits upright with the top of the Embedded Computer facing upwards to allow for efficient heat dissipation.

Recommended Wall Mount Screw and dimension:

M5 screw



Length: ≥ 20 mm
Diameter: ≥ 10 mm



2.3 Configuring the Boot mode

You may configure the boot mode of your Embedded Computer using the boot mode switch. The Boot Mode switch allows you to configure between different boot modes and the location to boot from.

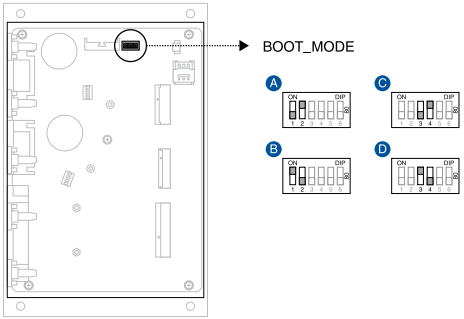
To configure the boot mode switch:

1. Remove the bottom cover.

   NOTE: For more information on removing the cover, please refer to the **Removing the bottom cover** section in this manual.

2. Locate the boot mode switch on the bottom of the Embedded Computer, then configure the boot mode switch to a boot mode listed in the table below.

   NOTE: Switches 5 and 6 on the boot mode switch are reserved.



Boot Mode			Boot type
	1	2	
A	OFF	ON	Serial Downloader
B	ON	OFF	Internal Boot (default)

Boot Mode			Boot type
	3	4	
C	OFF	ON	eMMC (default)
D	ON	OFF	SD

2.4 Turning your Embedded Computer off

If your Embedded Computer is unresponsive, disconnect the power from the Embedded Computer to turn it off.

3

Upgrading your Embedded Computer

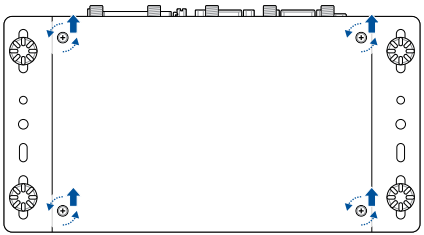
IMPORTANT!

- 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 Embedded 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.

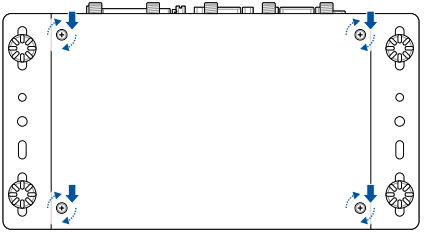
3.1 Removing the bottom cover

1. Turn off your Embedded Computer then disconnect all cables and peripherals, then place the Embedded Computer on a flat stable surface, with its top side facing down.
2. Remove the four (4) screws securing the bottom cover and place it aside.



3.2 Replacing the bottom cover

1. Align the bottom cover with the screw holes and two notch holes, then replace the bottom cover onto the Embedded Computer.
2. Secure the bottom cover using the four (4) screws removed previously.

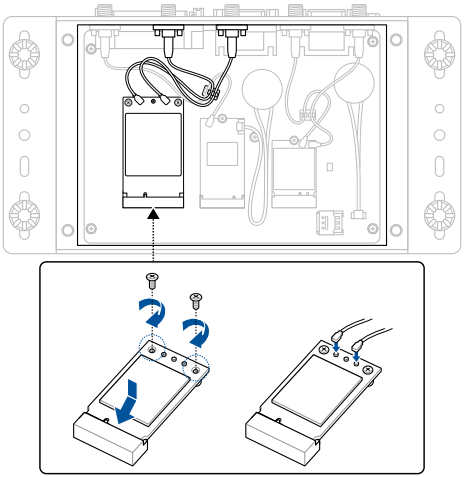


3.3 Installing an LTE Mini PCIe card

Your Embedded Computer comes with a Mini PCIe slot that allow you to install an LTE Mini PCIe card.

WARNING! RF modules are intended for OEM or host integrators only. For availability of system level RF certification, check with your OEM integrator.

1. (optional) If a thermal pad is present on your LTE Mini PCIe card, ensure to remove the plastic film before installing the LTE Mini PCIe card if it is not already removed.
2. Align and insert the LTE Mini PCIe card into the slot and press it down and secure it in place using two (2) screws.
3. Connect the antennas to your LTE Mini PCIe card.

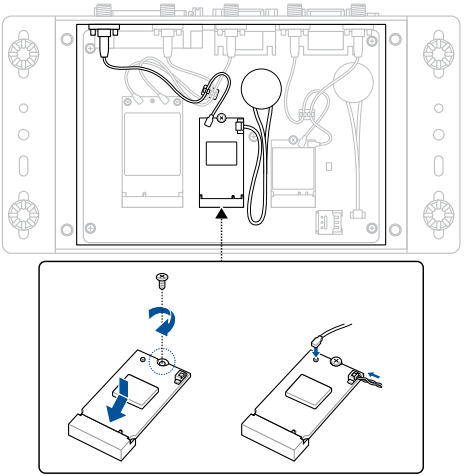


3.4 Installing an M.2 GPS module

Your Embedded Computer comes with a M.2 (B-key) slot that allow you to install an M.2 GPS module.

WARNING! RF modules are intended for OEM or host integrators only. For availability of system level RF certification, check with your OEM integrator.

1. (optional) If a thermal pad is present on your M.2 GPS module, ensure to remove the plastic film before installing the M.2 GPS module if it is not already removed.
2. Align and insert the M.2 GPS module into the slot and press it down and secure it in place using a screw.
3. Connect the antenna to your M.2 GPS.

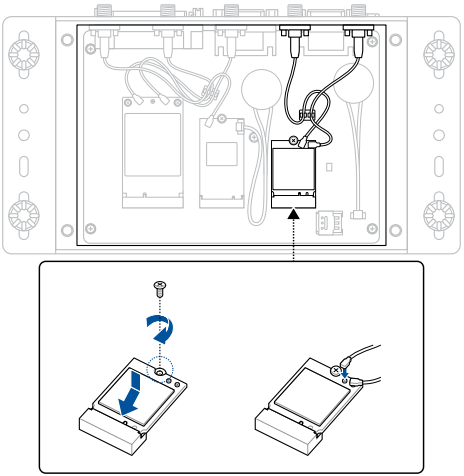


3.5 Installing a Wi-Fi module

Your Embedded Computer comes with an M.2 (E-key) slot that allows you to install an M.2 Wi-Fi module.

WARNING! RF modules are intended for OEM or host integrators only. For availability of system level RF certification, check with your OEM integrator.

1. (optional) If a thermal pad is present on your M.2 Wi-Fi module, ensure to remove the plastic film before installing the M.2 Wi-Fi module if it is not already removed.
2. Align and insert the M.2 Wi-Fi module into the slot and press it down and secure it in place using a screw.
3. Connect the antennas to your M.2 Wi-Fi.

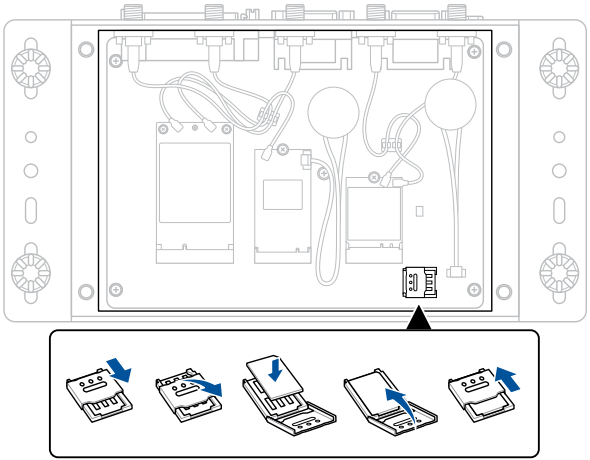


3.6 Installing a nano SIM card

Your Embedded Computer comes with two (2) nano SIM card slots, one inside the chassis, and one located in the rear of the Embedded Computer.

3.6.1 Installing a nano SIM card inside the chassis

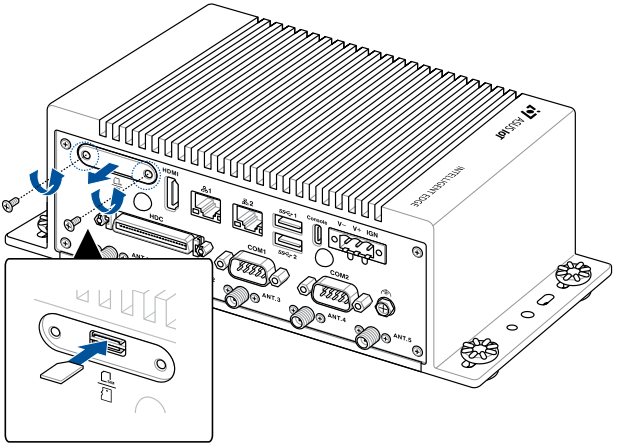
1. Place the Embedded Computer so that the rear of the Embedded Computer faces away from you.
2. Push the nano SIM cover towards the right of your Embedded Computer.
3. Lift the nano SIM cover.
4. Place the nano SIM into the nano SIM slot.
5. Replace the nano SIM cover.
6. Push the nano SIM cover towards the left of your Embedded Computer to secure the nano SIM card.



3.6.2 Installing a nano SIM card to the rear of the Embedded Computer

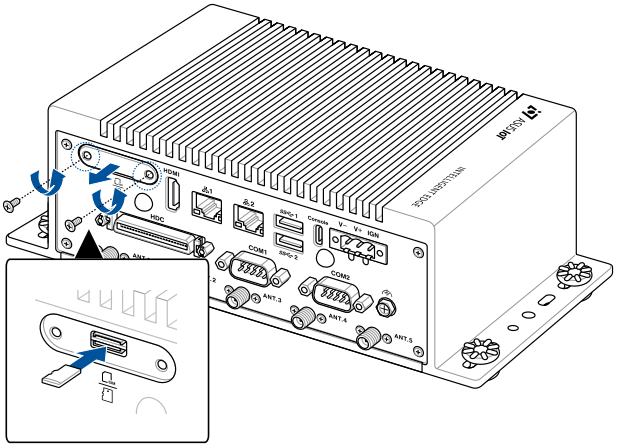
NOTE: This Nano SIM card slot is hot swappable.

1. Remove the two (2) screws securing the Nano SIM card / Micro SD card combo slot cover, then remove the cover.
2. Insert the nano SIM card to the top slot of the Nano SIM card / Micro SD card combo slot.
3. Replace the Nano SIM card / Micro SD card combo slot cover and secure it with the screws removed previously.



3.7 Installing an SD card

1. Remove the two (2) screws securing the Nano SIM card / Micro SD card combo slot cover, then remove the cover.
2. Insert the SD card to the bottom slot of the Nano SIM card / Micro SD card combo slot.
3. Replace the Nano SIM card / Micro SD card combo slot cover and secure it with the screws removed previously.



Appendix

Safety information

Your Embedded 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 will allow this product to be used in environments with ambient temperatures between -20˚C and 60˚C.
- The product should be used in environments with an ambient temperature of 35˚C when using the 65W adapter.
- 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.
- For your safety, only connect this device to a properly grounded electrical outlet.
- This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.
- Restricted Access Area:

  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 area 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.
- Please use this product with care when operating this product at full load, as the product may reach temperatures of up to 60˚C and the outer casing may reach temperatures of up to 72˚C
- 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 Embedded 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.

WARNING! Any changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

FCC RF Exposure Information

This device meets the government's requirements for exposure to radio waves. This device is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S. Government. The exposure standard employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6 W/kg. Tests for SAR are conducted using standard operating positions accepted by the FCC with the EUT transmitting at the specified power level in different channels. The FCC has granted an Equipment Authorization for this device with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this device is on file with the FCC and can be found under the Display Grant section of www.fcc.gov/oet/ea/fccid.

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 ー 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。

Japan JATE

本製品は電気通信事業者（移動通信会社、固定通信会社、インターネットプロバイダ等）の通信回線（公衆無線LANを含む）に直接接続することができません。本製品をインターネットに接続する場合は、必ずルーター等を経由し接続してください。

RF Module Warning Statement

RF modules are intended for OEM or host integrators only. For availability of system level RF certification, check with your OEM integrator.

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 https://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 https://csr.asus.com/english/REACH.htm

EU RoHS

This product complies with the EU RoHS Directive. For more details, see https://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 https://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.

Türkiye 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 https://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® Qualified 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 https://www.energystar.gov/powermanagement for detailed information on power management and its benefits to the environment. In addition, please visit https://www.energystar.gov for detailed information on the ENERGY STAR® joint program.

NOTE: ENERGY STAR® is NOT supported on FreeDOS and Linux-based products.

UK: The Radio Equipment Regulations 2017 (S.I. 2017/1206)

Simplified UKCA Declaration of Conformity

ASUSTek Computer Inc. hereby declares that this device is in compliance with the essential requirements and other relevant provisions of The Radio Equipment Regulations 2017 (S.I. 2017/1206). Full text of UKCA declaration of conformity is available at https://www.asus.com/support/.

The WiFi operating in the band 5150-5350MHz shall be restricted to indoor use for country listed below:

UK

UKCA RF Output table (The Radio Equipment Regulations 2017)

AZWAVE (Model: QCA6174A-5)

Function	Frequency	Maximum Output Power (EIRP)
WiFi	2412 - 2472 MHz	18 dBm
	5150 - 5350 MHz	22 dBm
	5470 - 5725 MHz	20 dBm
Bluetooth	2402 - 2480 MHz	8 dBm

UKCA RF Output table (The Radio Equipment Regulations 2017)

QUECTEL (Model: EC25-G)

Radio Type	Description	Frequency	Maximum Output Power (EIRP)
	900	880 - 915 MHz	35.0 dBm
	1800	1710 - 1785 MHz	32.0 dBm
WCDMA	Band 1	1920 - 1980 MHz	25.0 dBm
	Band 5	824 - 849 MHz	25.0 dBm
	Band 8	880 - 915 MHz	25.0 dBm
LTE	B1	1920 - 1980 MHz	25.0 dBm
	B3	1710 - 1785 MHz	25.0 dBm
	B5	824 - 849 MHz	25.0 dBm
	B7	2500 - 2570 MHz	25.0 dBm
	B8	880 - 915 MHz	25.0 dBm
	B20	832 - 862 MHz	25.0 dBm
	B28	703 - 748 MHz	25.0 dBm
	B38	2570 - 2620 MHz	25.0 dBm
	B40	2300 - 2400 MHz	25.0 dBm

EU: Radio Equipment Directive (Directive 2014/53/EU)

Simplified EU Declaration of Conformity

ASUSTek Computer Inc. hereby declares that this device is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU. Full text of EU declaration of conformity is available athttps://www.asus.com/support/

The WiFi operating in the band 5150-5350MHz shall be restricted to indoor use for countries listed in the table below:

Déclaration simplifiée de conformité de l'UE

ASUSTek Computer Inc. déclare par la présente que cet appareil est conforme aux critères essentiels et autres clauses pertinentes de la directive 2014/53/EU. La déclaration de conformité de l'UE peut être téléchargée à partir du site internet suivant : https://www.asus.com/support/

Dans la plage de fréquence 5150-5350 MHz, le Wi-Fi est restreint à une utilisation en intérieur dans les pays listés dans le tableau ci-dessous:

Vereinfachte EU-Konformitätserklärung

ASUSTek COMPUTER INC erklärt hiermit, dass dieses Gerät mit den grundlegenden Anforderungen und anderen relevanten Bestimmungen der Richtlinie 2014/53/EU übereinstimmt. Der gesamte Text der EU-Konformitätserklärung ist verfügbar unter: https://www.asus.com/support/

Der WLAN-Betrieb im Band von 5150-5350 MHz ist für die in der unteren Tabelle aufgeführten Länder auf den Innenbereich beschränkt:

Dichiarazione di conformità UE semplificata

ASUSTek Computer Inc. con la presente dichiara che questo dispositivo è conforme ai requisiti essenziali e alle altre disposizioni pertinenti con la direttiva 2014/53/EU. Il testo completo della dichiarazione di conformità UE è disponibile all'indirizzo: https://www.asus.com/support/

L'utilizzo della rete Wi-Fi con frequenza compresa nell'intervallo 5150-5350MHz deve essere limitato all'interno degli edifici per i paesi presenti nella seguente tabella:

Упрощенное заявление о соответствии европейской директиве

ASUSTek Computer Inc. заявляет, что устройство соответствует основным требованиям и другим соответствующим условиям директивы 2014/53/EU. Полный текст декларации соответствия ЕС доступен на https://www.asus.com/support/

Работа WiFi в диапазоне частот 5150-5350 должна быть ограничена использованием в помещениях для стран, перечисленных в таблице ниже:

إعلان التوافق المبسط الصادر عن الاتحاد الأوروبي

تقر شركة ASUSTek Computer أن هذا الجهاز يتوافق مع المتطلبات الأساسية والأحكام الأخرى ذات الصلة الخاصة بتوجيه 2014/53/EU. يتوفر النص الكامل لإعلان التوافق الصادر عن الاتحاد الأوروبي على:

https://www.asus.com/support/

يجب حصر استخدام WiFi العاملة بـ 5150-5350 ميجا هرتز على الاستخدام المنزلي للبلدان المدرجة بالجدول.

Опростена декларация за съответствие на ЕС

С настоящото ASUSTek Computer Inc. декларира, че това устройство е в съответствие със съществените изисквания и другите приложими постановления на свързаната Директива 2014/53/ЕС. Пълният текст на ЕС декларация за съвместимост е достъпен на адрес https://www.asus.com/support/

WiFi, работеща в диапазон 5150-5350MHz, трябва да се ограничи до употреба на закрито за страните, посочени в таблицата по-долу:

Declaração de Conformidade UE Simplificada

ASUSTek Computer Inc. declara que este dispositivo está em conformidade com os requisitos essenciais e outras disposições relevantes relacionadas às diretivas 2014/53/UE. O texto completo da declaração de conformidade CE está disponível em https://www.asus.com/support/

O WiFi operando na banda 5150-5350MHz deve ser restrito para uso interno para os países listados na tabela abaixo:

Pojednostavljena EU Izjava o sukladnosti

ASUSTeK Computer Inc. ovim izjavljuje da je ovaj uređaj sukladan s bitnim zahtjevima i ostalim odgovarajućim odredbama direktive 2014/53/EU. Cijeli tekst EU izjave o sukladnosti dostupan je na https://www.asus.com/support/

WiFi koji radi na opsegu frekvencija 5150-5350 MHz bit će ograničen na upotrebu u zatvorenom prostoru u zemljama na donjem popisu:

Zjednodušené prohlášení o shodě EU

Společnost ASUSTek Computer Inc. tímto prohlašuje, že toto zařízení splňuje základní požadavky a další příslušná ustanovení směrnice 2014/53/ EU. Plné znění prohlášení o shodě EU je k dispozici na adrese https://www.asus.com/support/

V zemích uvedených v tabulce je provoz sítě Wi-Fi ve frekvenčním rozsahu 5 150 - 5 350 MHz povolen pouze ve vnitřních prostorech:

Forenklet EU-overensstemmelseserklæring

ASUSTeK Computer Inc. erklærer hermed at denne enhed er i overensstemmelse med hovedkravene og øvrige relevante bestemmelser i direktivet 2014/53/EU. Hele EU-overensstemmelseserklæringen kan findes på https://www.asus.com/support/

Wi-Fi, der bruger 5150-5350 MHz skal begrænses til indendørs brug i lande, der er anført i tabellen:

Vereenvoudigd EU-conformiteitsverklaring

ASUSTeK Computer Inc. verklaart hierbij dat dit apparaat voldoet aan de essentiële vereisten en andere relevante bepalingen van Richtlijn 2014/53/EU. De volledige tekst van de EU-conformiteitsverklaring is beschikbaar op https://www.asus.com/support/

De WiFi op 5150-5350MHz zal beperkt zijn tot binnengebruik voor in de tabel vermelde landen:

Lihtsustatud EÜ vastavusdeklaratsioon

Käesolevaga kinnitab ASUSTek Computer Inc, et seade vastab direktiivi 2014/53/EÜ olulistele nõuetele ja teistele asjakohastele sätetele. EL vastavusdeklaratsiooni täistekst on saadaval veebisaidil https://www.asus.com/support/

Sagedusvahemikus 5150-5350 MHz töötava WiFi kasutamine on järgmistes riikides lubatud ainult siseruumides:

Eurooppa - EY:n vaatimustenmukaisuusvakuutus

ASUSTek Computer Inc. ilmoittaa täten, että tämä laite on direktiivin 2014/53/EU olennaisten vaatimusten ja muiden asiaankuuluvien lisäysten mukainen. Koko EY:n vaatimustenmukaisuusvakuutuksen teksti on luettavissa osoitteessa https://www.asus.com/support/

5 150 - 5 350 MHz:in taajuudella toimiva WiFi on rajoitettu sisäkäyttöön taulukossa luetelluissa maissa:

تبعیت از نسخه ساده شده بیانیه اتحادیه اروپا

ASUSTek Computer Inc در اینجا اعلام می کند که این دستگاه با نیازهای اساسی و سایر مقررات مربوط به بیانیه 2014/53/EU. مطابقت دارد. متن کامل پیروی از این بیانیه اتحادیه اروپا در این آدرس موجود است:
https://www.asus.com/support/ .

عملکرد 5150-5350 مگاهرتز برای WiFi باید برای استفاده در فضای داخل ساختمان برای کشورهای فهرست شده در جدول، محدود شود.

Απλοποιημένη Δήλωση Συμμόρφωσης ΕΕ

Διά του παρόντος η ASUSTek Computer Inc. δηλώνει ότι αυτή η συσκευή είναι σύμμορφη με τις βασικές προϋποθέσεις και άλλες σχετικές διατάξεις της Οδηγίας 2014/53/ΕΕ. Το πλήρες κείμενο της δήλωσης συμμόρφωσης της ΕΕ είναι διαθέσιμο στη διεύθυνση https://www.asus.com/support/

Το WiFi που λειτουργεί στη ζώνη 5150-5350MHz περιορίζεται για χρήση σε εσωτερικούς χώρους για τις χώρες που αναφέρονται στον παρακάτω πίνακα:

הצהרת תאימות רגולטורית מקוצרת עבור האיחוד אירופי

ASUSTek Computer Inc. מצהירה בזאת כי מכשיר זה תואם לדרישות החיוניות ולשאר הסעיפים הרלוונטיים של תקנה /2014/53 EU. ניתן לקרוא את הנוסח המלא של הצהרת התאימות הרגולטורית עבור האיחוד האירופי בכתובת:
https://www.asus.com/support/

יש להגביל רשתות Wi-Fi הפועלות ברצועת התדרים 5150-5350MHz לשימוש בתוך מבנים סגורים בארצות המפורטות ברשימה הבאה:

Egyszerűsített EU megfelelőségi nyilatkozat

Az ASUSTek Computer Inc. ezennel kijelenti, hogy ez az eszköz megfelel az 2014/53/EU sz. irányelv alapvető követelményeinek és egyéb vonatkozó rendelkezéseinek. Az EU megfelelőségi nyilatkozat teljes szövegét a következő weboldalon tekintheti meg: https://www.asus.com/support/

Az 5150-5350 MHz-es sávban működő Wi-Fi-t beltéri használatra kell korlátozni az alábbi táblázatban felsorolt országokban:

Pernyataan Kesesuaian UE yang Disederhanakan

ASUSTeK Computer Inc. dengan ini menyatakan bahwa perangkat ini memenuhi persyaratan utama dan ketentuan relevan lainnya yang terdapat pada Petunjuk 2014/53/EU. Teks lengkap pernyataan kesesuaian EU tersedia di: https://www.asus.com/support/

WiFi yang Beroperasi pada 5150-5350 MHz akan terbatas untuk penggunaan dalam ruangan di negara yang tercantum dalam tabel

Vienkāršota ES atbilstības paziņojums

ASUSTeK Computer Inc. ar šo paziņo, ka šī ierīce atbilst Direktīvas 2014/53/ES būtiskajām prasībām un citiem citiem saistošajiem nosacījumiem. Pilns ES atbilstības paziņojuma teksts pieejams šeit: https://www.asus.com/support/

Wi-Fi darbība 5150–5350 MHz ir jāierobežo lietošanai telpās valstīs, kuras norādītas tālāk.

Supaprastinta ES atitikties deklaracija

Šiame dokumente bendrovė „ASUSTek Computer Inc." pareiškia, kad šis prietaisas atitinka pagrindinius reikalavimus ir kitas susijusias Direktyvos 2014/53/ES nuostatas. Visas ES atitikties deklaracijos tekstas pateikiamas čia: https://www.asus.com/support/

Toliau nurodytose šalyse „WiFi" ryšiu, veikiančiu 5 150–5 350 MHz dažnio juostoje, galima naudotis tik patalpose:

Forenklet EU-samsvarserklæring

ASUSTek Computer Inc. erklærer herved at denne enheten er i samsvar med hovedsaklige krav og andre relevante forskrifter i direktivet 2014/53/EU. Fullstendig tekst for EU-samsvarserklæringen finnes på: https://www.asus.com/support/

Wi-Fi-området 5150–5350 MHz skal begrenses til innendørs bruk for landene som er oppført i tabellen:

Uproszczona deklaracja zgodności UE

Firma ASUSTek Computer Inc. niniejszym oświadcza, że urządzenie to jest zgodne z zasadniczymi wymogami i innymi właściwymi postanowieniami dyrektywy 2014/53/EU. Pełny tekst deklaracji zgodności UE jest dostępny pod adresem https://www.asus.com/support/

W krajach wymienionych w tabeli działanie sieci Wi-Fi w paśmie 5150–5350 MHz powinno być ograniczone wyłącznie do pomieszczeń:

Declaração de Conformidade Simplificada da UE

A ASUSTek Computer Inc. declara que este dispositivo está em conformidade com os requisitos essenciais e outras disposições relevantes da Diretiva 2014/53/UE. O texto integral da declaração de conformidade da UE está disponível em https://www.asus.com/support/

A utilização das frequências WiFi de 5150 a 5350MHz está restrita a ambientes interiores nos países apresentados na tabela:

Declarație de conformitate UE, versiune simplificată

Prin prezenta, ASUSTek Computer Inc. declară că acest dispozitiv este în conformitate cu reglementările esențiale și cu celelalte prevederi relevante ale Directivei 2014/53/UE. Textul complet al declarației de conformitate UE este disponibil la adresa https://www.asus.com/support/

Pentru țările listate în tabelul de mai jos, rețelele WiFi care funcționează în banda de frecvență de 5.150-5.350 MHz trebuie utilizate doar în interior:

Pojednostavljena Deklaracija o usaglašenosti EU

ASUSTek Computer Inc. ovim izjavljuje da je ovaj uređaj usaglašen sa osnovnim zahtevima i drugim relevantnim odredbama Direktive 2014/53/EU. Ceo tekst Deklaracije o usaglašenosti EU dostupan je na lokaciji https://www.asus.com/support/

WiFi koji radi u frekventnom opsegu od 5150 MHz do 5350 MHz ograničen je isključivo na upotrebu u zatvorenom prostoru za zemlje navedene u tabeli ispod:

Zjednodušené vyhlásenie o zhode platné pre EÚ

Spoločnosť ASUSTek Computer Inc. týmto vyhlasuje, že toto zariadenie je v súlade so základnými požiadavkami a ďalšími príslušnými ustanoveniami smernice č. 2014/53/EÚ. Plné znenie vyhlásenia o zhode pre EÚ je k dispozícii na lokalite https://www.asus.com/support/

Činnosť WiFi v pásme 5150 - 5350 MHz bude obmedzená na použitie vo vnútornom prostredí pre krajiny uvedené v tabuľke nižšie:

Poenostavljena izjava EU o skladnosti

ASUSTek Computer Inc. tukaj izjavlja, da je ta naprava skladna s temeljnimi zahtevami in drugimi relevantnimii določili Direktive 2014/53/EU. Polno besedilo izjave EU o skladnosti je na voljo na https://www.asus.com/support/

WiFi, ki deluje v pasovnem območju 5150–5350 MHz, mora biti v državah, navedenih v spodnjem seznamu, omejen na notranjo uporabo:

Declaración de conformidad simplificada para la UE

Por la presente, ASUSTek Computer Inc. declara que este dispositivo cumple los requisitos básicos y otras disposiciones pertinentes de la directiva 2014/53/EU. En https://www.asus.com/support/ está disponible el texto completo de la declaración de conformidad para la UE.

La conexión WiFi con una frecuencia de funcionamiento de 5150-5350 MHz se restringirá al uso en interiores para los países enumerados en la tabla:

Förenklad EU-försäkran om överensstämmelse

ASUSTek Computer Inc. deklarerar härmed att denna enhet överensstämmer med de grundläggande kraven och andra relevanta bestämmelser i direktiv 2014/53/EU. Fullständig text av EU-försäkran om överensstämmelse finns på https://www.asus.com/support/

WiFi som använder 5150-5350 MHz kommer att begränsas för användning inomhus i de länder som anges i tabellen:

ประกาศเกี่ยวกับความสอดคล้องของสหภาพยุโรปแบบย่อ

ASUSTek Computer Inc. ขอประกาศในที่นี้ว่าอุปกรณ์นี้มีความสอดคล้องกับความต้องการที่จำเป็นและเงื่อนไขที่เกี่ยวข้องอื่น ๆ ของบทบัญญัติข้อกำหนด 2014/53/EU เนื้อหาที่สมบูรณ์ของประกาศความสอดคล้องกับ EU มีอยู่ที่ https://www.asus.com/support/

การทำงานของ WiFi ที่ 5150-5350MHz ถูกจำกัดให้ใช้ในอาคารสำหรับประเทศที่แสดงในตาราง

Basitleştirilmiş AB Uyumluluk Bildirimi

ASUSTek Computer Inc., bu aygıtın 2014/53/EU Yönergesinin temel gereksinimlerine ve diğer ilgili hükümlerine uygun olduğunu bildirir. AB uygunluk bildiriminin tam metni şu adreste bulunabilir: https://www.asus.com/support/

5150-5350 MHz arasındaki WiFi çalışması, tabloda listelenen ülkeler için iç mekân kullanımıyla kısıtlanacaktır.

Спрощена декларація про відповідність нормам ЄС

ASUSTek Computer Inc. заявляє, що цей пристрій відповідає основним вимогам та іншим відповідним вимогам Директиви 2014 / 53 / ЕU. Повний текст декларації відповідності нормам ЄС доступний на https://www.asus.com/support/

Робота Wi-Fi на частоті 5150-5350 МГц обмежується використанням у приміщенні для країн, поданих у таблиці нижче:

AT	BE	BG	CZ	DK	EE	FR
DE	IS	IE	IT	EL	ES	CY
LV	LI	LT	LU	HU	MT	NL
NO	PL	PT	RO	SI	SK	TR
FI	SE	CH	HR	UK(NI)		

CE RED RF Output table (Directive 2014/53/EU)

AZWAVE (Model: QCA6174A-5)

Function	Frequency	Maximum Output Power (EIRP)
WiFi	2412 - 2472 MHz	18 dBm
	5150 - 5350 MHz	22 dBm
	5470 - 5725 MHz	20 dBm
Bluetooth	2402 - 2480 MHz	8 dBm

For the standard EN 300 440, if this device operates in 5725-5875 MHz, it will be considered as a receiver category 2.

CE RED RF Output table (Directive 2014/53/EU)
QUECTEL (Model: EC25-G)

Radio Type	Description	Frequency	Maximum Output Power (EIRP)
	900	880 - 915 MHz	35.0 dBm
	1800	1710 - 1785 MHz	32.0 dBm
WCDMA	Band 1	1920 - 1980 MHz	25.0 dBm
	Band 5	824 - 849 MHz	25.0 dBm
	Band 8	880 - 915 MHz	25.0 dBm
LTE	B1	1920 - 1980 MHz	25.0 dBm
	B3	1710 - 1785 MHz	25.0 dBm
	B5	824 - 849 MHz	25.0 dBm
	B7	2500 - 2570 MHz	25.0 dBm
	B8	880 - 915 MHz	25.0 dBm
	B20	832 - 862 MHz	25.0 dBm
	B28	703 - 748 MHz	25.0 dBm
	B38	2570 - 2620 MHz	25.0 dBm
	B40	2300 - 2400 MHz	25.0 dBm

Service and Support

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