

Lanner

Embedded Computing Platform

Hardware Platforms for Intelligent Edge Computing

EAI-I233 User Manual

Version: 1.1

Date of Release: 2025-09-01

About this Document



This manual describes the overview of the various functionalities of this product, and the information you need to get it ready for operation. It is intended for those who are:

- responsible for installing, administering and troubleshooting this system or Information Technology professionals.
- assumed to be qualified in the servicing of computer equipment, such as professional system integrators, or service personnel and technicians.

The latest version of this document can be found on Lanner’s official website, available either through the product page or through the [Lanner Download Center](#) page with a login account and password.

Conventions & Icons

The icons are used in the manual to serve as an indication of interest topics or important messages.

Icon	Usage
 Note or Information	This mark indicates that there is something you should pay special attention to while using the product.
 Warning or Important	This mark indicates that there is a caution or warning and it is something that could damage your property or product.

Online Resources

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In addition to contacting your distributor or sales representative, you could submit a request at our [Lanner Technical Support](#) and fill in a support ticket to our technical support department.

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Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- ▶ Reorient or relocate the receiving antenna.
- ▶ Increase the separation between the equipment and receiver.
- ▶ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- ▶ Consult the dealer or an experienced radio/TV technician for help.

FCC Caution

- ▶ Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
- ▶ This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.



Note

1. An unshielded-type power cord is required to meet FCC emission limits and to prevent interference to the nearby radio and television reception. It is essential that only the supplied power cord be used.
2. Use only shielded cables to connect I/O devices to this equipment.
3. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.



Important

1. Operations in the 5.15-5.25GHz band are restricted to indoor usage only.
2. This device meets all the other requirements specified in Part 15E, Section 15.407 of the FCC Rules.

Safety Guidelines

Follow these guidelines to ensure general safety:

- ▶ Keep the chassis area clear and dust-free during and after installation.
- ▶ Do not wear loose clothing or jewelry that could get caught in the chassis. Fasten your tie or scarf and roll up your sleeves.
- ▶ Wear safety glasses if you are working under any conditions that might be hazardous to your eyes.
- ▶ Do not perform any action that creates a potential hazard to people or makes the equipment unsafe.
- ▶ Disconnect all power by turning off the power and unplugging the power cord before installing or removing a chassis or working near power supplies
- ▶ Do not work alone if potentially hazardous conditions exist.
- ▶ Never assume that power is disconnected from a circuit; always check the circuit.

Consignes de sécurité

Suivez ces consignes pour assurer la sécurité générale :

- ▶ Laissez la zone du châssis propre et sans poussière pendant et après l'installation.
- ▶ Ne portez pas de vêtements amples ou de bijoux qui pourraient être pris dans le châssis. Attachez votre cravate ou écharpe et remontez vos manches.
- ▶ Portez des lunettes de sécurité pour protéger vos yeux.
- ▶ N'effectuez aucune action qui pourrait créer un danger pour d'autres ou rendre l'équipement dangereux.
- ▶ Coupez complètement l'alimentation en éteignant l'alimentation et en débranchant le cordon d'alimentation avant d'installer ou de retirer un châssis ou de travailler à proximité de sources d'alimentation.
- ▶ Ne travaillez pas seul si des conditions dangereuses sont présentes.
- ▶ Ne considérez jamais que l'alimentation est coupée d'un circuit, vérifiez toujours le circuit. Cet appareil génère, utilise et émet une énergie radiofréquence et, s'il n'est pas installé et utilisé conformément aux instructions des fournisseurs de composants sans fil, il risque de provoquer des interférences dans les communications radio.

Lithium Battery Caution

- ▶ There is risk of Explosion if Battery is replaced by an incorrect type.
- ▶ Dispose of used batteries according to the instructions.
- ▶ Installation only by a skilled person who knows all Installation and Device Specifications which are to be applied.
- ▶ Do not carry the handle of power supplies when moving to another place.
- ▶ Please conform to your local laws and regulations regarding safe disposal of lithium BATTERY.
- ▶ Disposal of a battery into fire or a hot oven, or mechanically crushing or cutting of a battery can result in an explosion.
- ▶ Leaving a battery in an extremely high temperature surrounding environment can result in an explosion or the leakage of flammable liquid or gas.
- ▶ A battery subjected to extremely low air pressure that may result in an explosion or the leakage of flammable liquid or gas.

Avertissement concernant la pile au lithium

- ▶ Risque d'explosion si la pile est remplacée par une autre d'un mauvais type.
- ▶ Jetez les piles usagées conformément aux instructions.
- ▶ L'installation doit être effectuée par un électricien formé ou une personne formée à l'électricité connaissant toutes les spécifications d'installation et d'appareil du produit.
- ▶ Ne transportez pas l'unité en la tenant par le câble d'alimentation lorsque vous déplacez l'appareil.

Operating Safety

- ▶ Electrical equipment generates heat. Ambient air temperature may not be adequate to cool equipment to acceptable operating temperatures without adequate circulation. Be sure that the room in which you choose to operate your system has adequate air circulation.
- ▶ Ensure that the chassis cover is secure. The chassis design allows cooling air to circulate effectively. An open chassis permits air leaks, which may interrupt and redirect the flow of cooling air from internal components.
- ▶ Electrostatic discharge (ESD) can damage equipment and impair electrical circuitry. ESD damage occurs when electronic components are improperly handled and can result in complete or intermittent failures. Be sure to follow ESD-prevention procedures when removing and replacing components to avoid these problems.
- ▶ Wear an ESD-preventive wrist strap, ensuring that it makes good skin contact. If no wrist strap is available, ground yourself by touching the metal part of the chassis.

- ▶ Periodically check the resistance value of the antistatic strap, which should be between 1 and 10 megohms (Mohms).

Sécurité de fonctionnement

- ▶ L'équipement électrique génère de la chaleur. La température ambiante peut ne pas être adéquate pour refroidir l'équipement à une température de fonctionnement acceptable sans circulation adaptée. Vérifiez que votre site propose une circulation d'air adéquate.
- ▶ Vérifiez que le couvercle du châssis est bien fixé. La conception du châssis permet à l'air de refroidissement de bien circuler. Un châssis ouvert laisse l'air s'échapper, ce qui peut interrompre et rediriger le flux d'air frais destiné aux composants internes.
- ▶ Les décharges électrostatiques (ESD) peuvent endommager l'équipement et gêner les circuits électriques. Des dégâts d'ESD surviennent lorsque des composants électroniques sont mal manipulés et peuvent causer des pannes totales ou intermittentes. Suivez les procédures de prévention d'ESD lors du retrait et du remplacement de composants.
- ▶ Portez un bracelet anti-ESD et veillez à ce qu'il soit bien au contact de la peau. Si aucun bracelet n'est disponible, reliez votre corps à la terre en touchant la partie métallique du châssis.
- ▶ Vérifiez régulièrement la valeur de résistance du bracelet antistatique, qui doit être comprise entre 1 et 10 mégohms (Mohms).

Mounting Installation Precaution

- ▶ Do not install and/or operate this unit in any place that flammable objects are stored or used in.
- ▶ If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (T_{ma}) specified by the manufacturer.
- ▶ Installation of the equipment (especially in a rack) should consider the ventilation of the system's intake (for taking chilled air) and exhaust (for emitting hot air) openings so that the amount of airflow required for safe operation of the equipment is not compromised.
- ▶ To avoid a hazardous load condition, be sure the mechanical loading is even when mounting.
- ▶ Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on over-current protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.
- ▶ Reliable earthing should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g., use of power strips).

Installation & Operation:

- ▶ This equipment must be grounded. The power cord for product should be connected to a socket-outlet with earthing connection.
Cet équipement doit être mis à la terre. La fiche d'alimentation doit être connectée à une prise de terre correctement câblée
- ▶ Suitable for installation in Information Technology Rooms in accordance with Article 645 of the National Electrical Code and NFPA 75.
Peut être installé dans des salles de matériel de traitement de l'information conformément à l'article 645 du National Electrical Code et à la NFPA 75.
- ▶ The machine can only be used in a restricted access location and must be installed by a skilled person.
Les matériels sont destinés à être installés dans des EMPLACEMENTS À ACCÈS RESTREINT.

Warning

- ▶ Class I Equipment. This equipment must be earthed. The power plug must be connected to a properly wired earth ground socket outlet. An improperly wired socket outlet could place hazardous voltages on accessible metal parts.
- ▶ Product shall be used with Class 1 laser device modules.

Avertissement

- ▶ Équipement de classe I. Ce matériel doit être relié à la terre. La fiche d'alimentation doit être raccordée à une prise de terre correctement câblée. Une prise de courant mal câblée pourrait induire des tensions dangereuses sur des parties métalliques accessibles.
- ▶ Le produit doit être utilisé avec des modules de dispositifs laser de classe 1.

Electrical Safety Instructions

Before turning on the device, ground the grounding cable of the equipment. Proper grounding (grounding) is very important to protect the equipment against the harmful effects of external noise and to reduce the risk of electrocution in the event of a lightning strike. To uninstall the equipment, disconnect the ground wire after turning off the power. A ground wire is required and the part connecting the conductor must be greater than 4 mm² or 10 AWG.

Consignes de sécurité électrique

- ▶ Avant d'allumer l'appareil, reliez le câble de mise à la terre de l'équipement à la terre.
- ▶ Une bonne mise à la terre (connexion à la terre) est très importante pour protéger l'équipement contre les effets néfastes du bruit externe et réduire les risques d'électrocution en cas de foudre.
- ▶ Pour désinstaller l'équipement, débranchez le câble de mise à la terre après avoir éteint l'appareil.
- ▶ Un câble de mise à la terre est requis et la zone reliant les sections du conducteur doit faire plus de 4 mm² ou 10 AWG.

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CHAPTER 1: PRODUCT OVERVIEW

Lanner’s EAI-I233, powered by NVIDIA Jetson AGX Orin with up to 64GB LPDDR5 memory, and delivers 275 TOPS AI performance for real-time computer vision. With 10G LAN, USB, COM, Wi-Fi, and 5G, it enables seamless AI deployment across retail, enterprise, and manufacturing.

Package Content

Your package contains the following items:

- ▶ 1x EAI-I233 AI Inference System
- ▶ 1x Power Adapter
- ▶ 4x Rubber Feet
- ▶ 1x Wallmount Kit



Note: If you should find any components missing or damaged, please contact your dealer immediately for assistance.

Ordering Information

SKU	CPU/SOM CPU	Memory	SOM GPU	Ethernet	I/O
EAI-I233A	NVIDIA Jetson AGX Orin/ 12-core NVIDIA ARM Cortex A78AE	LPDDR5 DRAM up to 64GB	NVIDIA Ampere, 2048 CUDA Cores & 64 Tensor Cores, 1.3GHz	1x GbE RJ45;	2x COM;
EAI-I233B	NVIDIA Jetson AGX Orin/ 8-core NVIDIA Arm Cortex A78AE	LPDDR5 DRAM up to 32GB	NVIDIA Ampere, 1792 CUDA Cores & 56 Tensor Cores, 939 MHz	1x 10GbE RJ45; 1x 2.5GbE Rj45	4x USB 3.2; 1x HDMI

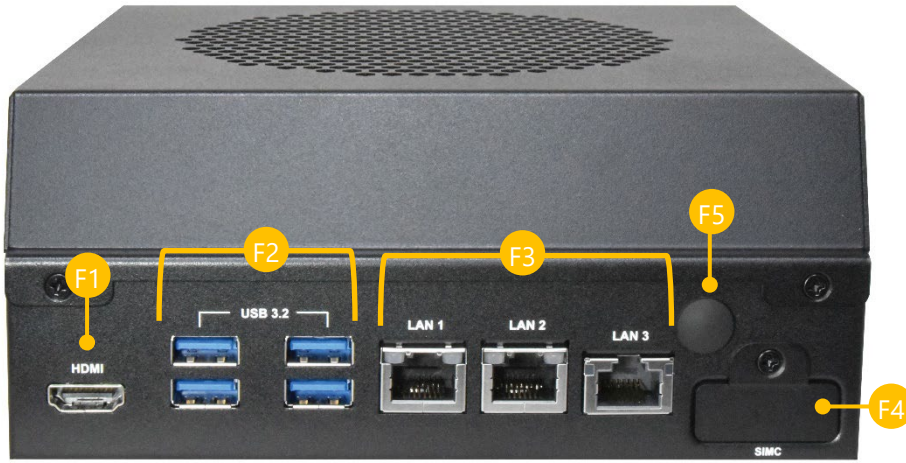
Optional Accessories

Model	Description
LTE/5G Antenna Kit	LTE/5G Antenna Kit (LTE/5G Module Not Included)
Wi-Fi Antenna Kit	WI-FI Antenna Kit (Wi-Fi Module Not Included)
VESA Mount Kit	VESA Rotate DIN Rail Kit

System Specifications

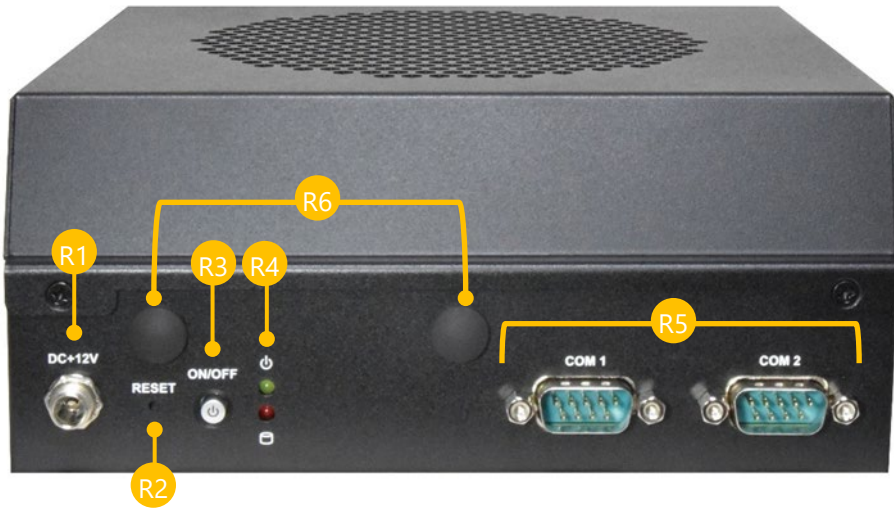
Processor System	CPU	NVIDIA® Jetson AGX Orin
	CPU TDP	30W
	SOM CPU	SKU A: 12-core NVIDIA Arm® Cortex A78AE; SKU B: 8-core NVIDIA Arm® Cortex A78AE
	SOM GPU	SKU A: NVIDIA Ampere, 2048 CUDA Cores & 64 Tensor Cores, 1.3 GHz SKU B: NVIDIA Ampere, 1792 CUDA Cores & 56 Tensor Cores, 939 MHz
System Memory	Technology	LPDDR5 DRAM with ECC
	Capacity	SKU A: 64GB eMMC SKU B: 32GB eMMC
Ethernet	Interface	1x GbE RJ45; 1x 10GbE RJ45; 1x 2.5GbE RJ45
	Speed	10/100/1000 Mbps; 10/100/10000 Mbps; 10/100/1000/2500 Mbps
I/O Interface	Reset Button	1x Reset Button
	Power Button	1x On/Off Button
	LED Indicators	Power/Storage, refer to Appendix A
	Serial COM Port	2x DB9 RS-232 (TX/RX/CTS/RTS)
	Display Port	1x HDMI Port
	USB Port	4x USB 3.2 Type A Ports
	Antenna	4x Antenna for LTE/5G Sub6; 2x Antenna for Wi-Fi
Storage	eMMC	eMMC 5.1, 64GB on SOM (By SKU)
	Onboard Slot	1x M.2 2280 M-Key (Default 128G NVMe Onboard)
Expansion	Mini-PCIe/M.2	1x M.2 2230 E-Key for Wi-Fi; 1x M.2 3042/3052 B-Key for LTE/5G;
	SIM Card Slot	1x Nano-SIM
Miscellaneous	Watchdog	Yes
	Internal RTC	Yes
	TPM	Yes, Onboard
Cooling	Processor	Passive Heatsink
	System	1x 12V Smart Fan, 2200 RPM
Environment	Temperature	0°C ~ 40°C
	Humidity (RH)	5~90% Operating; 5~95% Non-Operating
Mechanical	Dimension (WxHxD)	169.2 x 70 x 181.7mm
	Weight	2kg
	Mounting	Wallmount, VESA mount (Optional)
Power Supply	Type/Watts	60W Adapter
	Input	1x Power Jack/12V
OS Driver Support	Linux	Linux (NVIDIA Jetpack 6.X); Ubuntu 22.04.05 LTS
Certification	EMC	CE/UKCA, FCC Class A, RoHS
	Safety	MTBF, UL+CB (62368-1/60950)


Front Panel



No.	Description	
F1	Display Port	1x HDMI Port
F2	USB Port	4x USB 3.2 Type A Ports
F3	Ethernet Port	LAN1: 1x 1GbE RJ45 Port; LAN2: 2.5GbE RJ45 Port; LAN3: 10GbE RJ45 Port
F4	SIM Cover	SIM Cover w/ Intrusion Design for 1x Nano SIM; 1x Slide Switch (Left: Recovery Mode; Right: Normal Mode)
F5	Antenna	1x Antenna Holes for LTE/5G/Wi-Fi

Rear Panel



No.	Description																									
R1	Power Input	1x 12V Power Jack																								
R2	Reset Button	1x Reset Button																								
R3	Power Switch	1x Power On/Off Switch																								
R4	LED Indicator	 <ul style="list-style-type: none"> ● HDD Status ● System Power Status 																								
R5	COM Port	2x DB9 RS232 (TX/RX/CTS/RTS) <table border="1" style="margin-top: 10px;"> <thead> <tr> <th>Pin</th> <th>Description</th> <th>Pin</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>NC</td> <td>6</td> <td>NC</td> </tr> <tr> <td>2</td> <td>RXD</td> <td>7</td> <td>RTS</td> </tr> <tr> <td>3</td> <td>TXD</td> <td>8</td> <td>CTS</td> </tr> <tr> <td>4</td> <td>NC</td> <td>9</td> <td>NC</td> </tr> <tr> <td>5</td> <td>GND</td> <td></td> <td></td> </tr> </tbody> </table>	Pin	Description	Pin	Description	1	NC	6	NC	2	RXD	7	RTS	3	TXD	8	CTS	4	NC	9	NC	5	GND		
Pin	Description	Pin	Description																							
1	NC	6	NC																							
2	RXD	7	RTS																							
3	TXD	8	CTS																							
4	NC	9	NC																							
5	GND																									
R6	Antenna	3x Antenna Holes for LTE/5G/Wi-Fi																								

Side Panels

Left Side Panel



Right Side Panel

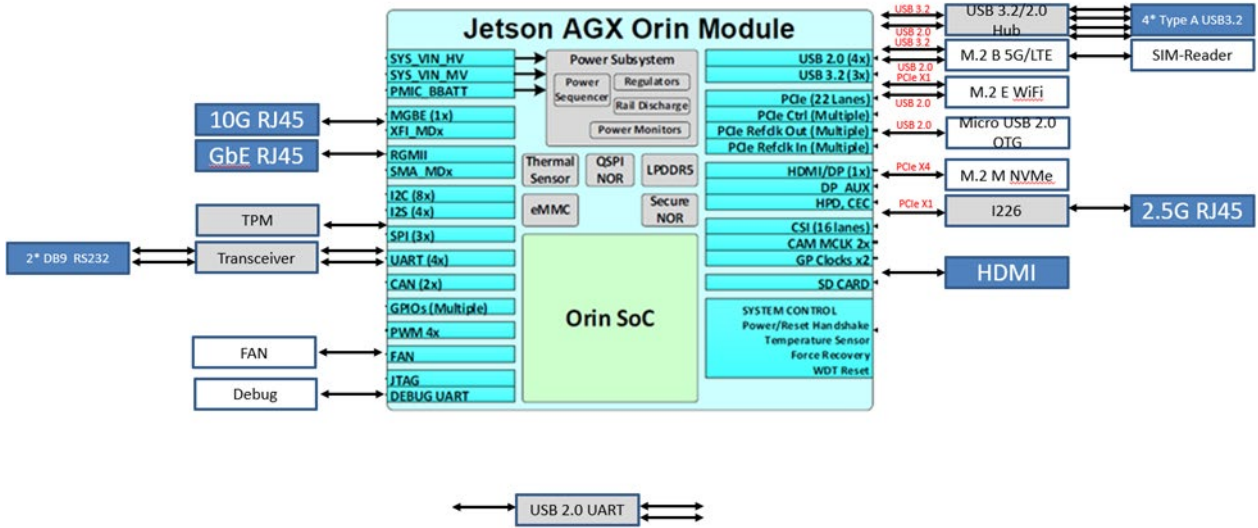


No.	Description	
S1	Antenna	1x Antenna Holes for LTE/5G/Wi-Fi
S2	Antenna	2x Antenna Holes for LTE/5G/Wi-Fi

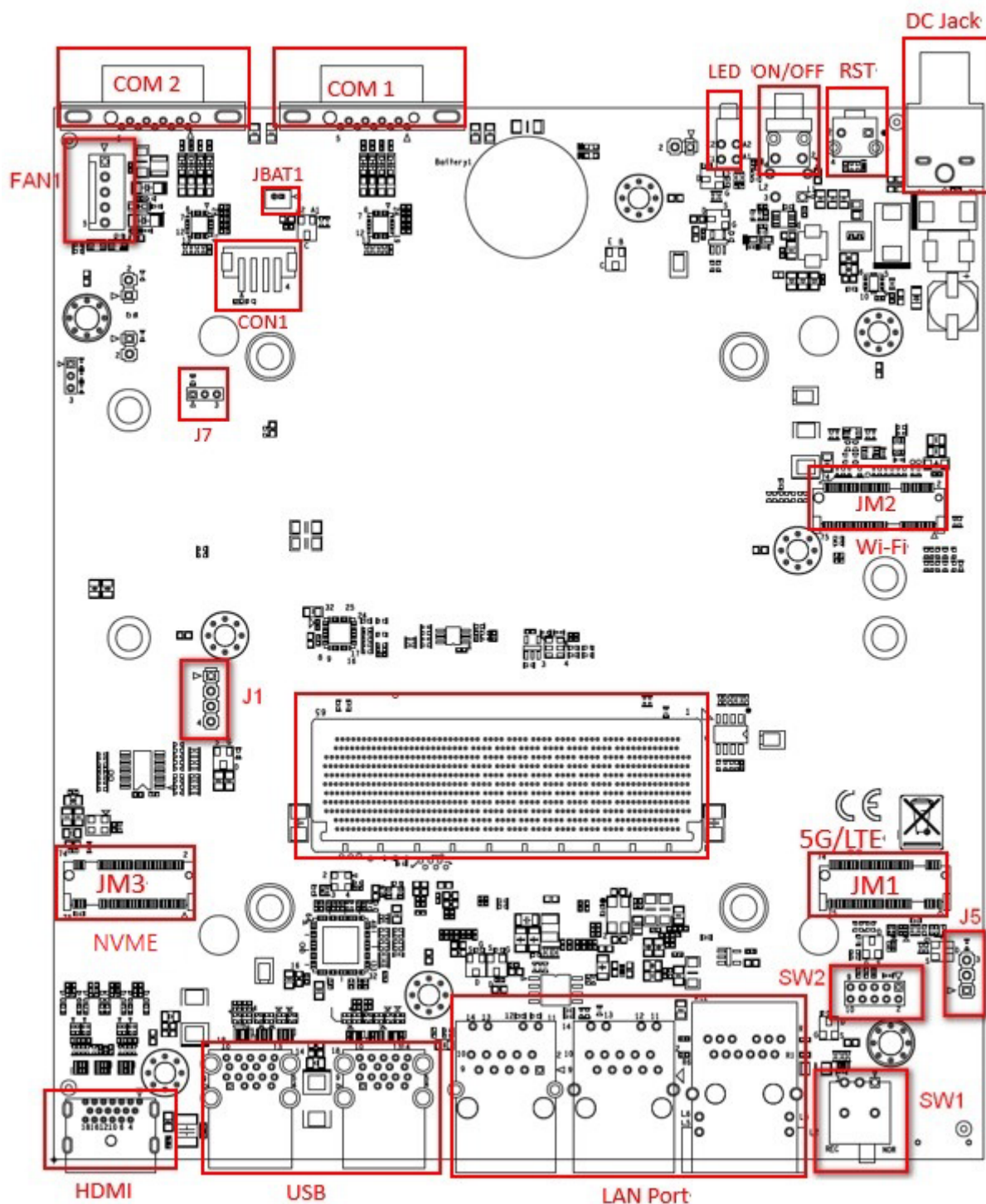
CHAPTER 2: MOTHERBOARD INFORMATION

Block Diagram

The block diagram indicates how data flows among components on the motherboard.



Internal Jumpers and Connector



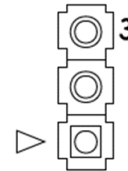
J1: SOM Debug UART

Pin	Description
1	UART3_PWR(3.3V)
2	UART3_RXD
3	GND
4	UART3_TXD



J5: 5G NR PCIe Selector

Pin	Description
1	1.8V
2	PCIE_SEL
3	GND



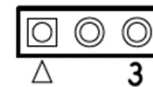
Jumper	MV32-W	FN990	EM9291	RM520N-GL
1-2	N/A	N/A	Y	N/A
2-3	N/A	N/A	N/A	N/A

J7: MCU SIP Mode

(1-2) = Normal Operation (Default)

(2-3) = ISP Mode

Jumper	Description
1	Pull up 10K to +P3V3_MCU
2	PIO0_12
3	GND



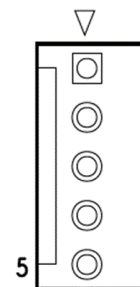
JBAT1: RTC Battery Connector

Pin	Description
1	VBAT
2	GND



FAN1: Fan Connector

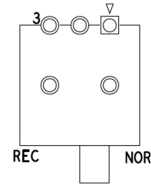
Pin	Description
1	GND
2	P12V
3	TACH1
4	NA
5	PWM



SW1: Force Recovery (SOM FW Upgrade)

(1-2) = Normal Operation Mode (Default)

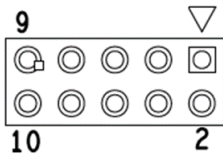
(2-3) = Force Recovery Mode



Pin	Description
1	NA
2	FORCE_RECOVERY_N
3	GND

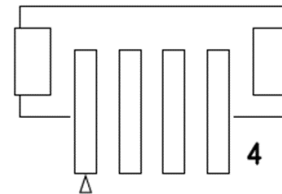
SW2: Install Jumper (5GNR Module)

Jumper	MV32-W	FN990	EM9291	RM520N-GL
1-2	N/A	N/A	N/A	N/A
3-4	N/A	N/A	Y	N/A
5-6	N/A	N/A	Y	N/A
7-8	N/A	N/A	Y	N/A
9-10	N/A	N/A	Y	N/A



CON1: MCU FW Upgrade UART Port

Pin	Description
1	+P3V3_MCU
2	MCU_UART_RX
3	GND
4	MCU_UART_TX



COM1: COM Port 1

Pin	Description	Pin	Description
1	NC	6	NC
2	RXD	7	RTS
3	TXD	8	CTS
4	NC	9	NC
5	GND		



COM2: COM Port 2

Pin	Description	Pin	Description
1	NC	6	NC
2	RXD	7	RTS
3	TXD	8	CTS
4	NC	9	NC
5	GND		



JM1: M.2 B-Key Connector (For 5G Sub6 Module)

Pin	Description	Pin	Description	Pin	Description
1	NC	35	USB3_TXN	61	NC
2	3V3	36	UIM1_PWR	62	NC
3	GND	37	USB3_TXP	63	NC
4	3V3	38	5G_VCC2	64	NC
5	GND	39	GND	65	NC
6	FULL_CARD_PWROFF_N	40	NC	66	UIM1_DET
7	USB2_D+	41	NC	67	RESET
8	NC	42	NC	68	5G_VCC3
9	USB2_D-	43	NC	69	NC
10	NC	44	NC	70	3V3
20	GND	45	GND	71	GND
20	5G_PCIE_SEL	46	NC	72	3V3
21	NC	47	NC	73	GND
22	5G_VBUS_SENSE	48	NC	74	3V3
23	NC	49	NC	75	NC
24	5G_VCC1	50	10K pull-up to 3.3V	76	NC
25	10K pull-up to 1.8V	51	GND	77	NC
26	NC	52	10K pull-up to 3.3V		
27	GND	53	NC		
28	NC	54	10K pull-up to 3.3V		
29	USB3_RXN	55	NC		
30	UIM1_RST	56	NC		
31	USB3_RXP	57	GND		
32	UIM1_CLK	58	NC		
33	GND	59	NC		
34	UIM1_DATA	60	NC		

JM2: M.2 E-Key Connector (For Wi-Fi Module)

Pin	Description	Pin	Description	Pin	Description
1	NC	35	PCIE_TXP	61	M2E_AP_WAKE_BT
2	3V3	36	UART5_RTS	62	M2E_ALERT_N
3	USB2_D+	37	PCIE_TXN	63	GND
4	3V3	38	NC	64	NC
5	USB2_D-	39	GND	65	NC
6	NC	40	NC	66	NC
7	GND	41	PCIE_RXP	67	NC
8	NC	42	M2E_AP_WAKE_BT	68	NC
9	NC	43	PCIE_RXN	69	GND
10	NC	44	NC	70	NC
11	NC	45	GND	71	NC
12	NC	46	NC	72	3V3
13	NC	47	PCIE_CLKP	73	NC
14	NC	48	NC	74	3V3
15	NC	49	PCIE_CLKN	75	GND
16	NC	50	NC	76	NC
17	NC	51	GND	77	NC
18	GND	52	PCIE_RESET_N		
19	NC	53	PCIE_CLKREQ_N		
20	M2E_BT_WAKE	54	M2E_BT_DISABLE_N		
21	NC	55	M2E_WIFI_WAKE		
22	UART5_RXD	56	M2E_WIFI_DISABLE_N		
23	NC	57	GND		
32	UART5_TXD	58	NC		
33	GND	59	M2E_SAR_TOUT		
34	UART5_CTS	60	NC		

JM3: M.2 M-Key Connector (For NVMe SSD)

Pin	Description	Pin	Description	Pin	Description
1	GND	27	GND	53	PCIE_CLK_N
2	3V3	28	NC	54	PCIE_WAKE
3	GND	29	PCIE_RX1_N	55	PCIE_CLK_P
4	3V3	30	NC	56	UFS0 REF CLK
5	PCIE_RX3_N	31	PCIE_RX1_P	57	GND
6	NC	32	NC	58	UFS0 RST N

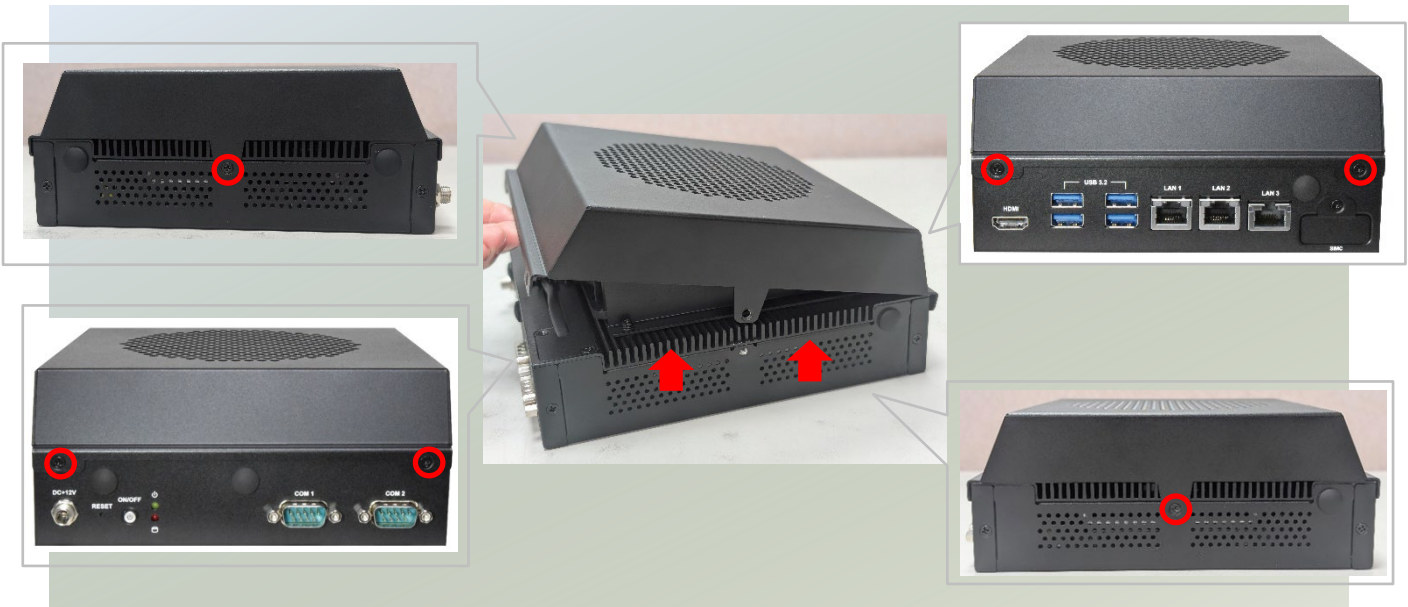
7	PCIE_RX3_P	33	GND	67	NC
8	NC	34	NC	68	NC
9	GND	35	PCIE_TX1_M2_N	69	NC
10	LED	36	NC	70	3V3
11	PCIE_TX3_M2_N	37	PCIE_TX1_M2_P	71	GND
12	3V3	38	NC	72	3V3
13	PCIE_TX3_M2_N	39	GND	73	GND
14	3V3	40	NC	74	3V3
15	GND	41	PCIE_RX0_N	75	GND
16	3V3	42	NC	76	NC
17	PCIE_RX2_N	43	PCIE_RX0_P	77	NC
18	3V3	44	ALERT_N		
19	PCIE_RX2_P	45	GND		
20	NC	46	NC		
21	GND	47	PCIE_TX0_M2_N		
22	NC	48	NC		
23	PCIE_TX2_M2_N	49	PCIE_TX0_M2_P		
24	NC	50	PCIE_RST_R		
25	PCIE_TX2_M2_P	51	GND		
26	NC	52	PCIE_CLK_REQ		

CHAPTER 3: HARDWARE SETUP

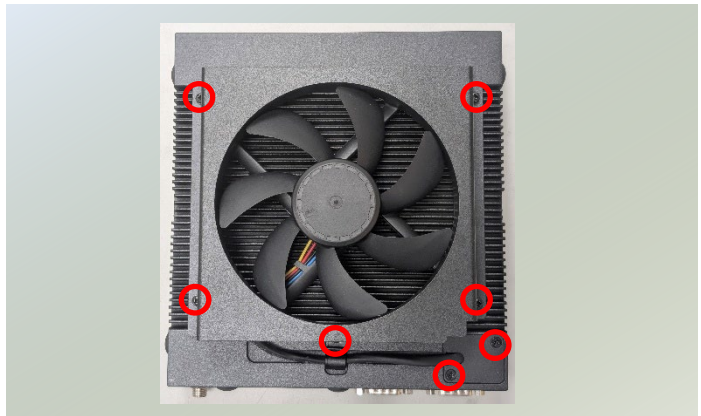
To reduce the risk of personal injury, electric shock, or damage to the unit, please remove all power connections to completely shut down the device, and wear ESD protection gloves when handling the installation steps.

Opening the Chassis

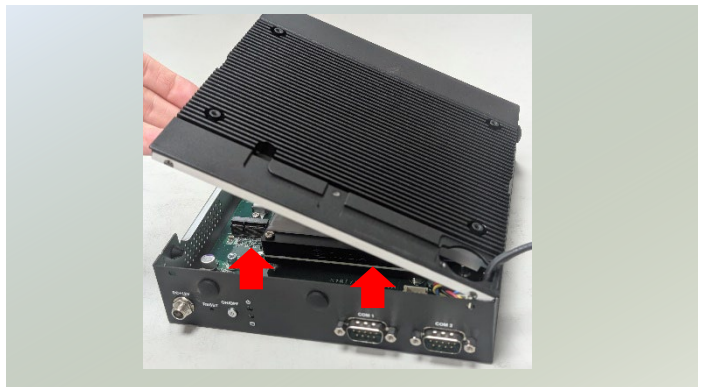
1. Power off the system. Unscrew the six (6) screws on the front, right side, left side, and rear panel. Lift and open the top chassis cover.



2. Next, remove the five (5) screws on the fan. Also remove the two (2) screws on the power cord cover. Lift and remove the fan.



3. Lift and open the second top chassis cover.



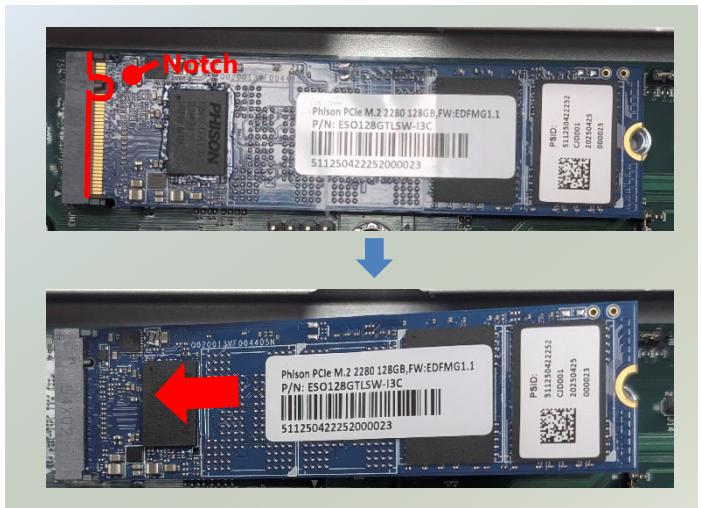
Installing Storage Module Card (Optional)

The system supports one M.2 2280 M-Key module card for additional storage. Please follow the steps for installation.

1. Power off the system, turn the system around, and open the bottom chassis cover.
2. Locate the M.2 slot on the motherboard.



3. Align the notch of the M.2 storage module card with the socket key in the pin slot.
4. Insert the M.2 module card pins at 30 degrees into the socket until it is fully seated.



5. Push down on the module card and secure it with one screw.



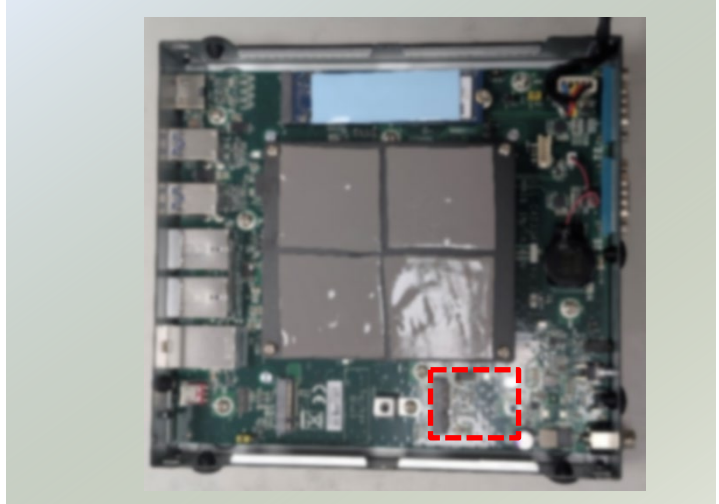
6. Lastly, thermal pad placement. Remove the protective film on the Thermal Pad (included in accessory pack) and gently place on the module.



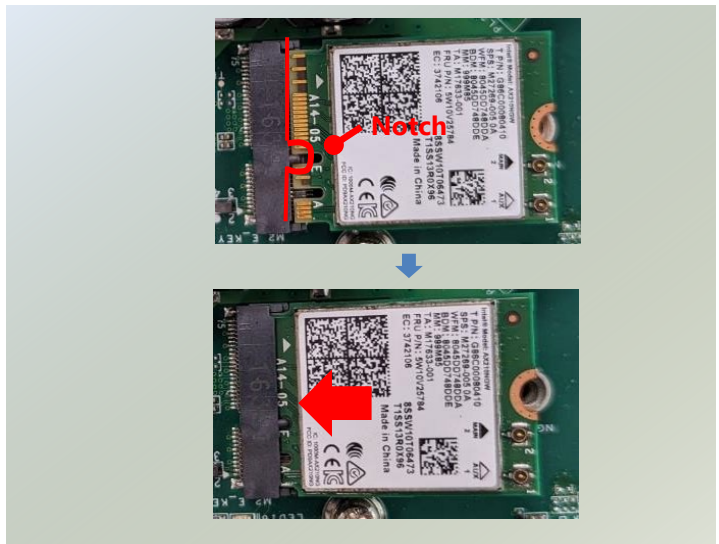
Installing Wi-Fi Module Card (Optional)

The system supports one M.2 E-Key slot for a Wi-Fi module card, an optional accessory. Wi-Fi module requires two antennas. Please follow the steps to install the Wi-Fi module card.

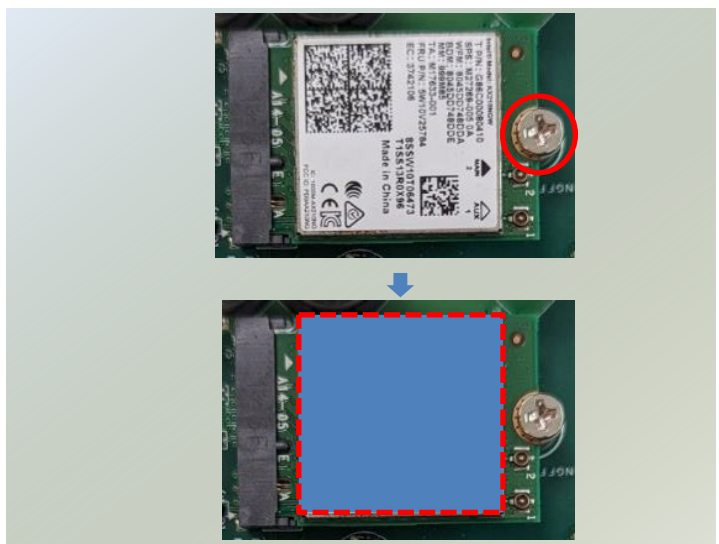
1. Power off the system, turn the system around, and open the bottom chassis cover.
2. Locate the M.2 E-Key slot on the motherboard.



3. Align the notch of the Wi-Fi module card with the socket key in the pin slot.
4. Insert the Wi-Fi module card pins at 30 degrees into the socket until it is fully seated.



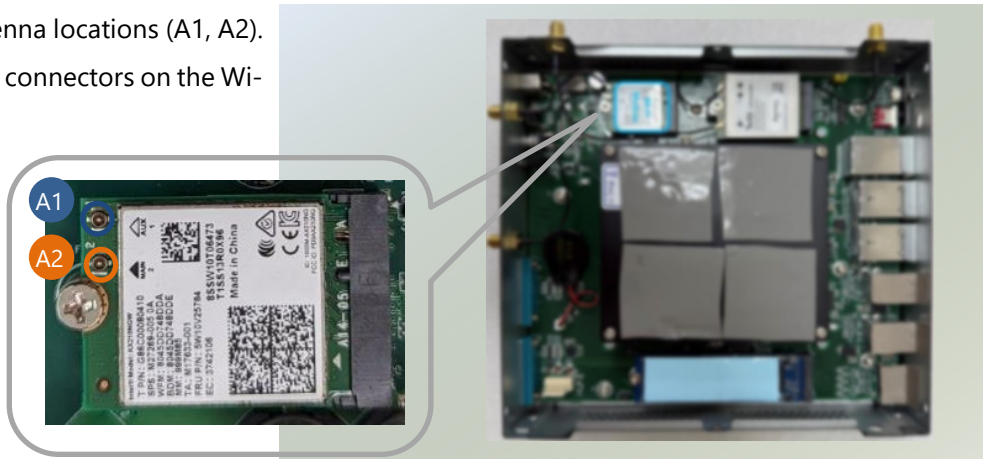
5. Push down on the module card and secure it with one screw.
6. Lastly, thermal pad placement. Remove the protective film on the thermal pad (included in accessory pack) and gently place on the module card.



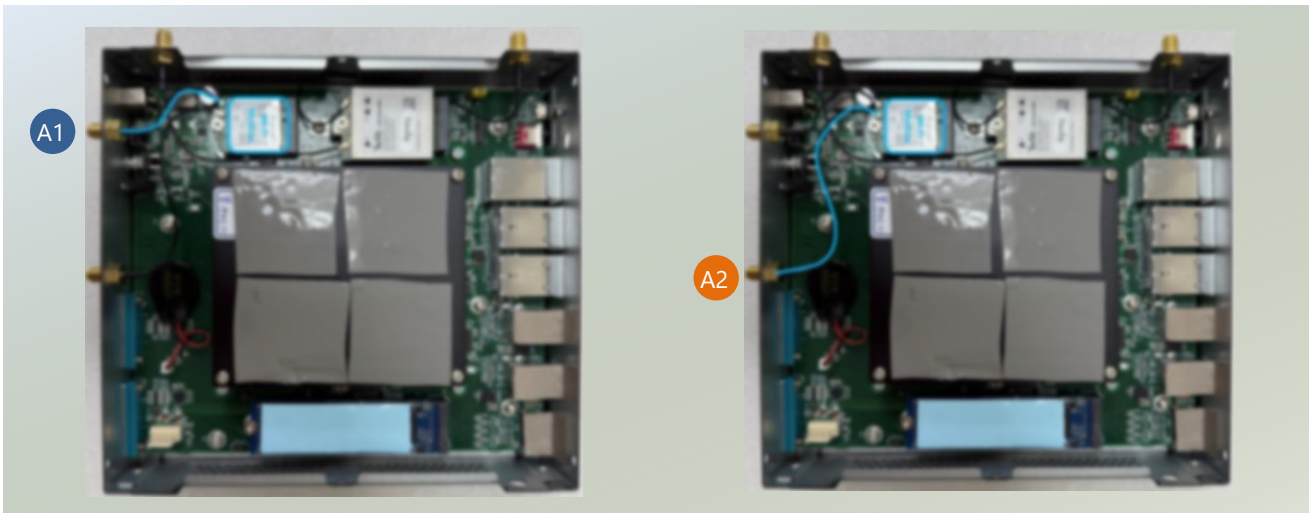
Installing Wi-Fi Antennas Rear Panel



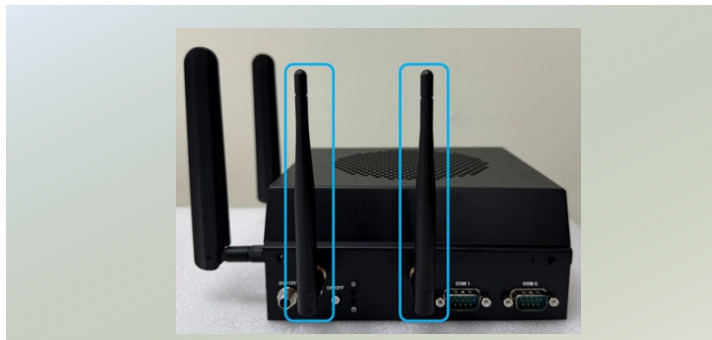
1. Locate the two (2) antenna locations (A1, A2).
Locate the two (2) IPEX connectors on the Wi-Fi module card.



2. Connect the RF cables to the Wi-Fi module card.



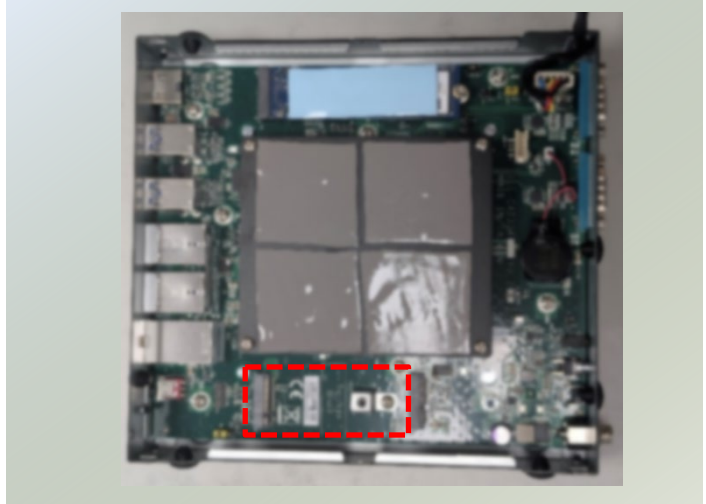
3. Screw on the two (2) antennas on the outside of the system.



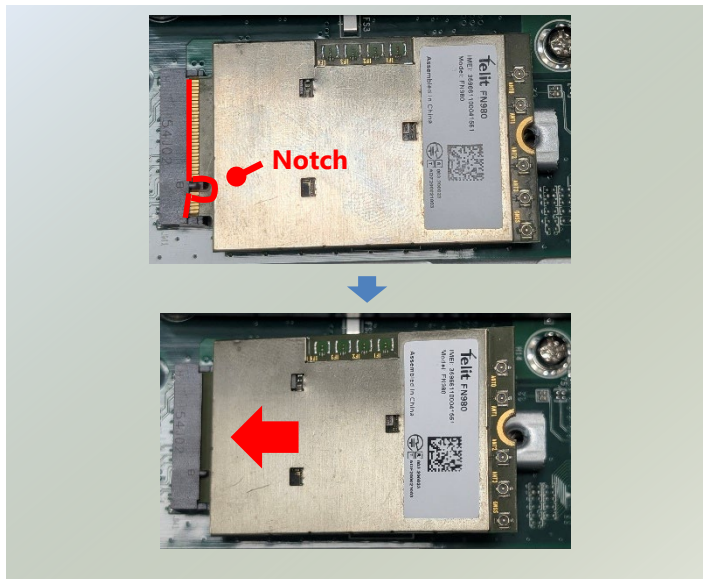
Installing LTE/5G Module Card (Optional)

This system features one M.2 B-Key slot for an LTE/5G module card, supporting a dual SIM design. LTE module will require two antennas. 5G module will require four antennas. Please follow the procedures for the installation of the 5G module card.

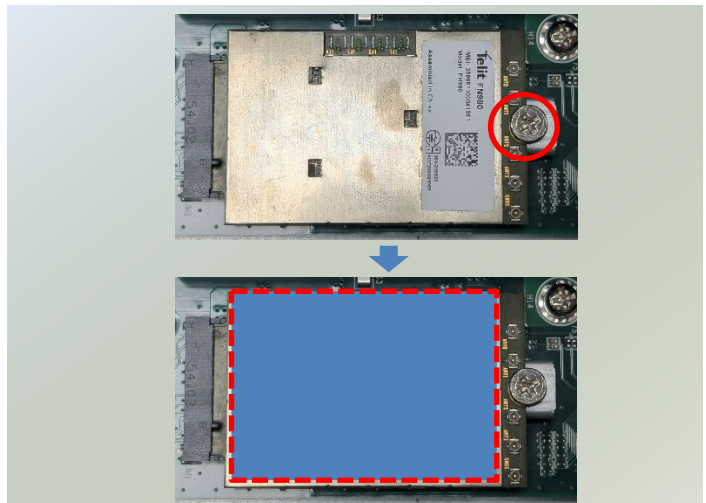
1. Power off the system, turn the system around, and open the bottom chassis cover.
2. Locate the M.2 B-Key slot on the motherboard.



4. Align the notch of the LTE/5G module card with the socket key in the pin slot.
5. Insert the LTE/5G module card pins at 30 degrees into the socket until it is fully seated.



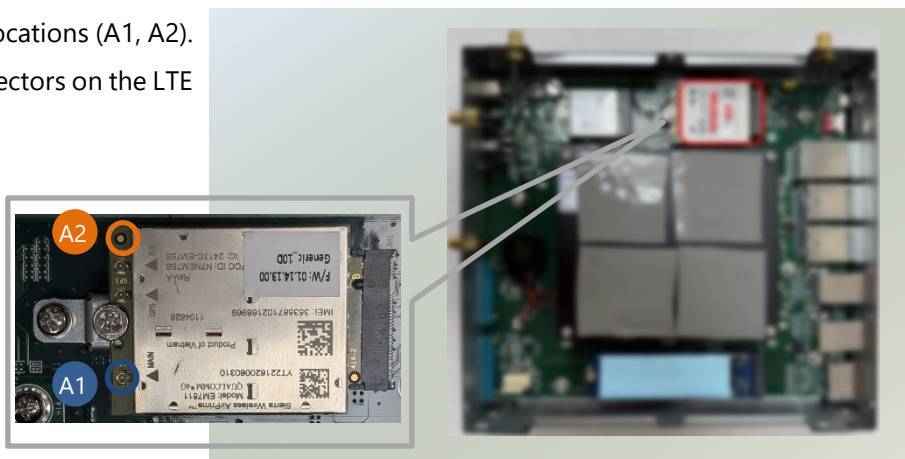
6. Push down on the module card and secure it with one screw.
7. Lastly, thermal pad placement. Remove the protective film on the thermal pad (included in accessory pack) and gently place on the module card.



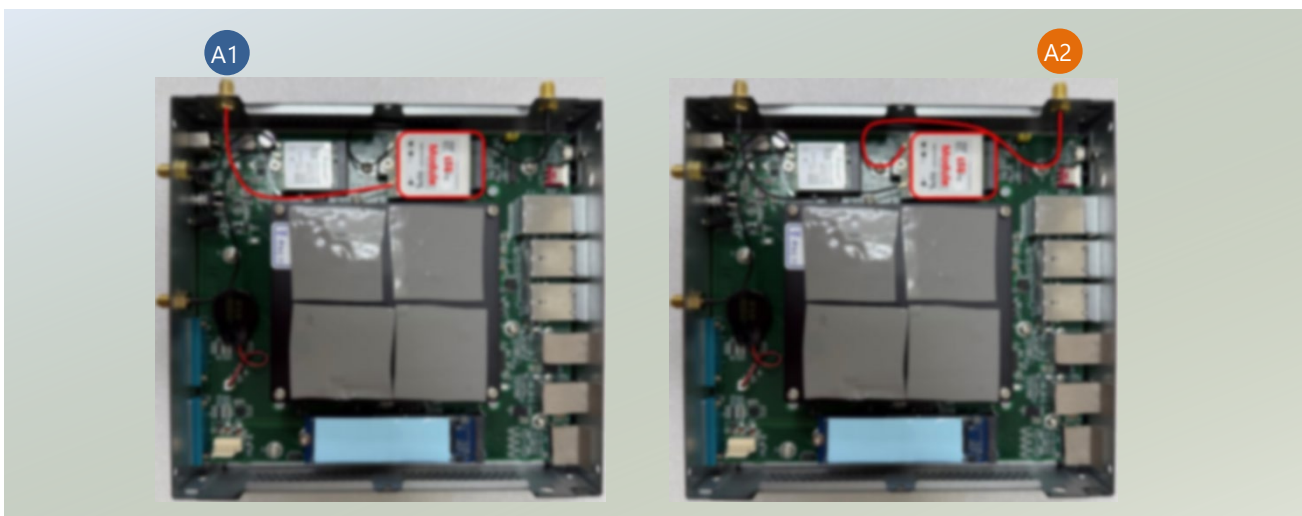
Installing LTE Antennas Right Side Panel



1. Locate the two (2) antenna locations (A1, A2).
Locate the two (2) IPEX connectors on the LTE module card.



2. Connect the RF cables to the LTE module card.



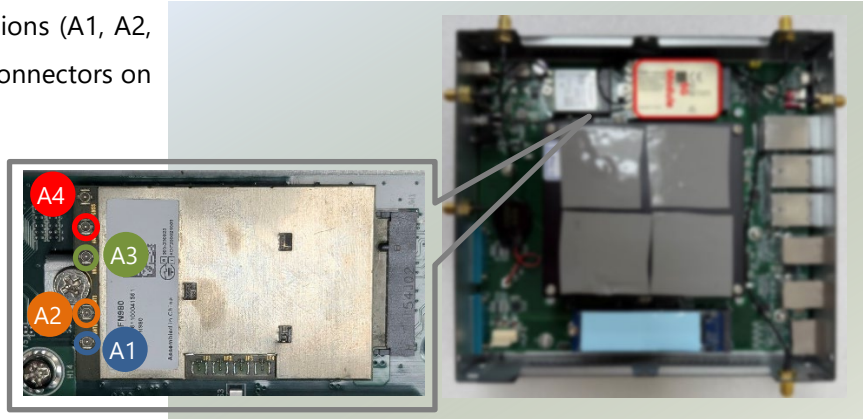
3. Screw on the two (2) antennas on the outside of the system.



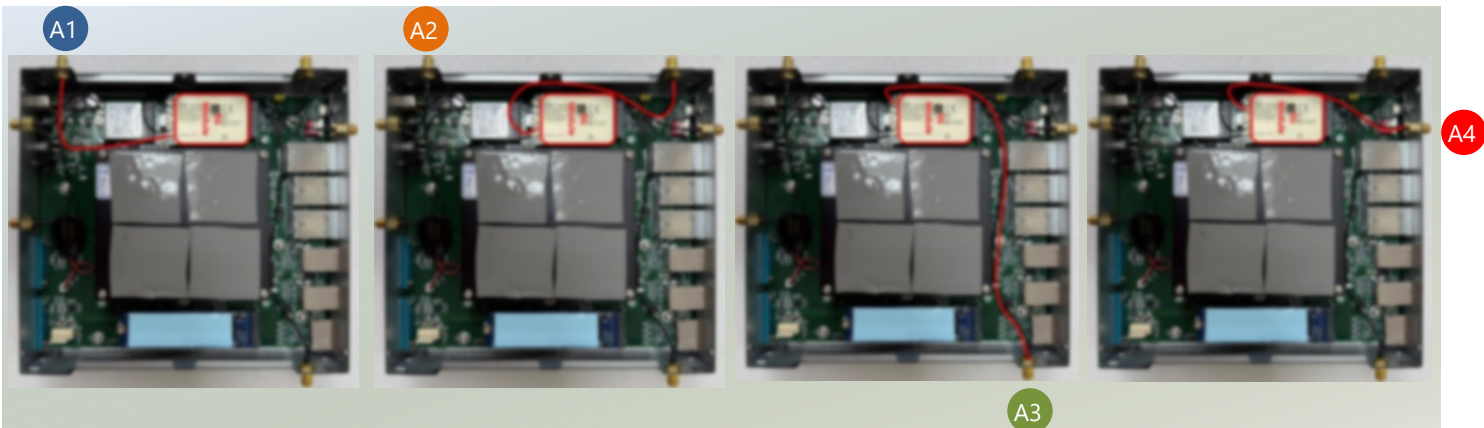
Installing 5G Antennas Front & Right/Left Side Panel



1. Locate the four (4) antenna locations (A1, A2, A3, A4). Locate the four (4) IPEX connectors on the 5G module card.



2. Connect the RF cables to the 5G module card.



3. Screw on the four (4) antennas to the outside of the system.



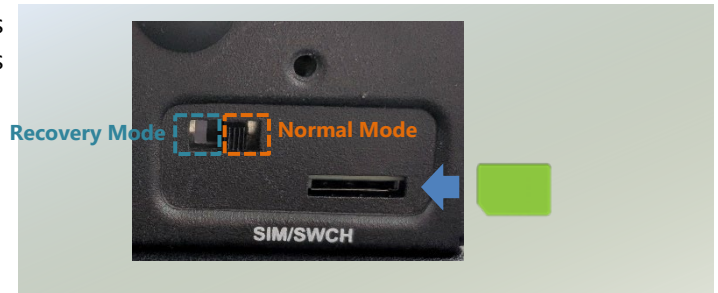
Installing Nano SIM Card

The SIM slot on the front panel supports 1x Nano SIM card. The SIM socket supports the push-push mechanism, allowing inserting and ejecting the SIM card to be as easy as one push. 1x Slide Switch (Left: Recovery Mode; Right: Normal Mode)

1. Locate the SIM card cover on the front panel.
2. Loosen and unscrew the one screw on the SIM card cover and remove the cover.



3. Insert and push the SIM card, gold contacts facing downwards, all the way in until it clicks into place.



4. To remove the SIM card, use your fingertips to push it once, to have the card automatically eject.
5. Place the cover back and secure with one screw.

Wall Mount (Optional)

The system can be mounted on a flat surfaced wall. Please take the following into considerations when mounting the system onto the wall.

1. The Wallmount Kit includes:

- ▶ 1x pair of Wall Brackets
- ▶ 1x Screw Pack



2. Invert the system to expose the bottom side. Secure the two all brackets to the system using four (4) screws, two (2) per bracket.



3. Now the system can be mounted on a flat surface wall.

VESA Mount (Optional)

A VESA (video electronics standards association) mount allows your system to be securely attached to a wall, monitor arm, or other mounting bracket, providing space efficiency, better ergonomics, and improved cable management. Please take the following into considerations when VESA mounting the system.

1. The VESA Mount Kit includes:

- ▶ 1x VESA Mount Bracket
- ▶ 1x Screw Pack



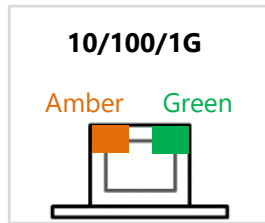
2. Invert the system to expose the bottom side. Secure the bracket to the system using four (4) screws.



3. Now the system can be securely attached to a wall, monitor arm, or other mounting bracket.

APPENDIX A: LED INDICATOR EXPLANATIONS

▶ RJ45 LAN LED



1Gb RJ-45 Define:

Speed	Amber (Link/Active)	Green / Amber (Speed)
10M	ON / Blinking (Data access)	OFF
100M	ON / Blinking (Data access)	ON (Green)
1G	ON / Blinking (Data access)	ON (Amber)

1. When cable is plug-in and network is linked. Both LED will be bright. The behavior is as defined.
2. Without the Cable plug-in, the LED should be off.
3. If LAN Driver controls the LED, the behavior will follow the driver.

2.5Gb RJ-45 Define:

Speed	Green (Link/Active)	Green / Amber (Speed)
100M	ON / Blinking (Data access)	OFF
1G	ON / Blinking (Data access)	ON (Amber)
2.5G	ON / Blinking (Data access)	ON (Green)

1. When cable is plug-in and network is linked. Both LED will be bright. The behavior is as defined.
2. Without the Cable plug-in, the LED should be off.
3. If LAN Driver controls the LED, the behavior will follow the driver.

APPENDIX B: TERMS AND CONDITIONS

Warranty Policy

1. All products are under warranty against defects in materials and workmanship for a period of one year from the date of purchase.
2. The buyer will bear the return freight charges for goods returned for repair within the warranty period; whereas the manufacturer will bear the after service freight charges for goods returned to the user.
3. The buyer will pay for the repair (for replaced components plus service time) and transportation charges (both ways) for items after the expiration of the warranty period.
4. If the RMA Service Request Form does not meet the stated requirement as listed on "RMA Service," RMA goods will be returned at customer's expense.
5. The following conditions are excluded from this warranty:
 - ▶ Improper or inadequate maintenance by the customer
 - ▶ Unauthorized modification, misuse, or reversed engineering of the product
 - ▶ Operation outside of the environmental specifications for the product.

RMA Service

Requesting an RMA#

1. To obtain an RMA number, simply fill out and fax the "RMA Request Form" to your supplier.
2. The customer is required to fill out the problem code as listed. If your problem is not among the codes listed, please write the symptom description in the remarks box.
3. Ship the defective unit(s) on freight prepaid terms. Use the original packing materials when possible.
4. Mark the RMA# clearly on the box.



Note: Customer is responsible for shipping damage(s) resulting from inadequate/loose packing of the defective unit(s). All RMA# are valid for 30 days only; RMA goods received after the effective RMA# period will be rejected.

RMA Service Request Form

When requesting RMA service, please fill out the following form. Without this form enclosed, your RMA cannot be processed.

RMA No.:		Reasons to Return: <input type="checkbox"/> Repair(Please include failure details)	
		<input type="checkbox"/> Testing Purpose	
Company:		Contact Person:	
Phone No.		Purchased Date:	
Fax No.:		Applied Date:	
Return Shipping Address: _____			
Shipping by: <input type="checkbox"/> Air Freight <input type="checkbox"/> Sea <input type="checkbox"/> Express_____			
<input type="checkbox"/> Others:_____			
Item	Model Name	Serial Number	Configuration

Item	Problem Code	Failure Status

- *Problem Code:**
- | | | | |
|------------------------|------------------------------|--------------------|--------------------------|
| 01: D.O.A. | 07: BIOS Problem | 13: SCSI | 19: DIO |
| 02: Second Time R.M.A. | 08: Keyboard Controller Fail | 14: LPT Port | 20: Buzzer |
| 03: CMOS Data Lost | 09: Cache RMA Problem | 15: PS2 | 21: Shut Down |
| 04: FDC Fail | 10: Memory Socket Bad | 16: LAN | 22: Panel Fail |
| 05: HDC Fail | 11: Hang Up Software | 17: COM Port | 23: CRT Fail |
| 06: Bad Slot | 12: Out Look Damage | 18: Watchdog Timer | 24: Others (Pls specify) |

Request Party

Confirmed By Supplier

Authorized Signature / Date

Authorized Signature / Date