MXA-200

IoT Gateway

User's Manual



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Revision Date: August 20, 2024

Part No: 50M-44A00-1000

LEADING EDGE COMPUTING

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Revision History

Revision	Release Date	Description of Change(s)
1.0	2024-08-20	Initial release

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Preface

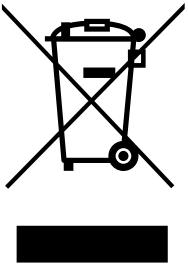
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Conventions

Take note of the following conventions used throughout this manual to make sure that users perform certain tasks and instructions properly.

NOTE: Additional information, aids, and tips that help users perform tasks.

CAUTION: Information to prevent ***minor*** physical injury, component damage, data loss, and/or program corruption when trying to complete a task.

WARNING: Information to prevent ***serious*** physical injury, component damage, data loss, and/or program corruption when trying to complete a specific task.

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1 Introduction

The MXA-200 IoT Energy Gateway provides communication conversion between different Ethernet or serial-based protocols allowing for wider integration of devices into a network with the ability to send data to the cloud. It is designed to work under a large variety of applications such as monitoring energy consumption, electric vehicle charging control and monitoring, renewable energy monitoring, and smart manufacturing.

The MXA-200 is an i.MX8M Plus based high-performance IoT gateway with a Quad Core processor open platform design, two RS-232/422/485 isolated serial ports, two 10/100/1000 Ethernet ports, two USB 3.0 port and an operating temperature range of -20~70°C. It offers two M.2 slots for integrating Wi-Fi/4G/5G modules. The MXA-200 enables system integrators to develop applications precisely for renewable energy, EV charging, smart cities and factories that require massive data collection, a cloud-based application and video related monitoring solutions.

1.1 Features

- NXP i.MX8M Plus Cortex A53 Quad Core 1.8GHz
- LPDDR4 2GB RAM, 32GB eMMC for system storage
- 2x RS-232/422/485 isolated serial ports
- 2x 10/100/1000 Ethernet ports
- 1x M.2 E-key for Wi-Fi
- 1x M.2 B-key for 5G or 4G/LTE
- Operating Temperature: -20°C to 70°C

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1.2 Packing List

Before unpacking, check the shipping carton for any damage. If the shipping carton and/or contents are damaged, inform your dealer immediately. Retain the shipping carton and packing materials for inspection. Obtain authorization from your dealer before returning any product to ADLINK. Ensure that the following items are included in the package.

- 1x MXA-200 IoT Gateway
- DIN rail mount kit with 2x flat head screws
- Wall mount kit with 4x pan head screws
- Quick Start Guide

1.3 Optional Accessories

- 24V/90W power adapter (P/N: 31-62187-1000-A0)

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1.4 Specifications

Model	MXA-200
System	
Processor	i.MX8M Plus ARM Cortex A53 Quad Core 1.8GHz
Memory	LPDDR4 2/4GB
Main Storage	32/64 GB eMMC
Storage Slot	1x microSD
TPM	TPM2.0
RTC	Monthly difference max.180 sec.
WDT	Supported
I/O Interfaces	
Ethernet	2x GbE
Serial Ports	2x RS-232/422/485, 4-wire
USB	2x USB 3.0 Type-A
Display	1x HDMI
Wi-Fi/BT	1x M.2 2230 E-key
Expanded I/F	1x M.2 2242 B-key (USB 3.0) for 5G or 4G/LTE
Mechanical	
Dimensions	110.90 (L) x 40 (W) x 131.4 (H) mm
Mounting	DIN rail kit / wall mount kit
Housing	Metal
Cooling	Fanless
Power Supply	
DC Input	12-24V DC
Environmental	
Operating Temperature	-20°C to 70°C
Storage Temperature	-25°C to 80°C
Humidity	approx. 95% @ 40°C (non-condensing)

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Model	MXA-200
Vibration Resistance	1. Test Standard: Referenced from IEC 60068-2-64 2. Test Mode: Random wave 3. Frequency: 5-500 Hz 4. Acceleration: 2 Grms 5. Direction: X, Y, Z axis 6. Duration: 60 min/axis
Shock Resistance	1. Test Standard: Referenced from IEC 60068-2-27 2. Acceleration: 20G 3. Pulse width: 11ms 4. System condition: Operation mode 5. Test faces: -X,-Y,-Z, X, Y, Z axis 6. Test times: 3 times per axis
Certifications	
EMC	CE / UKCA / RCM / KC / FCC EN/IEC 61000-6-4:2019; EN/IEC 61000-6-2:2019 47 CFR FCC Part 15 Subpart B, class B
UL	IEC 62368-1:2014; EN 62368-1:2014+A11:2017 UL 61010-1; CSA C22.2 No.61010-1 UL 61010-2-201; CSA C22.2 No.61010-2-201

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1.5 Functional Block Diagram

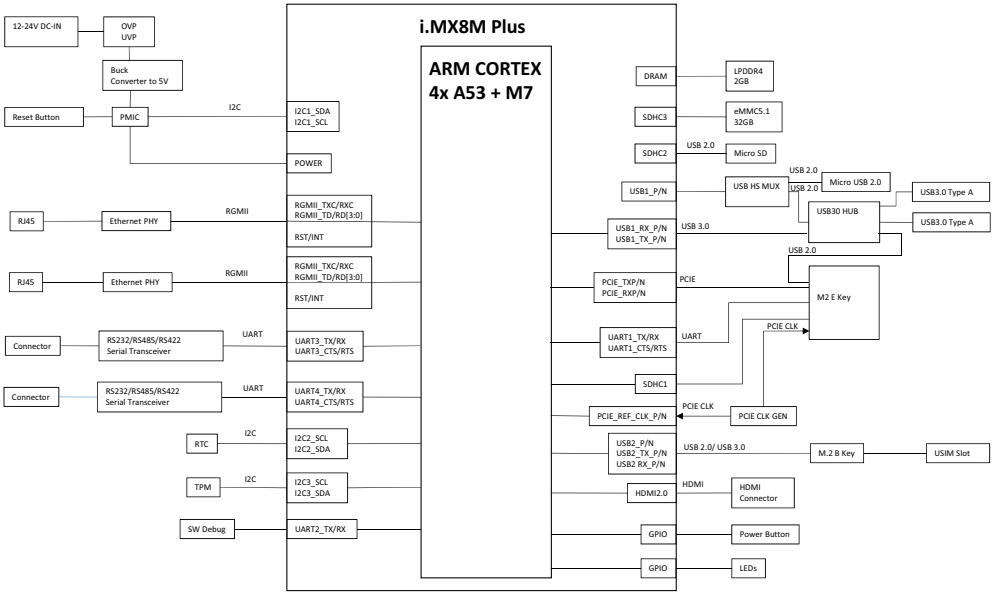


Figure 1-1: Functional Block Diagram

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1.6 Mechanical Drawings

NOTE: All dimensions are in millimeters unless noted.

1.6.1 Dimensions

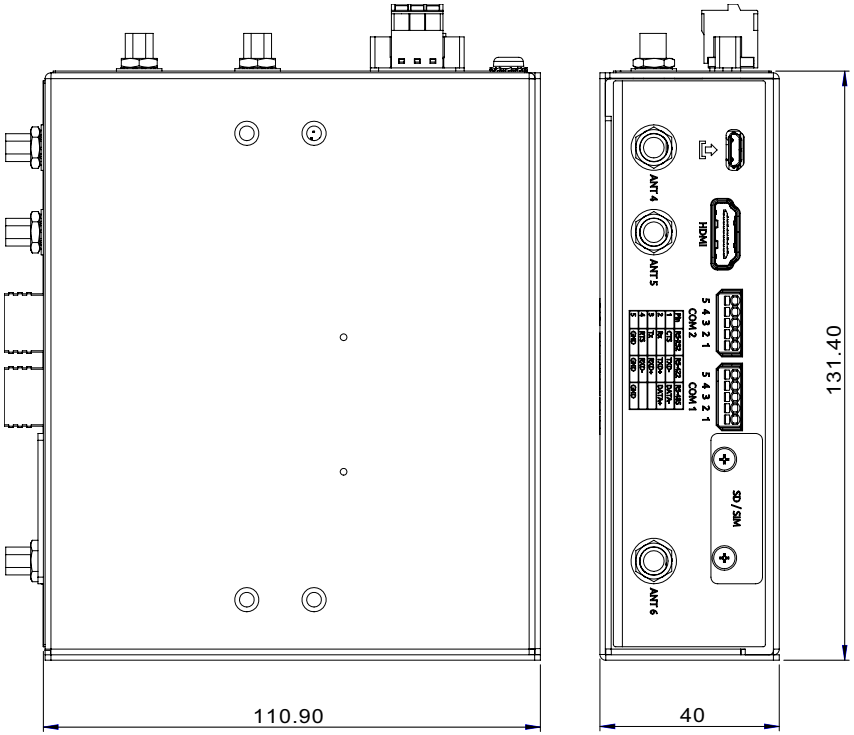


Figure 1-2: MXA-200 Dimensions

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1.6.2 DIN Rail Mounting

The DIN rail mount can be attached to the MXA-200 with two screws included in the wall mounting kit.

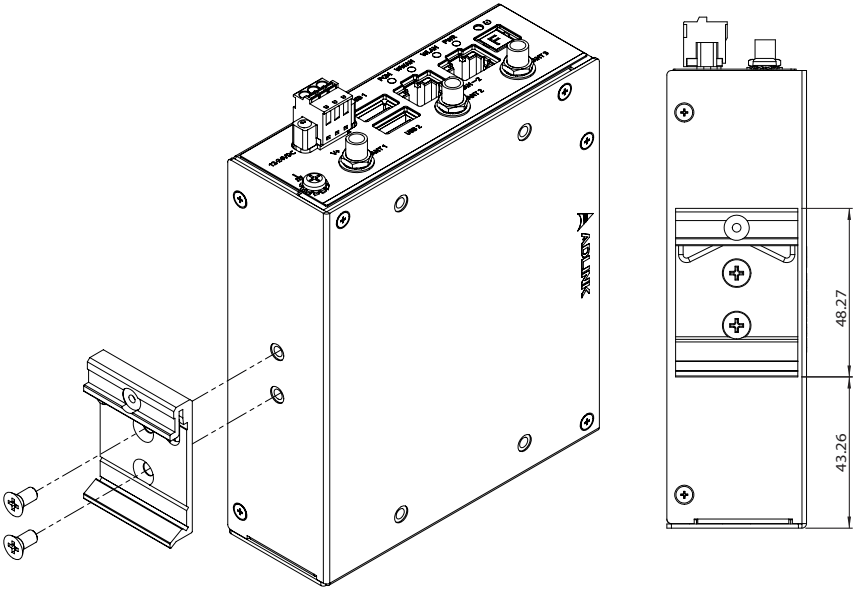


Figure 1-3: DIN Rail Mount 1

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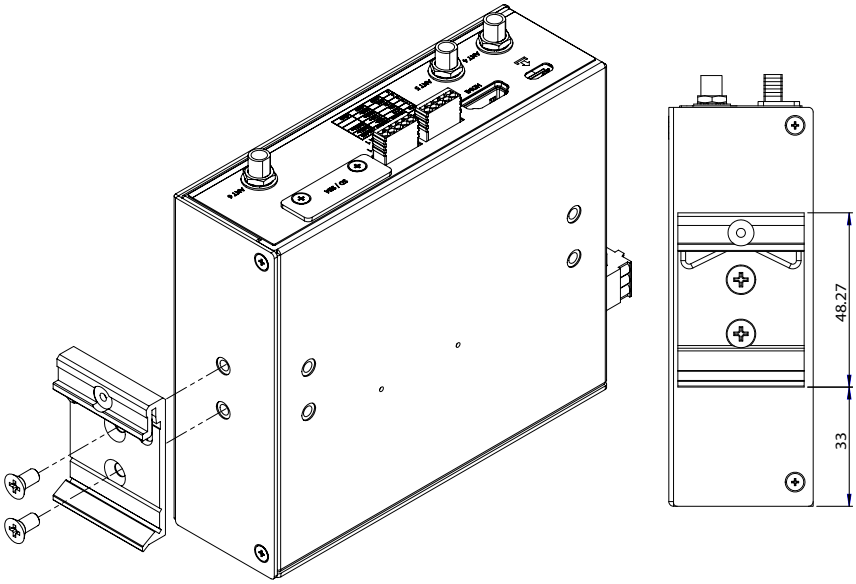


Figure 1-4: DIN Rail Mount 2

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1.6.3 Wall Mounting

Each wall mount bracket can be attached to the MXA-200 with two screws included in the wall mounting kit.

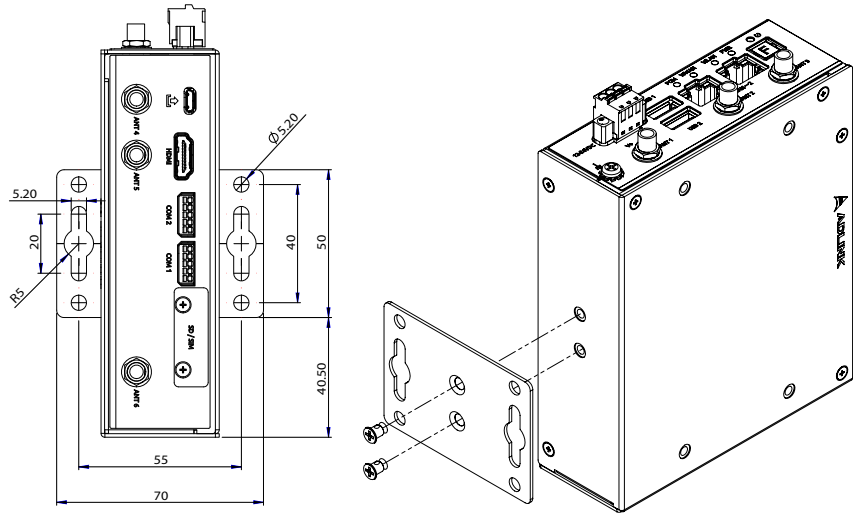


Figure 1-5: Wall Mount 1

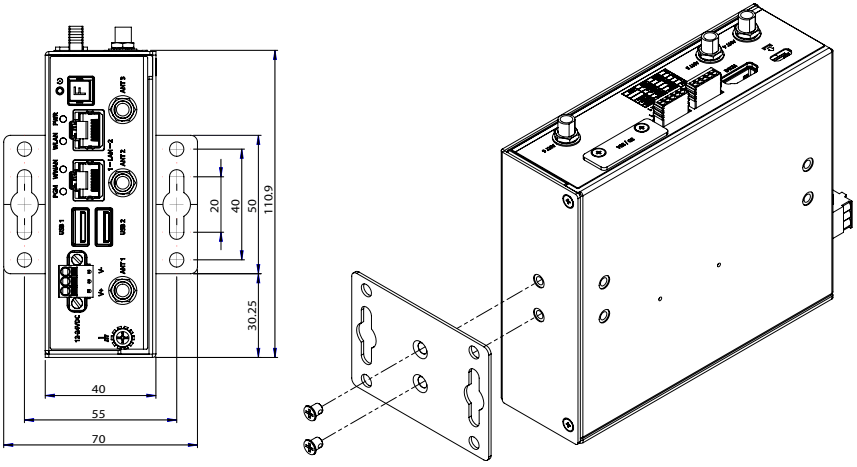


Figure 1-6: Wall Mount 2

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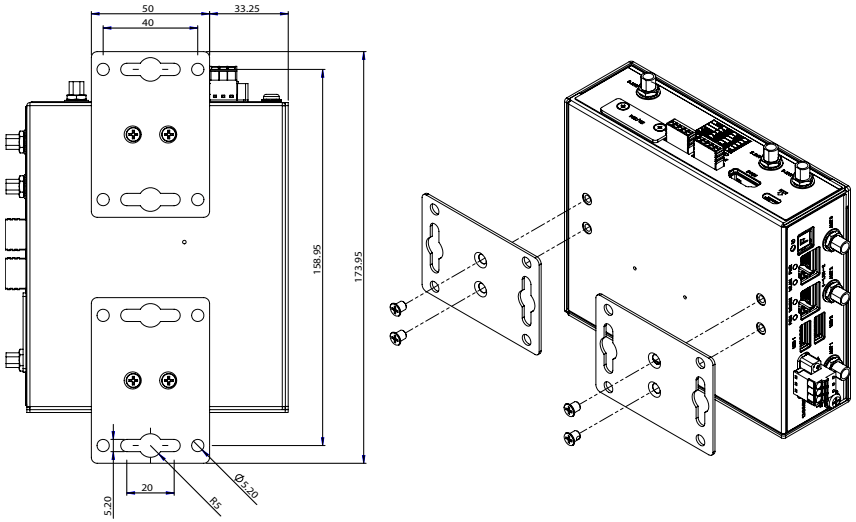


Figure 1-7: Wall Mount 3

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1.7 I/O Connectors

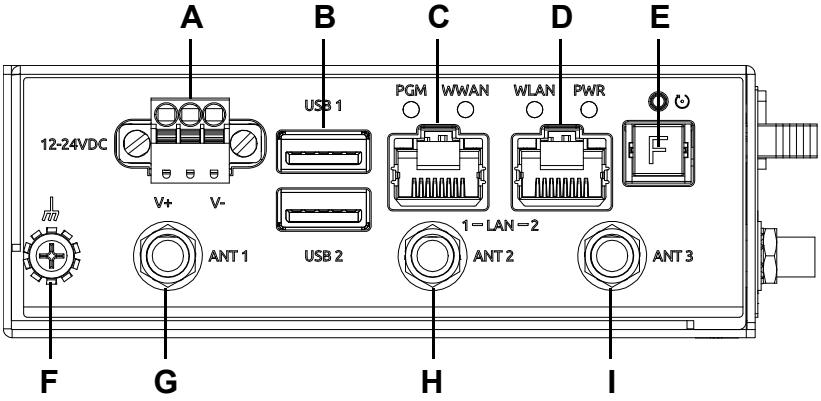


Figure 1-8: Front View

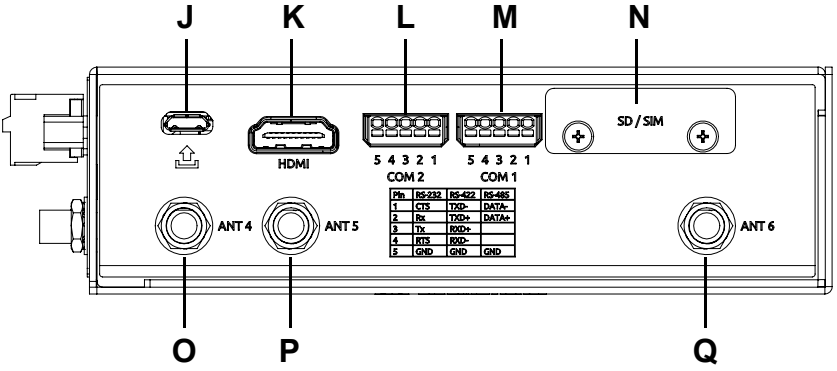


Figure 1-9: Side View

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Item	Description
A	DC power input
B	USB 3.0 Type-A
C, D	Gigabit Ethernet (GbE, RJ45)
E	Function button
F	Ground screw
G, H, I, O, P, Q	Antenna connector (optional for Wi-Fi/4G/5G/GPS)
J	Micro USB Connector
K	HDMI
L, M	RS-232/422/485, 4-wire
N	microSD and SIM slot

Table 1-1: I/O Connector Legend

LED	Description
PWR LED	The LED will light up when the system is powered.
WLAN LED	When a Wi-Fi module is installed, the LED will light up after the system loads, otherwise the LED will not light up.
WWAN LED	When a 5G/4G/LTE module is installed, the LED will light up after the system loads, otherwise the LED will not light up.
PGM LED	The LED will light up when flashing the BSP to the eMMC via an SD card.

Table 1-2: I/O Connector Legend

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1.7.1 DC Power Input

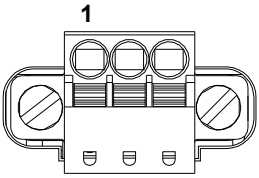


Figure 1-10: DC Power Input

Pin	Signal
1	V+ (DC_IN)
2	GND
3	V-

1.7.2 USB 3.0 Ports

The USB 3.0 Type-A ports support are compatible with SuperSpeed, Hi-Speed, full-speed and low-speed USB devices, with support for multiple boot devices, including USB flash, USB external HDD, and USB CD-ROM drivers, and boot priority and boot device configured in BIOS.

1.7.3 Gigabit Ethernet Ports

There are two Gigabit Ethernet (GbE) ports on the front panel with two MAC address. Either port can be used for connecting to a host PC

- LAN1: The default is DHCP
- LAN2: The default static IP address is 192.168.50.2

1.7.4 Reboot Button

Pressing the reboot button will cause the system to reboot.

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1.7.5 Function Key

Restore the MXA-200 to factory default settings by pressing the function button until the device reboots.

Item	Default Value
username	root
password	adlink
COM Port 1	RS-485/9600/N/8/1
COM Port 2	RS-485/9600/N/8/1
LAN 1	DHCP
LAN 2	Static IP:192.168.50.2
WiFi	▶ Disconnect WiFi network connection ▶ Clean all parameters
Cellular (optional)	▶ Disconnect cellular network connection ▶ Clean all parameters

1.7.6 Antenna Ports

Antenna ports ANT1-6 support the functions listed in Appendix B: Accessory Installation on page 29.

1.7.7 HDMI Connector

An HDMI Type-A socket is provided to connect a monitor to the system.

1.7.8 Micro-SIM Slot

Insert a micro-SIM card into the slot. Make sure it is properly aligned and inserted all the way. Once the card is inserted, the MXA-200 can connect to a cellular network and access the Internet.

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1.7.9 COM Port Connectors

The MXA-200 provides two COM ports through 5-pin connectors. The COM1 & COM2 ports support RS-232/422/485 modes.

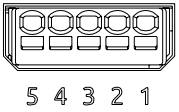


Figure 1-11: COM Port Pin Definition

Pin	Signal		
	RS-232	RS-422	RS-485
1	CTS	TXD-	DATA-
2	Rx	TXD+	DATA+
3	Tx	RXD+	
4	RTS	RXD-	
5	GND	GND	GND

Table 1-3: 5-pin Signal Function of COM Ports

1.7.10 microSD Slot

Insert a microSD card into the slot for additional storage.

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2 Getting Started

2.1 Unpacking the MXA-200

Ensure that the following items are included in the package. If any items are missing, contact your sales representative for assistance.

- MXA-200
- DIN rail mount kit with 2x flat head screws
- Wall mount kit with 4x pan head screws
- Quick Start Guide



Before unpacking, check the shipping carton for any damage. If the shipping carton and/or contents are damaged, inform your dealer immediately. Retain the shipping carton and packing materials for inspection. Obtain authorization from your dealer before returning any product to ADLINK.

Déballage de la MXA-200

Assurez-vous que les éléments suivants sont inclus dans le colis. Si des éléments sont manquants, veuillez contacter votre représentant commercial pour obtenir de l'aide.

- *MXA-200*
- *Kit de montage sur rail DIN avec 2 vis à tête plate*
- *Kit de montage mural avec 4 vis à tête cylindrique*
- *Guide de Démarrage Rapide*



AVERTISSEMENT: Avant de déballer, vérifiez l'emballage d'expédition pour tout dommage. Si l'emballage d'expédition et/ou le contenu sont endommagés, informez immédiatement votre revendeur. Conservez l'emballage d'expédition et les matériaux d'emballage pour inspection. Obtenez l'autorisation de votre revendeur avant de retourner tout produit à ADLINK.

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2.2 Connecting DC Power

DC power source output rating:

- Voltage: 12 to 24 VDC
- Current: 5A to 2.5A minimum

Follow these steps to connect power to the MXA-200:

1. Before turning on the power source, connect the positive and negative wires from a 12 to 24V DC power source to the terminal block.
2. Turn on the power source. If the power was connected correctly, the front panel green PWR LED will light up.



- Only use an IEC or UL certified power source.
- The maximum operating altitude is 5000m whose output meets LPS and SELV (ES1) circuits.

If the MXA-200 needs to be shut down, turn off the power source.

To remove the power wires, use a flat head screwdriver to push the orange slots on the terminal block and then pull out the wires.



- Ensure the power source is turned off before connecting or removing the power wires.
- Before providing DC power to the apparatus, ensure the voltage and polarity provided are compatible with the DC input. Improper input voltage and/or polarity can be responsible for system damage.

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Connexion de l'alimentation CC

Valeur nominale de sortie de la source d'alimentation CC:

- *Tension: 12 à 24 VCC*
- *Courant: 5A à 2,5A minimum*

Suivez ces étapes pour connecter l'alimentation à l'MXA-200:

1. *Avant d'allumer la source d'alimentation, connectez les fils positifs et négatifs d'une source d'alimentation de 12 à 24 V CC au bornier.*
2. *Allumez la source d'alimentation. Si l'alimentation a été correctement connectée, la LED verte PWR du panneau avant s'allumera.*



- *Utilisez uniquement une source d'alimentation certifiée IEC ou UL.*
- *L'altitude maximale de fonctionnement est de 5 000 m dont la sortie répond aux circuits LPS et SELV (ES1).*

Si l'MXA-200 doit être arrêté, coupez la source d'alimentation.

Pour retirer les fils d'alimentation, utilisez un tournevis à tête plate pour pousser les fentes orange du bornier puis retirez les fils.



- *Assurez-vous que la source d'alimentation est éteinte avant de connecter ou de retirer les fils d'alimentation.*
- *Avant de fournir une alimentation CC à l'appareil, assurez-vous que la tension et la polarité fournies sont compatibles avec l'entrée CC. Une tension d'entrée et/ou une polarité incorrecte peuvent être responsables d'endommagements du système.*

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Appendix A Debian Linux OS

Debian Linux is used as the MXA-200 operating system for system integrators to develop customization applications.This appendix includes information on the following items.

- Hardware Setup
- Connecting and Logging in via SSH
- LED Function
- Serial Port Configuration
- Network Settings
- 5G/4G/LTE Module Configuration
- WiFi Configuration and Connection

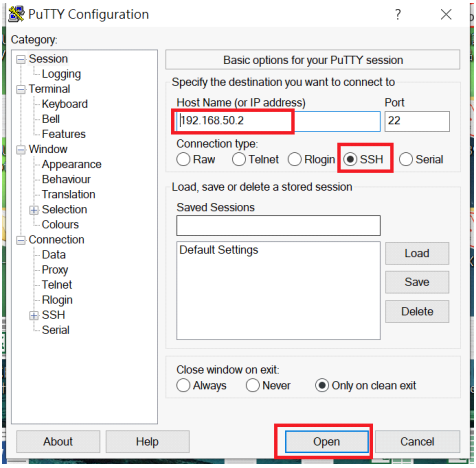
A.1 Hardware Setup

1. LAN1 (DHCP) connects to the network. LAN2 (Static IP) connects to the MXA-200 via SSH.
2. Connect the MXA-200 to a 12-24V DC power supply.
3. The MXA-200 will power on automatically.

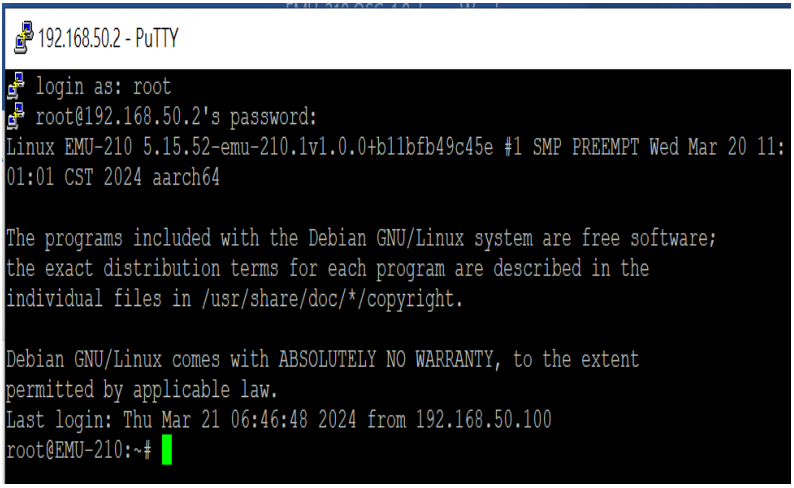
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A.2 Connecting and Logging in via SSH

1. Set the network domain of the host computer that will be connected to the MXA-200 to 192.168.50.xx.
2. Open Putty on the host computer and enter the IP address of the MXA-200: 192.168.50.2.



3. Log in with the username (**root**) and password (**adlink**).
4. You have successfully connected to the MXA-200.



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A.3 LED Function

- **PWR LED**: The LED will light up when powered.
- **WLAN LED**: When a Wi-Fi module is installed in the slot, the LED will light up after the system loads. If the hardware does not have a Wi-Fi module installed, the LED will not light up.
- **WWAN LED**: When a 5G LTE module is installed in the slot, the LED will light up after the system loads. If the hardware does not have a 5G LTE module installed, the LED will not light up.
- **PGM LED**: The LED will light up when flashing the BSP to the eMMC via an SD card.

A.4 Serial Port Configuration

Use the following commands to query the current COM1/COM2 serial settings.

```
$ cat /sys/class/gpio_switch/com1Mode
$ cat /sys/class/gpio_switch/com2Mode
```

Use the following commands to set the COM1/COM2 serial settings to RS-232/422/485.

```
$ echo RS232 > /sys/class/gpio_switch/com1Mode
$ echo RS232 > /sys/class/gpio_switch/com2Mode

$ echo RS422 > /sys/class/gpio_switch/com1Mode
$ echo RS422 > /sys/class/gpio_switch/com2Mode

$ echo RS485 > /sys/class/gpio_switch/com1Mode
$ echo RS485 > /sys/class/gpio_switch/com2Mode
```

Use the following commands to set the COM1/COM2 serial paths.

```
COM1: /dev/ttymxc2
COM2: /dev/ttymxc3
```


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A.5 Network Settings

Use the following command to Modify LAN1 (eth0).

```
$ vi /etc/systemd/network/10-eth.network.conf
```

Use the following command to Modify LAN2 (eth1).

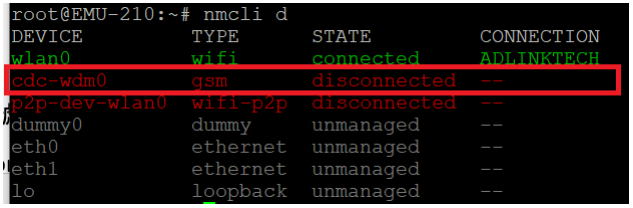
```
$ vi /etc/systemd/network/11-eth1.network.conf
```


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A.6 5G/4G/LTE Module Configuration

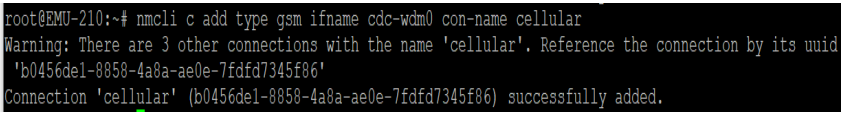
1. Enter the following command to check the interface status.

   ```
   $ nmcli d
   ```



2. Add a connection.

   ```
   $ nmcli c add type gsm ifname cdc-wdm0 con-name
   cellular
   ```



3. Check the connection status.

   ```
   $ nmcli c show cellular
   ```

4. Activate the connection.

   ```
   $ nmcli c up cellular
   ```



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5. Check if the network interface (wwan0) is present.

```
$ ifconfig
```

```
wwan0: flags=4291<UP,BROADCAST,RUNNING,NOARP,MULTICAST>  mtu 1500
        inet 10.131.44.140  netmask 255.255.255.248  broadcast 10.131.44.143
        inet6 2001:b400:e3db:7b17:909b:f846:edf2:4278  prefixlen 64  scopeid 0x0<global>
        ether da:ee:52:5e:92:7e  txqueuelen 1000  (Ethernet)
        RX packets 294  bytes 29244 (28.5 KiB)
        RX errors 46  dropped 0  overruns 0  frame 0
        TX packets 494  bytes 54865 (53.5 KiB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0
```

6. Perform network connectivity test (ping Google DNS).

```
$ ping -I wwan0 8.8.8.8
```

```
root@EMU-210:~#  ping -I wwan0 8.8.8.8
PING 8.8.8.8 (8.8.8.8) from 10.131.44.140 wwan0: 56(84) bytes of data.
64 bytes from 8.8.8.8: icmp_seq=1 ttl=55 time=1089 ms
64 bytes from 8.8.8.8: icmp_seq=2 ttl=55 time=144 ms
64 bytes from 8.8.8.8: icmp_seq=3 ttl=55 time=14.6 ms
64 bytes from 8.8.8.8: icmp_seq=4 ttl=55 time=22.3 ms
64 bytes from 8.8.8.8: icmp_seq=5 ttl=55 time=25.3 ms
64 bytes from 8.8.8.8: icmp_seq=6 ttl=55 time=13.2 ms
64 bytes from 8.8.8.8: icmp_seq=7 ttl=55 time=27.4 ms
64 bytes from 8.8.8.8: icmp_seq=8 ttl=55 time=14.2 ms
64 bytes from 8.8.8.8: icmp_seq=9 ttl=55 time=32.2 ms
64 bytes from 8.8.8.8: icmp_seq=10 ttl=55 time=21.4 ms
64 bytes from 8.8.8.8: icmp_seq=11 ttl=55 time=31.8 ms
64 bytes from 8.8.8.8: icmp_seq=12 ttl=55 time=13.6 ms
64 bytes from 8.8.8.8: icmp_seq=13 ttl=55 time=25.9 ms
64 bytes from 8.8.8.8: icmp_seq=14 ttl=55 time=24.6 ms
64 bytes from 8.8.8.8: icmp_seq=15 ttl=55 time=26.3 ms
64 bytes from 8.8.8.8: icmp_seq=16 ttl=55 time=24.3 ms
64 bytes from 8.8.8.8: icmp_seq=17 ttl=55 time=30.9 ms
64 bytes from 8.8.8.8: icmp_seq=18 ttl=55 time=16.8 ms
```

7. Close the connection.

```
$ nmcli c down cellular
```

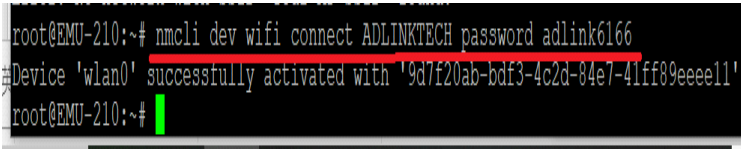
```
root@EMU-210:~# nmcli c down cellular
Connection 'cellular' successfully deactivated (D-Bus active path: /org/freedesktop/
NetworkManager/ActiveConnection/7)
root@EMU-210:~#
```


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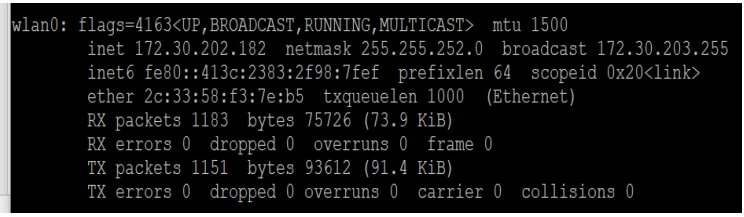
A.7 Wi-Fi Configuration and Connection

1. Enter the following to connect to the Wi-Fi AP.

```
$ nmcli dev wifi connect "Your AP SSID" password
"Your Password"
```

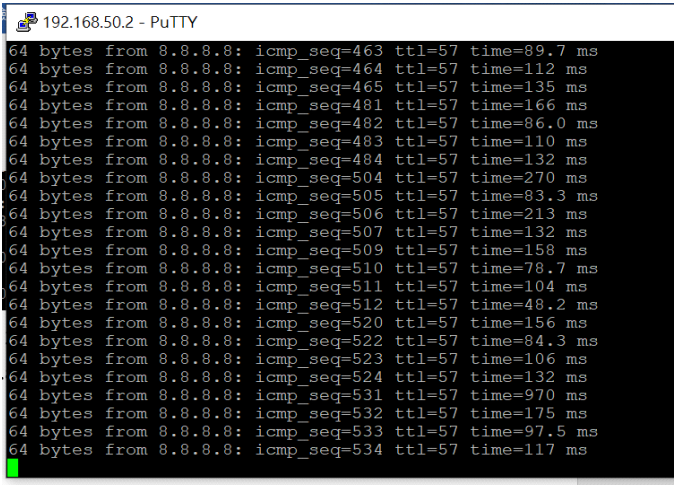


2. Check if the Wi-Fi network interface (wlan0) is present.



3. Enter the following command to execute a Wi-Fi connectivity function test (ping Google DNS).

```
$ ping -I wlan0 8.8.8.8
```



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Appendix B Accessory Installation

B.1 Wi-Fi Module

1. Remove 8 screws from chassis.



2. Remove the top cover



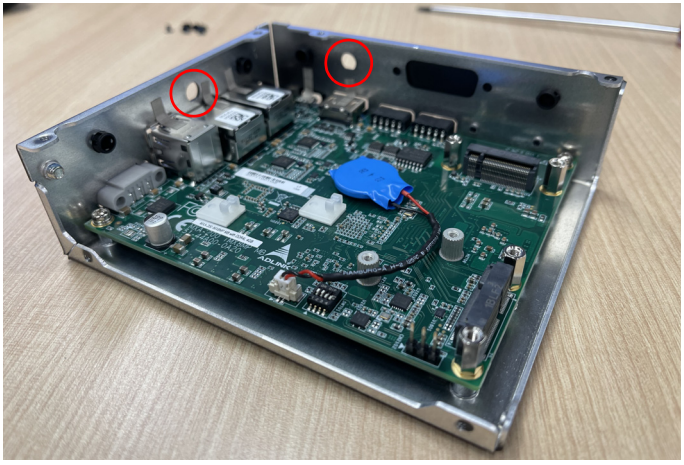
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3. Remove the appropriate antenna covers based on the Wi-Fi module used. There are two positions to choose from, depending on whether you will upgrade to a 4G module or a 5G module. If you will not upgrade the system, choose the first option.

Antenna covers for 4G modules Sierra EM7421 and Quectel EM05-G

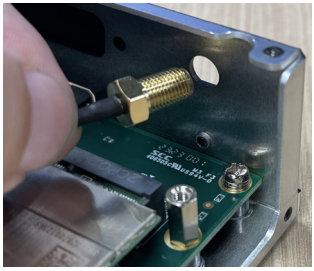


Antenna covers for 5G module: TELIT MV32-W-AD



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4. Install two RF Cables. Thread the SMA connector through the antenna hole.

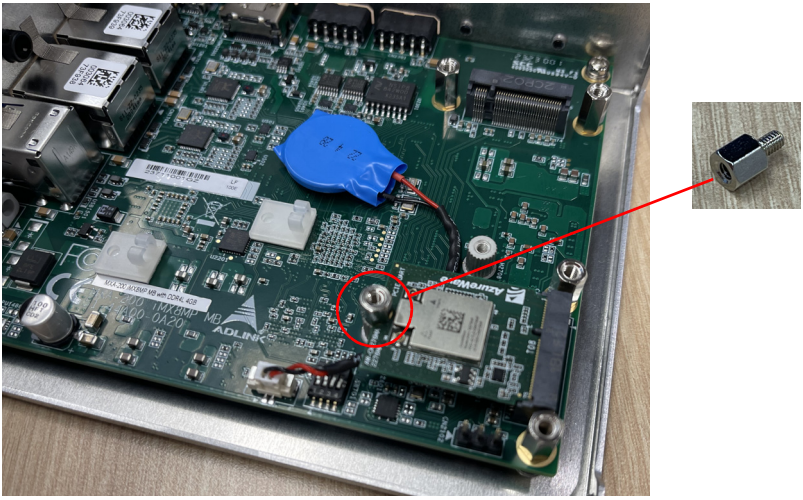



5. Insert the washer and install the hex nut (torque value = 6-8kgf.cm).

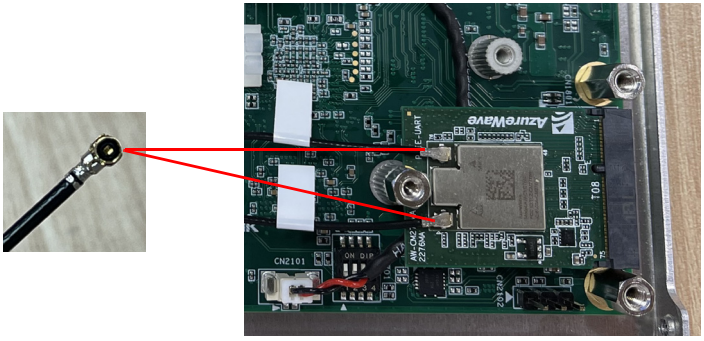



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6. Install the Wi-Fi module and secure with a hex standoff (torque value = 4-5kgf.cm).



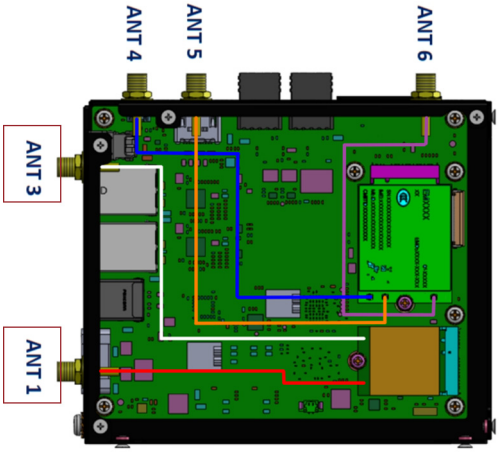
7. Attach the RF cable connector to the module.



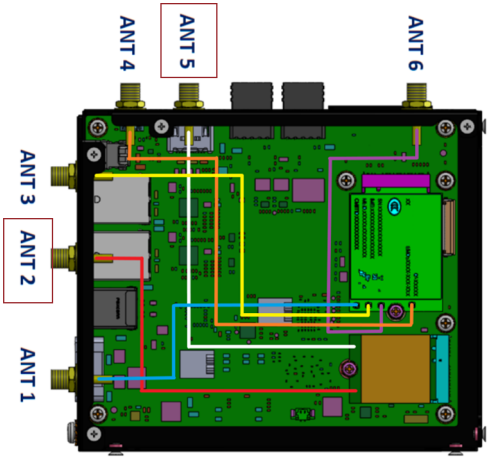
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8. RF Cable routing. There are two positions to choose from.

Cable routing for 4G modules Sierra EM7421 and Quectel EM05-G

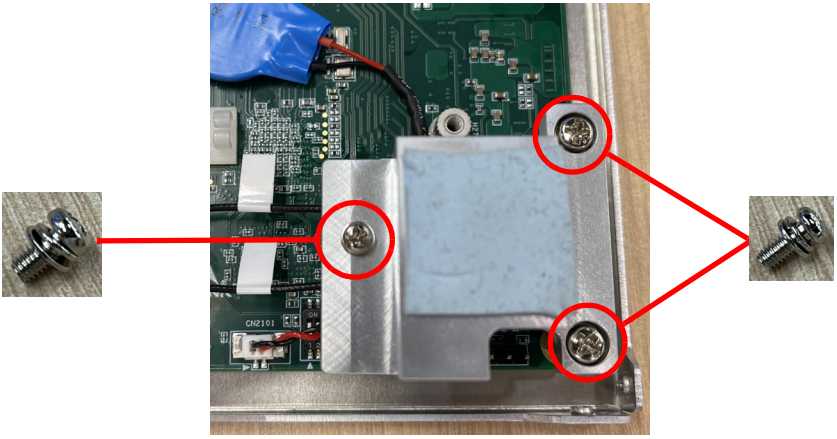


Cable routing for 5G module TELIT MV32-W-AD

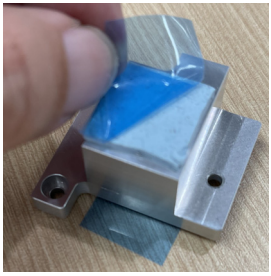


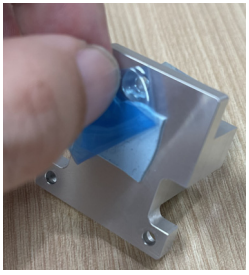
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9. Install the thermal conductive aluminum block and tighten the M2.5 screw and two M3 screws (torque value = 3.5-4kgf.cm).



The thermal conductive aluminum block has release paper on both sides, which needs to be removed before installation.





10. Replace the top cover and original screws.

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B.2 4G Module

1. Remove 8 screws from chassis.



2. Remove the top cover



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3. Remove the appropriate antenna covers based on the 4G module used. There are two positions to choose from, depending on the 4G module used.

Antenna covers for 4G module Sierra EM7421

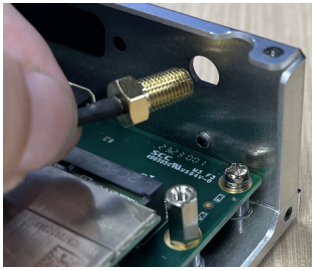


Antenna covers for 4G module Quectel EM05-G



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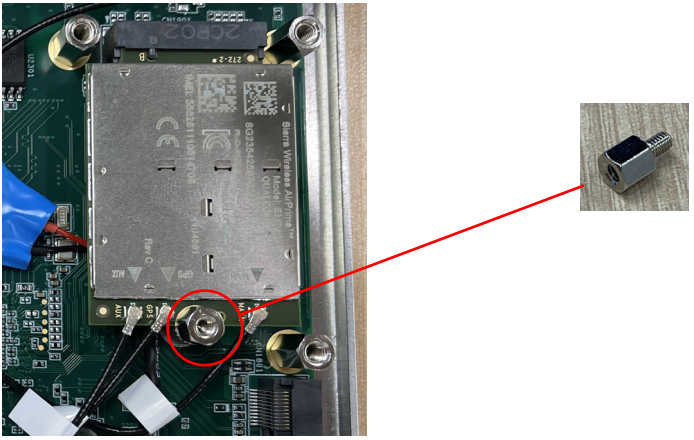
4. Install the RF Cables. Thread the SMA connector through the antenna hole.



5. Insert the washer and install the hex nut (torque value = 6-8kgf.cm).

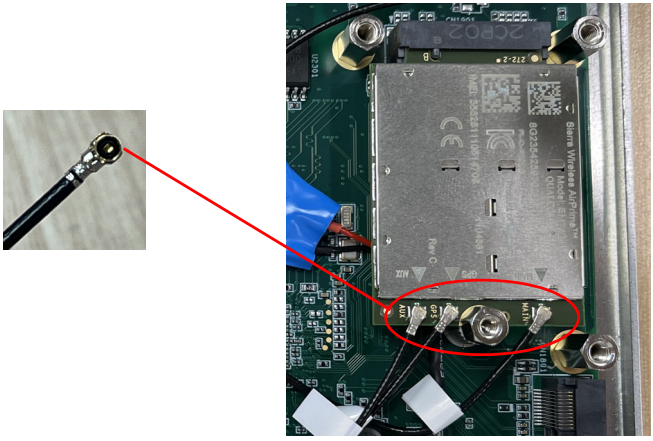


6. Install the 4G module and secure with a hex standoff (torque value = 4-5kgf.cm).



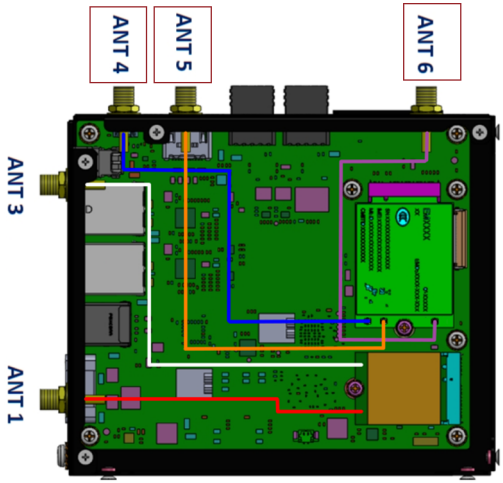
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7. Attach the RF cable connectors to the module.



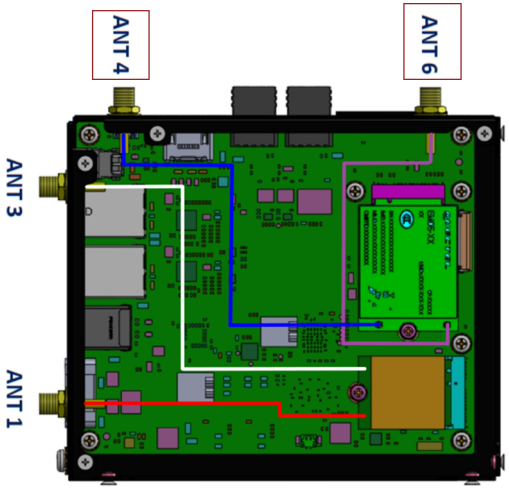
8. RF Cable routing. There are two positions to choose from.

Cable routing for 4G module Sierra EM7421

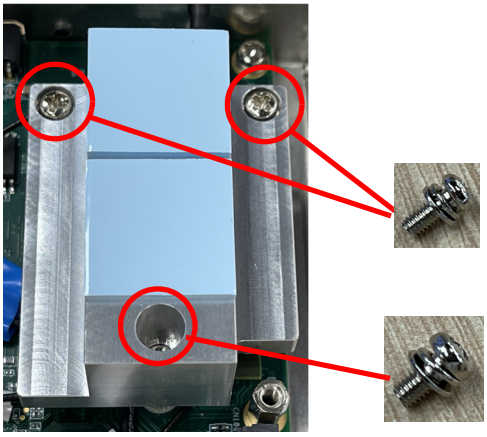


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Cable routing for 4G module Quectel EM05-G

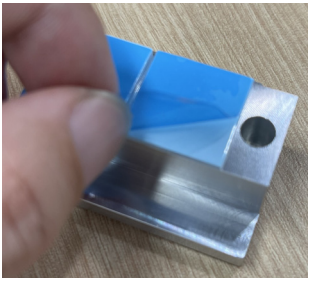


9. Install the thermal conductive aluminum block and tighten the M2.5 screw and two M3 screws (torque value = 3.5-4kgf.cm).



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The thermal conductive aluminum block has release paper on both sides, which needs to be removed before installation.





10. Replace the top cover and original screws.

B.3 5G Module

1. Remove 8 screws from chassis.

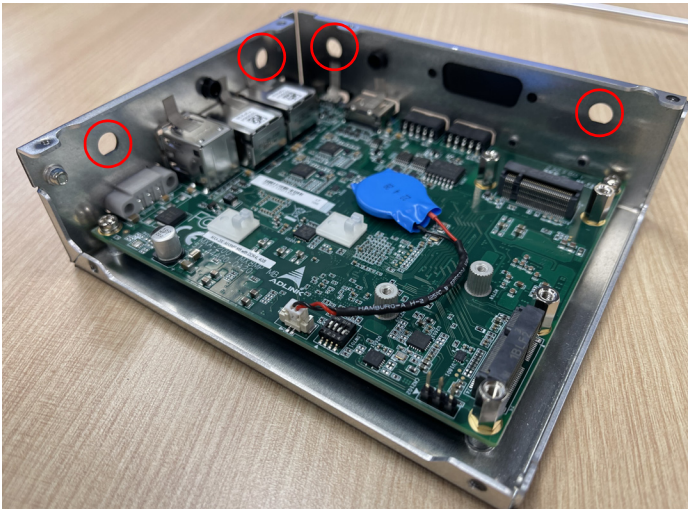


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2. Remove the top cover

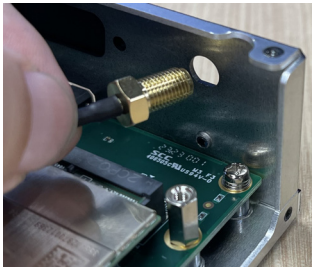


3. Remove four antenna covers.



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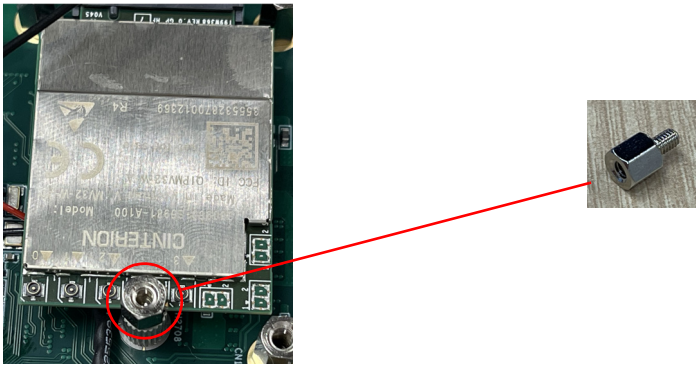
4. Install the RF Cables. Thread the SMA connector through the antenna hole.




5. Insert the washer and install the hex nut (torque value = 6-8kgf.cm).

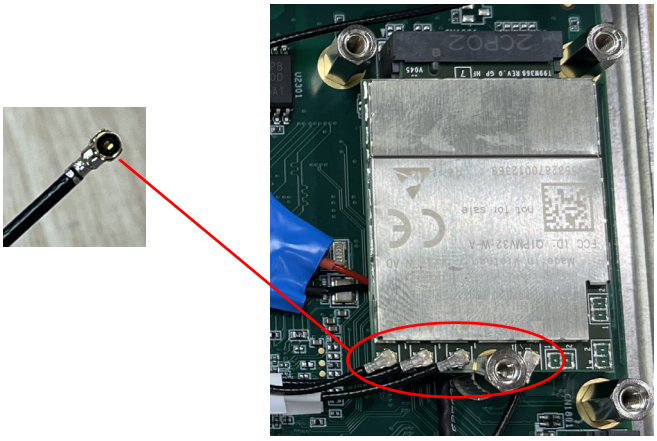



6. Install the 5G module and secure with a hex standoff (torque value = 4-5kgf.cm).

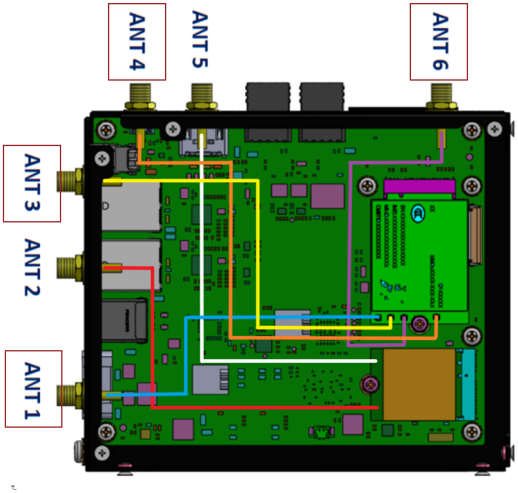


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7. Attach the RF cable connectors to the module.

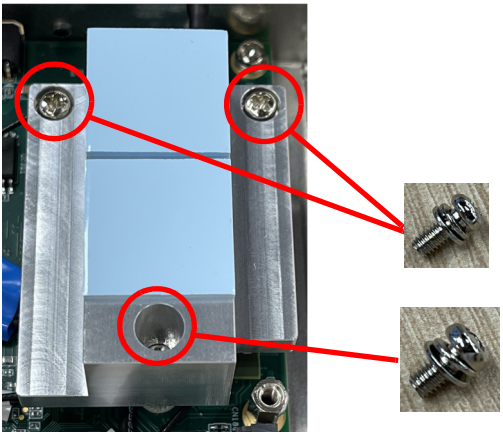


8. RF Cable routing.

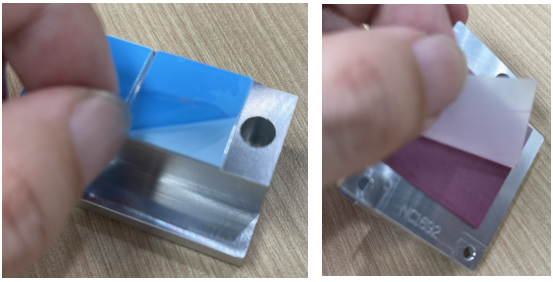


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9. Install the thermal conductive aluminum block and tighten the M2.5 screw and two M3 screws (torque value = 3.5-4kgf.cm).



The thermal conductive aluminum block has release paper on both sides, which needs to be removed before installation.



10. Replace the top cover and original screws.

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Important Safety Instructions

For user safety, please read and follow all instructions, Warnings, Cautions, and Notes marked in this manual and on the associated device before handling/operating the device, to avoid injury or damage.

- Read these safety instructions carefully.
- Keep the User's Manual for future reference.
- Read the Specifications section of this manual for detailed information on the recommended operating environment.
- The device can be operated at an ambient temperature of 5ºC to 50ºC.
- It is recommended that the device be installed in Information Technology Rooms that are in accordance with Article 645 of the National Electrical Code and NFPA 75.
- When installing/mounting or uninstalling/removing device:
  - Turn off power and unplug any power cords/cables.
  - Reinstall all chassis covers before restoring power.
- To avoid electrical shock and/or damage to device:
  - Keep device away from water or liquid sources.
  - Keep device away from high heat or humidity.
  - Keep device properly ventilated (do not block or cover ventilation openings).
  - Always use recommended voltage and power source settings.
  - Always install and operate device near an easily accessible electrical outlet.
  - Secure the power cord (do not place any object on/over the power cord).
  - Only install/attach and operate device on stable surfaces and/or recommended mountings.
  - This apparatus is powered by adapter or DC source. Please ensure the adapter or DC source has a grounded connection.
- If the device will not be used for long periods of time, turn off and unplug it from its power source
- Never attempt to repair the device, which should only be serviced by qualified technical personnel using suitable tools

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- A Lithium-type battery may be provided for uninterrupted backup or emergency power.

CAUTION:

Risk of explosion if battery is replaced with one of an incorrect type; please dispose of used batteries appropriately.
Risque d'explosion si la pile est remplacée par une autre de type incorrect. Veuillez jeter les piles usagées de façon appropriée.

- The device must be serviced by authorized technicians when:
  - The power cord or plug is damaged.
  - Liquid has entered the device interior.
  - The device has been exposed to high humidity and/or moisture.
  - The device is not functioning or does not function according to the User's Manual.
  - The device has been dropped and/or damaged and/or shows obvious signs of breakage.
- Disconnect the power supply cord before loosening the thumbscrews and always fasten the thumbscrews with a screwdriver before starting the system up.
- Terminal block wires should be fixed tightly by an authorized technician with the recommendation wire range: 16-24, str, sol, wire type: copper.
- It is recommended that the device be installed only in a server room or computer room where access is:
  - Restricted to qualified service personnel or users familiar with restrictions applied to the location, reasons therefor, and any precautions required.
  - Only afforded by the use of a tool or lock and key, or other means of security, and controlled by the authority responsible for the location.



BURN HAZARD
Touching this surface could result in bodily injury. To reduce risk, allow the surface to cool before touching.

RISQUE DE BRÛLURES
Ne touchez pas cette surface, cela pourrait entraîner des blessures.
Pour éviter tout danger, laissez la surface refroidir avant de la toucher.

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Consignes de Sécurité Importantes

Pour la sécurité de l'utilisateur, veuillez lire et suivre toutes les instructions, avertissements, mises en garde et notes marqués dans ce manuel et sur l'appareil associé avant de manipuler/ d'utiliser l'appareil, afin d'éviter toute blessure ou tout dommage.

- *Lisez attentivement ces consignes de sécurité*
- *Conservez le manuel de l'utilisateur pour pouvoir le consulter ultérieurement*
- *Lisez la section Spécifications de ce manuel pour des informations détaillées sur l'environnement d'exploitation recommandé*
- *L'appareil peut être utilisé à une température ambiante de 5ºC à 50ºC.*
- *Il est recommandé d'installer l'appareil dans Information Salles technologiques conformes à l'article 645 du Code national de l'électricité et NFPA 75.*
- *Lorsque l'installation/le montage ou la désinstallation/le retrait du périphérique est requis:*
  Lorsque l'installation/le montage ou la désinstallation/le retrait du périphérique est necessaire:
  - *Mettez l'appareil hors tension et débranchez tous les cordons/câbles d'alimentation*
  - *Réinstallez tous les couvercles de châssis avant de rétablir l'alimentation*
- *Pour éviter les chocs électriques et/ou d'endommager l'appareil:*
  - *Tenez l'appareil à l'écart de toute source d'eau ou de liquide*
  - *Tenez l'appareil à l'écart d'une forte chaleur ou d'une humidité élevée*
  - *Maintenez l'appareil correctement ventilé (n'obstruer ou ne couvrez pas les ouvertures de ventilation)*
  - *Utilisez toujours les réglages de tension et de source d'alimentation recommandés*
  - *Installez et utilisez toujours l'appareil près d'une prise de courant facilement accessible*

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- ▷ *Fixez le cordon d'alimentation (ne placez aucun objet sur le cordon d'alimentation)*
- ▷ *Installez/fixez et utilisez l'appareil uniquement sur des surfaces stables et/ou sur les fixations recommandées*
- ▷ *Cet appareil est alimenté par un adaptateur ou une source DC. Veuillez vous assurer que l'adaptateur ou la source DC est relié à la terre s'il dispose d'une mise à la terre de protection.*

- ▶ *Si l'appareil ne doit pas être utilisé pendant de longues périodes, éteignez-le et débranchez-le de sa source d'alimentation*
- ▶ *N'essayez jamais de réparer l'appareil, qui ne doit être réparé que par un personnel technique qualifié à l'aide d'outils appropriés*
- ▶ *Une batterie de type Lithium peut être fournie pour une alimentation de secours ininterrompue ou d'urgence*.



Risque d'explosion si la pile est remplacée par une autre de type incorrect. Veuillez jeter les piles usagées de façon appropriée.

- ▶ *L'appareil doit être entretenu par des techniciens agrees lorsque:*
  - ▷ *Le cordon d'alimentation ou la prise est endommagé(e)*
  - ▷ *Un liquide a pénétré à l'intérieur de l'appareil*
  - ▷ *L'appareil a été exposé à une forte humidité et/ou de la buée*
  - ▷ *L'appareil ne fonctionne pas ou ne fonctionne pas selon le manuel de l'utilisateur*
  - ▷ *L'appareil est tombé et/ou a été endommagé et/ou présente des signes évidents de dommage*
- ▶ *Débranchez le cordon d'alimentation avant de desserrer les vis à oreilles et serrez toujours les vis à oreilles avec un tournevis avant de mettre le système en marche*
- ▶ *Le fil du bornier doit être fixé fermement par un technicien agréé et recommandé pour la gamme de fils : 16-24, str, sol, type de fil: Cu*

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- *Il est recommandé d'installer l'appareil uniquement dans une salle de serveurs ou une salle informatique où l'accès est:*
  - *Réservé au personnel de service qualifié ou aux utilisateurs familiarisés avec les restrictions appliquées à l'emplacement, aux raisons de ces restrictions et toutes les précautions requises*
  - *Uniquement autorisé par l'utilisation d'un outil, d'une serrure et d'une clé, ou d'un autre moyen de sécurité, et contrôlé par l'autorité responsable de l'emplacement*

	***RISQUE DE BRÛLURES*** *Ne touchez pas cette surface, cela pourrait entraîner des blessures.* *Pour éviter tout danger, laissez la surface refroidir avant de la toucher.*

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