DLAP-211-JNX/DLAP-211-JT2/DLAP-211-Nano Series

Edge Inference System

User's Manual



Manual Rev.:	1.2
Revision Date:	May 08, 2025
Part Number:	50M-00016-1020

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Leading EDGE COMPUTING

Revision History

Revision	Release Date	Description of Change(s)
1.0	2021-12-06	Initial Release
1.1	2022-11-09	Added DLAP-211-JT2
1.2	2025-05-08	Updated system recovery and using the system

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Preface

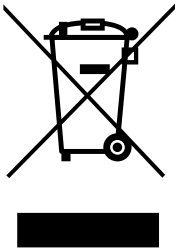
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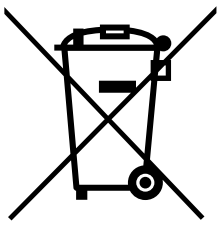
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Conventions

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.

ATTENTION: Informations destinées à prévenir les blessures corporelles mineures, les dommages aux composants, la perte de données et/ou la corruption de programme lors de l'exécu- tion d'une tâche.



WARNING:

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

AVERTISSEMENT: Informations destinées à prévenir les bles- sures corporelles graves, les dommages aux composants, la perte de données et/ou la corruption de programme lors de l'exécution d'une tâche spécifique.

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1 Introduction

ADLINK's DLAP-211 Series Edge Inference System leverages the power of NVIDIA® Jetson™ Nano TX2NX, and NX modules to deliver artificial intelligence (AI) at the edge. The DLAP-211 Edge AI Platforms with integrated NVIDIA Jetson accelerates deep learning workloads for object detection, recognition, and classification suitable for industrial embedded applications such as medical image processing, logistics automation, autonomous vehicles, smart retail, and AI NVR.

This fanless system provides a wide variety of industrial I/O and visual inferencing capabilities in a compact size. The DLAP-211 also supports reserved AFM connectors for optional I/Os including GPIO, Relay, I^2C, and SPI. With a lockable HDMI display, two GbE ports, four USB 3.0 ports (plus a USB 2.0 OTG port for software updates), one COM port, one isolated CAN bus, one audio jack plus one M.2 NVME/SATA and one SD slot for additional storage options, a Mini PCIe slot and USIM socket to support wireless communications such as Wi-Fi, LoRA, and 3G/4G LTE, the DLAP- 211 series enables AI at the edge with exceptional performance and convenience while keeping power consumption to a minimum.

1.1 Features

- Deep learning acceleration with NVIDIA® Jetson™ Xavier NX / TX2NX / Nano
- Compact fanless system: 148(W) x 105(D) x 52(H) mm
- Wide temperature range: -20°C to 70°C
- AFM supporting GPIO, Relay, I^2C, and SPI interfaces

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2 Specifications

2.1 Product Specifications

The DLAP-211 series come in six versions supporting Jetson Nano, TX2NX, and NX modules along with different I/O expansion options.

Model	DLAP-211- JNX	DLAP-211-JNXS	DLAP-211-JT2	DLAP-211-JT2S	DLAP-211-NanoS	DLAP-211-NanoS
System						
GPU	384-core NVIDIA Volta GPU with 48 Tensor Cores		NVIDIA Pascal Architecture GPU with 256 CUDA cores		NVIDIA Maxwell architecture with 128 CUDA cores	
CPU	6-core ARM v8.2 64-bit		2-core Denver 2 64-bit and 4-core ARM Cortex-A57		ARM Cortex- A57	
RAM	8/16GB	8GB	4GB			
Storage	16 GB eMMC 5.1					
OS	Linux Ubuntu					
Front Panel I/O Ports						
Button	1x power, 1x reset, 1x recovery					
HDMI	1x lockable					
USB	4x USB 3.0 Type-A					
Ethernet	2x 10/100/1000 Mbps Ethernet					
Audio	Mic-in, Line-out					
Expansion I/O	N/A	2x I2C, 2x SPI, 1x UART, 8x GPIO, 1x Relay through 1x D-sub 37-pin connector	N/A	2x I2C, 2x SPI, 1x UART, 8x GPIO, 1x Relay through, 1x D-sub 37-pin connector	N/A	2x I2C, 2x SPI, 1x UART, 8x GPIO 1x Relay through, 1x D-sub 37-pin connector
Rear Panel I/O Ports						
USB	1x USB 2.0 OTG					
Serial Port	1x COM RS-232/422/485					
CAN Bus	1x 2.0b				N/A	

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Model	DLAP-211-JNX	DLAP-211-JNXS	DLAP-211-JT2	DLAP-211-JT2S	DLAP-211-NanoS	DLAP-211-NanoS
Extension Slots						
Mini PCIe	1x Mini PCIe slot					
M.2	1x M.2 B key 2242 socket					
SD Card Slot	1x SD card slot					
Power Supply						
DC Input	12V					
AC Input	60W AC/DC adapter					
Mechanical						
Dimensions (W x D x H)	148 x 120 x 52 mm (DLAP-211-JNX/JT2/Nano) 148 x 120 x 64 mm (DLAP-211-JNXS/JT2S/NanoS)					
Weight	Gross 1.725 KG / Net 1.5 KG					
Mounting	Wall and VESA (DIN rail optional)					
SMA Antenna Connector	4					
Environmental						
Operating Temperature	-20°C to 70°C (system level) -20°C to 85°C (board level)					
Operating Humidity	~95% @40°C (non-condensing)					
Storage Temperature	-40°C to 85°C					
Vibration	Operating 5Grms, 5 to 500 Hz, 3 axes w/ mSATA					
Shock	Operating 100G, half sine 11 ms duration w/ SD, mSATA					
ESD	Contact +/- 4kV, Air +/- 8kV					
Regulatory	CE & FCC class B, (EN61000-6-4/-6-2), CE-LVD & UL by CB, FCCID (DLAP-211-JNXO & DLAP-211-NanoO support CE & FCC class A with 4V for one camera connected.)					
Firmware						
WDT	WDT Supported					

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3 Mechanical Layout

3.1 Mechanical Dimensions

NOTE:

All dimensions are in millimeters, unless noted.

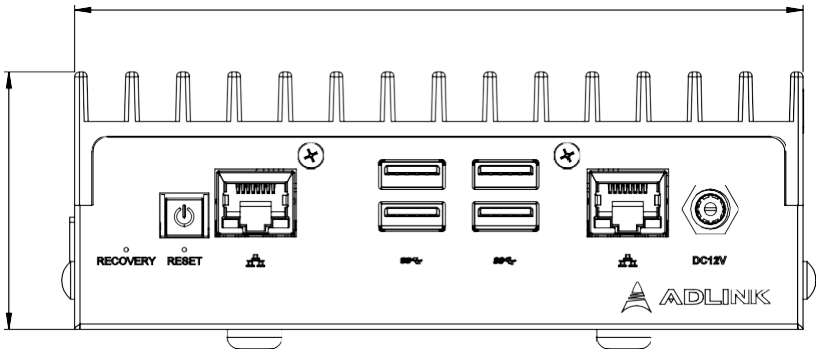


Figure 1: DLAP-211-Nano/JT2/NX front view

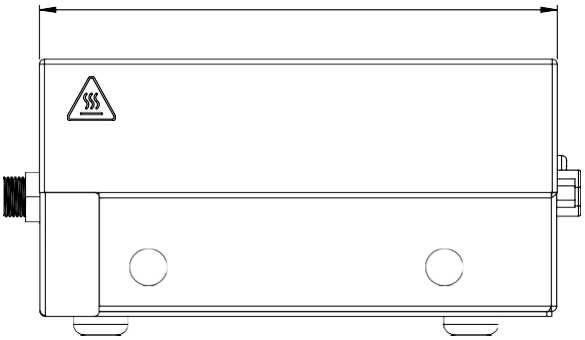


Figure 2: DLAP-211-Nano/JT2/NX side view

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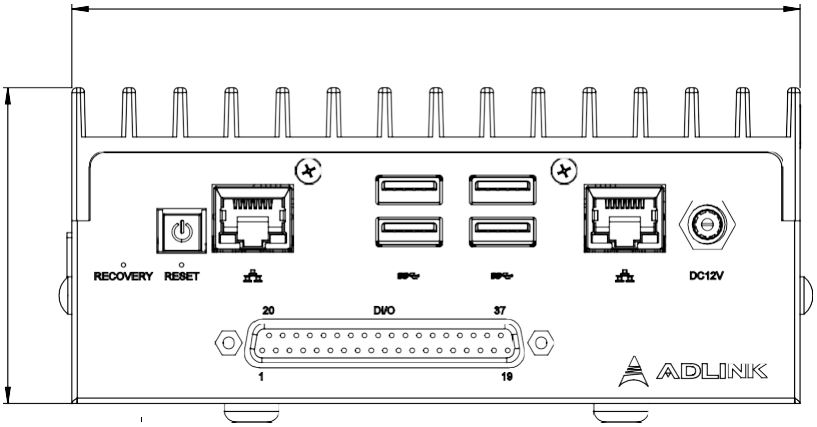


Figure 3: DLAP-211-NanoS/JT2S/NXS front view

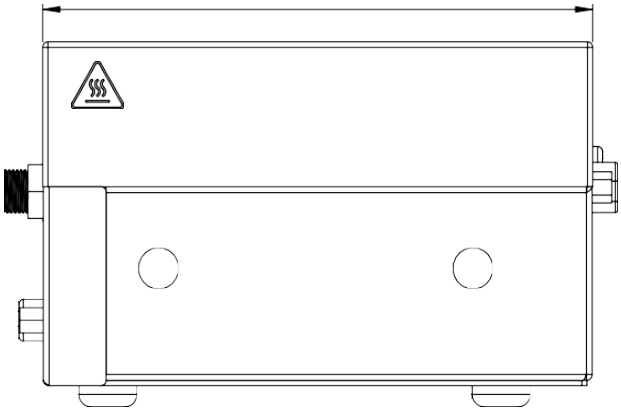


Figure 4: DLAP-211-NanoS/JT2S/NXS side view

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4 Getting Started

4.1 Unpacking Checklist

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 fol- lowing items are included in the package.

- DLAP-211 unit
- Screw pack
- VESA mount kit (plus optional DIN rail kit if applicable)
- >60W Power adapter

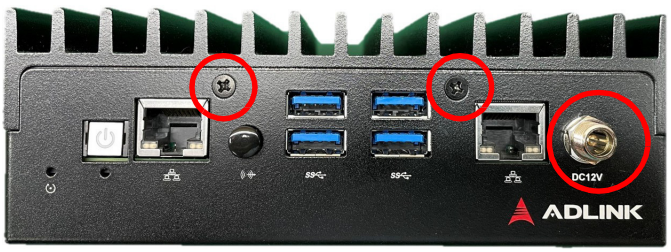
4.2 Cooling Considerations

All heat-generating components of the DLAP-211 are located on the left side of the system. These components directly contact the heat sink via thermal pads to dissipate heat. To maximize effi- ciency of heat dissipation, maintain a minimum of 2 inches (5cm) clearance on the top of the DLAP-211.

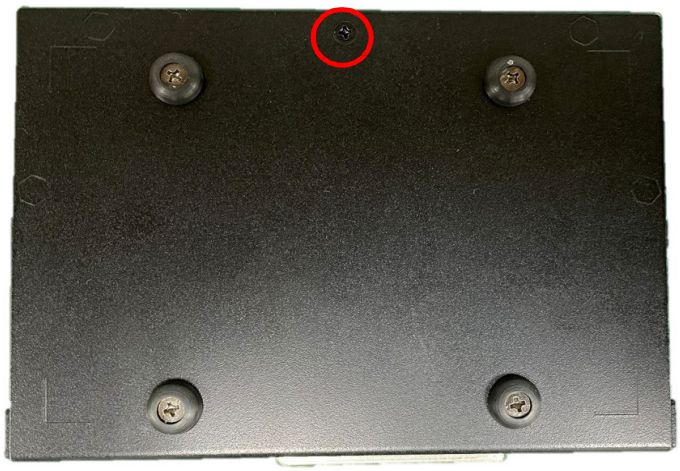
4.3 Removing the Chassis Cover

To access the DLAP-211's internal components, remove the underside of the chassis as follows.

1. On the front panel, remove the nut and washer from the 12V DC connector and remove the two mounting screws, as indicated in the figure below.

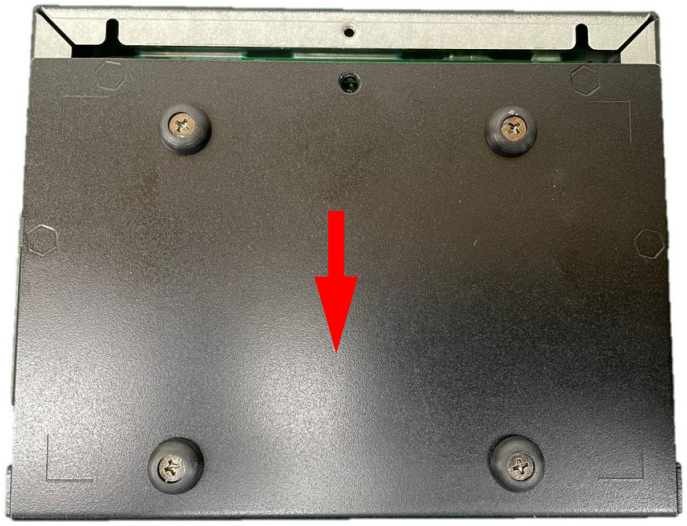


2. Remove one screw on the underside of the device.

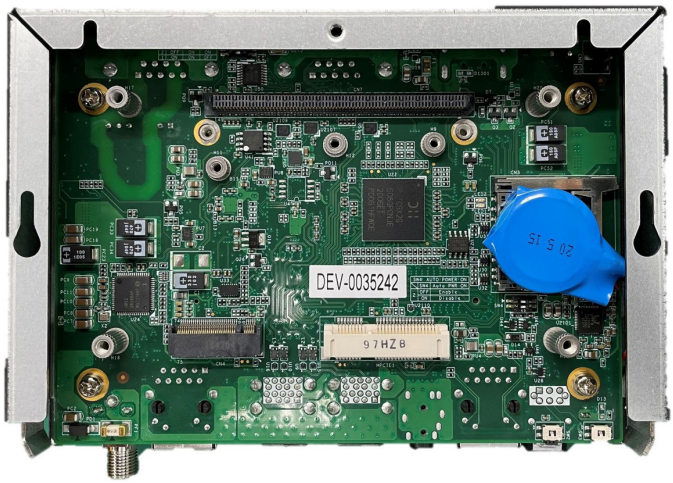


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1. Slide the cover in the direction indicated by the red arrow.



2. Lift the cover off of the chassis.



Reverse the steps to replace the bottom cover.

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4.4 nstalling an M.2 SSD Module

Use the following steps to install an M.2 SSD module.

1. Insert the M.2 2242 B or B+M key module into the indi- cated slot (under the wires) at an angle.

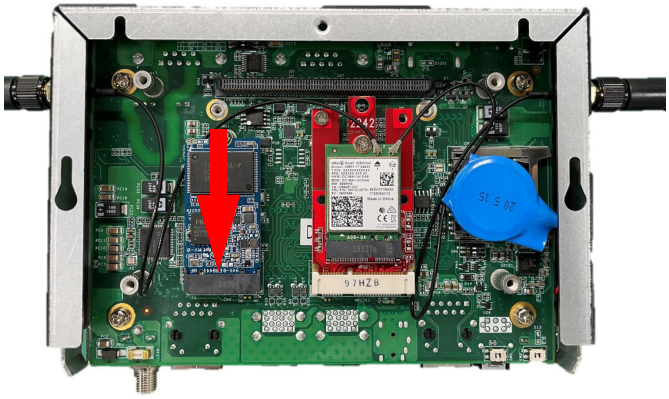


Figure 5: M.2 2242 B-key slot

2. Press down on the M.2 module until it is seated, then secure it with one M2.5-P-head-L5 screw (not provided).
3. Replace the bottom cover of the chassis.

CAUTION:

Make sure not to remove or damage any wires while installing the module.

4.5 Installing a Mini PCIe Wi-Fi Module

Use the following steps to install a Mini PCIe Wi-Fi module.

1. Insert the Mini PCIe Wi-Fi module into the indicated slot at an angle.

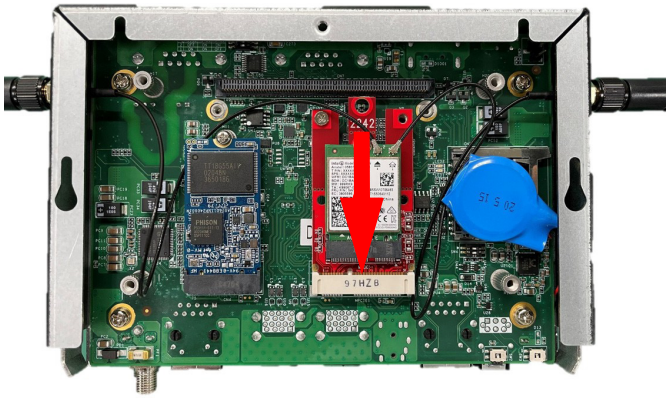


Figure 6: Mini PCIe Wi-Fi slot

2. Press down on the module until it is seated, then secure it to the board using two M2.5-P-head-L5 screws (not provided).
3. Attach the wires and antennas that came with your Wi-Fi kit. It is recommended that the Wi-Fi antenna be connected to the left SMA antenna port, and Wi-Fi + Bluetooth antenna be connected to the right SMA antenna port.
4. Replace the bottom cover of the chassis.

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4.6 Connecting DC Power



Before providing DC power to the DLAP-211, ensure the voltage and polarity provided are compatible with the DC input. Improper input voltage and/or polarity can be responsible for system damage.

Avant de connecter le PC DLAP-211 à une source de courant continu, veuillez vous assurer de la polarité de la tension con- formément à l'entrée CC du PC. Une tension et/ou une polarité incorrectes peuvent causer des dommages irréversibles sur le système.

DC power sources must comply with LPS and SELV (ES1) circuits with no energy hazard, as well as the following:

- IEC 62368-1, IEC 60950-1, and UL 62368-1
- Output voltage: 12V DC
- Output current: 5.0A minimum
- TMA: 55°C with DC input; 40°C with adapter input
- Altitude Operability: 5000m minimum

The DLAP-211 DC power input connector uses V+, V-, and chassis ground pins.

Les sources d'alimentation CC doivent être conformes aux circuits LPS et SELV (ES1) avecaucun risque énergétique, ainsi que:

- *CEI 62368-1, CEI 60950-1 et UL 62368-1*
- *Tension de sortie: 12V DC*
- *Courant de sortie: 5.0A minimum*
- *TMA: 55°C avec entrée DC; 40°C avec entrée adaptateur.*
- *Altitude de fonctionnement: min. 5000 mètres*

Le connecteur d'entrée d'alimentation CC DLAP-211 utilise V+, V- et châssis broches de terre.



For additional assistance and information, contact ADLINK. To reduce potential safety hazards, use only the AC adapter pro- vided with the product, a replacement AC adapter provided by ADLINK, or an AC adapter purchased as an accessory from ADLINK.

Si vous avez besoin d'aide supplémentaire, veuillez contacter ADLINK pour plus d'informations. Pour réduire les problèmes de sécurité potentiels, seul l'adaptateur secteur fourni avec le produit, un adaptateur secteur de remplacement fourni par ADLINK ou un adaptateur secteur acheté comme accessoire auprès d'ADLINK doit être utilisé avec le produit.

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4.7 VESA Mount

The DLAP-211 controller ships with a VESA 100 mounting bracket and four M4 screws. Follow the steps below to mount the device.

1 Attach the VESA bracket to the wall (or other suitable mounting surface) such that its keyhole-shaped mounting holes are oriented with the wider openings at the top.

2 Secure the four M4 screws to the bottom of the chassis.

3 Securely attach the device to the VESA bracket by first inserting the heads of the screws into the wider openings of the VESA bracket's mounting holes, then sliding the device down such that the screws are now firmly held by the narrower portions of the mounting holes.

NOTE

NOTE:

It is recommended that four M4 screws, 6cm in length, be used to attach the assembled brackets to a wall. Actual fastener type and length will be determined by the type of wall being anchored to. (Sample anchors M4x0.7 L8mm with washer.)

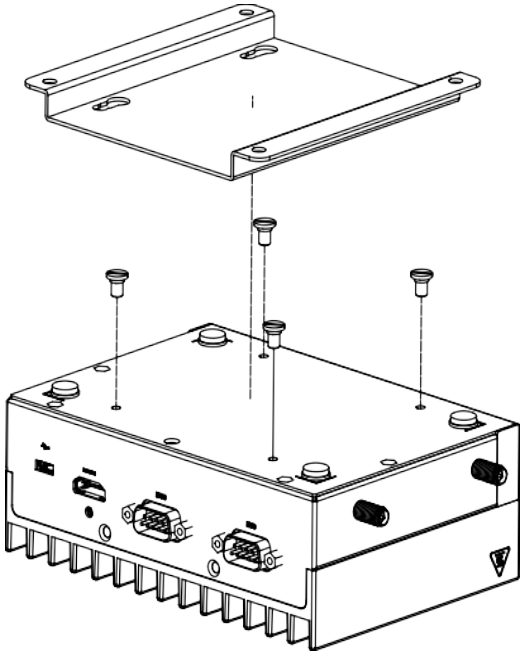


Figure 7: VESA mount

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4.8 DIN Rail Mount

The DLAP-211 controller may optionally include a DIN rail mount kit, with its own six M4 screws, in addition to the standard VESA mount kit. Follow these steps to install the DIN rail bracket.

1. Use two M4 screws (pointing upwards in the red box below) to attach the DIN rail bracket to the adapter plate.
2. Use four M4 screws (circled in red below) to attach the DIN rail bracket assembly to the DLAP-211 chassis.

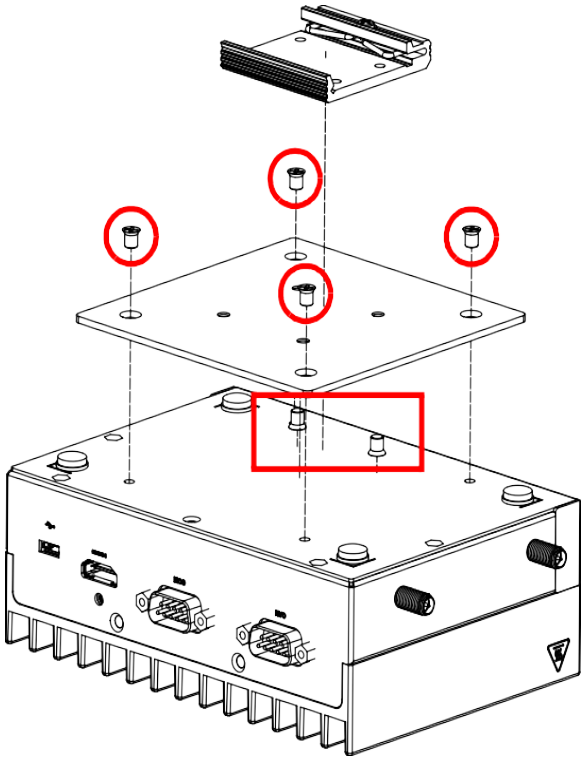


Figure 8: DIN rail mount

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4.9 AT Power Mode Switch (SW4)

The DLAP-211 is set in AT mode by default. By using the AT Power Mode Switch (SW4), users can set the system to be powered-on with the power button.

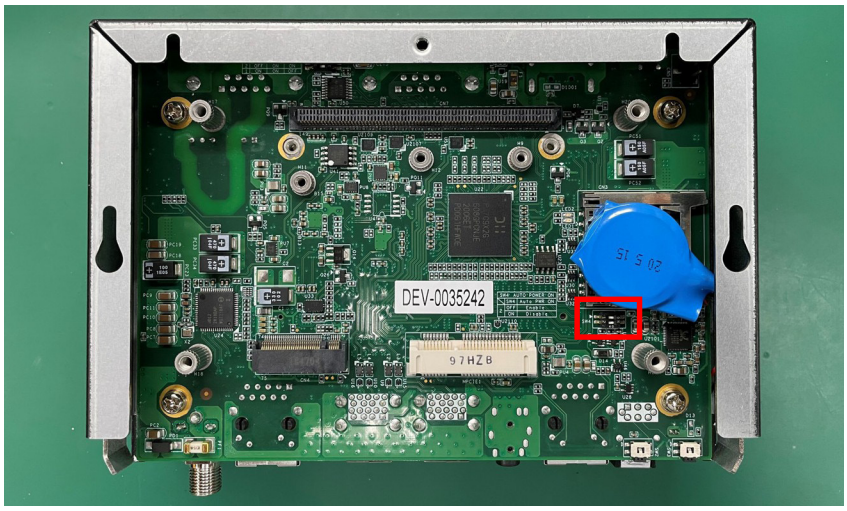


Figure 9: AT power mode switch (SW4)

AT mode can be configured as follows:

Table 1: AT mode switch configuration

SW4 Auto Power On		
	SW4	**Auto Power On**
2	OFF	Enable (Default)
	ON	Disable

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5 System Layout

5.1 Front Panel I/O Connectors

DLAP-211-NanoS/JT2S/NXS Front Panel

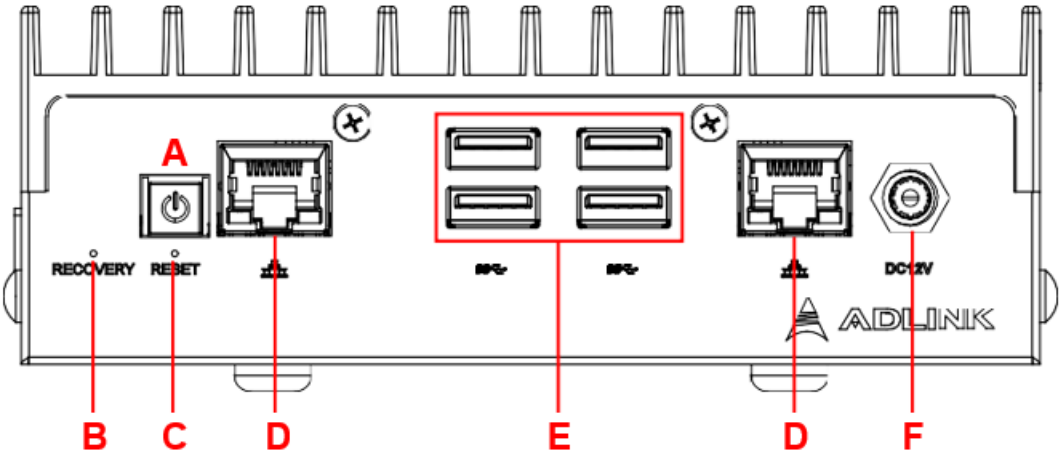


Figure 10: DLAP-211-NanoS/JT2S/NXS front panel I/O connectors 1

DLAP-211-NanoS/JT2S/NXS Front Panel

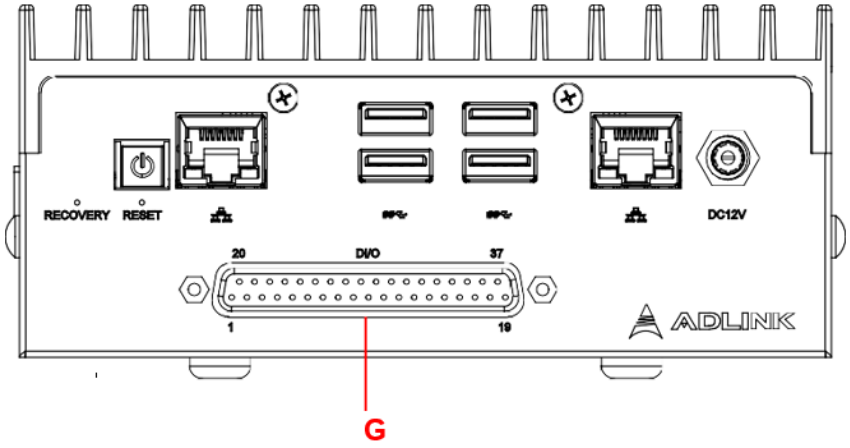


Figure 11: **DLAP-211-NanoS/JT2S/NXS front panel I/O connectors 2**

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Table 2: Front panel I/O connector descriptions

Item	Name	Description
A	Power button	The power button is a non-latched pushbutton with a blue LED power indicator. Press to power on/power off the system. The button LED lights up when the system is turned on. If the system hangs, pressing and holding the button continuously for 5 seconds performs a hard shutdown on the system.
B	Recovery button	Press this button to force the system into recovery mode. See **Section 3.2 System Recovery**.
C	Reset button	The reset button executes a hard reset on the system.
D	GbE connector (LAN 1)	GbE from NVIDIA® Jetson™ modules. See **Section 1.5 Pin Definitions**.
D	GbE connector (LAN 2)	GbE from Intel® I210. See **Section 1.5 Pin Definitions**.
E	USB 3.0	See **Section 1.5.2 USB 3.0 Connectors**.
F	DC connector 12V	12V DC screw-type connector. See **Section 1.5.3 12V DC Connector**.
G	D-sub 37-pin connector	1x I2C, 1x SPI, 1x UART, 8x GPIO, 1x Relay function

5.2 Rear Panel I/O Connectors

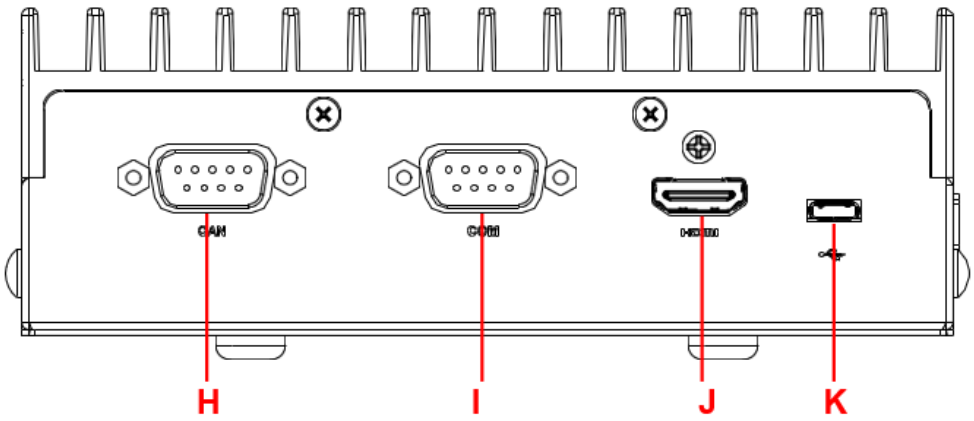


Figure 12: Rear panel I/O connectors

Table 3: Rear panel descriptions

Item	Name	Description
H	CAN bus	CAN 2.0B (backward compatible with 2.0A)
I	Serial port	COM port (DB-9 connector) RS-232/422/485 (software programmable)
J	HDMI port	HDMI 2.0 with lock
K	USB 2.0	USB 2.0 OTG (Micro USB)

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6 Connector Pinouts and Jumper Settings

6.1 Ethernet GbE Connectors

The DLAP-211 series comes with two RJ45 connectors:

- NVIDIA® Jetson™ modules (LAN 1)
- Intel® I210 (LAN 2)

LAN LED connection speed color indicators:

	Active & Link (Left LED)	Speed (Right LED)
10 Mbps	Yellow (Blinking)	N/A
100 Mbps	Yellow (Blinking)	N/A
1000 Mbps	Yellow (Blinking)	Green

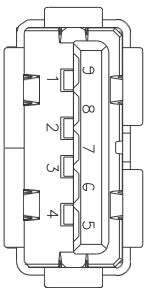
The following table provides details for the RJ45 GbE pin connections.

Pin #	10BASE-T/ 100BASE-TX	1000BASE-T
1	TX+	LAN_TX0+
2	TX-	LAN_TX0-
3	RX+	LAN_TX1+
4	—	LAN_TX2+
5	—	LAN_TX2-
6	RX-	LAN_TX1-
7	—	LAN_TX3+
8	—	LAN_TX3-

6.2 USB 3.0 Connectors

The USB 3.0 ports support a USB Type-A connection, compatible with SuperSpeed, Hi-Speed, Full-speed, and Low-speed USB devices suitable for USB peripherals including USB cameras.

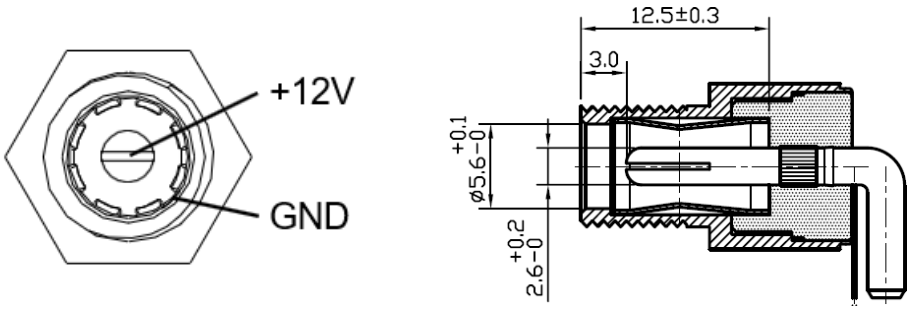
Pin #	Signal Name
1	USB3.0_P5VA
2	USB2_CMAN
3	USB2_CMAP
4	GND
5	USB3A_CMRXN
6	USB3A_CMRXP
7	GND
8	USB3A_CMTXN
9	USB3A_CMTXP



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6.3 12V DC Connector

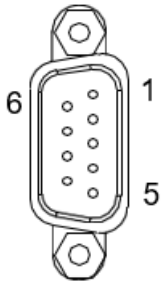
The system requires a 12V DC power source with a screw-type connector.



6.4 Controller Area Network (CAN) Bus

The Controller Area Network (CAN) enables communication among devices.

Pin	Signal	Description
1	NC	(Not connected)
2	CAN0_Low	Differential CAN signal negative level
3	NC	(Not connected)
4	NC	(Not connected)
5	NC	(Not connected)
6	NC	(Not connected)
7	CAN0_High	Differential CAN signal positive level
8	NC	(Not connected)
9	NC	(Not connected)



6.5 COM Port

One COM port supports RS-232/422/485.

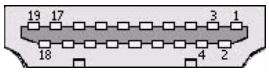
Pin	RS-232	RS-422	RS-485
1	DCD#	COM_TXD_N	COM_D-
2	COM_RXD	COM_TXD_P	COM_D+
3	COM_TXD	COM_RXD_P	NC
4	DTR#	COM_RXD_N	NC
5	COM_GND	NC	NC
6	NC	NC	NC
7	COM_RTS#	NC	NC
8	COM_RCTS#	NC	NC
9	NC	NC	NC

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6.6 HDMI Connectors

The rear panel HDMI connector supports HDMI 2.0.

Pin #	Signal	Pin #	Signal
1	TMDS Data2+	2	TMDS Data2 Shield
3	TMDS Data2–	4	TMDS Data1+
5	TMDS Data1 Shield	6	TMDS Data1–
7	TMDS Data0+	8	TMDS Data0 Shield
9	TMDS Data0–	10	TMDS Clock+
11	TMDS Clock Shield	12	TMDS Clock–
13	CEC	14	Reserved
15	SCL	16	SDA
17	DDC/CEC Ground	18	+5 V Power
19	Hot Plug Detect		



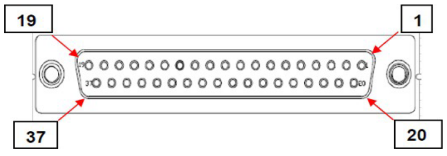
6.7 USB 2.0 OTG Connector

The DLAP-211 supports a USB 2.0 OTG Micro USB Type-B connection for system recovery.

Pin	Signal	Description
1	VCC_USBDev	USB device power
2	USB_D1_n	Universal Serial Bus Port 1 / USB-Client differential pair
3	USB_D1_p	
4	USB_ID	USB ID pin
5	GND_USBDev	USB GND

6.8 D-sub 37-pin Connector

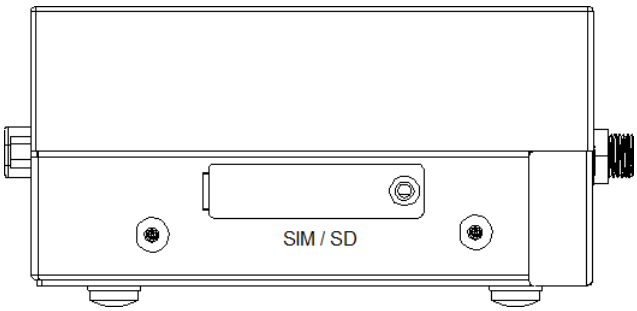
Pin #	Signal	Voltage	Pin #	Signal	Voltage
1	OPEN Relay		2	N/A	
3	COM Relay		4	N/A	
5	SPI0_SCK	3.3V	6	SPI0_CS1_1	3.3V
7	SPI0_MOSI	3.3V	8	SPI0_MISO	3.3V
9	SPI0_CS0_L	3.3V	10	GND	
11	(GPO1)GPIO_14	3.3V	12	(GPO2)GPIO_12	3.3V
13	(GPO3)GPIO_10	3.3V	14	(GPO4)GPIO_06	3.3V
15	(GPI1)GPIO_05	3.3V	16	(GPI2)GPIO_04	3.3V
17	(GPI3)GPIO_03	3.3V	18	(GPI4)GPIO_02	3.3V
19	GND		20	GND	
21	JUMPER2_EN		22	GPIO_07	
23	I2C0_SDA	3.3V	24	I2C0_SCL	3.3V
25	GND		26	GND	
27	3.3V		28	3.3V	
29	GND		30	UART0_RTS	3.3V
31	UART0_CTS	3.3V	32	UART0_TXD	3.3V
33	UART0_RXD	3.3V	34	GND	
35	GND		36	5V	
37	5V				



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6.9 Side I/O Slots

The I/O connectors accessible from the right side panel of the DLAP-211 are described below.



6.9.1 SD Card Slot

For additional storage, use the side door to install or remove a user-provided SD card.

6.9.2 USIM Slot

The DLAP-211 is equipped with a USIM slot connected to the Mini PCIe connector for use with a user-provided SIM card and 3G/4G Mini PCIe module to provide cellular communication. Install or remove a SIM card module via the side door.

NOTE:

The 3G/4G Mini PCIe module requires a user-provided SIM card for communication via a telecom operator. See Section 4.5 Installing a Mini PCIe Wi-Fi Module.

6.9.3 Orientation

Insert the SIM and SD cards with the orientations shown below.



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7 Using the System

7.1 Software Configuration

The DLAP-211 ships with a customized NVIDIA Linux for Tegra (L4T) image pre-installed. The latest version of this custom L4T image and other relevant files are available on the ADLINK web- site.

DLAP-211-JNX:

https://www.adlinktech.com/Products/Deep_Learning_Accelerator_Platform_and_Server/Inference_Platform/DLAP-211-JNX

DLAP-211-JT2:

https://www.adlinktech.com/Products/Deep_Learning_Accelerator_Platform_and_Server/Inference_Platform/DLAP-211-JT2

DLAP-211-Nano:

https://www.adlinktech.com/Products/Deep_Learning_Accelerator_Platform_and_Server/Inference_Platform/DLAP-211-Nano

7.2 Flash the System Image

Before flashing the image to NVIDIA Jetson Family, you should prepare the following items:
1. **A Host PC** with **Ubuntu** operating system.
2. A good quality **OTG cable (micro-usb/USB type C)** for connecting it to NVIDIA Jetson Family (**Client PC**).

Complete the following steps on the **Client PC** before performing the host PC steps:
Client PC
1. Connect the OTG cable to the USB port.
2. Enter **Recovery Mode**

Method 1: (Power on)
$ sudo reboot --force forced-recovery

Method 2: (Power off)
1. Press and hold the recovery button.
2. Press the power switch.
3. Press the reset button once and release it after 3-5 seconds.

Recovery button



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Recovery button on development kit



Host PC

The host must have the following dependencies:

```
$ sudo apt install libxml2-utils simg2img network-manager abootimg sshpass device-tree-compiler nfs-kernel-server
```

1. Connect the host PC to the Client PC via OTG cable.
2. Open a terminal, run the following command and check out the mode on the host PC:
   ```
   $ lsusb | grep NVIDIA
   ```

Recovery mode will show APX.	Normal mode will show L4T.
Bus 001 Device 031: ID 0955:7019 NVIDIA Corp. APX	Bus 001 Device 030: ID 0955:7020 NVIDIA Corp. L4T (Linux for Tegra) running on Tegra

- **We need to make sure the client PC in recovery mode before flash image.**
- **If client PC doesn't recognize or not in recovery mode, double-check the OTG cable connection and perform troubleshooting as needed until the client is recognized and in recovery mode.**

3. Download the mfi file image into the Host PC.

```
ex: mfi_jetson-orin-nano-dlap211-onx_16-35.3.1-2v1.2.tbz2
```

4. Unzip the mfi file that was previously downloaded.

```
ex: $ sudo tar -jxf mfi_jetson-orin-nano-dlap211-onx_16-35.3.1-2v1.2.tbz2
```

5. Go to the working folder.

```
ex: $ cd mfi_jetson-orin-nano-dlap211-onx_16-35.3.1-2v1.2
```

6. Execute the flash command

```
ex: $ sudo ./tools/kernel_flash/l4t_initrd_flash.sh --flash-only
```

NOTE:

In JetPack 5.0.2 and earlier versions of the MFI image, please execute the flash command:

$ sudo ./nvmflash.sh

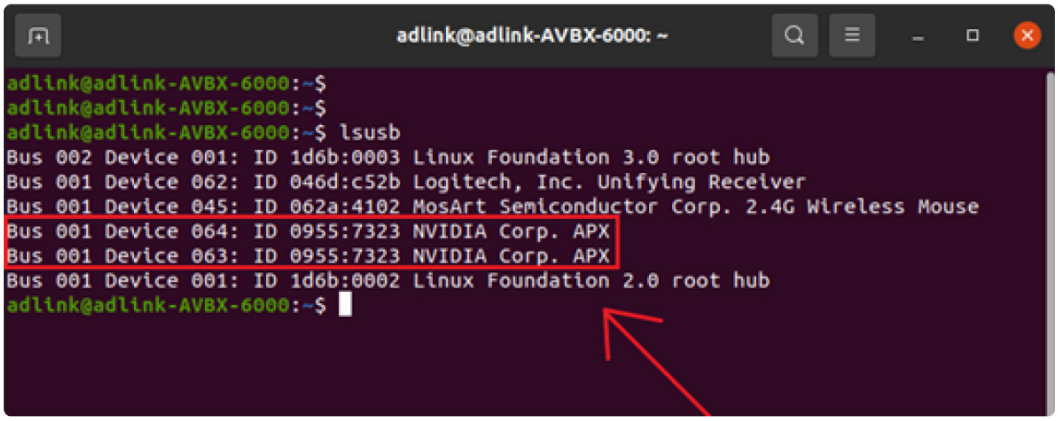
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The following illustrates how to do the mass flash.

1. Connect **Client PCs** to the **Host PC**.



2. In the terminal, run **lsusb** to check that all Client PCs have entered into Recovery Mode.



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3. Execute flash command,
$ sudo ./tools/kernel_flash/l4t_initrd_flash.sh --flash-only --massflash 2 (2 as number of client PCs need flash)
Reference:



7.3 COM Port Configuration

By default, the DLAP-211 is configured to support the RS-232 pro- tocol.

Model	COM Port Name
DLAP-211-JNX/JNXS	ttyTHS0
DLAP-211-JT2/JT2S	ttyTHS2
DLAP-211-Nano/NanoS	ttyTHS1

Switching between RS-232/422/485:

```
$ echo rs232 > /sys/class/sp339_mode_ctl/uartMode
$ echo rs422 > /sys/class/sp339_mode_ctl/uartMode
$ echo rs485 > /sys/class/sp339_mode_ctl/uartMode
```

Checking the current mode of the serial port:

```
cat /sys/class/sp339_mode_ctl/uartMode
```

7.4 SPI, I2C, and Relay Configuration

The DLAP-211-JT2S, DLAP-211-NanoS, and DLAP-211-JNXS

support I2C, SPI, GPIO, and Relay functions through a 37-pin D- sub connector that can be accessed through the commands described in the following sections.

7.4.1 GPIO

DLAP-211-JNXS GPIO map table:

Pin	Signal	GPIO Number	Pin	Signal	GPIO Number
11	GPO 1	gpio345	15	GPI 1	gpio266
12	GPO 2	gpio268	16	GPI 2	gpio265
13	GPO 3	gpio417	17	GPI 3	gpio264
14	GPO 4	gpio267	18	GPI 4	gpio419

DLAP-211-JT2S GPIO map table:

Pin	Signal	GPIO Number	Pin	Signal	GPIO Number
11	GPO 1	gpio278	15	GPI 1	gpio408
12	GPO 2	gpio338	16	GPI 2	gpio411
13	GPO 3	gpio337	17	GPI 3	gpio410
14	GPO 4	gpio340	18	GPI 4	gpio409

DLAP-211-NanoS GPIO map table:

Pin	Signal	GPIO Number	Pin	Signal	GPIO Number
11	GPO 1	gpio39	15	GPI 1	gpio63
12	GPO 2	gpio194	16	GPI 2	gpio65
13	GPO 3	gpio169	17	GPI 3	gpio66
14	GPO 4	gpio64	18	GPI 4	gpio62

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Examples:

GPO set low command:

```
$echo 0 > /sys/class/gpio/gpio345/value
```

GPI get value command:

```
$cat /sys/class/gpio/gpio266/value
```

7.4.2 SPI, I2C, Relay

DLAP-211-JNXS/JT2S/NanoS SPI, I2C, Relay map table:

Model	I2C Name	SPI Name	Relay GPIO Number
DLAP-211-JNXS	i2c1	/dev/spidev0.0 /dev/spidev0.1	gpio424
DLAP-211-JT2S	i2c2	/dev/spidev0.0 /dev/spidev0.1	gpio264
DLAP-211-NanoS	i2c3	/dev/spidev0.0 /dev/spidev0.1	gpio168

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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.

S'il vous plaît prêter attention stricte à tous les avertissements et mises en garde figurant sur l'appareil , pour éviter des blessures ou des dommages.

- 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.
- When installing/mounting or uninstalling/removing device; or when removal of a chassis cover is required for user servicing (See "Getting Started"):
  [> 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) and connect it to a socket-outlet with earthing connection.
  [> Only install/attach and operate device on stable surfaces and/or recommended mountings.
- If the device will not be used for long periods of time, turn off and unplug from its power source.
- Never attempt to repair the device, which should only be serviced by qualified technical personnel using suitable tools.
- A Lithium-type battery may be provided for uninterrupted backup or emergency power.



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.
  [> The equipment is not intended to be installed or used in a home, school, or public area accessible to the general population.
  [> The knurled thumb screws with slotted heads for each Node module should be tightened with a tool after both initial installation and subsequent use.
- 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 therefore, 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.
- Please use an approved power source certified by IEC or UL. If you need an adapter, optional accessories, or further assistance, please contact ADLINK for more information.

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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.

- 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*
- Lors de l'installation/montage ou de la désinstallation/retrait de l'appareil ; ou lorsque le retrait d'un boîtier est nécessaire pour l'entretien par l'utilisateur (voir Mise en route) :
  - Éteignez l'alimentation et débranchez tous les cordons/câbles d'alimentation.
  - Réinstallez tous les panneaux du boîtier avant de remettre l'alimentation sous tension.
- *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*
  - Fixez le cordon d'alimentation (ne placez aucun objet sur/au-dessus du cordon d'alimentation) et connectez-le à une prise de courant avec mise à la terre
- N'essayez jamais de réparer l'appareil, qui doit être réparé uniquement par du personnel technique qualifié *et utilisant des outils appropriés.*
  - *Lors de l'installation/montage ou de la désinstallation/retrait d'un périphérique, ou lorsque le retrait d'un couvercle de châssis est requis pour l'entretien par l'utilisateur :*
  - *Coupez l'alimentation et débranchez tous les cordons/câbles d'alimentation.*
- *Réinstallez tous les capots du châssis avant de rétablir l'alimentation. Installez/fixez et utilisez l'appareil uniquement sur des surfaces stables et/ou des supports recommandés.*
- *Si l'appareil n'est pas utilisé pendant une longue période, éteignez-le et débranchez-le de sa source d'alimentation.*
- *Une batterie de type lithium peut être fournie pour une alimentation de secours ou de secours ininterrompue.*

  - *L'appareil doit être réparé par des techniciens agréés lorsque :*
  - *Le cordon d'alimentation ou la fiche est endommagé.*
  - *Du liquide est entré dans l'appareil. € L'appareil a été exposé à une humidité élevée et/ou à l'humidité.*
  - *L'appareil ne fonctionne pas ou ne fonctionne pas conformément au manuel de l'utilisateur.*

- *L'appareil est tombé et/ou a été endommagé et/ou présente des signes évidents de casse.*
- *Débranchez le cordon d'alimentation avant de desserrer les vis moletées et fixez toujours les vis moletées avec un tournevis avant de démarrer le système.*
  - *L'équipement n'est pas destiné à être installé ou utilisé dans une maison, une école ou une zone publique accessible au grand public.*
  - *Les vis à molette avec têtes fendue pour chaque module Node doivent être serrées avec un outil après l'installation initiale et lors de l'utilisation suivante.*
- *Il est recommandé d'installer l'appareil uniquement dans une salle de serveurs ou une salle informatique dont l'accès est :*

  - *Réservé au personnel de service qualifié ou aux utilisateurs familiers avec les restrictions appliquées à l'emplacement, les raisons de celles-ci et les précautions requises.*
  - *Autorisé uniquement par l'utilisation d'un outil ou d'une serrure et d'une clé, ou d'autres moyens de sécurité, et contrôlé par l'autorité responsable du lieu.*

Veuillez utiliser une source d'alimentation approuvée et certifiée par la norme IEC ou UL. Si vous avez besoin d'un adaptateur, d'accessoires en option ou d'une assistance supplémentaire, veuillez contacter ADLINK pour plus d'informations.

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Getting Services

Ask an Expert: https://www.adlinktech.com/en/Askanexpert

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Tel: +49-621-43214-0
Fax: +49-621 43214-30
Email: emea@adlinktech.com

Please visit the Contact page at www.adlinktech.com for information on how to contact the ADLINK regional office nearest you.

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