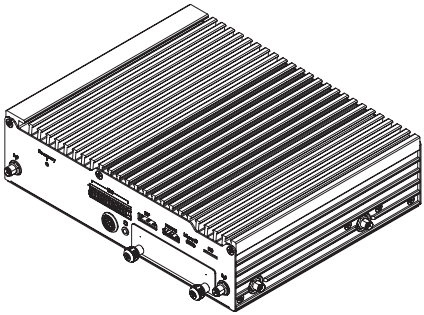
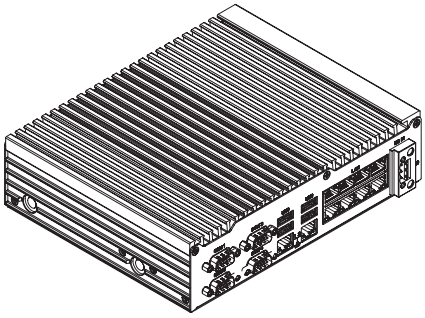
QBiX-Jetson-XavierAHP-A1 (QN-XAVNA-SI) QBiX-Jetson-NanoAHP-A1 (QN-NANOA-SI)

QBiX-Jetson Industrial Embedded System
Quick Start Guide





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Packing List

Before setting up your product, please make sure the following items have been shipped:

Item	Quantity
System kit	1
54V / 180W adapter	1
Power cord (May vary based on local distribution)	1
Screw for 2.5HDD/SSD, M3x4L	4

If any of these items are missing or damaged, please contact your distributor or sales representative immediately.

About this Document

This User's Manual contains all the essential information, such as detailed descriptions and explanations on the product's hardware and software features (if any), its specifications, dimensions, jumper/ connector settings/definitions, and driver installation instructions (if any), to facilitate users in setting up their product.

Users may refer to the GIGAIPC.com for the latest version of this document.

Safety Precautions

Please read the following safety instructions carefully. It is advised that you keep this manual for future references

1. All cautions and warnings on the device should be noted.
2. Make sure the power source matches the power rating of the device.
3. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
4. Always completely disconnect the power before working on the system's hardware.
5. No connections should be made when the system is powered as a sudden rush of power may damage sensitive electronic components.
6. If the device is not to be used for a long time, disconnect it from the power supply to avoid damage by transient over-voltage.
7. Always disconnect this device from any AC supply before cleaning.
8. While cleaning, use a damp cloth instead of liquid or spray detergents.
9. Make sure the device is installed near a power outlet and is easily accessible.
10. Keep this device away from humidity.
11. Place the device on a solid surface during installation to prevent falls
12. Do not cover the openings on the device to ensure optimal heat dissipation.

13. Watch out for high temperatures when the system is running.

14. Do not touch the heat sink or heat spreader when the system is running

15. Never pour any liquid into the openings. This could cause fire or electric shock.

16. As most electronic components are sensitive to static electrical charge, be sure to ground yourself to prevent static charge when installing the internal components. Use a grounding wrist strap and contain all electronic components in any static-shielded containers.

17. If any of the following situations arises, please the contact our service personnel:
    i. Damaged power cord or plug
    ii. Liquid intrusion to the device
    iii. Exposure to moisture
    iv. Device is not working as expected or in a manner as described in this manual
    v. The device is dropped or damaged
    vi. Any obvious signs of damage displayed on the device

18. **DO NOT LEAVE THIS DEVICE IN AN UNCONTROLLED ENVIRONMENT WITH TEMPERATURES BEYOND THE DEVICE'S PERMITTED STORAGE TEMPERATURES (SEE CHAPTER 1) TO PREVENT DAMAGE.**

FCC Statement

This device complies with Part 15 FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received including interference that may cause undesired operation.

Caution:

There is a danger of explosion if the battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions and your local government's recycling or disposal directives.

Attention:

Il y a un risque d'explosion si la batterie est remplacée de façon incorrecte.
Ne la remplacer qu'avec le même modèle ou équivalent recommandé par le constructeur. Recycler les batteries usées en accord avec les instructions du fabricant et les directives gouvernementales de recyclage.

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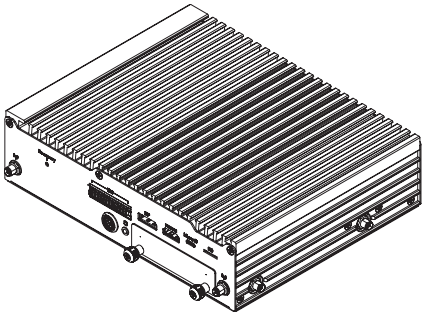
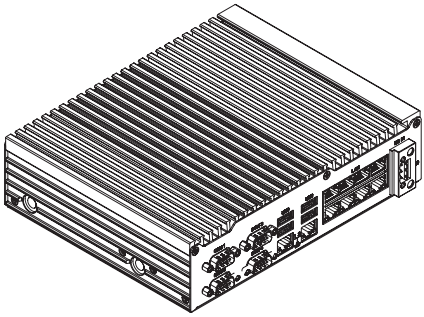
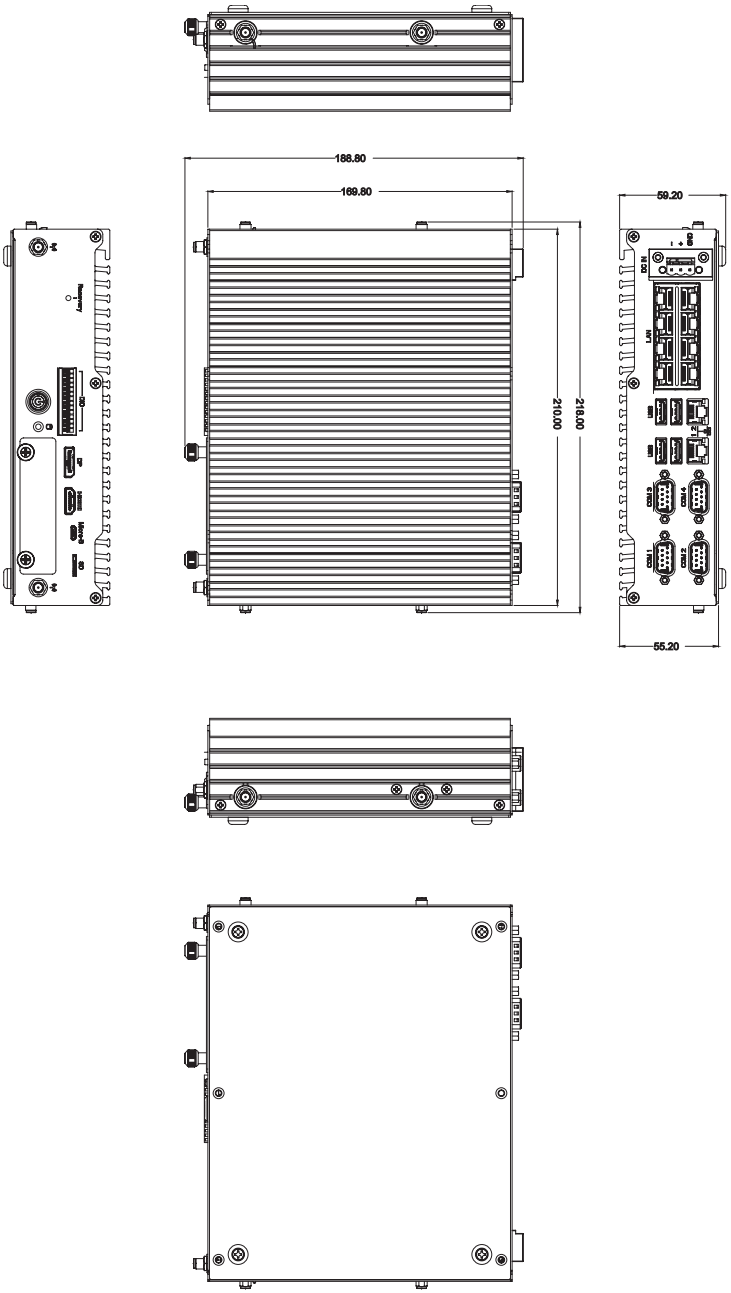
Chapter 1

Chapter 1 - Product Specifications






188.80
169.80
59.20
210.00
218.00
55.20

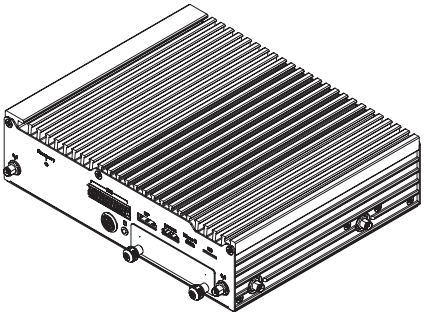
1.1 Specifications

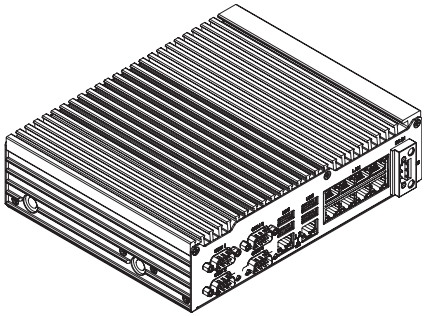
System	QBiX-Jetson-XavierAHP-A1 (QN-XAVNA-SI)	QBiX-Jetson-NanoAHP-A1 (QN-NANOA-SI)
Dimension	System Size : 210W x 169.8D x 55.2H (mm)	
CPU	6-core NVIDIA® Carmel Arm® v8.2 64-bit CPU 6MB L2 cache + 4MB L3 cache	ARM® Cortex® A57 MPCore (Quad-Core) Processor with NEON Technology
Memory	8GB 128-bit LPDDR4 DRAM 1666MHz (Module)	4GB 16-bit LPDDR4 DRAM 1666MHz (Module)
Ethernet	8 x GbE LAN ports with PoE 15W/port, IEEE802.3af compliant, Total 120W 2 x GbE LAN ports	
Graphic support	384-core NVIDIA® Volta™ GPU with 48 Tensor Cores 1 x HDMI port, supporting a maximum resolution of 3840x2160 @60Hz 1 x DP port, supporting a maximum resolution of 4096x2160 @60Hz	NVIDIA® Maxwell™ architecture with 128 NVIDIA CUDA® cores 1 x HDMI port, supporting a maximum resolution of 3840x2160 @60Hz 1 x DP port, supporting a maximum resolution of 2500x1600 @60Hz
Storage	1 x 16GB eMMC 5.1 (Module) 1 x SATA 6Gb/s port (Support 2.5'' HDD/SSD)	
Expansion Slots	1 x 3052 M.2 B-Key 1 x Mini-PCIe slot 1 x 2230 M.2 E-Key 1 x SIM slot	
Front I/O	1 x Power button 1 x HDD LED 1 x DIO 1 x DP 1 x HDMI 1 x USB2.0 Type Micro B 1 x SD slot (Micro SD) 1 x Recovery button 2 x External Antenna hole (option)	

System	QBiX-Jetson-XavierAHP-A1 (QN-XAVNA-SI)	QBiX-Jetson-NanoAHP-A1 (QN-NANOA-SI)
Rear I/O	4 x COM headers (RS232/422/485) 4 x USB3.0 ports 8 x GbE LAN ports with PoE 15W/port 2 x GbE LAN ports 1 x 3pin Terminal Block	
Side I/O	4 x External Antenna hole (option)	
Power	54VDC (PoE support)	
Operation Temperature	Operating temperature: -20°C to 70°C Operating humidity: 0-90% (non-condensing) Non-operating temperature: -40°C to 85°C Non-operating humidity: 0%-95% (non-condensing) Use wide temperature range memory and storage	
Packaging Content	Box Packing Capacity: 4pcs Carton size: 523 x 297 x 339(mm) Content: 54V/180W adapter x 1 Power cord x 1 (By region)	
Order Information	System: 9BQNXAVNAMR-SI	System: 9BQNNANOAMR-SI

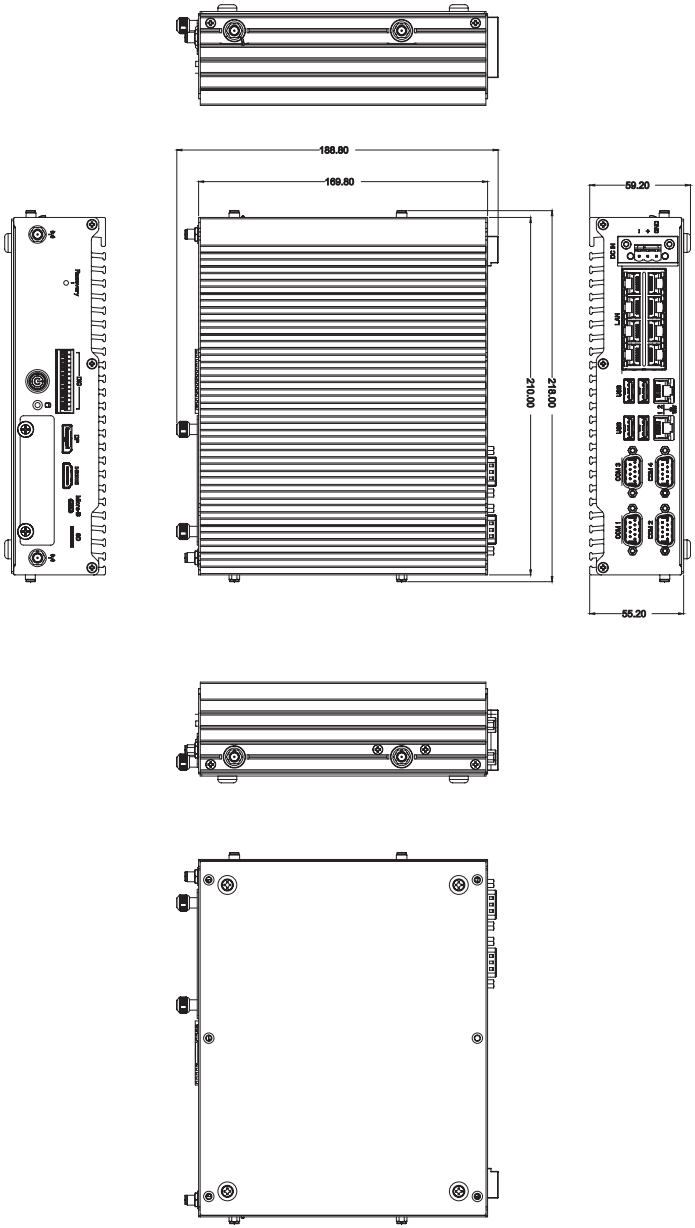
Chapter 2

Chapter 2 – QBiX-Jetson-XavierAHP-A1
(QN-XAVNA-SI)
QBiX-Jetson-NanoAHP-A1
(QN-NANOA-SI)
Industrial Embedded System Kit



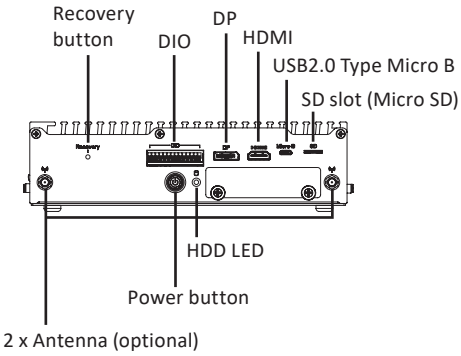


2.1 Dimension

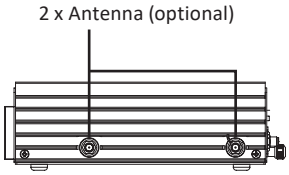


2.2 Getting Familiar with Your Unit

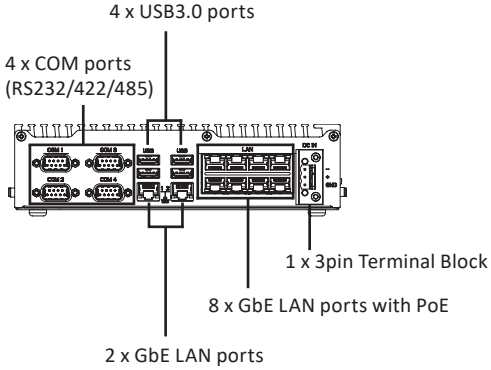
[Front I/O Side]



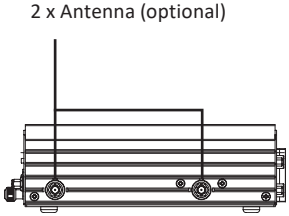
[Left Side]



[Rear I/O Side]



[Right Side]



2.3 2.5” HDD/SSD Installation

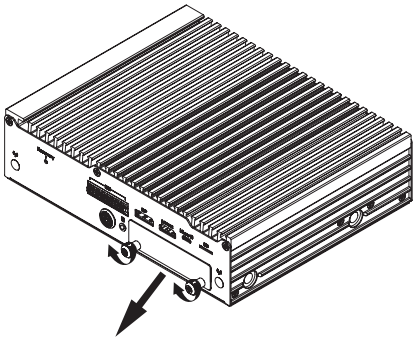
[Install]

* Before opening the case, make sure to unplug the power cord.

* Before Connecting the power, make sure to fasten the case securely.

❶

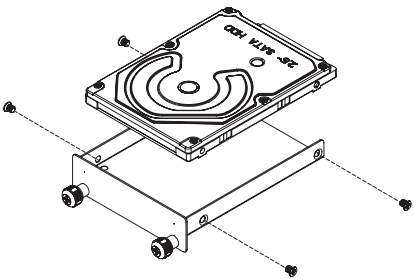
Remove the screws and pull-out the HDD Tray.



❷

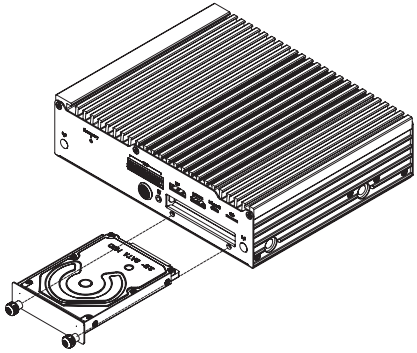
Put 2.5” HDD/SSD on the Tray, and tighten up the screws which was provided in the accessory kit to secure the HDD.

* please make sure the side with HDD brand logo is face-up.



❸

Put the HDD tray back into the chassis, and tighten up the screws.



2.4 Recovery button

Following instructions will help you to re-program NVIDIA® Jetson Nano module.

1. Please make sure to power off QBiX-Jetson Xavier/Nano system.

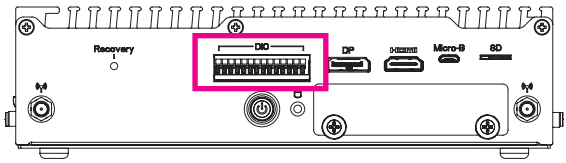
2. Prepare a USB cable to connect between your host system and QBiX-Jetson Xavier/Nano system.
For the host system : plug into any USB port
For QBiX-Jetson Xavier/Nano system : plug into USB Micro B 2.0 port

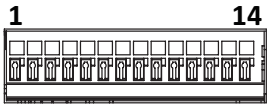
3. Power on QBiX-Jetson Xavier/Nano system, then press Recovery button for 3 seconds, and back to the host system clicks "flash" to start re-program process on QBiX-Jetson Xavier/Nano system. After installation is complete, follow the instructions to install BSP.

4. Back to QBiX-Jetson Xavier/Nano System, complete the informations which the system requires you to fill-in.

5. After filling in all the information, the system will reboot automatically, your re-program process is complete.

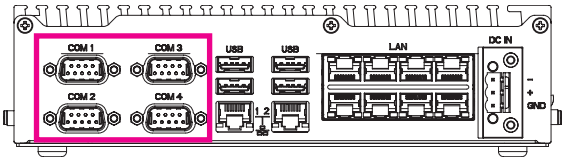
2.5 DIO (GPIO) Pin Define

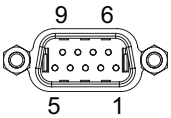


DIO (GPIO)	
	
Pin No.	Pin Define
1	GPIO-output_1
2	GPIO-output_2
3	GPIO-output_3
4	GPIO-output_4
5	GPIO-output_5
6	GPIO-output_6
7	GPIO-input_1
8	GPIO-input_2
9	GPIO-input_3
10	GPIO-input_4
11	GPIO-input_5
12	GPIO-input_6
13	GND
14	Isolation Power

Caution: The GPIO 8 bits, SMBUS and Renote control (+5V) on the terminal does not meet limited power source (LPS) requirements.
This port is limited to only 5V for the specific end products and are provided with a molded plastic Fire Enclosure. Rated minimum 94V-1 or Metal enclosure.

2.6 DB9 COM Pin Define



DB9 COM port	
	
Pin No.	Pin Define
1	DCD
2	RX
3	TX
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	RI

2.7 Safety and Regulatory Information

Risk of explosion if the battery is replaced with an incorrect type. Batteries should be recycled where possible.
Disposal of used Batteries must be in accordance with local environmental regulations.
Failure to use the included Power Adapter may violate regulatory compliance and may expose the user to safety
hazards.

HIGH DEFINITION MULTIMEDIA INTERFACE

At the end of its serviceable life, this product should not be treated as household or general waste. It should be handed over to the applicable collection point for the recycling of electrical and electronic equipment, or returned to the supplier for disposal.