# AVerMedia Carrier Board and Box PC

# EN713-AAE9/ EN713(EOL)/ NX213B

Designed for NVIDIA® Jetson Nano/ Xavier NX Module



AVerMedia Technologies, Inc.
No. 135, Jian 1st Rd., Zhonghe Dist., New Taipei City 23585, Taiwan
Tel: 886-2-2226-3630
Fax: 886-2-3234-4842
Sales and Marketing: Contact
Technical Support: Professional User

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**Revision History**

| Revision | Date | Updates |
|---|---|---|
| 1.0 | 02/24/2021 | Initial release |
| 2.0 | 03/01/2022 | Update Power Consumption |
| 2.1 | 10/31/2022 | 1. Update Safety Precaution/Product specification<br>2. Update EN713 box PC EOL information |
| | | |

# Preface

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**Technical Support**

If you experience the difficulty after reading this manual and/or using the product, please contact the reseller from which you purchased the product. In most cases, the reseller can help you with the product installation and the difficulty you encountered.

In case the reseller is not able to resolve your problem, our highly capable global technical support team can certainly assist you. Our technical support section is available 24 hours a day and 7 days a week through our website, with the click here. For more contact information, you may find it in the section of AVerMedia Global Offices.

**Contact Enquiry:**

For more information of our products, pricing, and order placement, please fill in our inquiry form here, we will contact you within 24 hours.

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### Headquarters

**Taiwan Office**

No. 135, Jian 1st Rd., Zhonghe Dist., New Taipei City 23585,Taiwan

Tel: +886-2-2226-3630

Fax: +886-2-3234-4842

Sales & Marketing: Contact

Technical Support: Home users / Professional users

### The Americas

**USA Office**

4038 Clipper Court Fremont, CA 94538

Tel: (510) 403-0006

Fax: (510) 403-0022

Sales & Marketing: Contact

Technical Support: Home users / Professional users

**Brazil Office**

Sales & Marketing: Contact

Technical Support: Home users / Professional users

**Latin America Office**

Sales & Marketing: Contact

Technical Support: Home users / Professional users

### Europe

**Head Office EU**

AVT Solutions GmbH

Hanauer Landstrasse 291 B 60314 Frankfurt Hessen

Germany

: technicalsupport_120

Sales & Marketing: Contact

Technical Support: Home users / Professional users

**Russia Office**

Sales & Marketing: Contact

Technical Support: Home users / Professional users

Professional Solutions Support Tel:

+7 (925) 834-0310

**Spain Office**

AVerMedia Europe Group

Ronda de Poniente no. 4 segundo H

28760 Tres cantos, Madrid

Spain:

: technicalsupport_120

Sales & Marketing: Contact

Technical Support: Home users / Professional users

### Asia-Pacific

**China Office**

Room 1510, No.488, Hitech Plaza, South Wuning Rd., Jingan District, Shanghai, China

Tel: +86-021-5298 7985

Fax: +86-021-5298 7981

Sales & Marketing: Contact

Technical Support: Home users / Professional users

**Japan Office**

6F,Kojimachi Syuei Bldg,4-3-13 Kudan-minami, Chiyoda-ku, Tokyo ,102-0074, Japan

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**Limited Product Warranty**

AVerMedia provides the two-year product warranty. Should this product, in AVerMedia's opinion, fail to be in the good working order during the warranty period, AVerMedia will, at its option, repair or replace it at no charge, provided that the product has not been subjected to abuse, misuse, accident, disaster, or non-AVerMedia authorized modification or repair.

You may obtain the warranty service by delivering this product to an authorized AVerMedia business partner or to AVerMedia along with the proof of purchase. Product returned to AVerMedia must be pre-authorized by AVerMedia with an RMA (Return Material Authorization) number marked on the outside of the package and sent prepaid, insured, and packaged for the safe shipment. AVerMedia will return the product by prepaid shipment service.

The limited product warranty is only valid over the serviceable life of the product. This is defined as the period during which all components are available. Should the product prove to be irreparable, AVerMedia reserves the right to substitute an equivalent product if available or to retract the product warranty if no replacement is available.

The above product warranty is the only warranty authorized by AVerMedia. Under no circumstances will AVerMedia be liable in any way for any damages, including any lost profits, lost savings, or other incidental or consequential damages arising out of the use of, or inability to use, such product.

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**ESD Warning**

Electronic components and circuits are sensitive to Electrostatic Discharge (ESD). When handling any circuit board assemblies including AVerMedia AVerMedia products, it is highly recommended that ESD safety precautions can be observed. ESD safe best practices can include, but are not limited to the following ones.

1. Leave the circuit board in the antistatic package until it is ready to be installed.
2. Use a grounded wrist strap when handling the circuit board. At a minimum, you need to touch a grounded metal object to dissipate any static charge, which may be present on you.
3. Avoid handling the circuit board in the carpeted areas.
4. Handle the board by the edges and avoid the contact with the components.
5. Only handle the circuit boards in ESD safe areas, which may include ESD floor and/or table mats, wrist strap stations, and ESD safe lab coats.

## Safety Precaution:

1. All cautions and warnings on the device should be noted.
2. For safety consideration, do NOT open the device if not a qualified service stuff.
3. Place the device on a solid surface during installation to prevent falls.
4. Keep the device away from humidity.
5. Do NOT leave this device in an un-controlled environment with temperatures beyond the device's permitted storage temperature to avoid damage.
6. All adaptors and cables supplied by AVerMedia are verified. Do NOT use any others not supplied by AVerMedia to avoid any malfunction or fires.
7. Make sure the power source matches the power rating of the device.

8. Place the power cord where people cannot step on it. Do not put anything on the power cord.
9. Always completely disconnect the power while the device is not usage or idle for a long time.
10. Disconnect the device from any AC supply before cleaning. While cleaning, use a damp cloth instead of liquid or spray detergents.
11. Make sure the device is installed near a power outlet and easy for accessible.
12. Do not cover the openings on the device to ensure optimal heat dissipation.
13. Watch out the heatsink or heat spreader of the device when the system is running.
14. Never pour any liquid into the openings. This could cause fire or electric shock.
15. The static electricity should be noted while installing any internal components. Consider to use a grounding wrist strap and put all electronic parts in static-shielded containers.

If the following situations occur, please contact our service personnel:

(1) The device is dropped or damaged
(2) Damaged power cord or plug
(3) Exposure to moisture
(4) Liquid intrusion into the device
(5) Any obvious signs of damage displayed on the device
(6) Device is not working as expected or in a manner as described in this manual

# 1.0 Introduction

AVerMedia EN713-AAE9 is a fully featured carrier board developed for NVIDIA® Jetson Nano/ Xavier NX module (EN713(EOL)/NX213B). It is specifically designed to have eight 10/100Mb Ethernet ports with PoE (PSE, Power Sourcing Equipment) support.

Operating with NVIDIA® Jetson Nano/ Xavier NX module, EN713-AAE9/EN713(EOL)/NX213B can process eight channels of 1080p30 video stream, which makes it the perfect choice in building the high performance AI edge computing platform for the intelligent video analytics applications.

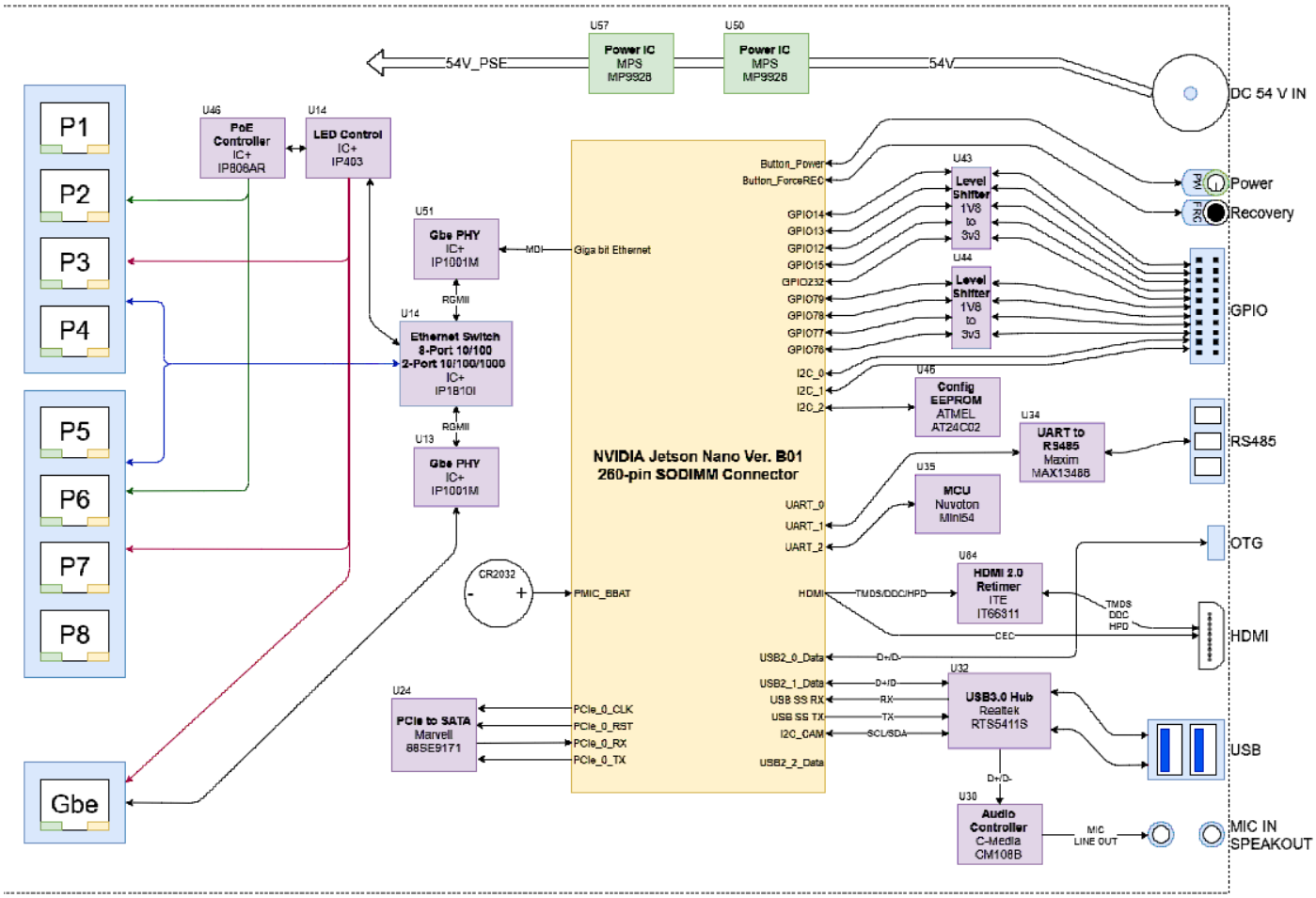
EN713-AAE9/ EN713(EOL)/ NX213B have compact size, which can fit in the compact platform for the commercial and industrial application. And it can operate in the temperature range from -10℃ up to 70℃. AVerMedia EN713-AAE9/ EN713(EOL)/ NX213B provides not only the access to a great list of latest interfaces on Nano/ Xavier NX module but also 1x RS-485 interface, 1x micro controller unit (MCU), and 1x RTC battery as the function enrichment.

## 1.1 Product Specifications

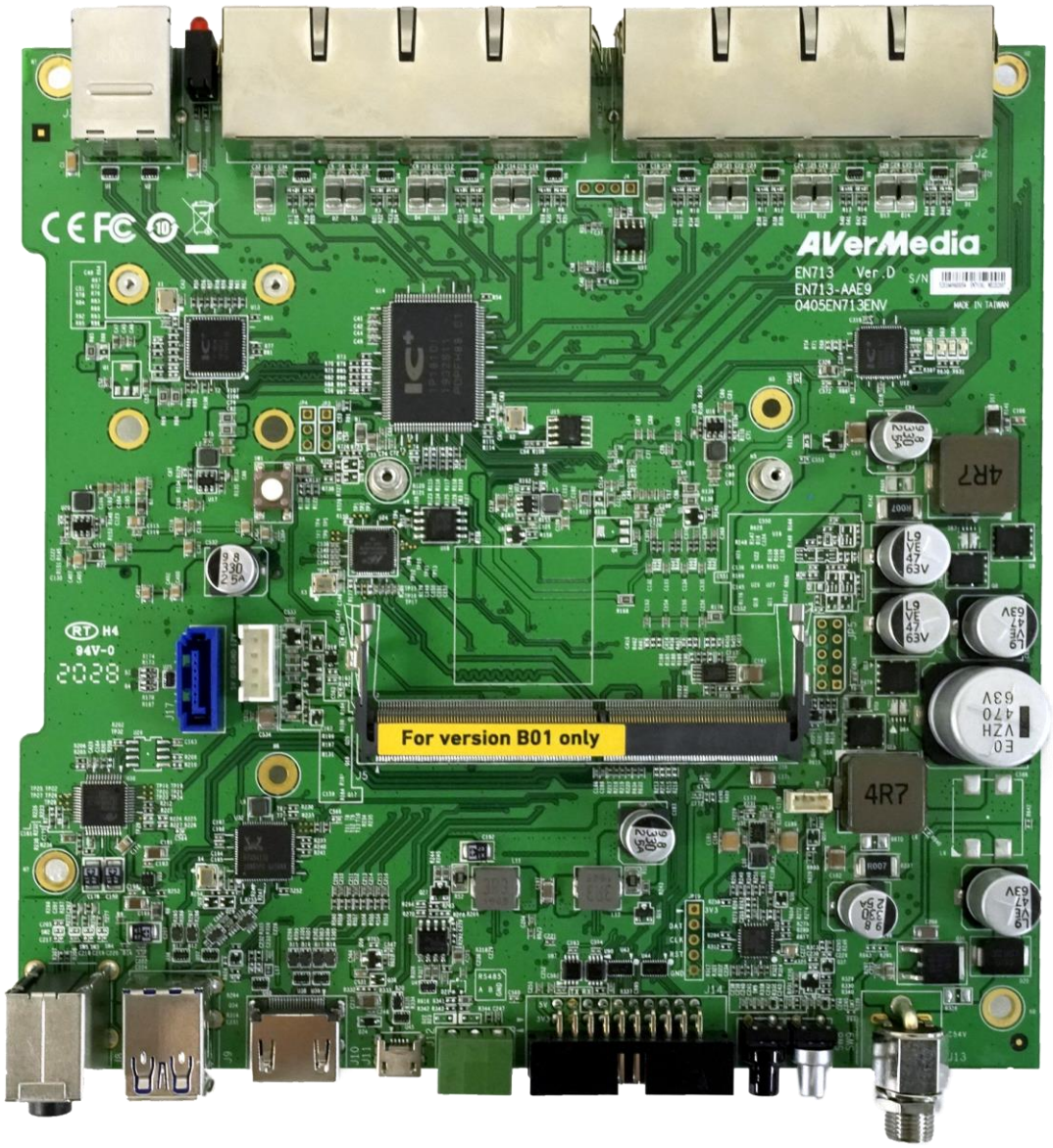
| | | | | |
|---|---|---|---|---|
| **Product Name** | Fanless/Fan/Carrier Board | Fanless Box PC<br>EN713(EOL)/ NX213B | | Carrier Board<br>EN713-AAE9 |
| **Core** | System on Module (SoM) | Equips NVIDIA® Jetson Nano™/ Xavier NX module | | Fully support NVIDIA® Jetson Nano™/ Xavier NX module |
| **Front I/O** | HDMI 2.0 Output | 1x HDMI 2.0a/b Type-A supports maximum resolution 3840x2160 at 60Hz | | |
| | USB 2.0 | 1x USB 2.0 Micro-B for recovery | | |
| | USB 3.0 | 2x USB 3.0 Type-A | | |
| | 10/100/1000 BASE-T Ethernet | 1x GbE RJ-45 | | |
| | | 8 ports PoE (8x 10/100 MbE RJ-45 PSE, Power Sourcing Equipment, IEEE 802.3 AT/AF with power budget) | | |
| | SATA Rev. 3.0 | 1x | | |
| | Audio | 1x Mic-in, 1x Speaker-out | | |
| | RS-485 | 1x RS-485 Euroblock (3 pins) | | |
| | Expansion Header | 20 pin with 1x 3.3V UART2, 1x SPI, 1x I2S, 2x I2C | | |
| | Button | 1x Power, 1x Recovery | | |
| **Internal PCIe Sockets** | Mini-PCIe | Alternative option: 1x Mini-PCIe slot , Only support USB 2.0 (for Wi-Fi/BT card, reserved) | | |
| **Power** | Power Input | 54V/2.78A for PoE (PSE, IEEE 802.3 AT/AF with power budget) | | |
| **Environment** | Operating Temperature | -10℃ ~ 65℃<br>fanless chassis | 0℃ ~ 50℃<br>Fanless chassis | Nano 75℃<br>NX-10℃ ~ 70℃ |
| | Storage Temperature | -20℃ ~ 85℃ | | |
| | Relative Humidity | 40 ℃ @ 95%, Non-Condensing | | |
| **Physical Characteristics** | Chassis Dimension | W:212mm x L:196mm x H:60mm (W:226 mm with mounting ears) | W:190mm x L:175mm x H:80mm (W:225mm with mounting ears) | W:170mm x L:170mm x H:4.5mm |
| | Weight | 1.25 Kg | 4 Kg | 269g |
| | Thermal Solution | With fanless chassis | With fanless chassis | (Optional) with fan module |
| **Regulation** | EMC/Safety | CE/FCC Class B, KC | | |

# 2.0 Product Overview

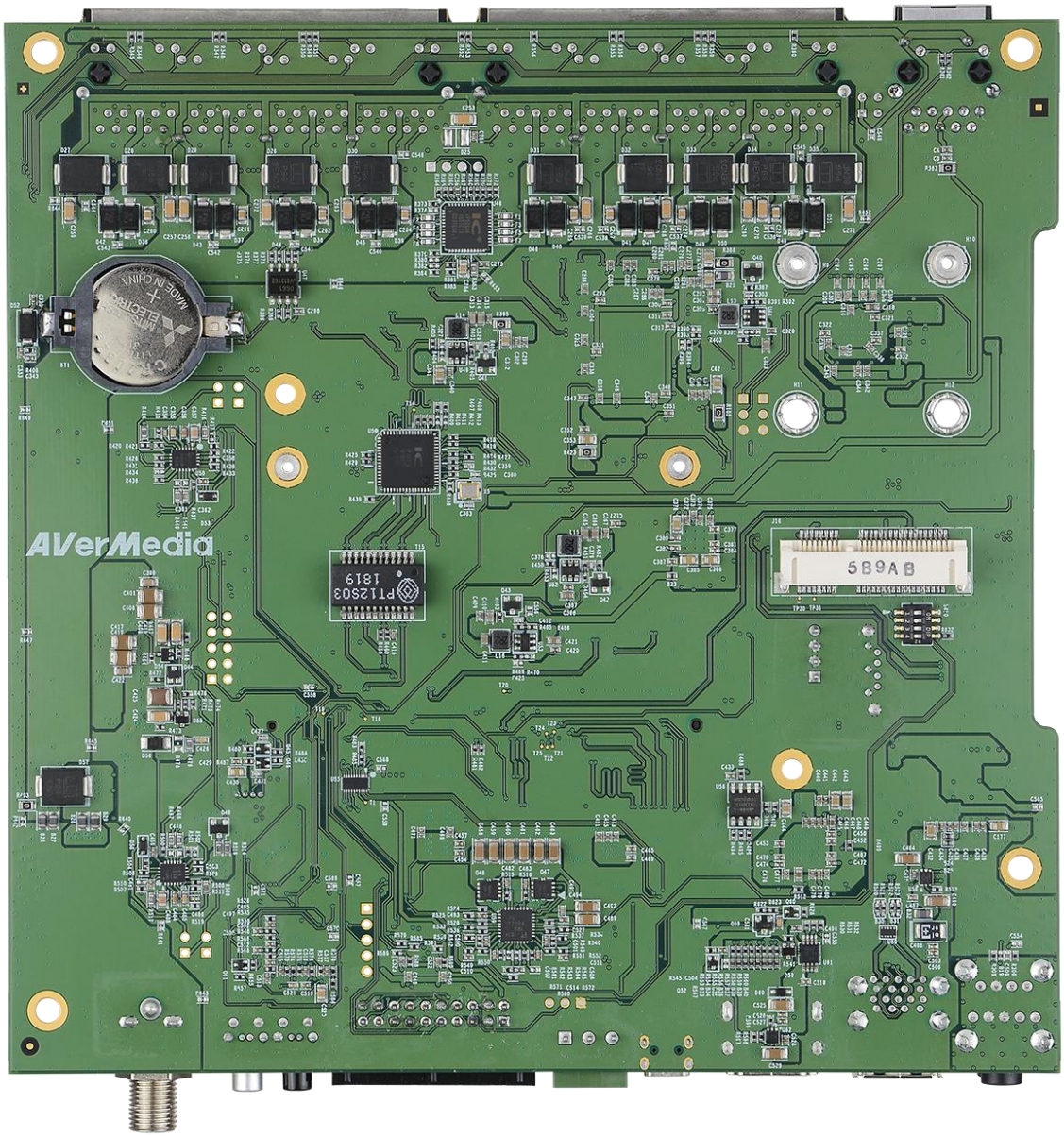
## 2.1 Block Diagram



## 2.2 Top View of Carrier Board



## Bottom View of Carrier Board



## 2.3 Connector Summary

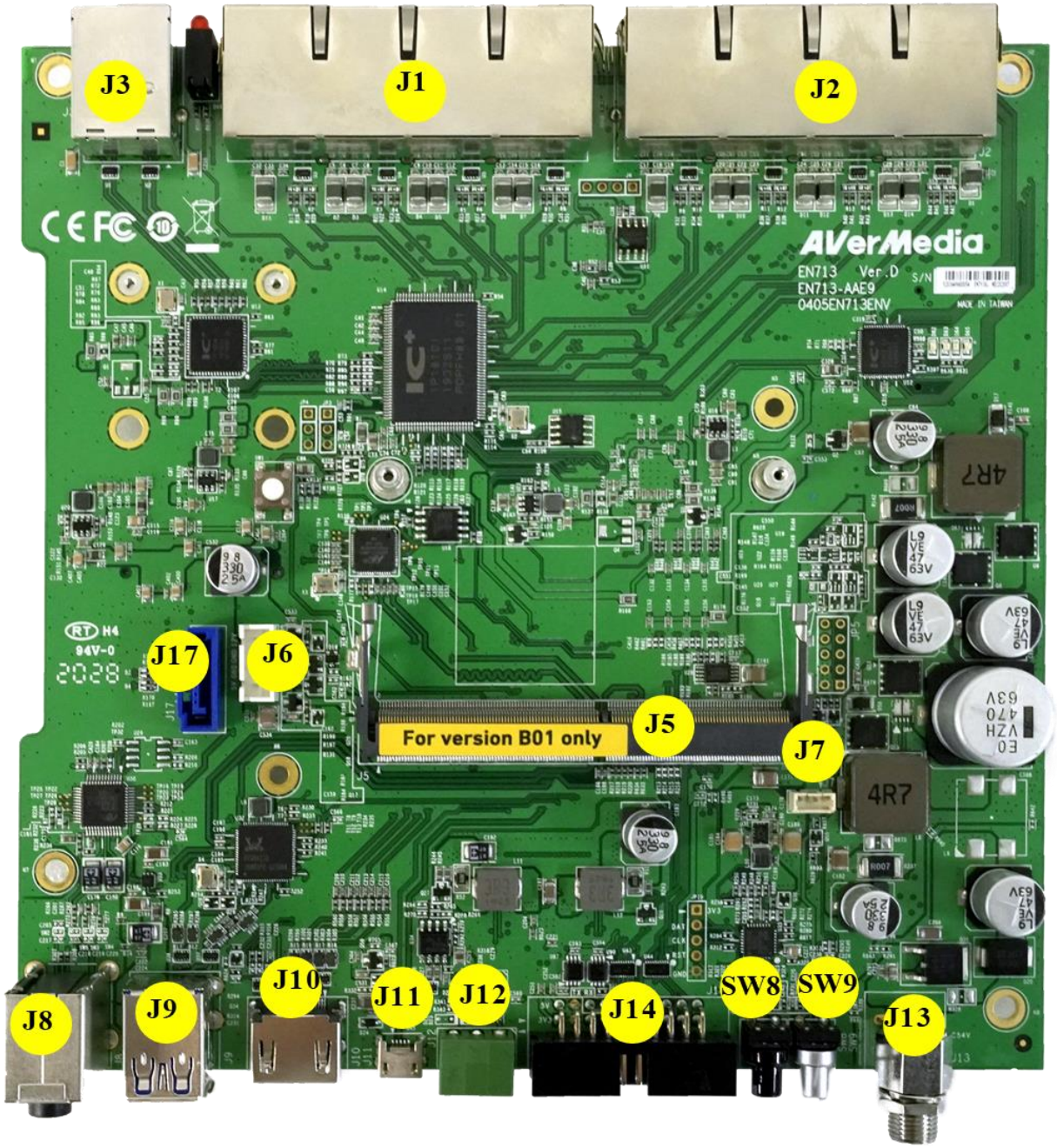
| Designation | Description |
|---|---|
| J1 | RJ45 10/100Mb 4-port Ethernet connector with POE support |
| J2 | RJ45 10/100Mb 4-port Ethernet connector with POE support |
| J3 | RJ45 1Gb single-port Ethernet connector |
| J5 | 260-pin SODIMM connector for NVIDIA® Jetson Nano/ Xavier NX module |
| J6 | SATA power wafer |
| J7 | Fan wafer |
| J8 | Mic and speaker connector |
| J9 | USB 3.1 Gen 1 2-port connector with 900mA x2 |
| J10 | HDMI video output connector |
| J11 | USB2.0 /OTG micro-type connector |
| J12 | RS-485 connector |
| J13 | 54V DC power Jack |
| J14 | 20-pin header UART console for debug, I2C, GPIO |
| J16 | Mini card for USB only |
| J17 | SATA connector |
| BT1 | RTC battery connector |

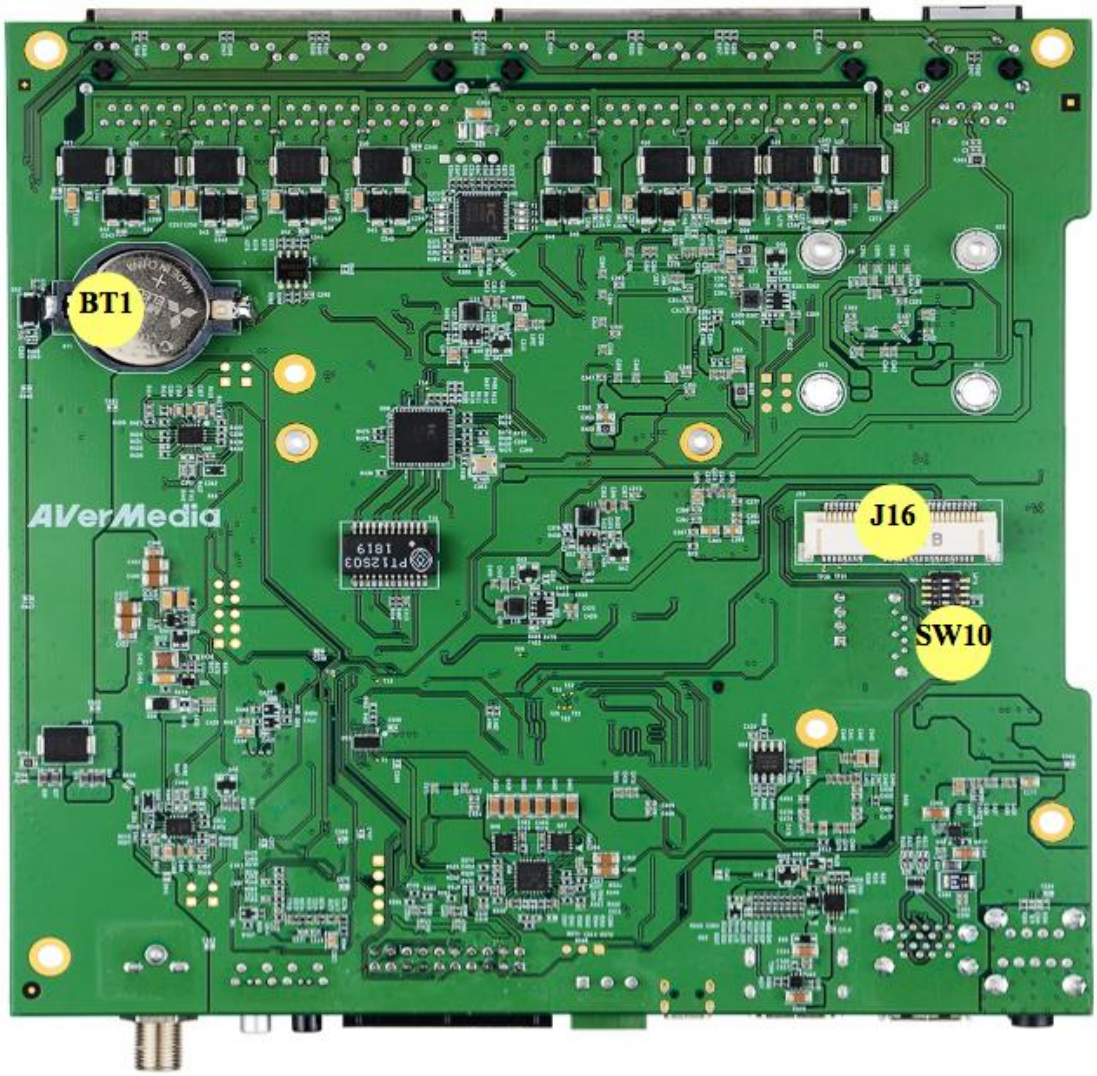
## 2.4 Switch Summary

| Designation | Description |
|---|---|
| SW8 | Force recovery button |
| SW9 | Power on button |
| SW10 | 4-pin DIP switch with four sets of setting as defined in Section 3.20. |

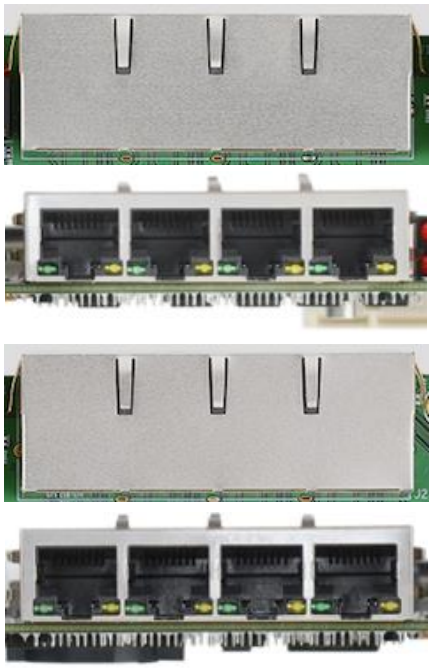
# 3.0 Feature Description

## 3.1 Connector and Switch Locations




BT1
J16
SW10

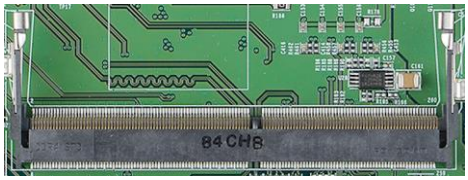
## 3.2 10/100Mb 4-port Ethernet Connectors

| | | |
|---|---|---|
| **Function** | 10/100Mb 4-port Ethernet connectors, used to connect IP cameras and/or the network switches. |  |
| **Location** | J1 and J2 | |
| **Type Description** | RJ45*4 with integrated magnetics for PoE application | |
| **Manufacturer and Part Number** | CHAMPWAY, CWJ46614AENL | |
| **Mating Connector** | Any standard 10/100Mb Ethernet mating connector can be applicable. | |
| **Pinout** | Comply with Ethernet standards. | |
| **Remarks** | POE support is enabled on J1 and J2. | |

## 3.3 1Gb single-port Ethernet Connector

| | | |
|---|---|---|
| **Function** | 1Gb single-port Ethernet connector, used to connect to the host system. |  |
| **Location** | J3 | |
| **Type Description** | RJ45 with integrated magnetics | |
| **Manufacturer and Part Number** | FOXCONN, JFM38013-0L03-4F-BX3 | |
| **Mating Connector** | Any standard 1Gb Ethernet mating connector can be applicable. | |
| **Pinout** | Comply with Ethernet standards. | |
| **Remarks** | None | |

## 3.4 260-Pin SODIMM Connector

| | | |
|---|---|---|
| **Function** | Used to mount with and connect to NVIDIA® Jetson Nano/ Xavier NX module. |  |
| **Location** | J5 | |
| **Type Description** | 260-pin SODIMM connector | |
| **Manufacturer and Part Number** | FOXCONN, ASAA826-EASB0-7H | |
| **Mating Connector** | DDR4 SO-DIMM 260PIN 9.2mmH STANDARD | |
| **Pinout** | Please refer to NVIDIA Jetson Nano System-on-Module datasheet for the pinout details. | |
| **Remarks** | None | |

## 3.5 SATA Power Wafer and SATA Connector

| | | |
|---|---|---|
| **Function** | 2.5” hard drive/SSD<br>3.5” surveillance hard drive/SSD |  |
| **Location** | J6 (on the left) and J17 (on the right) | |
| **Type Description** | SATA HD power (on the left) and signal (on the right) connector | |
| **Manufacturer and Part Number** | J6:<br>PINREX, 753-81-04TW00<br>J17:<br>FOXCONN, LE18077-Z54B-4H | |
| **Mating Connector** | 4-pin wafer and SATA 3.0 connector | |
| **Pinout** | J6:<br>Pin Number / Description<br>1 / 5V Power<br>2 / GND<br>3 / GND<br>4 / 12V Power<br>J17: Please refer to SATA 3.0 standard | |
| **Remarks** | None | |

## 3.6 Fan Wafer

<table>
<tr><td>Function</td><td>Fan power and control wafer</td><td rowspan="6"> 
</td></tr>
<tr><td>Location</td><td>J7</td></tr>
<tr><td>Type Description</td><td>1*4 pin wafer with 1.25 mm pitch</td></tr>
<tr><td>Manufacturer and Part Number</td><td>Joint Tech, A1250WV-04PNLNT1N00B</td></tr>
<tr><td>Mating Connector</td><td>(Combination with PINREX’s housing)</td></tr>
<tr><td>Pinout</td><td><table><tr><th>Pin Number</th><th>Description</th></tr><tr><td>1</td><td>GND</td></tr><tr><td>2</td><td>5V Power</td></tr><tr><td>3</td><td>TACH from fan to module</td></tr><tr><td>4</td><td>PWM from module to fan</td></tr></table></td></tr>
<tr><td>Remarks</td><td colspan="2">None</td></tr>
</table>

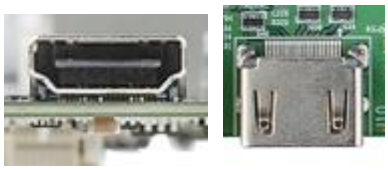
## 3.7 Mic and Speaker Connector

<table>
<tr><td>Function</td><td>Mic and speaker jack</td><td rowspan="5">  </td></tr>
<tr><td>Location</td><td>J8</td></tr>
<tr><td>Type Description</td><td>3.5 mm miniature jack</td></tr>
<tr><td>Manufacturer and Part Number</td><td>JKCR, PJD-035-87HAB</td></tr>
<tr><td>Mating Connector</td><td>2 or 3 conductors type plug</td></tr>
<tr><td>Pinout</td><td>Mic input (on the top) and speaker output (on the bottom)</td></tr>
<tr><td>Remarks</td><td colspan="2">None</td></tr>
</table>

## 3.8 USB 3.1 Gen 1 2-Port Connector

| | | |
|---|---|---|
| **Function** | USB 3.1 Gen 1 device connector |  |
| **Location** | J9 | |
| **Type Description** | 2-port USB Type-A female connector | |
| **Manufacturer and Part Number** | CHAMPWAY, CU3B-AFR15U-096H | |
| **Mating Connector** | Any USB standard Type-A interface cable or device. | |
| **Pinout** | Please refer to USB 3.1 Gen 1 standard. | |
| **Remarks** | Support 900mA x2 | |

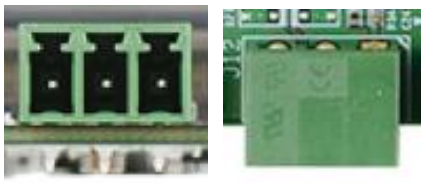
## 3.9 HDMI Video Output Connector

| | | |
|---|---|---|
| **Function** | HDMI Type-A TX connector |  |
| **Location** | J10 | |
| **Type Description** | HDMI Type-A female connector | |
| **Manufacturer and Part Number** | Compupack, ACNHM220028-001 | |
| **Mating Connector** | Any HDMI standard Type-A interface cable or device. | |
| **Pinout** | Please refer to HDMI standard. | |
| **Remarks** | None | |

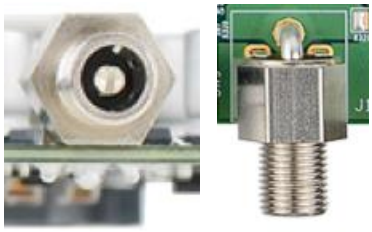
## 3.10 OTG USB/ Micro-Type Connector

| | | |
|---|---|---|
| **Function** | OTG programming recovery |  |
| **Location** | J11 | |
| **Type Description** | USB Micro-type female connector | |
| **Manufacturer and Part Number** | Fullglory, FG-MCB-111440 | |
| **Mating Connector** | Any USB standard Micro-type interface cable or device. | |
| **Pinout** | Please refer to USB Micro-type standard. | |
| **Remarks** | None | |

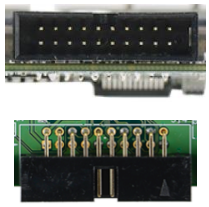
## 3.11 RS-485 Connector

<table>
<tr><td>Function</td><td>RS485 interface from Jetson Nano module UART control</td><td rowspan="6">  </td></tr>
<tr><td>Location</td><td>J12</td></tr>
<tr><td>Type Description</td><td>3-pin terminal block</td></tr>
<tr><td>Manufacturer and Part Number</td><td>DECA, ME030-38103T</td></tr>
<tr><td>Mating Connector</td><td>Combination with the plug terminal block from DECA</td></tr>
<tr><td>Pinout</td><td><table><tr><th>Pin Number</th><th>Description</th></tr><tr><td>1</td><td>GND</td></tr><tr><td>2</td><td>B</td></tr><tr><td>3</td><td>A</td></tr></table></td></tr>
<tr><td>Remarks</td><td colspan="2"></td></tr>
</table>

## 3.12 54V DC Power Jack

<table>
<tr><td>Function</td><td>54V DC power input</td><td rowspan="6">  </td></tr>
<tr><td>Location</td><td>J13</td></tr>
<tr><td>Type Description</td><td>2.5 mm power jack</td></tr>
<tr><td>Manufacturer and Part Number</td><td>JKCR, DCD-020-105B</td></tr>
<tr><td>Mating Connector</td><td>Any 2.5mm power plug cable</td></tr>
<tr><td>Pinout</td><td><table><tr><th>Pin Number</th><th>Description</th></tr><tr><td>3</td><td>GND</td></tr><tr><td>1</td><td>54V Power</td></tr><tr><td>2</td><td>GND</td></tr></table></td></tr>
<tr><td>Remarks</td><td colspan="2">None</td></tr>
</table>

## 3.13 20-Pin Header

<table>
<tr><td>Function</td><td>UART console for debug, I2C, GPIO</td><td rowspan="5">  <br></td></tr>
<tr><td>Location</td><td>J14</td></tr>
<tr><td>Type<br>Description</td><td>2.54 mm pitch 2*10 header</td></tr>
<tr><td>Manufacturer and Part Number</td><td>COXOC, 302AE20PGAR003</td></tr>
<tr><td>Mating Connector</td><td>Any 2.5mm pitch DuPont wire</td></tr>
<tr><td>Pinout</td><td>EN713(EOL)
<table>
<tr><th>Address</th><th>Pin Name</th><th colspan="2">20-Pin Index</th><th>Pin Name</th><th>Address</th></tr>
<tr><td></td><td>+3V3</td><td>1</td><td>2</td><td>+5V</td><td></td></tr>
<tr><td></td><td>GND</td><td>3</td><td>4</td><td>GND</td><td></td></tr>
<tr><td rowspan="2">/dev/i2c-1</td><td>I2C1_SDA</td><td>5</td><td>6</td><td>UART2_TXD_3V3</td><td rowspan="2">Debug Console<br>/dev/ttyS0</td></tr>
<tr><td>I2C1_SCL</td><td>7</td><td>8</td><td>UART2_RXD_3V3</td></tr>
<tr><td rowspan="2">/dev/i2c-0</td><td>I2C0_SDA</td><td>9</td><td>10</td><td>GND</td><td></td></tr>
<tr><td>I2C0_SCL</td><td>11</td><td>12</td><td>SPI1_SCK</td><td>gpio14</td></tr>
<tr><td>gpio79</td><td>I2S0_SCLK</td><td>13</td><td>14</td><td>SPI1_MISO</td><td>gpio13</td></tr>
<tr><td>gpio78</td><td>I2S0_DOUT</td><td>15</td><td>16</td><td>SPI1_MOSI</td><td>gpio12</td></tr>
<tr><td>gpio77</td><td>I2S0_DIN</td><td>17</td><td>18</td><td>SPI1_CS0</td><td>gpio15</td></tr>
<tr><td>gpio76</td><td>I2S0_FS</td><td>19</td><td>20</td><td>SPI1_CS1</td><td>gpio232</td></tr>
</table>
NX213B
<table>
<tr><th>Address</th><th>Pin Name</th><th colspan="2">20-pin index</th><th>Pin Name</th><th>Address</th></tr>
<tr><td></td><td>+3V3</td><td>1</td><td>2</td><td>+5V</td><td></td></tr>
<tr><td></td><td>GND</td><td>3</td><td>4</td><td>GND</td><td></td></tr>
<tr><td rowspan="2">/dev/i2c-8</td><td>I2C1_SDA</td><td>5</td><td>6</td><td>UART2_TXD</td><td rowspan="2">/dev/ttyTCU0<br>Debug Console</td></tr>
<tr><td>I2C1_SCL</td><td>7</td><td>8</td><td>UART2_RXD</td></tr>
<tr><td rowspan="2">/dev/i2c-1</td><td>I2C0_SDA</td><td>9</td><td>10</td><td>GND</td><td></td></tr>
<tr><td>I2C0_SCL</td><td>11</td><td>12</td><td>SPI1_SCK</td><td>gpio480<br>Bidirection</td></tr>
<tr><td>gpio445<br>Bidirection</td><td>I2S0_SCLK</td><td>13</td><td>14</td><td>SPI1_MISO</td><td>gpio481<br>Bidirection</td></tr>
<tr><td>gpio446<br>Bidirection</td><td>I2S0_DOUT</td><td>15</td><td>16</td><td>SPI1_MOSI</td><td>gpio482<br>Bidirection</td></tr>
<tr><td>gpio447<br>Bidirection</td><td>I2S0_DIN</td><td>17</td><td>18</td><td>SPI1_CS0</td><td>gpio483<br>Bidirection</td></tr>
<tr><td>gpio448<br>Bidirection</td><td>I2S0_FS</td><td>19</td><td>20</td><td>SPI1_CS1</td><td>gpio484<br>Bidirection</td></tr>
</table></td></tr>
<tr><td>Remarks</td><td colspan="2">GPIO uses 3.3V</td></tr>
</table>

## 3.14 Mini Card Connector

| | | |
|---|---|---|
| **Function** | LTE or Wi-Fi Module |  |
| **Location** | J16 | |
| **Type Description** | Mini-Card for USB | |
| **Manufacturer and Part Number** | FOXCONN, AS0B221-S68Q-7H | |
| **Mating Connector** | Any Mini-Card standard interface device. | |
| **Pinout** | Please refer to Mini-Card standard for the pinout details. | |
| **Remarks** | Support USB 2.0 only, not PCIe | |

## 3.15 RTC Battery Connector

| | | |
|---|---|---|
| **Function** | RTC battery for module |  |
| **Location** | BT1 | |
| **Type Description** | RTC holder and RTC battery | |
| **Manufacturer and Part Number** | Holder:<br>LOTES, AAA-BAT-054-P06<br>RTC Battery:<br>MITSUBISHI, CR2032 3V | |
| **Mating Connector** | Any CR2032 3V battery | |
| **Pinout** | Pin Number / Description<br>1 / 3V Power<br>2 / GND | |
| **Remarks** | Please be reminded to pay the proper attention on the polarity of this 3V battery, when it is being replaced. The correct placement is to keep the "+" mark on the battery outward, as shown in the above photo. | |

## 3.16 Force Recovery Button

| | | |
|---|---|---|
| **Function** | Force recovery |  |
| **Location** | SW8 | |
| **Type Description** | Button | |
| **Pinout** | N/A | |
| **Remarks** | None | |

## 3.17 Power on Button

| | | |
|---|---|---|
| **Function** | Power control button |  |
| **Location** | SW9 | |
| **Type Description** | Button with Green LED | |
| **Pinout** | N/A | |
| **Remarks** | The green light on LED is activated when the board is powered on. | |

## 3.18 4-Pin DIP Switch

| | | |
|---|---|---|
| **Function** | Optional function selection |  |
| **Location** | SW10 | |
| **Type Description** | 4 SPST DIP switch | |
| **Manufacturer and Part Number** | N/A | |
| **Mating Connector** | N/A | |
| **Pinout** | Please refer to the following table. | |

**Remarks**

| SW10 | Default (OFF) | ON |
|---|---|---|
| S1 | Fan PWM controller | Fan always on |
| S2 | Auto power on | Auto power on disabled |
| S3 | RS-485 normal mode | RS-485 terminal mode |
| S4 | Test mode off | Test mode on (for the factory use) |

## 3.19 Other Switch and Jumpers

Other switch and jumpers, such as SW1, JP3, JP4, and JP5, etc. marked on the printed circuit board of EN713-AAE9 carrier board, are reserved for the internal use by AVerMedia. They are not open to the client application.

## 4.0 Installation

1. Check and ensure all the external system power supplies are turned off.
2. Install the Micro USB2.0 cable to Jetson platform connector.
3. Press and hold on the Recover button.
4. Connect the power cord to the box PC.
5. BSP Setup Instructions

BSP (board support package) can be downloaded from https://www.avermedia.com/professional/download, or contact technical support from https://www.avermedia.com/professional/technical_support.

BSP File Name for Jetson Nano:
EN713-R1.0.*.tar.gz (e.g. EN713-R1.0.5.4.6.tar.gz)

BSP File Name for Jetson Xavier NX:
EN713-NX-R1.0.*.tar.gz (e.g. EN713-NX-R1.0.17.4.6.tar.gz)

* Important Note: Please backup your personal files before re-flashing BSP

Here is an example for Jetson Xavier NX. (Please refer to BSP release note.)

1. Decompress by root
sudo tar zxf EN713-NX-R1.0.17.4.6.tar.gz

2. Enter L4T directory
cd JetPack_4.6_Linux_JETSON_XAVIER_NX_TARGETS/Linux_for_Tegra

3. Connect a Jetson platform and a host PC(*) through a Micro USB to USB Cable
* The host PC must be a physical Ubuntu 18.04 PC with x64 CPU, not a virtual machine or Jetson platform.

4. Enter the recovery mode
power off -> press recovery button -> power on -> wait 2 seconds -> release recovery button

5. Start to flash BSP
a. Use default user account. ( user_name/password: nvidia )
./install.sh
b. Create other user name and password as default user
./install.sh --create_default_account

6. Flash more modules (speed up)
./install.sh -r

## 5.0 Software

The BSP is based on NVidia JetPack.
https://docs.nvidia.com/jetson/archives/l4t-archived/l4t-3261/index.html
For more detail information. Please refer to BSP release note.

## 6.0 Power Consumption

| Item Description | Power Consumption |
|---|---|
| Theoretical Maximum System Power Consumption | Maximum power consumption of EN713(EOL) is 15.5W (w/ HDMI, RJ45), and embedded w/ POE, that would be extra up to 100W;<br><br>Maximum power consumption of NX213B is 32W (w/ HDMI, RJ45), and embedded w/ POE, that would be extra up to 100W.<br><br>(maximum power consumption up to 150W based on adapter) |
| Typical System Power Consumption | The power consumption under the normal operating mode is depending on the application software running with NVIDIA® Jetson Nano /Xavier NX. |