PULSE SYSTECH

Designed for Depth Build for Trust

# NOVASTATION
# USER MANUEL

**PULSESYSTECH**

**www.pulsesystech.com**

**support@pulsesystech.com**

| Revision | Date | Description |
|---|---|---|
| 000 | 2025-07-16 | Pre Release |
| 001 | 2026-01-02 | Block Diagram and Mechanical Details update |

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# 1. PREFACE

## 1.1 Disclaimer

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## 1.2 Customer Support

If you encounter any issues or difficulties after reviewing this user manual or while using the carrier board, please contact Pulsesystech's Field Application Engineer (FAE) team.See the contact information section below for more information on how to contact us directly.

## 1.3 Contant Information

| Contact Information | |
|---|---|
| **E-mail Address** | **For technical support requests:**<br>support@pulsesystech.com<br>**For wholesale inquiries:**<br>sales@pulsesystech.com |
| **Address** | Sanayi district, Teknopark Boulevard No:1/4C, Interior Door No: Z08, Pendik/Istanbul, Turkey<br>**For information requests:**<br>info@pulsesystech.com<br>www.pulsesystech.com |
| **Support** | Please go to the www.pulsesystech.com/novastation for product manuals, installation guides, device drivers, BSPs and technical tips.<br>Submit your technical support questions to e-mail support@pulsesystech.com of our support engineers. Technical Support representatives are available 24 hours a day, 7 days a week on our website. |

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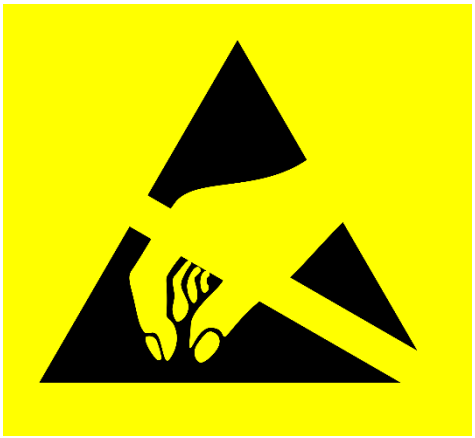
## 1.6 ESD Warning



Electronic devices and printed circuit boards are vulnerable to Electrostatic Discharge (ESD). When working with any circuit board assemblies, including Pulsesystech carrier boards, it is strongly advised to follow appropriate ESD protection procedures. Recommended ESD handling practices include, but are not limited to, the following:

1. Store circuit boards in antistatic packaging until they are required for installation.
2. Wear a properly grounded wrist strap when handling boards; at a minimum, discharge static electricity by touching a grounded metal surface before contact.
3. Handle circuit boards only within designated ESD-protected environments, such as areas equipped with ESD-safe floor mats, work surfaces, wrist strap grounding points, and protective laboratory garments.
4. Do not handle circuit boards in environments with carpeted flooring.
5. Hold circuit boards by their edges whenever possible and avoid direct contact with electronic components.

## 1.7 Limited Product Warranty

Pulsesystech offers a two (2) year limited warranty for the carrier board, effective from the original date of purchase. To remain eligible for warranty coverage, the carrier board must not be altered, modified, or reworked in any manner. Any changes or modifications that are not expressly authorized by Pulsesystech—whether documented in this user manual or provided as written instructions by Pulsesystech Support—will result in the warranty being rendered void.

To request warranty service, the carrier board must be returned to Pulsesystech within the applicable warranty period and accompanied by the original sales invoice or other valid proof of purchase.

## 2. INTRODUCTION

Pulsesystech Novastation is a modular hardware platform that offers a unique advantage in terms of size and cost within the Jetson ecosystem. Thanks to its standard user ports, the system can be used directly without the need for any proprietary or custom cable sets. However, to ensure long-term, reliable, and durable use of the IO ports, optional cable sets manufactured by Pulsesystech are available.

Novastation is designed to be compatible with NVIDIA Jetson Nano, Jetson TX2 NX, Jetson Xavier NX, and Jetson Orin Nano modules. This modular architecture allows users to change the processor according to their AI development requirements while continuing to use the existing ports on the same hardware platform.

The onboard PCIe interfaces enable the integration of communication modules such as Wi-Fi and Bluetooth with minimal space requirements. In addition, NVMe SSD support allows data to be stored securely at high speeds. For alternative communication modules connected via the PCIe interfaces, customized Board Support Package (BSP) support can be provided at the operating system level, accelerating software development and system scalability.

Novastation provides four MIPI-CSI-2 camera interfaces, enabling low-latency multi-camera operation. This capability significantly enhances system performance, particularly for computer vision and AI-based visual analysis applications.

For requests such as reducing unit costs, customizing user ports, developing specialized communication interfaces, or implementing customized operating systems or Linux driver solutions, please contact Pulsesystech. We are pleased to add value to your projects through our flexible and scalable engineering expertise.

# 3. NOVASTATION TECHNICAL SPECIFICATIONS

**Table 1. Novastation Features**

| Feature | Description |
|---|---|
| **Module Compatibility** | NVIDIA Jetson Nano<br>NVIDIA Jetson TX2 NX<br>NVIDIA Jetson Xavier NX<br>NVIDIA Jetson Orin Nano |
| **Mechanical Dimensions** | 85.5mm x 73.5mm x 29.2mm |
| **Supply Voltage** | 9V-32V |
| **Reverse Voltage Protection** | Main Power Input Protection |
| **Ethernet** | 1 x 10/100/1000BASE-T RJ45 Famele |
| **USB** | 2 x USB2.0 Tip A<br>1 x USB 2.0 Micro-B (Recovery)<br>1 x USB 3.0 Tip A |
| **Camera** | 1 x 4L MIPI-CSI2,<br>1 x 2L MIPI-CSI2,<br>**(2 x 4L MIPI-CSI2, 2 x 2L MIPI-CSI2 manufacture custom option please contact us)** |
| **PCIe** | 1 x M.2 E Key (1 lane PCIe Gen 3 USB 2.0) for WiFi/Bluetooth Modules<br>1 x M.2 M Key NVMe 2242 SSD Size (4 Lane PCIe Gen 4) |
| **Debug** | 1 x USB CH340 Driver For Debug |
| **UART** | 1 x RS232<br>**(TTL/RS485 port manufacture custom option please contact us)** |
| **CAN** | 1 x Non-isolated CAN 2.0<br>**(2 x Non-isolated CAN 2.0 manufacture custom option please contact us)** |
| **I2C** | 1 x I2C |
| **SPI** | 1 X SPI |
| **RTC Battery** | 2-Pin RTC Battery Connector |
| **External Voltage Output** | 1 x 12V/1A<br>1 x 3V3/500mA<br>1 x 5V0/500mA |
| **GPIO** | 1 x Force Recovery,<br>1 x Sys Reset<br>1 x Sleep/Wake<br>2 x GPIO |
| **Circuit Operating Temperature** | -40 °C…85 °C |

| Part Number | Description |
|---|---|
| **JTSN0001V1A** | Novastation |

## 3.1 Block Diagram

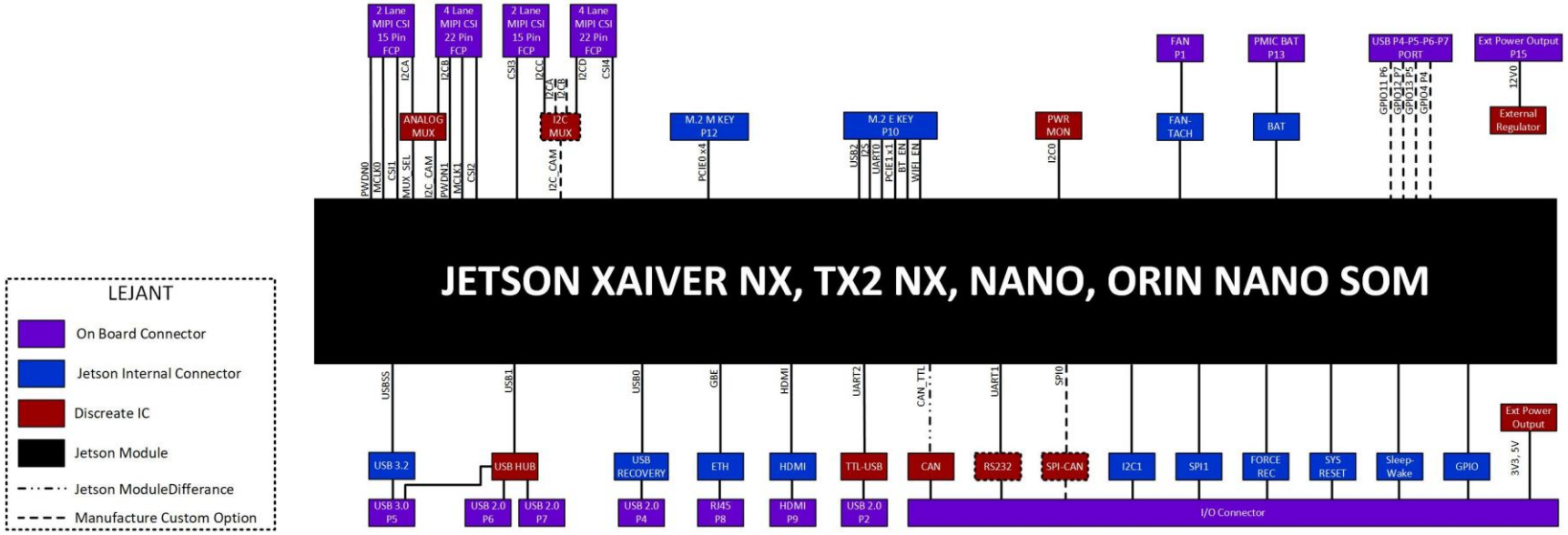



**Figure 1. Novastation Signal Block Diagram**

## 3.2 On-Circuit Connector Placement

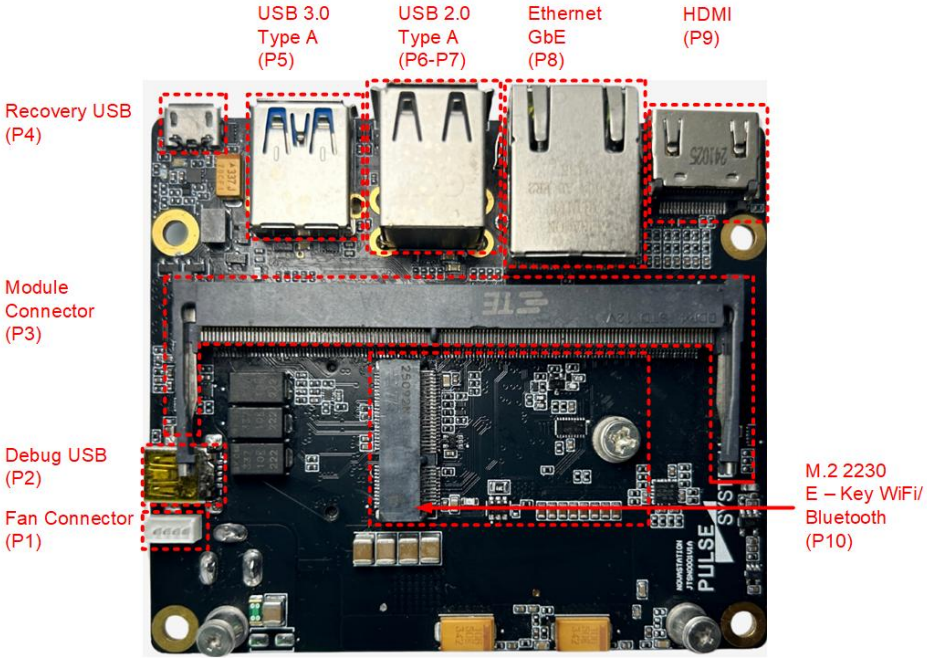



**Figure 1. Novastation Top Designator**

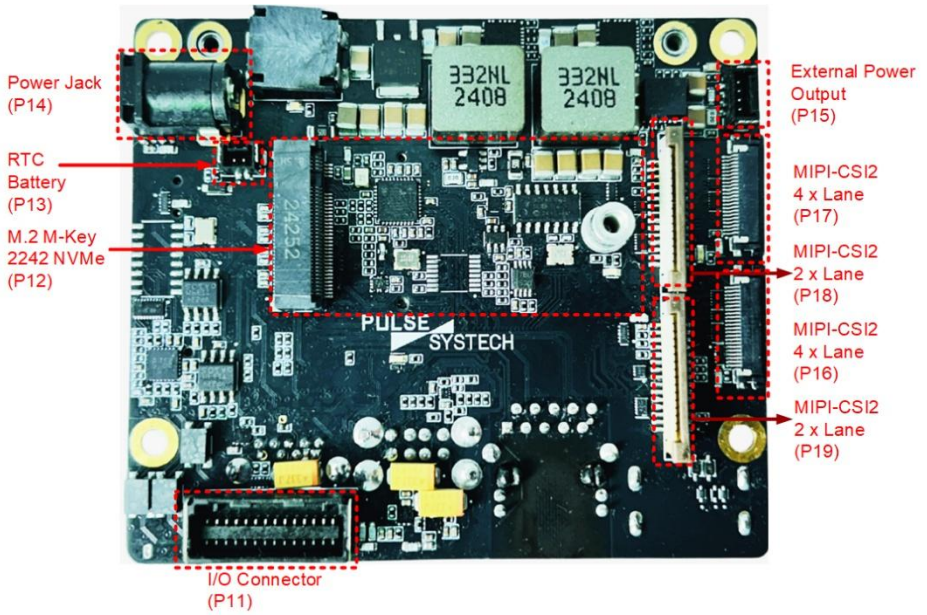



**Figure 2. Novastation Bottom Designator**

## 3.3 Connector Information

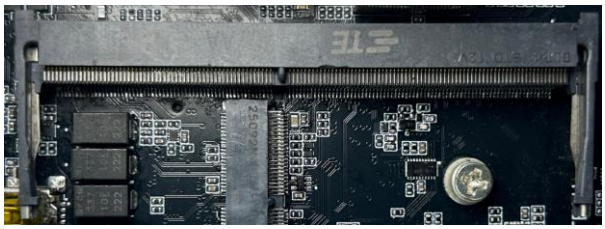
| Descriptive | Connector | Description |
|---|---|---|
| **P1** | **Fan Connector**<br>**125SH-B-04-TS** | Active heatsink fan connector for Module Connector |
| **P2** | **Debug USB** | UART2 debug signal converted to the USB |
| **P3** | **Module Connector** | Nvidia Jetson Orin Nano, Xavier NX, TX2 NX, Nano Module Board-Board Connector |
| **P4** | **Recovery USB** | Operating system installing port |
| **P5** | **USB 3.0 Connector** | USB 3.0 Type-A connector |
| **P6, P7** | **USB 2.0 Connector** | USB 2.0 Type-A connector |
| **P8** | **Gigabit Ethernet** | RJ-45 Gigabit Ethernet Connector 10/100/1000/ Base-T connection |
| **P9** | **HDMI** | HDMI display video connector |
| **P10** | **M.2 E Key Slot** | M.2 2230 E-Key Wi-Fi/Bluetooth module connector |
| **P11** | **I/O Connector**<br>**5054332881** | GPIO signal connector |
| **P12** | **M.2 M Key Slot** | M.2 2242 NVMe SSD connector |
| **P13** | **RTC Battery**<br>**5055680281** | RTC battery connector |
| **P14** | **Power Jack** | Power input connector |
| **P15** | **External Voltage Output**<br>**5055680471** | +12V0/1A External power output connector |
| **P16, P17** | **MIPI – CSI2 4 x Lane Connector** | MIPI-CSI2 4x Lane camera connector |
| **P18, P19** | **MIPI – CSI2 2 x Lane Connector** | MIPI-CSI2 2x Lane camera connector |

# 4. NOVASTATION DETAILED TECHNICAL EXPLANATIONS

## 4.1 Module Connector

The Jetson Orin Nano, Xavier NX, TX2 NX, Nano is connected to the Novastation for carrier board via a TE Connectivity DDR4 SODIMM 260 Pin connector.

| Function | Description |
|---|---|
| **Location** | P3 |
| **Type** | TE Connectivity DDR4 SODIMM 260 Pin |
| **Connector Part Number** | 2309413-1 |
| **Pin Diagram** | System-On-Module datasheet for pinout details<br><br>https://developer.nvidia.com/embedded/downloads |

## 4.2 HDMI Connector

The Jetson NX and Nano modules will output video via the Novastation for HDMI connector that is HDMI 2.0 capable.

| Function | Description |
|---|---|
| **Location** | P9 |
| **Type** | HDMI Connector |
| **Mate Connector Part Number** | HDMI Type-A Cable |
| **Pin Diagram** | Refer to HDMI Standard |

## 4.3 Ethernet GbE Connector

The Jetson NX and Nano modules will allow internet communication via GbE 10/100/1000 Ethernet connector as below.

| Function | Description |
|---|---|
| **Location** | P8 |
| **Type** | RJ-45 Connector |
| **Mate Connector Part Number** | RJ-45 Ethernet Cable |
| **Pin Diagram** | Refer to Ethernet Standard |

## 4.4 USB 2.0 Type-A Connector

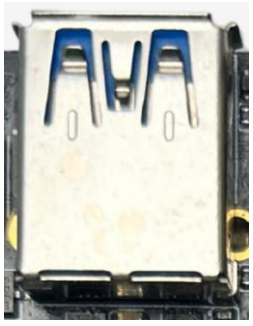
The Novastation incorporates 2 x USB 2.0 Type-A connectors with a 0.5A current limit per connector.

| Function | Description |
|---|---|
| **Location** | P6-P7 |
| **Type** | USB Type-A Connector |
| **Mate Connector Part Number** | USB Type-A Cable |
| **Pin Diagram** | Refer to USB Standard |

## 4.5 USB 3.0 Type-A Connector

The Novastation incorporates USB 3.0 Type-A connectors with a 0.9A current limit per connector.

| Function | Description |
|---|---|
| **Location** | P5 |
| **Type** | USB Type-A Connector |
| **Mate Connector Part Number** | USB Type-A Cable |
| **Pin Diagram** | Refer to USB Standard |



## 4.6 Recovery Micro USB 2.0 Connector

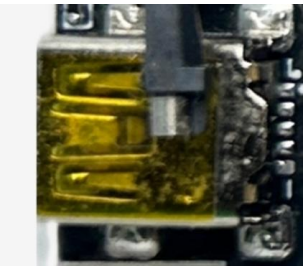
The Novastation incorporates Micro USB recovery connectors.

| Function | Description |
|---|---|
| **Location** | P4 |
| **Type** | Micro USB Connector |
| **Mate Connector Part Number** | Micro USB Cable |
| **Pin Diagram** | Refer to USB Standard |

## 4.7 Debug USB Connector

The Novastation incorporates Mini USB debug UART connectors.

| Function | Description |
|---|---|
| **Location** | P2 |
| **Type** | Mini USB Connector |
| **Mate Connector Part Number** | Mini USB Cable |
| **Pin Diagram** | Refer to USB Standard |



## 4.8 Fan Connector

The Novastation implements a 4 Position connector for active cooling capability.

| Function | Description |
|---|---|
| **Location** | P1 |
| **Type** | 4 Position 1.25mm Board to Cable Connector |
| **Connector Part Number** | 125SH-B-04-TS |
| **Mate Connector Part Number** | 51021-0400 |
| **Pin Diagram** | |
| **Pin 1** | GND |
| **Pin 2** | 5V0 |
| **Pin 3** | FAN_TACH |
| **Pin 4** | FAN_PWM |

## 4.9 M.2 E-Key – WiFi and Bluetooth Port

Novastation implements an M.2 2230 E-Key for a PCIe x1, USB 2.0 Wi-Fi/Bluetooth Module.

| Function | Description | | |
|---|---|---|---|
| **Location** | P10 | | |
| **Type** | M.2 E-key 2230 | | |
| **Mate** | E-key WiFi/BT module | | |
| **Pin Diagram** | | | |
| Pin 1 | GND | Pin 44 | N.C. |
| Pin 2 | +3V3 | Pin 45 | GND |
| Pin 3 | USB2_AP_P | Pin 46 | N.C. |
| Pin 4 | +3V3 | Pin 47 | PCIE1_CLK_P |
| Pin 5 | USB2_AP_N | Pin 48 | N.C. |
| Pin 6 | N.C. | Pin 49 | PCIE1_CLK_N |
| Pin 7 | GND | Pin 50 | M2E_SUSCLK_32KHZ |
| Pin 8 | I2S1_SCLK | Pin 51 | GND |
| Pin 9 | N.C. | Pin 52 | PCIE1_RST_N |
| Pin 10 | I2S1_LRCK | Pin 53 | PCIE1_CLKREQ_N |
| Pin 11 | N.C. | Pin 54 | M2E_WDISABLE2 |
| Pin 12 | I2S1_SDIN | Pin 55 | PCIE_WAKE |
| Pin 13 | N.C. | Pin 56 | M2E_WDISABLE1 |
| Pin 14 | I2S1_SDOUT | Pin 57 | GND |
| Pin 15 | N.C. | Pin 58 | N.C. |
| Pin 16 | N.C. | Pin 59 | N.C. |
| Pin 17 | N.C. | Pin 60 | N.C. |
| Pin 18 | GND | Pin 61 | N.C. |
| Pin 19 | N.C. | Pin 62 | N.C. |
| Pin 20 | N.C. | Pin 63 | GND |
| Pin 21 | N.C. | Pin 64 | N.C. |
| Pin 22 | UART0_RXD | Pin 65 | N.C. |
| Pin 23 | N.C. | Pin 66 | N.C. |
| Pin 32 | UART0_TXD | Pin 67 | N.C. |
| Pin 33 | GND | Pin 68 | N.C. |
| Pin 34 | UART0_CTS | Pin 69 | GND |
| Pin 35 | PCIE1_TX0_P | Pin 70 | N.C. |
| Pin 36 | UART0_RTS | Pin 71 | N.C. |
| Pin 37 | PCIE1_TX0_N | Pin 72 | +3V3 |
| Pin 38 | N.C. | Pin 73 | N.C. |
| Pin 39 | GND | Pin 74 | +3V3 |
| Pin 40 | N.C. | Pin 75 | GND |
| Pin 41 | PCIE1_RX0_P | MNT1 | GND |
| Pin 42 | N.C. | MNT2 | GND |
| Pin 43 | PCIE1_RX0_N | | |

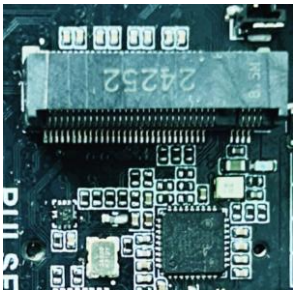
## 4.10 M.2 M-Key 2242 NVMe x4 Port

Novastation implements an M.2 2242 M-Key for a PCIe x4 Gen 4 NVMe.

| Function | Description |
|---|---|
| **Location** | P12 |
| **Type** | M.2 M-key 2242 |
| **Mate** | M-key NVMe |

**Pin Diagram**

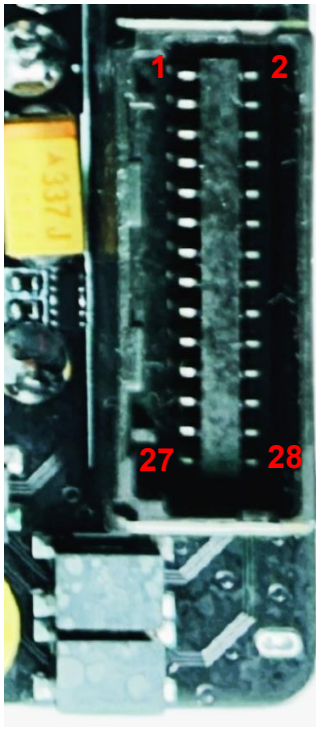
| | | | | | |
|---|---|---|---|---|---|
| Pin 1 | GND | Pin 24 | N.C. | Pin 47 | PCIE0_TX0_N |
| Pin 2 | +3V3 | Pin 25 | PCIE0_TX2_P | Pin 48 | N.C. |
| Pin 3 | GND | Pin 26 | N.C. | Pin 49 | PCIE0_TX0_N |
| Pin 4 | +3V3 | Pin 27 | GND | Pin 50 | PCIE0_RST_N |
| Pin 5 | PCIE0_RX3_N | Pin 28 | N.C. | Pin 51 | GND |
| Pin 6 | N.C. | Pin 29 | PCIE0_RX1_N | Pin 52 | PCIE0_CLKREQ_N |
| Pin 7 | PCIE0_RX3_P | Pin 30 | N.C. | Pin 53 | PCIE0_CLK_N |
| Pin 8 | N.C. | Pin 31 | PCIE0_RX1_P | Pin 54 | PCIE_WAKE |
| Pin 9 | GND | Pin 32 | N.C. | Pin 55 | PCIE0_CLK_P |
| Pin 10 | N.C. | Pin 33 | GND | Pin 56 | N.C. |
| Pin 11 | PCIE0_TX3_N | Pin 34 | N.C. | Pin 57 | GND |
| Pin 12 | +3V3 | Pin 35 | PCIE0_TX1_N | Pin 58 | N.C. |
| Pin 13 | PCIE0_TX3_P | Pin 36 | N.C. | Pin 67 | N.C. |
| Pin 14 | +3V3 | Pin 37 | PCIE0_TX1_P | Pin 68 | 32KHZ_CLK |
| Pin 15 | GND | Pin 38 | N.C. | Pin 69 | N.C. |
| Pin 16 | +3V3 | Pin 39 | GND | Pin 70 | +3V3 |
| Pin 17 | PCIE0_RX2_N | Pin 40 | N.C. | Pin 71 | GND |
| Pin 18 | +3V3 | Pin 41 | PCIE0_RX0_N | Pin 72 | +3V3 |
| Pin 19 | PCIE0_RX2_P | Pin 42 | N.C. | Pin 73 | GND |
| Pin 20 | N.C. | Pin 43 | PCIE0_RX0_P | Pin 74 | +3V3 |
| Pin 21 | GND | Pin 44 | N.C. | Pin 75 | GND |
| Pin 22 | N.C. | Pin 45 | GND | MNT1 | N.C. |
| Pin 23 | PCIE0_TX2_N | Pin 46 | N.C. | MNT2 | N.C. |



## 4.11 I/O Connector

The Novastation implements a 5054332881 Connector to allow access for additional GPIO and interfaces.

| Function | Description |
|---|---|
| **Location** | P11 |
| **Type** | Board to Cable |
| **Connector Part Number** | 5054332881 |
| **Mate Connector Part Number** | 5054322801 |

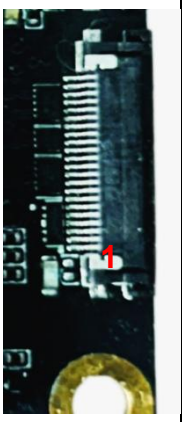



| Pin Diagram | | | |
|---|---|---|---|
| **Pin 1** | SPI1_CS0 | **Pin 2** | SLEEP / WAKE |
| **Pin 3** | SPI1_MISO | **Pin 4** | SYS_RESET |
| **Pin 5** | SPI1_SCK | **Pin 6** | RECOVERY |
| **Pin 7** | SPI1_MOSI | **Pin 8** | GND |
| **Pin 9** | GND | **Pin 10** | GND |
| **Pin 11** | I2C1_SCL | **Pin 12** | 3V3 OUT |
| **Pin 13** | I2C1_SDA | **Pin 14** | GND |
| **Pin 15** | GND | **Pin 16** | 5V0 OUT |
| **Pin 17** | N.C. | **Pin 18** | GPIO_7 |
| **Pin 19** | N.C. | **Pin 20** | GPIO_9 |
| **Pin 21** | CAN1_L | **Pin 22** | N.C. (MFO-RS485_TX_L) |
| **Pin 23** | CAN1_H | **Pin 24** | RS232_TX (MFO-RS485_TX_H) |
| **Pin 25** | CAN2_L | **Pin 26** | RS232_RX (MFO-RS485_RX_H) |
| **Pin 27** | CAN2_H | **Pin 28** | N.C. (MFO-RS485_RX_L) |

## 4.12 22-Pin MIPI-CSIx4 Connector

Novastation allows 22-Pin MIPI-CSI2 4 x Lane video through the SFV22R-1STE1HLF connectors.

| Function | | Description | | P16 | P17 |
|---|---|---|---|---|---|
| **Location** | | P16-P17 | | | |
| **Type** | | Board to Cable | | | |
| **Connector Part Number** | | SFV22R-1STE1HLF | | | |
| **Mate Connector Part Number** | | Flex Ribbon Cable 22-pin 0.5mm pitch | | | |
| **Pin Diagram** | | | | | |
| **P16** | | **P17 (MFO)** | | | |
| **Pin 1** | +3V3 | **Pin 1** | +3V3 | | |
| **Pin 2** | I2CA_SDA | **Pin 2** | I2CD_SDA | | |
| **Pin 3** | I2CA_SCL | **Pin 3** | I2CD_SCL | | |
| **Pin 4** | GND | **Pin 4** | GND | | |
| **Pin 5** | CAM0_MCLK_1V8 | **Pin 5** | N.C. | | |
| **Pin 6** | CAM0_PWDN_ 3V3 | **Pin 6** | Pull-Up (3V3) | | |
| **Pin 7** | GND | **Pin 7** | GND | | |
| **Pin 8** | CSI1_D1_P | **Pin 8** | CSI4_D3_P | | |
| **Pin 9** | CSI1_D1_N | **Pin 9** | CSI4_D3_N | | |
| **Pin 10** | GND | **Pin 10** | GND | | |
| **Pin 11** | CSI1_D0_P | **Pin 11** | CSI4_D2_P | | |
| **Pin 12** | CSI1_D0_N | **Pin 12** | CSI4_D2_N | | |
| **Pin 13** | GND | **Pin 13** | GND | | |
| **Pin 14** | CSI0_CLK_P | **Pin 14** | CSI4_CLK_P | | |
| **Pin 15** | CSI0_CLK_N | **Pin 15** | CSI4_CLK_N | | |
| **Pin 16** | GND | **Pin 16** | GND | | |
| **Pin 17** | CSI0_D1_P | **Pin 17** | CSI4_D1_P | | |
| **Pin 18** | CSI0_D1_N | **Pin 18** | CSI4_D1_N | | |
| **Pin 19** | GND | **Pin 19** | GND | | |
| **Pin 20** | CSI0_D0_P | **Pin 20** | CSI4_D0_P | | |
| **Pin 21** | CSI0_D0_N | **Pin 21** | CSI4_D0_N | | |
| **Pin 22** | GND | **Pin 22** | GND | | |

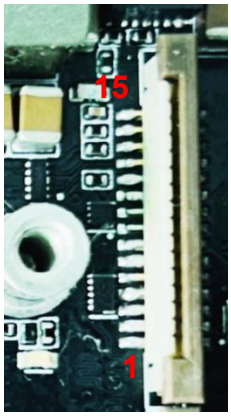


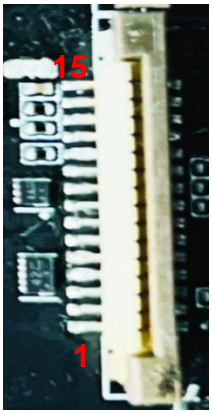

## 4.13 15-Pin MIPI-CSIx2 Connector

| Function | Description | P18 | P19 |
|---|---|---|---|
| **Location** | P18-P19 | | |
| **Type** | Board to Cable | | |
| **Connector Part Number** | FFC3A20-15-G | | |
| **Mate Connector Part Number** | Flex Ribbon Cable 15-pin 1.0mm pitch | | |

**Pin Diagram**

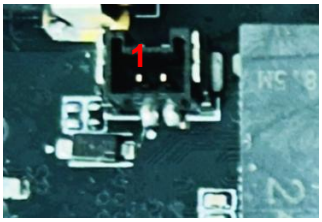
| P18 | | P19 (MFO) | |
|---|---|---|---|
| **Pin 1** | GND | **Pin 1** | GND |
| **Pin 2** | CSI2_D0_N | **Pin 2** | CSI3_D0_N |
| **Pin 3** | CSI2_D0_P | **Pin 3** | CSI3_D0_P |
| **Pin 4** | GND | **Pin 4** | GND |
| **Pin 5** | CSI2_D1_N | **Pin 5** | CSI3_D1_N |
| **Pin 6** | CSI2_D1_P | **Pin 6** | CSI3_D1_P |
| **Pin 7** | GND | **Pin 7** | GND |
| **Pin 8** | CSI2_CLK_N | **Pin 8** | CSI3_CLK_N |
| **Pin 9** | CSI2_CLK_P | **Pin 9** | CSI3_CLK_P |
| **Pin 10** | GND | **Pin 10** | GND |
| **Pin 11** | CAM1_PWDN_3V3 | **Pin 11** | Pull-Up (3V3) |
| **Pin 12** | CAM1_MCLK_1V8 | **Pin 12** | N.C. |
| **Pin 13** | I2CB_SCL | **Pin 13** | I2CC_SCL |
| **Pin 14** | I2CB_SDA | **Pin 14** | I2CC_SDA |
| **Pin 15** | +3V3 | **Pin 15** | +3V3 |



## 4.14 RTC Battery Connector

| Function | Description |
|---|---|
| **Location** | P13 |
| **Type** | Board to Cable |
| **Connector Part Number** | 5055680281 |
| **Mate Connector Part Number** | 5055650201 |
| **Pin Diagram** | |
| **Pin 1** | VCC_RTC |
| **Pin 2** | GND |

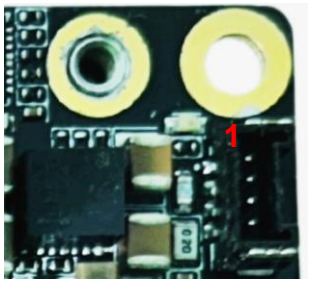



## 4.15 Power Input Jack Connector

| Function | Description |
|---|---|
| **Location** | P14 |
| **Type** | Jack |
| **Mate Connector Part Number** | 2.0mm ID, 6.50mm OD |
| **Pin Diagram** | Refer to power jack standard |

## 4.16 External Power Output

| Function | Description |
|---|---|
| **Location** | P15 |
| **Type** | Board to Cable |
| **Connector Part Number** | 5055680471 |
| **Mate Connector Part Number** | 5055650401 |
| **Pin Diagram** | |
| **Pin 1** | +12V0 |
| **Pin 2** | +12V0 |
| **Pin 3** | GND |
| **Pin 4** | GND |



# 5. TYPICAL INSTALLATION

1. Apply all safety precautions specified in section 1.6 ESD Warning.

2. Before using Novastation, ensure that none of the onboard ports (P1, P2, P3, P4, P5, P6, P7, P8, P9, P10, P11, P12, P13, P14, P15, P16, P17, P18, P19) are connected and that no external power source is applied.

3. If Wi-Fi / Bluetooth functionality is required in Novastation, install the Wi-Fi / Bluetooth module into the P10 connector using the F2 component specified in 8. MECHANICAL DETAILS.

4. If SSD or M.2 M-Key PCIe module functionality is required in NovaStation, install the SSD or M.2 M-Key PCIe module into the P12 connector using the F3 component specified in 8. MECHANICAL DETAILS.

5. Install the NVIDIA Jetson processor module into the P3 connector using the F1 component specified in 8. MECHANICAL DETAILS.

   Ensure that the manufacturer's instructions are followed to correctly install the mounting hardware, heatsink or heat spreader, as well as any other applicable installation requirements.

6. To install the operating system on the NVIDIA Jetson module, the following system requirements must be met:

   a. To place the NVIDIA Jetson module into recovery mode, connect the corresponding 0118060001 cable to the P11 connector and pull pin 6 to a low level (connect to GND).

   b. Connect a power supply within the operating voltage range to the P14 connector via the power jack.

   c. Establish a host PC connection to the P4 connector using a Data Micro-USB cable.

   Once these connections are completed, the system will be ready for operating system installation. The operating system installation steps can be accessed at www.pulsesystech.com/support

7. After the installation is complete, the system can be operated either via an HDMI cable connected to the P9 display interface or through the P2 Debug USB connection. Instructions for using the P2 Debug USB interface are available at www.pulsesystech.com/support

## 6. PACKAGE INCLUDE

| Descriptive | Part Number | Description |
|---|---|---|
| **F1** | 030101-RP5M2.5 | Jetson SOM Module Screw |
| **F2** | 030101-RP3M3 | M.2 E Key WiFi/Bluetooth Screw |
| **F3** | 030101-RP5M3 | M.2 M Key Screw |

Please refer to section 8. MECHANICAL DETAILS for the installation locations of the components.

## 7. CABLES (NOT INCLUDE)

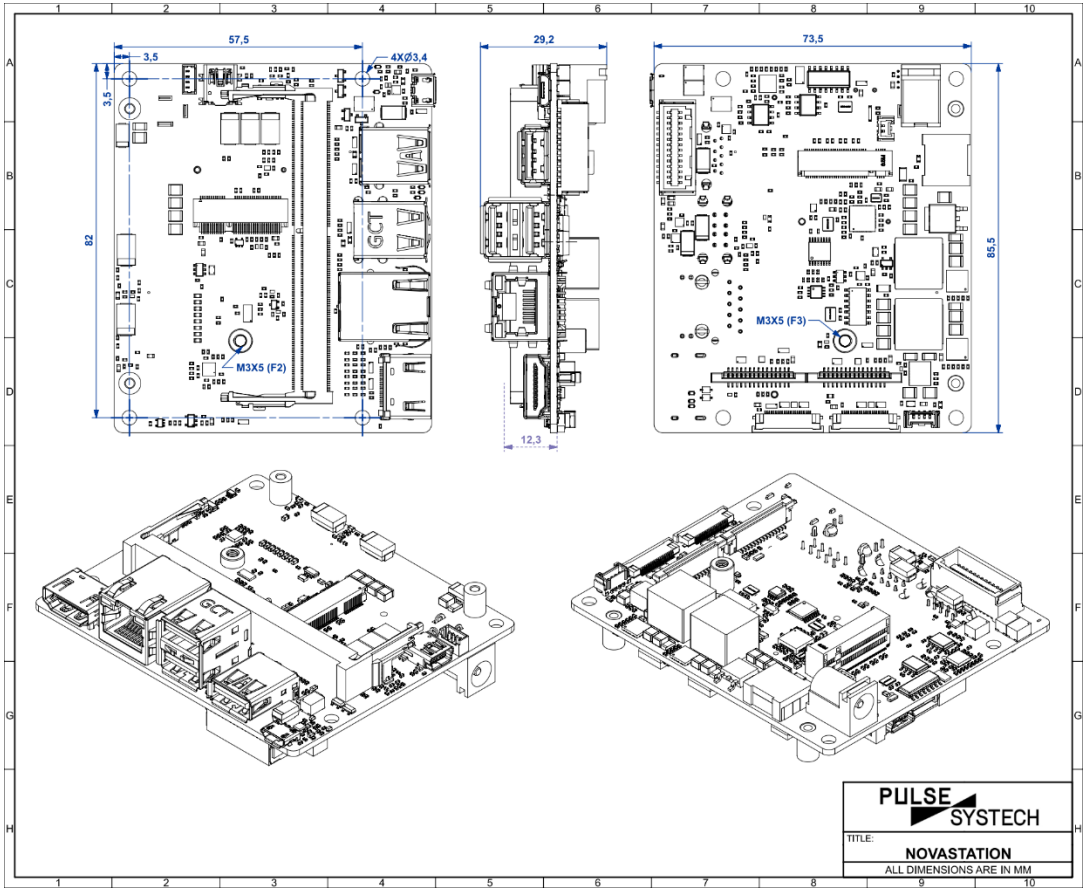
| Description | Part Number | QTY | Image |
|---|---|---|---|
| This is the cabled mating connector corresponding to the P11 I/O connector on the board. This connector is required to enable the Force Recovery connection. | 0118060001 | 1 |  |
| The P13 connector is the mating cabled connector for the RTC battery. | 0118060002 | 1 | - |
| The P15 connector is the mating connector for the external voltage output cable. | 0118060003 | 1 | - |

# 8. MECHANICAL DETAILS

Complete 3D CAD models of all Novastation assemblies are available at the following location:

https://www.pulsesystech.com/wp-content/uploads/2025/12/JTSN0001V1A_2025_12_25.zip

## 8.1 JTSN0001V1A – Novastation Stand Alone Drawings



## 8.2 JTSN0001V1A – Novastation with Jetson Orin Nano Module