



## Features

- NVIDIA® Jetson Orin NX™ and Nano™ Series module
- 1x HDMI 4Kp60 for Orin NX™, 1x HDMI 4Kp30 for Orin Nano™
- 2x GbE LAN
- 1x Micro USB (supports OS flash)
- 2x USB 3.2 Gen2 Type-A
- 2x USB 2.0 Type-A
- 2x I<sup>2</sup>C, 2x UART, 4x GPIOs, 1x CAN
- 1x M.2 2230 E-Key for WiFi/BT, 1x M.2 2280 M-Key for NVMe
- 2x 4 lane MIPI CSI-2
- Supports PSE board/OOB board/5G daughter board (optional)
- Wide power input range +12V to +24V DC
- Supports Ubuntu 22.04 OS

## Specifications

|                              |                                                                                                                                                                                                                                                                                      |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System Mainboard             | NVIDIA® Jetson Orin NX™ 16 GB/ 8 GB<br>NVIDIA® Jetson Orin Nano™ 8 GB/ 4GB<br>Module Compatibility with carrier board                                                                                                                                                                |
| CPU Type                     | Jetson Orin NX™ 16 GB:<br>8-core Arm® Cortex®-A78AE v8.2 64-bit CPU<br>2MB L2 + 4MB L3<br>Jetson Orin NX™ 8 GB:<br>6-core Arm® Cortex®-A78AE v8.2 64-bit CPU<br>1.5MB L2 + 4MB L3<br>Jetson Orin Nano™ 8 GB/ 4 GB:<br>6-core Arm® Cortex®-A78AE v8.2 64-bit CPU<br>1.5MB L2 + 4MB L3 |
| System Speed                 | EC3020-NANO-8/ EC3020-NANO-4: 1.7 GHz                                                                                                                                                                                                                                                |
| Memory                       | NVIDIA® Jetson Orin NX™: 16GB/ 8GB 128-bit LPDDR5 102.4 GB/s<br>NVIDIA® Jetson Orin Nano™: 8GB 128-bit LPDDR5 102 GB/s<br>NVIDIA® Jetson Orin Nano™: 4GB 64-bit LPDDR5 51 GB/s                                                                                                       |
| AI Inference Computing Power | NX 16GB delivery up to 100 TOPS<br>NX 8GB delivery up to 70 TOPS<br>Nano 8GB delivery up to 40 TOPS<br>Nano 4GB delivery up to 20 TOPS                                                                                                                                               |
| Front Panel External I/O     | 2x Gigabit Ethernet (10/100/1000), RJ45 with LED<br>1x HDMI Type-A<br>2x USB 3.2 Gen2 Type-A<br>1x USB 2.0 Type-C for Recovery<br>1x Power button<br>1x Recovery button                                                                                                              |
| Rear Panel External I/O      | 2x Antenna<br>1x 12-24V DC Jack input with Lock                                                                                                                                                                                                                                      |
| Expansion Slot               | 1x M.2 2230 E-Key for WiFi/BT,<br>1x 20-pin Expansion Terminal Block supports 2x I2C,<br>2x UART, 4x GPIOs, 1x CAN<br>PSE Board/OOB Board/5G Daughter Board (Optional)                                                                                                               |
| Storage                      | 1x M.2 2280 M-Key for NVMe                                                                                                                                                                                                                                                           |
| Power Requirement            | DC 12~24V                                                                                                                                                                                                                                                                            |
| Power Supply                 | 90W                                                                                                                                                                                                                                                                                  |
| Construction                 | Aluminum & steel                                                                                                                                                                                                                                                                     |
| Chassis Color                | Black & Red                                                                                                                                                                                                                                                                          |
| Mounting Type                | wall mount                                                                                                                                                                                                                                                                           |
| Dimensions                   | 126mm (W) x 96mm (D) x 73.9mm (H)                                                                                                                                                                                                                                                    |
| Weight                       | 1.25 kg                                                                                                                                                                                                                                                                              |
| Operating Temperature        | -15°C~55°C (-5°F~131°F)                                                                                                                                                                                                                                                              |
| Storage Temperature          | -40°C~85°C (-40°F~185°F)                                                                                                                                                                                                                                                             |

|                   |                                                        |
|-------------------|--------------------------------------------------------|
| Relative Humidity | 5%~95% (non-condensing)                                |
| Vibration         | Operating: 1 grms / 3~500Hz / random operation         |
| Shock             | Operating: 20 g / 11 ms<br>Non-operating: 40 g / 11 ms |
| Certification     | CE/FCC Class B                                         |
| Operating System  | Ubuntu 22.04<br>JetPack 6.2                            |

## Ordering Information

|               |                                                                                                                                                                                                                          |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EC3020-NX-16  | NVIDIA® Jetson Orin™ NX 16 GB, 1x HDMI, 2x GbE, 2x USB 3.2, 1x USB 2.0 Type C for recovery<br>1x M.2 2230 E Key for wifi, 12V to 24V DC Input, -15°C ~ +55°C operating temperature, with power adapter, with RTC battery |
| EC3020-NX-8   | NVIDIA® Jetson Orin™ NX 8 GB, 1x HDMI, 2x GbE, 2x USB 3.2, 1x USB 2.0 Type C for recovery<br>1x M.2 2230 E Key for wifi, 12V to 24V DC Input, -15°C ~ +55°C operating temperature, with power adapter, with RTC battery  |
| EC3020-NANO-8 | NVIDIA® Jetson Orin Nano™ 8GB, 1x HDMI, 2x GbE, 2x USB 3.2, 1x USB 2.0 Type C for recovery<br>1x M.2 2230 E Key for wifi, 12V to 24V DC Input, -15°C ~ +55°C operating temperature, with power adapter, with RTC battery |
| EC3020-NANO-4 | NVIDIA® Jetson Orin Nano™ 4GB, 1x HDMI, 2x GbE, 2x USB 3.2, 1x USB 2.0 Type C for recovery<br>1x M.2 2230 E Key for wifi, 12V to 24V DC Input, -15°C ~ +55°C operating temperature, with power adapter, with RTC battery |