**Overview**

AVerMedia’s Carrier board NX215 support powerful NVIDIA® Jetson Orin NX/Orin Nano/Xavier™ NX/TX2 NX/Nano modules. This efficient system-on-module (SoM) opens new worlds of embedded IoT applications with full analytic capabilities.

NX215 is designed for the industry applications with spatial concern and feature a rich assortment of I/O ports for rapid AI-based solution development and seamless deployment as required by demanding business applications.

AVerMedia supports businesses of all sizes and offers customizable BSP services, flexible MoQ, in addition to NVIDIA’s JetPack™ SDK.

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**Enterprise-Leading Features**

- NVIDIA® Jetson Orin NX/Orin Nano/Xavier™ NX/TX2 NX/Nano module
- 2x 2 Lane MIPI CSI-2 Camera Input
- 1x 4 Lane MIPI CSI-2 Camera Input (only for NX/TX2 NX/Nano)
- 2x GbE RJ-45, 20-pins expansion header
- 3x USB 3.0
- 2x 4Kp60 HDMI outputs (Nano/Orin NX/Orin Nano support 1x HDMI)
- 1x micro-SD card slot (only for NX/TX2 NX/Nano)
- 2x M.2. for WIFI and SSD (Nano doesn’t wifi)
- Operating temperature: 0°C ~ 70°C
- Dimension: W: 120mm x L: 90mm x H:26.5mm

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**The AVerMedia Advantage**

**Video Processing Technology**

AVerMedia understands that each business has a unique set of requirements that requires professional expertise and support. With AVerMedia, you are guaranteed to work with a proven global leader in video processing technology (200+ video capturing & streaming patents) with decades of experience processing multiple video signals for countless award-winning products.

A global leader that supports businesses of all sizes with comprehensive customization services (i.e., HW/PCB/BSP/etc.), flexible MoQ while ensuring a high-quality design and stable product. And for projects requiring additional security, we can provide customizable encryption hardware to support your privacy needs.

**Flexibility & Reliability**

By partnering with us, a dedicated NVIDIA® ELITE Partner, our support-driven team offers prompt after-sales support so that your company stays focused on what matters most, customer acquisition.

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The product images are for illustration purposes only and may not be an exact representation of the product.
NX215 Carrier board

NVIDIA® Jetson Xavier™ NX/ TX2 NX/ NANO module

Application

Powered by NVIDIA’s Jetson SoM, this power efficient SoM enables AI calculations and predictions on the edge of the network for applications such as driver safety and cost efficiency relationships. An expansive amount of interface options are available supporting AHD, IP, MIPI, etc., and is suitable for multiple scenarios requiring camera flexibility. And for various locations of installment the fanless design combined with optimized thermal chassis ensures full loading through a large temperature range.

Ecosystem

We provide a rich ecosystem of partners to support your growth with the ability to help search for new business partners for your unique project. Our verified partner ecosystem maintains the highest level of experience and professionalism, while offering hardware, software and strategic services. No matter the size or level of experience, if you are looking to accelerate your growth, we have the resources to make it happen.

Expandability

In addition to the default selection of interfaces, frame grabbers can be added for expanded functionality.

<table>
<thead>
<tr>
<th>Model</th>
<th>Host Interface</th>
<th>Video Interface</th>
<th>Max Input Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>CN312MW</td>
<td>M.2 M key 2280</td>
<td>1x HDMI, 1x SDI</td>
<td>2Kp60 in (SDI) 1920 x 1200p60 in (HDMI) 1080p out</td>
</tr>
<tr>
<td>CN312SW</td>
<td>M.2 M key 2280</td>
<td>2x SDI</td>
<td>2Kp60 in - 1080p out</td>
</tr>
</tbody>
</table>

Interface Diagram

2 x USB 3.0
1 x USB 3.0
1 x Micro-SD card slot
2 x HDMI
Power Button (Recovery)
2 x USB 3.0
2 x GBE RJ-45
DC IN ATX 4pin 12~24V
DC IN
1 x USB 2.0 Micro-B
MIPI 2 x 2 lane
MIPI 1x 4 lane
2 x I2C
1 x UART
4 x GPIOs
1 x CAN

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NX215 Carrier board
NVIDIA® Jetson Jetson Orin NX/Orin Nano/ Xavier™ NX/TX2 NX/Nano module

Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>NX215</th>
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<tbody>
<tr>
<td>Type</td>
<td>Carrier board</td>
</tr>
<tr>
<td>NVIDIA GPU SoC Module Compatibility</td>
<td>NVIDIA® Jetson Orin NX /Orin Nano module</td>
</tr>
</tbody>
</table>
| Networking | · 2x GbE RJ-45  
· 1xM.2. key E 2230 for wifi (NANO doesn’t support) |
| Display Output | 1x HDMI 3840 x 2160 at 60Hz for Orin NX at 30Hz for Orin Nano | 2x HDMI 2.0 (3840 x 2160 at 60Hz) | 1x HDMI 2.0 (3840 x 2160 at 60Hz) |
| Temperature | Operating temperature 0°C~70°C  
Storage temperature -40°C ~ 85°C  
Relative humidity 40°C @ 95%, Non-Condensing |
| MIPI Camera Inputs | · 2x 2 lane MIPI CSI-2, 15 pin FPC 1mm Pitch Connector  
· 1x 4 lane MIPI CSI-2, 36 pin FPC 0.5mm Pitch Connector (only for NX/TX2 NX/Nano) |
| USB | 1x USB 2.0 Micro-B for recovery  
3x USB 3.0 Type-A |
| Storage | 1x micro-SD card slot (only for NX/TX2 NX/Nano)  
1x M.2. key M 2280 for NVMe |
| Expansion Header | 20 pins: 2x I2C, 1x UART, 4x GPIOs, 1xCAN (EU terminal block)  
20 pins: 2x I2C, 1x UART, 4x GPIOs(EU terminal block) |
| Input Power | DCINJACK on board & ATX 4pin  
12V/5A, 12V~24V is recommended. |
| Power Cord | US/JP/EU/UK/TW/AU/CN |
| Fan Module | Heat sink with fan (optional) |
| Buttons | Power and Recovery |
| RTC Battery | Support RTC battery and Battery Life Monitoring by MCU |
| PCB/Electronics | 120mm (W) x 90mm (L) x 26.5mm (H) |
| Mechanical Info | Weight: 125 g |
| Certifications | CE, FCC, KC |

Optional Accessories

MIPI Camera

For 15 pin MIPI connector:
1. raspberry pi camera v2  
   Manufacturer: APPRO.PHO  
   - B-04: IMX179 (8M) MIPI, 1080P (30fps)  
   - C-04: IMX290 (2M) MIPI, 1080P (30fps)  
   - C-05: IMX290 (2M) +ISP (YUV), 1080P (30fps)

For 36 pin MIPI connector:
1. Manufacturer: APPRO.PHO  
   - B-03: IMX334 (4K) MIPI, 4K (30fps)  
   - A-06: IMX334 (4K) V-by-One® HS x1, 4K (30fps)