NX215 Carrier board

NVIDIA® Jetson Xavier™ NX/ TX2 NX/ NANO Version B01 module

For Smart Retail, Smart Surveillance and Smart City Applications

Overview

AVerMedia's Carrier board NX215 support powerful NVIDIA® Jetson Xavier™ NX/TX2 NX/NANO Version B01 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.

Enterprise-Leading Features

- NVIDIA® Jetson Xavier™ NX/ TX2 NX /NANO module
- 2x 2 Lane MIPI CSI-2
- 1x 4 Lane MIPI CSI-2 MIPI Camera Input
- 2x GbE RJ-45, 20-pins expansion header
- 3x USB 3.0
- 2x 4Kp60 HDMI outputs
- 1x micro-SD card slot
- 2xM.2. for WIFI and SSD
- Operating temperature: 0°C ~ 70°C
- Dimension: W: 120mm x L: 90mm

The AVerMedia Advantage

Video Processing Technology

Flexibility & Reliability

Dedicated After-Sales Support

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.

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.

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

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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.
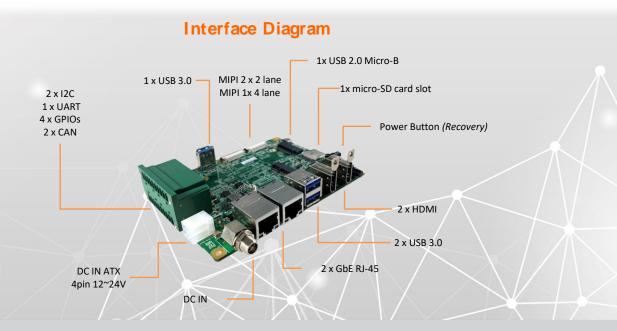
Ecosystem

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.

Model	Host Interface	Video Interface	Max Input Resolution
CN312M	M.2 M key 2280	1x HDMI, 1x SDI	2Kp60 in – 1080p out
CN312SW	M.2 M key 2280	2x SDI	2Kp60 in - 1080p out

Interface Diagram

1x USB 2.0 Micro-B

1 x USB 3.0

MIPI 2 x 2 lane
MIPI 1 x 4 lane

1x micro-SD card slot

2 x I2C
1 x UART
4 x GPIOs
2 x CAN

Power Button *(Recovery)*

2 x HDMI

2 x USB 3.0

DC IN ATX
4pin 12~24V

2 x GbE RJ-45

DC IN

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Specifications

Model	NX215
Type	Carrier board
NVIDIA GPU SoC Module Compatibility	It apply to NVIDIA® Jetson Xavier™ NX/ TX2 NX/ NANO Version B01 module
Networking	2x GbE RJ-45 1xM.2. key E 2230 for wifi (NANO don't support)
Display Output	2x HDMI 2.0 (3840 x 2160 at 60Hz) (NANO supports 1x HDMI 2.0)
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 (Compatible on NVIDIA® Jetson Xavier™ NX Developer Kit) • 1x 4 lane MIPI CSI-2, 36 pin FPC 0.5mm Pitch Connector
USB	1x USB 2.0 Micro-B for recovery 3x USB 3.0 Type-A
Storage	1x micro-SD card slot 1xM.2. key M 2280 for SSD NVMe
Expansion Header	20 pins: 2x I2C, 1x UART, 4x GPIOs, 2xCAN (EU terminal block) (NANO supports 1x CAN only)
Input Power	DCINJACK on board & ATX 4pin 12V/5A, 12V~24V is recommended.
Power Cord	US/JP/EU/UK/TW/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 Mechanical Info	120mm (W) x 90mm (L) Weight: 125 g
Certifications	CE, FCC, KC

Optional Accessories

MIPI Camera	For 15 pin MIPI connector:
	1. raspberry pi camera v2
	2. 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)

*All specifications are subject to change without prior notice.

RoHS 2 COMPLIANT

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