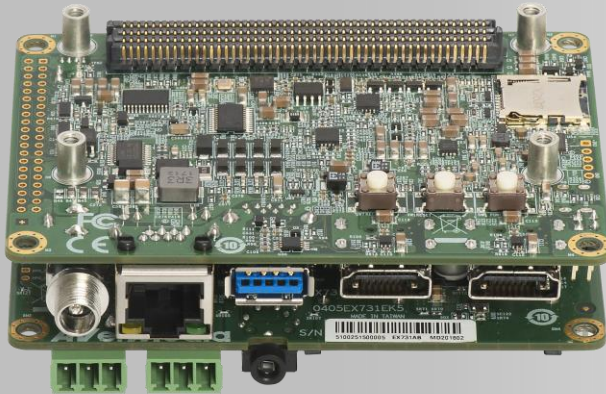


# EX731-AA/N1

Tegra X1/X2 Carrier Board with compact design and extension daughter board



## Features

- Operate with NVIDIA Tegra X1/X2 module
- 2 HDMI outputs
- 1 USB 3.0
- 1 RJ45 for Giga Ethernet
- Compact design with Pico-ITX (100 mm x 72mm)
- Extension daughter board has
  - 2 M.2 B+M
  - RS485
  - Audio Mic in
- TX2 support CAN Bus
- Suitable for applications of robotics, UAV, UGV, AOI, medical image, and other video-enabled equipment for automation, AI, and deep learning

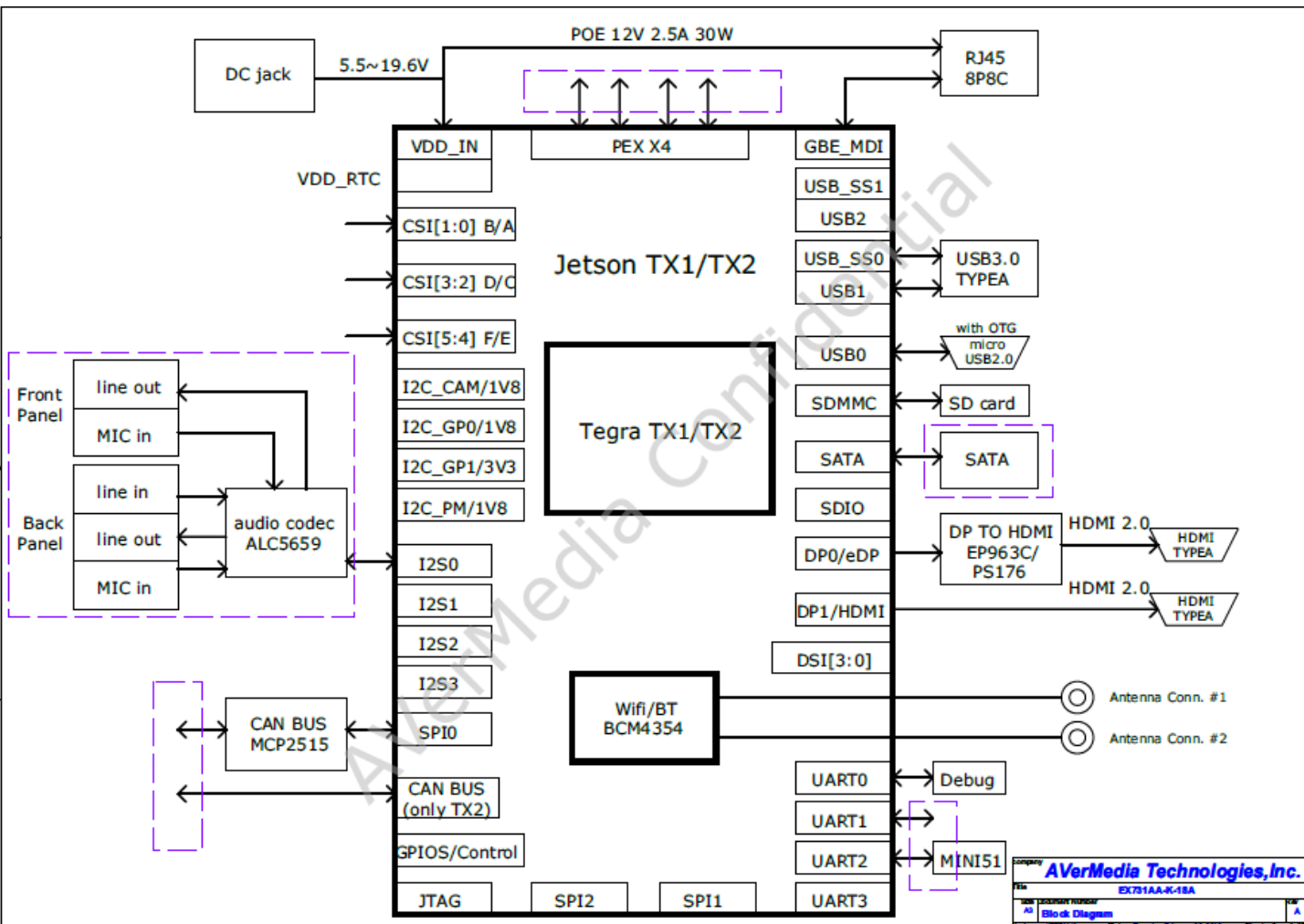
## Specifications

<b>Support Module</b>	NVIDIA Tegra X1/X2 Module
<b>Video Interface</b>	1x HDMI Out Type A, 4096 x 2160 p60
<b>Storage</b>	1x micro SD card
<b>LAN Port</b>	1x RJ-45 for Gigabyte Ethernet
<b>Buttons</b>	Power on/off, Reset, Recovery
<b>USB3.0</b>	1x USB3.0 Type A
<b>Other Interface</b>	1 x UART, 1 x SPI, 1 x I2S, 1x I2C, 7 GPIOs
<b>TX2 only</b>	2 <sup>nd</sup> HDMI Out Type A, 4096 x 2160 p60
<b>Power Supply</b>	+12VDC/5A
<b>Battery Power</b>	Support with power management
<b>Operating Temperature</b>	0°C ~ +55°C (standard version)
<b>Operating Humidity</b>	10% ~ 90% (RH)
<b>Storage Temperature</b>	-25°C ~ +105°C
<b>Dimension</b>	Mini-ITX, 100mm x 72mm x 42mm

## TX1 and TX2 Comparison

	Jetson TX1	Jetson TX2
<b>GPU</b>	256-core Maxwell	256-core Pascal
<b>CPU</b>	Quad Core ARM Cortex A57	Dual Core NVIDIA Denver 2.0 + Quad Core ARM Cortex A57
<b>Memory</b>	4GB 64-bit LPDDR4, 25.6 GB/s	8GB 128-bit LPDDR4, 58.4 GB/s
<b>Storage</b>	16 GB e.MMC	32GB e.MMC
<b>Wi-Fi</b>	802.11 b/g/n/ac 2x2 MIMO	802.11 b/g/n/ac 2x2 MIMO
<b>Bluetooth</b>	Bluetooth 4.1	Bluetooth 4.1
<b>Ethernet</b>	Gigabit Ethernet	Gigabit Ethernet
<b>HDMI 2.0 a/b</b>	1x	2x
<b>Video Encode</b>	Up to 2160p, 30 fps	Up to 2160p, 60 fps
<b>Video Decode</b>	Up to 2160p, 60 fps	Up to 2160p, 60 fps
<b>Mechanical</b>	50mm x 87mm, 400-pin board to board connector	50mm x 87mm, 400-pin board to board connector

## Block Diagram



## Perspective View

