AVerAI EA713-AAMN Box PC

EA713-AAMN-1PC0 Box PC supports 2x M.2 and 4x mPCIe slots alternatively
It equips NVIDIA® Jetson™ AGX Xavier™ 16GB with passive cooling system without Wi-Fi/BT

Description

AVerMedia EA713-AAMN-1PC0 Box PC equips NVIDIA® Jetson AGX Xavier™ 16GB which aims it at AI centric use cases for edge computing such as robotics and industrial automation within dimension W:196mm x L:232mm x H:60mm (7.72" x 9.13" x 2.36", with mounting ears W:144.8mm, 8.9").

EA713-AAMN-1PC0 Box PC provides 2x M.2 Key M 2280 and 4x mPCIe slots alternatively for Xavier to receive various video inputs by using AVerMedia's capture cards.

These 2x M.2 Key M 2280 and 4x mPCIe slots share PCIe Gen2 x4 lanes, so EA713-AAMN-1PC0 Box PC can provide three different combinations for developers to install video capture cards alternatively, such as 2x M.2 Key M 2280 slots, 4x mPCIe slots, and 2x mPCIe slots with 1x M.2 Key M 2280 slot.

By using AVerMedia's extended video capture cards, Xavier is able to receive HDMI, VGA, SDI, composite video inputs, and even dual 4Kp30 HDMI video inputs for different application scenarios.

EA713-AAMN-1PC0 Box PC provides 2x GbE, and 2x USB 3.0 for Xavier to connect various IP cameras and USB 3.0 cameras. General purpose I/O are ready for developers to use such as 1x 4Kp60 HDMI output, 1x USB 2.0 Micro-B for BSP installation only, 1x micro SD card slot, 1x Mic-in, and 1x Speaker-out, 1x CAN bus, 1x RS-485. It also provides 40 pins of GPIO expansion: 1x UART, 2x I2C, 1x CAN, and 5x GPIO for Xavier to communicate with the external devices.

This highly integrated edge computer is a well prepared application ready system for developers to overcome the challenges timely and easily.

Features

- Fully support NVIDIA® Jetson AGX Xavier™ 16GB
- 2x M.2 Key M 2280 or 4x mPCIe alternatively
- 1x M.2 Key E 2230 for Wi-Fi module
- 1x M.2 Key M 2280 for NVMe
- 2x GbE, 2x USB 3.0, 1x 4Kp60 HDMI output
- 1x USB 2.0 Micro-B for BSP installation only , 1x micro SD card slot
- 1x CAN bus, 1x RS-485, 1x Mic-in, 1x Speaker-out
- 40 pins: 1x UART, 2x I2C, 1 x CAN (W/O transceiver), and 5x GPIO
- AVerCooler WaveFin for No-Air-Flow environment
- Operating temperature: -20°C~65°C (MODE_30W_ALL, No-Air-Flow)
- Chassis dimension: W:196mm x L:232mm x H:60mm (7.72" x 9.13" x 2.36", with mounting ears W:144.8mm, 8.9")

Embedded Vision Solutions for NVIDIA Jetson

AVerMedia offers 5 categories of Embedded Vision Solutions for deep learning application on the edge devices, with the support of battery power and HDMI/VGA/3G-SDI/Composite video sources and the direct technical support for developers.

- Standard and customized TK1 modules and carrier boards
- Standard and customized TX1/TX2/TX2i/AGX Xavier/Nano carrier boards
- Standard and customized TK1 single boards
- Standard and customized TK1 and TX1/TX2/TX2i/AGX Xavier/Nano application-ready systems
- Software design service of Linux BSP, driver, OpenCV, VisionWorks, and cuDNN.

Why AVerMedia

- Innovative, patented passive cooling thermal designs for No-Air-Flow environment: AVerCooler, WaveFin, and Surfax.
- Full customization ability with our in-house HW and SW development teams.
- Timely support from NVIDIA® as we are a NVIDIA® Jetson Preferred Partner.
- Stable supply as we are a financially sound company.

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Specifications

Type	Box PC with AVerCooler WavieFin passive cooling system
NVIDIA GPU SoC Module Compatibility	NVIDIA® Jetson AGX Xavier™ 16GB
Networking	2x GbE (RJ-45)
Display Output	1x HDMI type A, maximum resolution: 3840x2160 at 60Hz
Temperature	Operating Temperature -20°C~65°C (MODE_30W_ALL, No-Air-Flow) Storage Temperature -40°C ~ 85°C Relative Humidity 40 °C @ 95%, Non-Condensing
USB	1x USB 2.0 Micro-B for BSP installation only 2x USB 3.0 Type-A (USB3.2 Gen1 x1)
Storage	32GB eMMC 5.1
RS-485	1x RS-485
CAN bus	1x CAN bus with transceiver
GPIO Expansion	40 pins: 1x UART, 2x I2C, 1x CAN (W/O transceiver), 5x GPIO
User Expansion	1x M.2 Key E 2230 for Wi-Fi module (PCIe Gen4x 1) 1x M.2 Key M 2280 for NVMe (PCIe Gen4x 4) 2x M.2 Key M 2280 (PCIe Gen2 x2) or 4x mPCIe Gen2 x1
Input Power	12V/5A
Buttons	Power and Recovery (Each button has a RGB tri-color LED)
RTC Battery	Support RTC battery and Battery Life Monitoring by MCU
Chassis Dimension/ Weight	W:196mm x L:232mm x H:60mm 7.72" x 9.13" x 2.36", with mounting ears W:144.8mm, 8.9" Weight: 2.5Kg
Certifications	CE, FCC

Compatible Cards

Model Name	CM311-H	C353	C353W	C351	C351W	CN311-H	CN312SW
Host Interface	PCIe Gen2 x1	PCIe Gen1 x1		PCIe Gen1 x1		PCIe Gen2 x2	PCIe Gen2 x2
Max Input Resolution	1920x1080 60fps	1920x1080 60fps		NTSC/PAL		4096x2160 30fps	2048x1080 60fps
Max Record Resolution	1920x1080 60fps	1920x1080 30fps		NTSC/PAL		4096x2160 30fps	1920x1080 60fps
Channel No.	1	1		4		1	2
H/W Encode		●					
Audio Interface	HDMI embedded	HDMI embedded		RL (RCA)		HDMI embedded	SDI embedded
Video Interface — SDI							●
Video Interface — HDMI	●	●				●	
Video Interface — DVI		●					
Video Interface — VGA		●					
Video Interface — Composite				●			
Color Depth/Precision	8 bit	8 bit				8 / 10 bit	8 bit
Color Format	IYU2, YUY2, YUYV, UYVY RGB565, RGB555, RGB24	YUY2,YV12 RGB24		YUY2		I420, NV12, YV12, IYU2, YUY2, YUYV, UYVY, AYUV, RGB565, RGB555, RGB24, RGB32, ARGB32, XRGB, V210,Y210, V410, Y410	I420, NV12, YV12, IYU2, YUY2, YUYV,UYVY, RGB24
Operating Temperature	0°C~50°C	0°C~55°C	-40°C~85°C	0°C~55°C	-40°C~85°C	0°C~40°C	-20°C~70°C
Dimensions (LxW) mm	50.95x30	50.95x30		50.95x30		22x80	22x80

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Order Information

Standard Product	Product Name	M.2/mPCIe Video Input	NVIDIA Jetson SoM	Cooling System	Wireless
	EA713-AAMN-1AC0	2x M.2 or 4x mPCIe	Xavier 16GB	Active Cooling	N/A
	EX713-AAMN-2AC0	2x M.2 or 4x mPCIe	Xavier 8GB	Active Cooling	N/A
●	EA713-AAMN-1PC0	2x M.2 or 4x mPCIe	Xavier 16GB	Passive Cooling	N/A
	EX713-AAMN-2PC0	2x M.2 or 4x mPCIe	Xavier 8GB	Passive Cooling	N/A
	EA713-AAMN-1ACW	2x M.2 or 4x mPCIe	Xavier 16GB	Active Cooling	Wi-Fi/BT
	EX713-AAMN-2ACW	2x M.2 or 4x mPCIe	Xavier 8GB	Active Cooling	Wi-Fi/BT
	EA713-AAMN-1PCW	2x M.2 or 4x mPCIe	Xavier 16GB	Passive Cooling	Wi-Fi/BT
	EX713-AAMN-2PCW	2x M.2 or 4x mPCIe	Xavier 8GB	Passive Cooling	Wi-Fi/BT

* All specifications are subject to change without prior notice.

RoHS 2 COMPLIANT

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