



LAND



SEA



AIR

AV710-V2

AGX XAVIER RUGGED COMPUTER



- NVIDIA® Jetson AGX Xavier™ with 512-Core Volta GPU with 64 Tensor cores
- Multi Video Format Frame Grabber Support
- SDI/HD/3G-SDI Input by Mini PCIe or M.2
- PAL/NTSC Input By Mini PCIe or M.2
- 1x CAN Bus, 1x RS485 , 2x USB, 2x LAN
- 1 x NVMe (PCIe Gen4x 4) By Option
- MIL-461 18V~36V DC-DC
- MIL-810 Vibration & Shock Resistance
- Extended Temperature Support -40°C to +65°C



Features

- **AI Interface Solution, NVIDIA Jetson AGX Xavier Module**

AV710-X2-Xavier is 7STARLAKE ruggedized AI Edge platform specifically designed for NVIDIA® JETSON AGX Xavier module. Utilizing 7STARLAKE' Open, Modular, Scalable Architecture. In addition to AGX Xavier module, AV710-X2-Xavier provides one M.2 NVMe slot for fast storage access. Combining stunning inference performance, powerful CPU and expansion capability, it is the perfect ruggedized platform for versatile edge AI applications.

AV710-X2-Xavier ruggedized AI inference platforms designed for advanced inference acceleration applications such as voice, video, image and recommendation services. It supports NVIDIA® Jetson AGX Xavier GPU, featuring 11 TFLOPS in FP16 and 22 TOPs in INT8 for real-time inference based on trained neural network model.

The Tech Specs



JETSON AGX XAVIER	
GPU	512-core Volta GPU with Tensor Cores
CPU	8-core ARM v8.2 64-bit CPU, 8MB L2 + 4MB L3
Memory	32GB 256-Bit LPDDR4x 137GB/s
Storage	32GB eMMC 5.1
DL Accelerator	[2x] NVDLA Engines
Vision Accelerator	7-way VLIW Vision Processor
Encoder/Decoder	[2x] 4Kp60 HEVC/[2x] 4Kp60 12-Bit Support
Size	105 mm x 105 mm x 65 mm
Deployment	Module [Jetson AGX Xavier]



Digital HD-SDI video input

1CH, Mini PCIe HW encode video capture card



Analogic PAL video input

4CH, Mini PCIe Video Capture Card



Analogic PAL video output

1CH, Scan Converter Board

AV710-X2-Xavier offers an extension to Frame grabbers which is extremely vital in applications related to agile reconnaissance, e.g., target acquisition, smart surveillance, and security. For instance, when a potential breach of abnormal signal is detected, a frame grabber captures an image or a sequence of images in digital form, and then transmits the data to user and command control center. By adding a slim frame grabber card, **AV710-X2-Xavier** can collect useful images and help our clients to react promptly on the ever-changing world.

Specifications

System

Processor	8-core ARM v8.2 64-bit CPU, 8MB L2 + 4MB L3.
Memory type	32GB 256-Bit LPDDR4x 137GB/s
Chipset	AGX XAVIER

GPU

NVIDIA	JETSON AGX XAVIER
CUDA Cores Memory	512-core Volta GPU with Tensor Cores 32GB 256-Bit LPDDR4x 137GB/s
Storage	32GB Emmc x 1

Graphics Output

1x DVI	DVI
Resolution	Up to 1920x1200@60Hz 32bpp

Storage

HDD/SSD	1x M.2 2280 M key NVMe socket (PCIe Gen3 x4) for NVMe SSD installation 1 x 2.5" SSD
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I/O

Power Button	Water Resistive Power Button with LED Backlight
Ethernet (X1, X2)	2 x LAN, total 4 x LAN

USB (X3)	2 x USB3.0
DVI (X4)	1 x DVI
COM (X5)	1 x RS485
Audio (X6)	1 x 3.5mm Audio Jacks (1 x MIC, 1 x Line-Out)
CAN (X7)	1 x CAN
DC-IN (X8)	1 x DVI
BNC (X9)	1x HD-SDI

Power Requirement

Power Input	DC-DC 18 to 36V (300W max) Mil-STD 461
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Applications, Operating System

Applications	Commercial and Military Platforms Requiring Compliance to MIL-STD-810 Process Control, where Harsh Temperature, Shock, Vibration, Altitude, Dust and EMI Conditions.
Operating System	Linux Ubuntu18.04

Physical

Dimension (W x D x H)	230 x 83 x 280 (mm)
Weight	TBC
Chassis	Aluminum Alloy, Corrosion Resistant
Finish	Anodic aluminum oxide
Cooling	Natural Passive Convection/Conduction. No Moving Parts
Ingress Protection	IP65

Environmental

MIL-STD-810G Test

Low Temperature	Method 502.4 Procedure 2	-20°C, 4 hours, change rate: $\leq 20^{\circ}\text{C}$.
High Temperature	Method 501.4 Procedure 2	+55°C, 4 hours, change rate: $\leq 20^{\circ}\text{C}$.
Humidity	Method 507.4	85%-95%RH without condensation, 24 hours/ cycle, conduct 10 cycle.
Vibration	Method 514.5	5-500Hz, Vertical 2.20Grms, 40mins x 3axis.
Shock	Method 516.5	20 Grms, 11ms, 3 axes.

Non-Operating Tests

Low Storage	Temperature	Method 502.4	-33°C, 4 hours, change rate: $\leq 20^{\circ}\text{C}$.
High Storage	Temperature	Method 501.4 Procedure 1	+71°C, 4 hours, change rate: $\leq 20^{\circ}\text{C}$.
Vibration		Method 514.5	5-500Hz, Vertical 2.20Grms, 40mins x 3axis.
Shock		Method 516.5	20 Grms, 11ms, 3 axes.
EMC compliance		MIL-STD-461E :	
		CE102 basic curve, 10kHz - 30 MHz	
		RE102-4, (1.5 MHz) -30 MHz - 5 GHz	
		RS103, 1.5 MHz - 3 GHz, 50 V/m equal for all frequencies	
		RS103, 3 GHz - 5 GHz, 50 V/m equal for all frequencies	
		EN 61000-4-2: Air discharge: 8 kV, Contact discharge: 6kV	
		EN 61000-4-4: Signal and DC-Net: 1 kV	
		EN 61000-4-5: Leads vs. ground potential 1kV, Signal und DC-Net: 0.5 kV	
		EN 61000-4-2: Air discharge: 8 kV, Contact discharge: 6kV	
		EN 61000-4-4: Signal and DC-Net: 1 kV	
		EN 61000-4-5: Leads vs. ground potential 1kV, Signal und DC-Net: 0.5 kV	
		EN 61000-4-2: Air discharge: 8 kV, Contact discharge: 6kV	

EN 61000-4-4: Signal and DC-Net: 1 kV

EN 61000-4-5: Leads vs. ground potential 1kV, Signal und DC-Net: 0.5 kV EN 55022, class A

EN 61000-4-3: 10V/m

Operating Temperature	-40 to 65°C (Ambient with air flow)
Storage Temperature	-40 to 85°C

Appearance & Dimension

