AIR6N0-C-MB NX I/O

YUAN

Card Size AI Edge with Multi AIoT Expansion

Features

· Powered by NVIDIA® Jetson Orin™ NX Super up to 157 / 117 TOPS
· Business Card Size
· 3×M.2, 8×MIPI CSI-2 Lanes and RS232 / RS485 / GPIO
· 2×USB3.2 Gen2
· 1×Mini DisplayPort

Specifications

System				
SOM	NVIDIA Jetson Orin™ NX 16GB Super	NVIDIA Jetson Orin™ NX 8GB Super	NVIDIA Jetson Orin™ Nano 8GB Super	NVIDIA Jetson Orin™ Nano 4GB Super
CPU	8-Core Arm® Cortex®-A78AE v8.2 64-Bit CPU 2MB L2 + 4MB L3	6-Core Arm® Cortex®-A78AE v8.2 64-Bit CPU 1.5MB L2 + 4MB L3	6-Core Arm® Cortex®-A78AE v8.2 64-Bit CPU 1.5MB L2 + 4MB L3	
GPU	1024-Core NVIDIA Ampere Architecture GPU with 32 Tensor Cores		1024-core NVIDIA Ampere Architecture GPU with 32 Tensor Cores	512-core NVIDIA Ampere Architecture GPU with 16 Tensor Cores
AI Performance	157 TOPS	117 TOPS	67 TOPS	34 TOPS
System Memory	16GB 128-bit LPDDR5 102.4GB/s	8GB 128-bit LPDDR5 102.4GB/s	8GB 128-bit LPDDR5 102 GB/s	4GB 64-bit LPDDR5 51 GB/s
Interface				
Storage	Supports External NVMe 1×Micro SD Card Slot			
Display Interface	1×Mini DP1.4			
Ethernet	1×RJ45 for 10/100/1000Mbps Ethernet (DHCP Client)			
Expansion Slot	1×M.2 2280 M Key PCIe Gen4×4 Slot 1×M.2 2230 M Key PCIe Gen4×2 Slot (Nano: Gen3×2) 1×M.2 2230 E Key PCIe Gen4×1 Slot (Nano: Gen3×1)			
USB	1×USB3.2 Gen2 (Type-C) 1×USB3.2 Gen1 (Type-A)			
MIPI	8 MIPI CSI-2 Lanes (D-PHY 2.1, Support MIPI Camera, Capture Card)			
Peripheral Communication	10 Pin Header 　1×USB2.0 　4×GPIO 　1×I2C 6 Pin Wafer 　1×UART (*) 4 Pin Header 　5V / 3A 8 Pin Phoenix Connector (CON2) 1×GPIO 2×I2C 8 Pin Phoenix Connector (CON3) 1×RS232(*) 1×RS485 1×GPIO 2 Pin Header (CON4) 1×GPIO 2 Pin Header (CON5) 1×GPIO * Please select either RS232 of 8 Pin Phoenix Connector or UART of 6 Pin Wafer to use			
Misc. Features	Firmware Upgradable			

Development Environment	
JetPack	6.2 or Higher

Environment	
Power Supply	DC input : 12~36V
Power Consumption	TBA
Operating Temperature	0~60°C with Airflow
Storage Temperature	-20~80°C
Certification	CE, FCC

SDK / Software

Video Feature				
SOM	NVIDIA Jetson Orin™ NX 16GB Super	NVIDIA Jetson Orin™ NX 8GB Super	NVIDIA Jetson Orin™ Nano 8GB Super	NVIDIA Jetson Orin™ Nano 4GB Super
Video Encode	AV1 (UHP) 1×4K60 | 3×4K30 | 6×1080p60 | 12×1080p30 H.265 (UHP) 1×4K60 | 3×4K30 | 6×1080p60 | 12×1080p30 H.264 (UHP) 1×4K60 | 2×4K30 | 5×1080p60 | 11×1080p30		1080p30 supported by 1-2 CPU cores	
Video Decode	AV1 (Main Profile) 1×8K30 | 2×4K60 | 4×4K30 | 10×1080p60 | 20×1080p30 H.265 (Main, Main10) 1×8K30 | 2×4K60 | 4×4K30 | 9×1080p60 | 18×1080p30 H.264 (Baseline, Main, High) 1×4K60 | 2×4K30 | 5×1080p60 | 11×1080p30 VP9 (Profile 0, Profile 2) 1×4K60 | 3×4K30 | 7×1080p60 | 15×1080p30		AV1 (Main Profile) 1×4K60 | 2×4K30 | 5×1080p60 | 10×1080p30 H.265 (Main, Main10) 1×4K60 | 2×4K30 | 5×1080p60 | 11×1080p30 H.264 (Baseline, Main, High) 1×4K30 | 3×1080p60 | 7×1080p30 VP9 (Profile 0, Profile 2) 1×4K60 | 2×4K30 | 5×1080p60 | 10×1080p30	

SDK	

QCAP	Capture
	  High Performance Renderer
	  Image Snapshot
	  De-interlace, Alpha Blending Engine
	  Auto Signal Detection
	  2D/3D Video, Audio and VANC Streams Capture
	
	Record
	  Encrypt / Sync / Clone / Recording
	  Time-Shifting / Rewind / Pre-Event / Recording
	  Multi-Streams (3D) Recording
	  Animation Transition Effect
	  Video Cropping, Scaling and Alpha Blending Engine
	
	Stream
	  2D/3D Universal Stream Client
	  2D/3D Multi-Streams Stream Server
	  RTSP, RTMP, HLS, SRT, TS, WebRTC. NDI-HX (*), Full NDI (*)
	  Animation Transition Effect
	  Video Cropping, Scaling and Alpha Blending Engine
	  *Separate License Required

QDEEP	AI SDK Integrated Multiple Algorithms and Deep-Learning Models in Various Fields of Applications
	  Face Recognition
	  Objects Detection
	  Objects Segment
	  Optical Character Recognition
	  License Plate Recognition
	  Customizable Video AI Functions Upon Request

Software (Optional)		
Xtreamer	Web Based User Interface	
	Encode / Decode AV1, H.26X	
	Color Format Adjust 444 / 422 / 420, 10Bit / 8Bit Select	
	Record MP4, TS	

	Stream / Network
	  RTSP, RTMP, HLS, SRT, TS, WebRTC. NDI-HX (*), Full NDI (*)
	  *Separate License Required	

Mechanical

· Dimension: 90mm × 55mm

· Weight: 165g (With SOM and Fan)

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