

M13_D11/11/00_F101

JAN

AIR6N0-C-MB NX 2×GIGE

Card Size AI Edge with Multi AIoT Expansion

Partner

Features

- Powered by NVIDIATM Jetson Orin[™] NX up to 100 / 70 TOPS
- Business Card Size
- 2×GIGE In, PSE Support
- 2×M.2, Gen 4×2 M Key / Gen 4×1 E Key
- 1×USB3.2 Gen2
- 1×Mini DisplayPort



CPU NVIDIA Jetson Orin [™] NX 8GB S-Core Arm® Cortex*-A738E v8.2 64-Bit CPU S-Core Arm® Cortex*-A738E v8.2 64-Bit CPU GPU 1308 L2 + 4MB L3 S-Core Arm® Cortex*-A738E v8.2 64-Bit CPU S-Core Arm® Cortex*-A738E v8.2 64-Bit CPU GPU 1308 L2 + 4MB L3 S-Core Arm® Cortex*-A738E v8.2 64-Bit CPU S-Core Arm® Cortex*-A738E v8.2 64-Bit CPU GPU 1302 Core NVIDIA Ampere Architecture GPU Witia 2 Tensor Cores Signed Cores AI Performance NVIDIA Jetson Orin [™] NX 8GB 100 TOPS System Memory NUDIA Jetson Orin [™] NX 8GB NVIDIA Jetson Orin [™] NX 16GB Interface Sorage NVIDIA Jetson Orin [™] NX 16GB Storage Supports External NVMe Staff or 10/100/1000Mbps Ethernet DHCP Clent TMAZ 2230 M Key PCle Gen4x4 S101 Secore XamPC Score Key PCle Gen4x4 S101 Storage 14MS 2230 M Key PCle Gen4x4 S101 Secore Key PCle Gen4x4 S101 Styles 2 Gen2 (Type-C) MIPI Secore Key PCle Gen4x4 S101 MIPI Score Key PCle Gen4x4 S101 Secore Key PCle Gen4x4 S101 Styles 2.0 Secore Key PCle Gen4x4 S101 Secore Key PCle Gen4x4 S101 Styles 2.0 Secore Key PCle Gen4x4 S101 Secore Key PCle Gen4x4 S101 Styles 2.1<			
CPU Score Arm® Cortes® -A78AE v8.2 64-Bit CPU Score Arm® Cortes® -A78AE v8.2 64-Bit CPU GPU 1024-Core NUDIDA Ampre Architecture GPU SUB L2 + 4MB L3 Al Performance 1024-Core NUDIDA Ampre Architecture GPU NUDIDA Jetson Orin® NX 16GB System Memory NUDIDA Jetson Orin® NX 8GB NUDIDA Jetson Orin® NX 16GB System Memory NUDIDA Jetson Orin® NX 8GB NUDIDA Jetson Orin® NX 16GB Store Arm® Core XRUIDA Ampre Architecture GPU NUDIDA Jetson Orin® NX 16GB Interface Store Arm® Core XRUIDA Ampre Architecture GPU NUDIDA Jetson Orin® NX 16GB Store Arm® Core XRUIDA Ampre Architecture GPU Store XRUIDA Ampre Architecture GPU Store XRUIDA Ampre Architecture GPU Store Arm® Core XRUIDA Ampre Architecture GPU Store XRUIDA Ampre Architecture GPU Store XRUIDA Ampre Architecture GPU Store Arm® Core XRUIDA Ampre Architecture GPU Store XRUIDA Ampre Architecture GPU Store XRUIDA Ampre Architecture GPU Store Arm® Core XRUIDA Ampre Architecture GPU Store XRUIDA Ampre Architecture GPU Store XRUIDA Ampre Architecture GPU Store Arm® Core XRUIDA Ampre Architecture GPU Store XRUIDA Ampre Architecture GPU Store XRUIDA Ampre Architecture GPU Store ArmStore Store Architecture GPU Store XRUIDA Ampre Architecture GPU Store XRUIDA Ampre Ampre Architecture GPU	System		
GPO with 32 Tensor Cores AI Performance NVIDIA Jetson Orin™ NX 8GB NVIDIA Jetson Orin™ NX 16GB System Memory NVIDIA Jetson Orin™ NX 8GB NVIDIA Jetson Orin™ NX 16GB System Memory NVIDIA Jetson Orin™ NX 16GB NVIDIA Jetson Orin™ NX 16GB System Memory NVIDIA Jetson Orin™ NX 16GB 16GB LPDDR5 Interface Tables of Card Slot 16GB LPDDR5 Display Interface 1xMicro SD Card Slot Tables of 10/100/1000Mbps Ethernet Display Interface 1xMilor 2230 Key PCle Gen4x2 Slot Tables of 10/100/1000Mbps Ethernet Display Interface 1xM.2 2230 Key PCle Gen4x2 Slot Tables of 10/100/1000Mbps Ethernet Display Interface 1xM.2 2230 Key PCle Gen4x2 Slot Tables of 10/100/1000Mbps Ethernet Display Interface 1xM.2 2230 Key PCle Gen4x2 Slot Tables of 10/100/1000Mbps Ethernet MIP 2x40 Kly PCle Gen4x2 Slot Tables of 10/100/1000Mbps Ethernet Tables of 10/100/1000Mbps Ethernet Jub PC Client 1xM.2 2230 Key PCle Gen4x2 Slot Tables of 10/100/1000Mbps Ethernet Tables of 10/100/1000Mbps Ethernet Jub PC Client 1xM.2 2230 Key PCle Gen4x2 Slot Tables of 10/100/1000Mbps Ethernet Tables of 10/100/1000Mbps Ethernet Jub PC Clie	CPU	6-Core Arm [®] Cortex [®] -A78AE v8.2 64-Bit CPU	8-Core Arm [®] Cortex [®] -A78AE v8.2 64-Bit CPU
Al Performance 70 TOPS 100 TOPS 100 TOPS 100 TOPS 50 T	GPU		
System Memory 8GB LPDDRS 16GB LPDDRS Interface Supports External NVMe 1xMicro SD Card Slot 1xMicro SD Card Slot Display Interface 1xMini DP1.4 Ethernet DHCP Client DHCP Client 1xM.2 2230 M Key PCle Gen4x2 Slot 1xM.2 2230 K Key PCle Gen4x2 Slot 1xM.2 2230 K Key PCle Gen4x1 Slot USB 1xUSB3.2 Gen2 (Type-C) MIPI 2x4MPIC SJ-2 Lanes (D-PHY 2.1, Support MIPI Camera, Capture Card) 10 Pin Header 1xUS82.0 1xUS2 GPIn Wafer 1xUSB GPIn Quart 2x9Peripheral Communication GPIn Wafer 1xUART(*) 2Pin Header 1xUART (*) 3Pin Header 1xUART (*) Piease select either 6 Pin Wafer UART or 3 Pin Header UART to use	AI Performance		
Storage Supports External NVMe 1xMicro SD Card Slot Display Interface 1xMicro SD Card Slot Ethernet 1xN435 for 10/100/1000Mbps Ethernet DHCP Client Expansion Slot 1xN.2 2230 M Key PCle Gen4x2 Slot 1xM.2 2230 E Key PCle Gen4x1 Slot USB 1xUSB3.2 Gen2 (Type-C) MIPI 2x4MIPI CSI-2 Lanes (D-PHY 2.1, Support MIPI Camera, Capture Card) 10 Pin Header 1xUSB2.0 4xGPIO 1x12C 10 Pin Header 1xUSB2.0 4xGPIO 1x12C 6 Pin Wafer 1xUART(*) 2pin Header 1xUART(*) 2 Pin Header 1xUART(*) 2pin Header 1xUART(*) 2 Pin Header 1xUART(*) 2pin Header 1xUART(*)	System Memory		
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IxRJ45 for 10/100/1000Mbps Ethernet DHCP Client Expansion Slot 1xM.2 2230 M Key PCle Gen4×2 Slot 1xM.2 2230 E Key PCle Gen4×1 Slot USB 1xUSB3.2 Gen2 (Type-C) MIPI 2x4MIPI CSI-2 Lanes (D-PHY 2.1, Support MIPI Camera, Capture Card) MiPi 0 Pin Header 1xUSB2.0 4xGPIO 1xUSB2.0 4xGPIO 1xUSR2 6 Pin Wafer 1xUART(*) 2 Pin Header 1xGPIO 3 Pin Header 1xURT (*) 3 Pin Header 1xURT (*) 3 Pin Header 1xURT (*) * Please select either 6 Pin Wafer UART or 3 Pin Header UART to use	Storage		
Ethernet DHCP Client Expansion Slot 1×M.2 2230 M Key PCle Gen4×2 Slot 1×M.2 2230 E Key PCle Gen4×1 Slot USB 1×USB3.2 Gen2 (Type-C) MIPI 2×4MIPI CSI-2 Lanes (D-PHY 2.1, Support MIPI Camera, Capture Card) OP Pripheral Communication 6 Pin Wafer 1×USB2.0 Arschlutz 6 Pin Wafer 1×UART(*) De Pin Header 1×UART (*) 2 Pin Header 1×UART (*) Press select either 6 Pin Wafer UART or 3 Pin Header UART to use	Display Interface	1×Mini DP1.4	
Expansion Slot 1×M.2 2230 E Key PCle Gen4×1 Slot USB 1×USB3.2 Gen2 (Type-C) MIPI 2×4MIPI CSI-2 Lanes (D-PHY 2.1, Support MIPI Camera, Capture Card) 10 Pin Header 1×USB2.0 4×GPIO 1×USC 6 Pin Wafer 1×UART(*) 2 Pin Header 1×GPIO 1×URRT(*) 3 Pin Header 2 Pin Header 1×GPIO 1×URRT(*) 2 Pin Header 2 Pin Header 1×GPIO 3 Pin Header 1×GPIO 2 Pin Header 1×GPIO	Ethernet		
MIPI 2x4MIPI CSI-2 Lanes (D-PHY 2.1, Support MIPI Camera, Capture Card) 10 Pin Header 1xUSB2.0 4xGPIO 1xI2C 6 Pin Wafer 1xUART(*) 2 Pin Header 1xGPIO 3 Pin Header 1xGPIO 3 Pin Header 1xUART (*) * Please select either 6 Pin Wafer UART or 3 Pin Header UART to use	Expansion Slot		
10 Pin Header 1×USB2.0 4×GPIO 1×I2C 6 Pin Wafer 1×UART(*) 2 Pin Header 1×GPIO 3 Pin Header 1×UART (*) * Please select either 6 Pin Wafer UART or 3 Pin Header UART to use	USB	1×USB3.2 Gen2 (Type-C)	
1×USB2.0 4×GPIO 1×12C 6 Pin Wafer 1×UART(*) 2 Pin Header 1×GPIO 3 Pin Header 1×UART (*) * Please select either 6 Pin Wafer UART or 3 Pin Header UART to use	MIPI	2×4MIPI CSI-2 Lanes (D-PHY 2.1, Support MIPI Camera, Capture Card)	
3 Pin Header 1×UART (*) * Please select either 6 Pin Wafer UART or 3 Pin Header UART to use	Peripheral Communication	1×USB2.0 4×GPIO 1×I2C 6 Pin Wafer 1×UART(*) 2 Pin Header	
Misc. Features Firmware Upgradable		3 Pin Header 1×UART (*)	
	Misc. Features	Firmware Upgradable	

Key points

Video Interfa Video Input

2×GIGE (PSE Support with Power Board)

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SDK/Software

SDK/Software		
Video Feature		
	AV1 (UHP) 1×4K60 3×4K30 6×1080p60 12×1080p30	
Video Encode	H.265 (UHP) 1×4K60 3×4K30 6×1080p60 12×1080p30	
	H.264 (UHP) 1×4K60 2×4K30 5×1080p60 11×1080p30 AV1 (Main Profile)	
Video Decode	H.265 (Main, Main10)	
	H.203 (Wall), Wall () 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	
SDK		
QCAP	Capture High Performance Renderer Image Snapshot Deinterlace, 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 (*), Dante AV-H (*) 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 (*) Dante AV-H (*) *Separate License Required	
SCP	Capture Auto Signal Detection Deinterlace, OSD, Color Adjustment Image Snapshot Animation Transform Effect for PGM Record AV1, H.26X MP4, TS Multi-Stream Recording Schedule Recording	

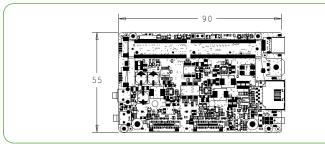
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Environment

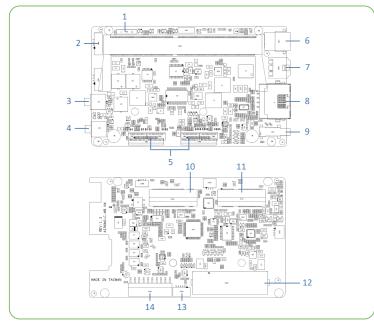
Development Environment		
OS	Ubuntu: 20.04	
Kernel	5.10.104-tegra or Higher	
BSP	Linux for Tegra(L4T) R35.3.1 or Higher	
SDK	JetPack 5.1.1 or Higher	
Environment		
Power Supply	DC input : 48V	
Power Consumption	TBA	
Operating Temperature	Standard Version: 0~60 ° C with Airflow	
Storage Temperature	-20~80 ° C	

Mechanical



IO Layout

Carrier Board



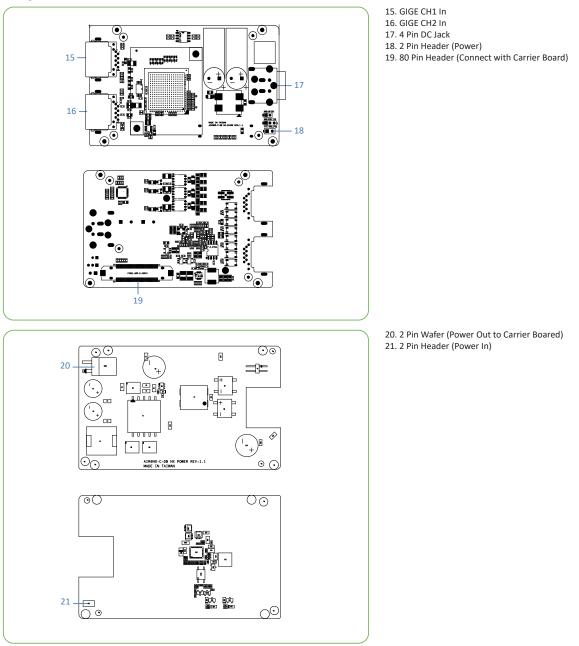
- Dimension of main Board: 90mm×55mm
- Weight: 220g (Including SOM, Fan and Daughter Board)

- 1. Battery
- 2. FAN
- 3. Recovery Power
- 4. 5. MIPI
- 6. Mini DisplayPort1.4
- 7. DC Pin Header (19V)
- 8. RJ45
- 9. USB3.2 Gen 2 Type-C
- 10. M.2 2230 M Key (PCle Gen4×2)
- 11. M.2 2230 E Key (PCIe Gen4×1)
- 12. 80 Pin Header (Connect with Daughter Board)
- 13. 6 Pin Wafer 14. 10 Pin Header

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• Daughter Board





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US

sales@assured-systems.com

Sales: +1 347 719 4508 Support: +1 347 719 4508

1309 Coffeen Ave Ste 1200 Sheridan WY 82801 USA

EMEA

sales@assured-systems.com

Sales: +44 (0)1785 879 050 Support: +44 (0)1785 879 050

Unit A5 Douglas Park Stone Business Park Stone ST15 0YJ United Kingdom

VAT Number: 120 9546 28 Business Registration Number: 07699660