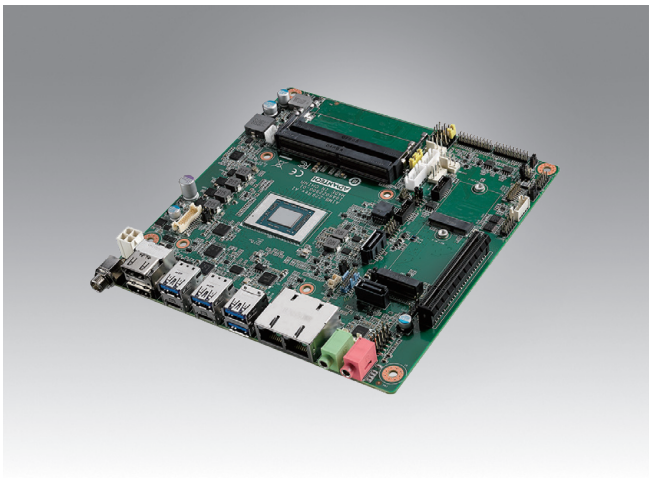
AIMB-229

AMD V-series mini-ITX with 2HDMI/2DP/ 8USB/6COM/2Gb/2M.2



Features

- Support AMD V2000 processor
- Two 260-pin SO-DIMM up to 64GB DDR4 3200 SDRAM
- Support multi display, Max up to 4 displays
- Supports 1 PCIe x8, 1 E-Key 2230 M.2 slot, 1 M-Key 2242/3043/2280 M.2 slot
- 6COM, 4 USB3.2 Gen2, 2 USB3.2 Gen1, 2 USB2.0, 2 SATA, 16bit GPIO
- Support SUSI, WISE-DeviceOn and Edge AI Suite

Software APIs: SMBus, H/W Monitor, Watchdog, GPIO, Brightness

Utilities: BIOS flash, Monitoring

Windows 10 IoT **WISE-DeviceOn** CE FCC RoHS

Specifications

Processor System	SOC (7nm)	V2748	V2718	V2516
	Max. Speed	4.15Ghz (8 Core 54W)	4.15Ghz (8 Core 25W)	3.95Ghz (6 Core 25W)
	L2 Cache	4Mb	4Mb	4Mb
	BIOS	AMI 128Mbit SPI		
Expansion Slot	M.2	1 M-Key (support 2242/3042/2280), 1 E-Key (support 2230)		
	PCIe	1 PCIe x8		
Memory	Technology	Dual Channel DDR4 3200MHz SDRAM		
	Max. Capacity	64 GB/ 32 GB per SO-DIMM		
	Socket	2 x 260-pin DDR4 SO-SIMM with ECC Support		
Graphics	Controller	AMD Integrated Vega GCN		
	eDP	1, resolution up to 5120x2880@60Hz Max (Optional)		
	Display Port	2, Supports DP++(via USB Type-C), resolution up to 4096 x 2160 @ 60Hz		
	HDMI	2, resolution up to 4096x2160@60Hz (HDMI2.0 supported by SKU)		
	Multi Display	HDMI/HDMI/DP/DP eDP/HDMI/DP/DP		
Ethernet	Interface	10/100/1000 Mbps		
	Controller	GbE LAN1: Realtek 8111H GbE LAN2: Realtek 8111H		
	Connector	RJ-45 x 2		
SATA	Max Data Transfer Rate	600 MB/s		
	Channel	2, SATA III		
Rear I/O	DP++ Type-C	2		
	Ethernet	2		
	HDMI	2		
	USB	4 x USB3.2 Gen2/2 x USB3.2 Gen1		
	Audio	2 (Line out + Mic/Line in)		
	DC jack	1 (2.5 mm)		
Internal Connector	eDP (Optional)	1		
	USB	2 x USB2.0		
	Serial	6, COM1: support RS-232 with 5V/12V/Ring COM2: support RS-232/422/485 supports 9 bit data/auto flow(select by Jumper) COM3: Colay Cctalk(5/12V; Jumper select) ; singnal mix with RS232 COM4: support 5V/12V selection(by jumper); Colay TTL (5V, TX, RX only) ; singnal mix with RS232 COM5: support RS-232/422/485 supports 9 bit data/auto flow(select by Jumper) COM6: RS-232		
	SATA	2		
	SATA PWR Connector	2		
	Intrusion Protection	1		
	GPIO	16 bit		
Watchdog Timer	Output	System reset		
	Interval	Programmable 1 ~ 255 sec/min		
Power	Power Type	12V DC input; 1 x External DC jack; 1 x Internal 4-pin (2x2) power connector; Supports AT/ATX mode		
	Typical Power Consumption	TBD		
Environment		Operating	Non-Operating	
	Temperature	0 ~ 60 °C (32 ~ 140 °F)	-40 ~ 85 °C (-40 ~ 185 °F)	
Physical Characteristics	Dimensions	170 mm x 170 mm (6.69" x 6.69")		

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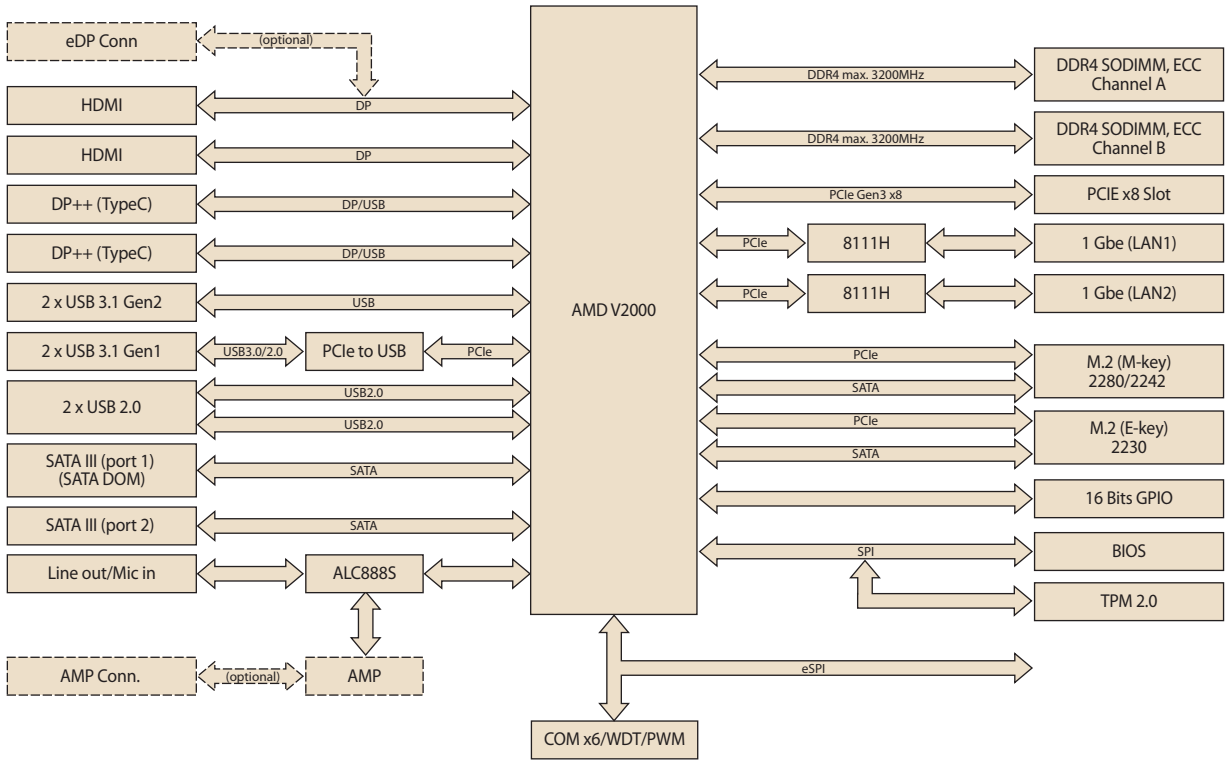
All product specifications are subject to change without notice.

Block Diagram



Ordering Information

P/N	Chipset	HDMI	eDP	DP 1.2	GbE LAN	COM	SATAIII	USB3.2 Gen2	USB3.2 Gen1	USB2.0	M.2	PCIex8	TPM	AMP
AIMB-229VG2-00A1E	V2748	2 (HDMI 2.0)	(1)	2	2	6	2	4	2	2	2	1	1	1
AIMB-229VG2-02A1E	V2718	2 (HDMI 1.4)	(1)	2	2	6	2	4	2	2	2	1	1	(1)
AIMB-229VG2-03A1E	V2516	2 (HDMI 1.4)	(1)	(2)	2	6	2	2	2	2	2	1	1	(1)

*() BOM options available on MP version.

Packing List

Part Number	Description	Quantity
1700003194-21	SATA HDD cable	1
1700018785-01	SATA power cable(1 port, 25cm)	1
1701200220-01	1 to 2 Serial port cable	1
1700022363-01	1 to 1 Serial port cable	1
1700023082-11	ATX cable 2*10P-4.2/1*3P-2.0 15cm	1
1960104751T001	IO Bracket	1
1910004710	M.2 POST	1
1930000207-01	M.2 Screw	2

I/O View

Optional Chassis

Part Number	Description
AIMB-B2000-00YE	AIMB-B2000 wallmount chassis w/o adaptor

Optional Accessories

Part Number	Description	Quantity
1960089783T001	CPU Cooler (CPU TDP 54W, V2748/V2546, H: 58.3mm)	1
1960089784T001	CPU Cooler (CPU TDP 25W, V2718/V2516, H: 45mm)	1

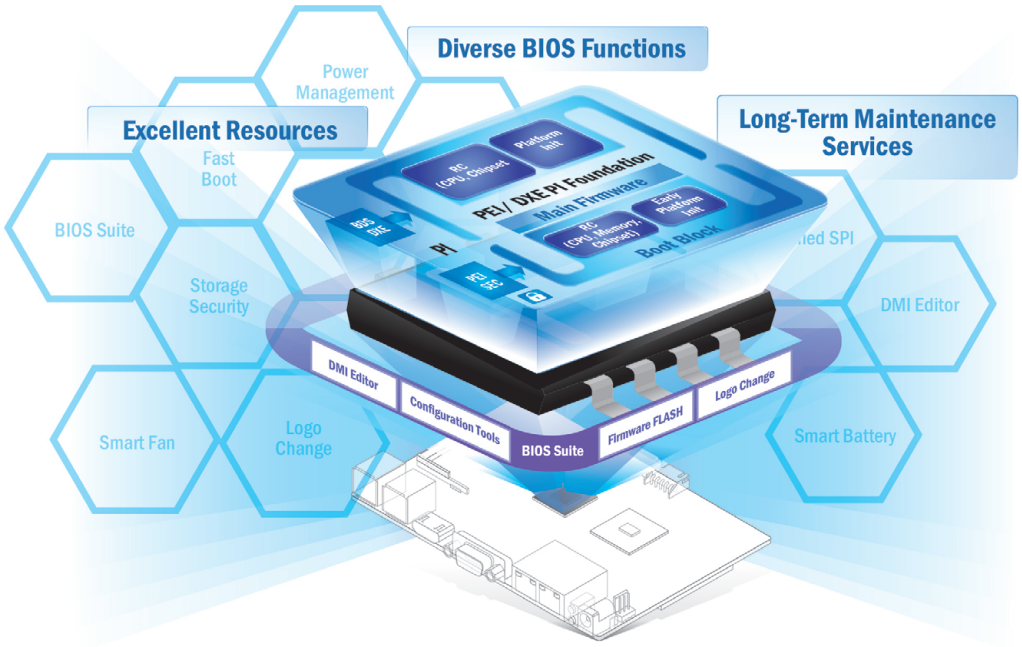
Embedded OS

OS	Part No.	968 P/N	Description

Reliable Embedded BIOS Solutions

Custom BIOS services with long-term support

Advantech's high-quality embedded BIOS solutions deliver rapid execution and feature expert BIOS team support. These solutions feature multi-functional designs that ensure security and enable power/boot management. Advantech further provides 10+ years of BIOS version management, internal management, and longevity support for both hardware and BIOS — enhancing application efficiency, diversifying functionality, and optimizing performance.



Embedded BIOS Solution Advantages

Sufficient Sources

- Strong partnership with BIOS vendors
- 50+ engineers with extensive industrial BIOS experience

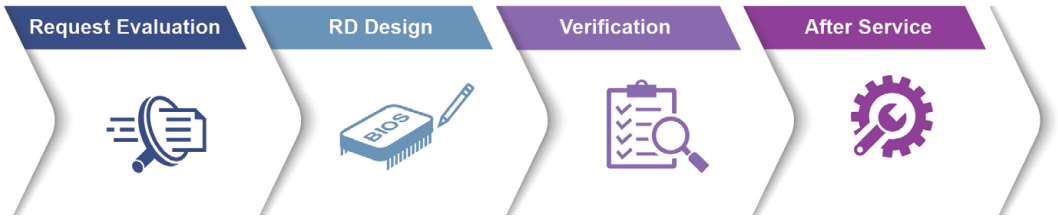
Diverse BIOS Functions

- Multi-layer security
- 3 second fast boot
- Power management
- BIOS suite utility

Long-Term Maintenance Services

- Platform longevity support
- 10-year BIOS version control
- BIOS remote backup

Value-Added Customization Process



WISE-DeviceOn

Massive IoT Device Management Utility

IoT deployment and management typically involves numerous disparate devices installed on multiple sites. These devices require effective monitoring, managing, and tracking. Advantech's easy-to-use WISE-DeviceOn interface enables users to remotely monitor device health, troubleshoot problems, and send software/firmware updates over-the-air (OTA). In sum, DeviceOn empowers quick real-time responsiveness to emerging problems.

Features

Comprehensive Management	Remote Access	Efficient Operations
• Devices status • Peripherals/firmware • Open for extension	• Real-time monitoring • Remote controls • Troubleshooting	• Zero-touch on-boarding • OTA updates • Batch control

Product Highlights

SOM-6883
High-performance 11th Gen Intel® COMe Type 6 Module

MIO-5375
Compact 11th Gen Intel® Outdoor Focused 3.5" SBC

EPC-B5587
10th Gen Intel® Xeon® based Edge server

EPC-R3220
Arm based IoT Edge Gateway

Edge AI Suite

AI development for diverse application at the Edge

Increasing demand for AI inference/analytic capabilities at the Edge make AI training models, software development environments, and hardware configuration key factors in successful solution deployment. Advantech's Edge AI Suite helps users build AI demo devices quickly and choose optimal hardware solutions easily.

5x Performance Boost	All-in-one Installation	One Click AI Experience	Plug-and-play Environment	Discover Cost-effective Hardware
• Integrated Intel® OpenVINO™ technology • Boost AI using Advantech hardware	• Build AI environment in under 5 minutes • Ready-to-use configuration	• User friendly configuration guidance • One-click Benchmark acquisition	• Easy access to 100+ AI inference extensions • Software development package available	• Diverse CPU/RAM options • Find hardware solutions for AI development

Embedded Linux Support and Design-in Services

Hardware Certified Ubuntu and Yocto with Eco Partner Services

Linux is the most popular embedded OS for transportation, outdoor services, factory automation, and mission critical applications. Its open source and kernel reliability features ease security updates, and make it particularly adaptable to new AI and Edge computing technology. Advantech has cooperated with Canonical and other software partners to provide hardware certified Ubuntu image and Yocto BSP as Linux offerings. The Advantech, Embedded Linux, and Android Alliance (ELAA) delivers local software services and consultation.

Features

Certified OS and BSP	Licensed Services	Numerous AI and Edge Resources	Local Partner Alliance
• Platform compatibility tests • Preloaded functional driver and software stacks	• License authorized Canonical delivers 10-years of bug fixes and security updates • In-house bundled service	• Containerized technology for service provision and deployment • AI resources from Caffe, TensorFlow, and mxnet	• Embedded Linux and Android Alliance (ELAA)