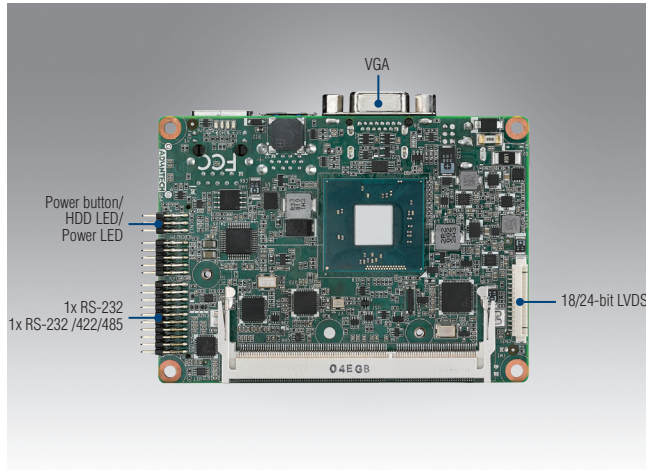


MIO-2263

Intel® Atom™ SoC E3825/ J1900, Pico-ITX SBC



WISE-PaaS/RMM  CE FCC

Specifications

Processor System	CPU	Intel Celeron J1900	Intel Atom E3825
	Frequency	2.0 GHz (Quad-Core)	1.33 GHz (Dual-Core)
	L2 Cache	2 MB	1 MB
	Max Turbo Frequency	2.42 GHz	-
	System Chipset	Intel Atom SoC processor integrated	-
	BIOS	AMI EFI 64 Mbit	-
Memory	Technology	DDR3L 1333 MHz for J1900	
	Max. Capacity	DDR3L 1066 MHz for E3825	
	Socket	8 GB	
Display	Chipset	1 x 204-pin SODIMM (Support 1.35V DDR3L)	
	Graphic Engine	Intel® Atom SoC integrated	
	DirectX®11, Open GL3.0/ Open CL 1.1, OGL ES 2.0		
	Encode: H264, MPEG2/4, VC1, WMV9		
	Decode: H264, MPEG2		
	LVDS	Supports single channel 24-bit LVDS	
	Resolution: 1440 x 900 at 60Hz		
Ethernet	VGA	Up to 2560 x 1600 at 60Hz	
	HDMI	Up to 1920 x 1080 at 60 Hz	
	Dual Display	Yes (VGA+LVDS or HDMI+LVDS)	
	Speed	10/100/1000 Mbps	
Audio	Controller	Intel i210	
	Connector	RJ45 on rear I/O	
Watchdog Timer	Chipset	Realtek ALC888S, High Definition Audio (HD), Line-in, Line-out	
Storage	mSATA	Output system reset, programmable counter from 1~255 minutes/ seconds	
	SATA	1 x half size mini PCIe slot	
Rear I/O	1, up to 3Gb/s (300MB/s)		
	Ethernet	1	
	VGA	1	
	USB	1 x USB 3.0 compatible with USB 2.0	
Internal I/O	1 x USB 2.0		
	DC Power Jack*	1	
	USB	2 x USB 2.0	
	Serial	1 x RS-232 from COM2 (ESD protection for RS-232: Air gap ±15kV, Contact ±8kV)	
	SMBus	1 x RS-232/422/485 from COM1 with auto-flow control	
	GPIO	1	
Expansion	Mini PCI Express	8-bit general purpose input/ output	
	MIOe	1 x Half-size	
Power	SMBus, 2 x USB2.0, LPC, 2 x PCIe x1, line out, DisplayPort/HDMI*, +5 Vsb/+12 Vsb power, Power On, Reset		
	Power Type	Single 12V DC power input (Supports DC power hot plug)	
	Power supply voltage		
	Total peripheral power supply output	Supports single 12V input, ±10%	
	Power Consumption (Typical)	5V @ 3A for CPU board and MIOe module totally, 12V @ 2A for MIOe module	
	Power Consumption (Max, test in HCT)	J1900: 0.86A @12V (10.59W)	
	Battery	E3825: 0.59A @ 12V (7.08W)	
Environment	Operation	J1900: 1.04A @12V (12.48W)	
	Non-Operation	E3825: 0.76A @ 12V (9.12W)	
Physical Characteristics	Power Management	ACPI	
	Dimensions (L x W)	Lithium 3V/ 210mAH	
	Weight	0 ~ 60° C with air flow 0.7m/s (32 ~ 140° F) (Operational humidity: 40° C @ 95% RH Non-Condensing)	
	Total Height	-40° C ~ 85° C and 60° C @ 95% RH non-condensing	
		100 x 72 mm (3.9" x 2.8")	
		0.46 kg (1.01 lb), weight of total package	
		33.63 mm	

* Support by request

Features

- Intel® Atom™ SoC E3825 and Celeron J1900
- DDR3L 1333, up to 8GB
- Dual independent display by 24-bit LVDS +VGA or 24-bit LVDS + HDMI
- Flexible design using integrated I/O: MIOe to approach vertical applications
- Rich I/O interface with 2 COM, 1 SATA, USB3.0, mini PCIe and mSATA
- Supports WISE-PaaS/RMM and Embedded Software APIs

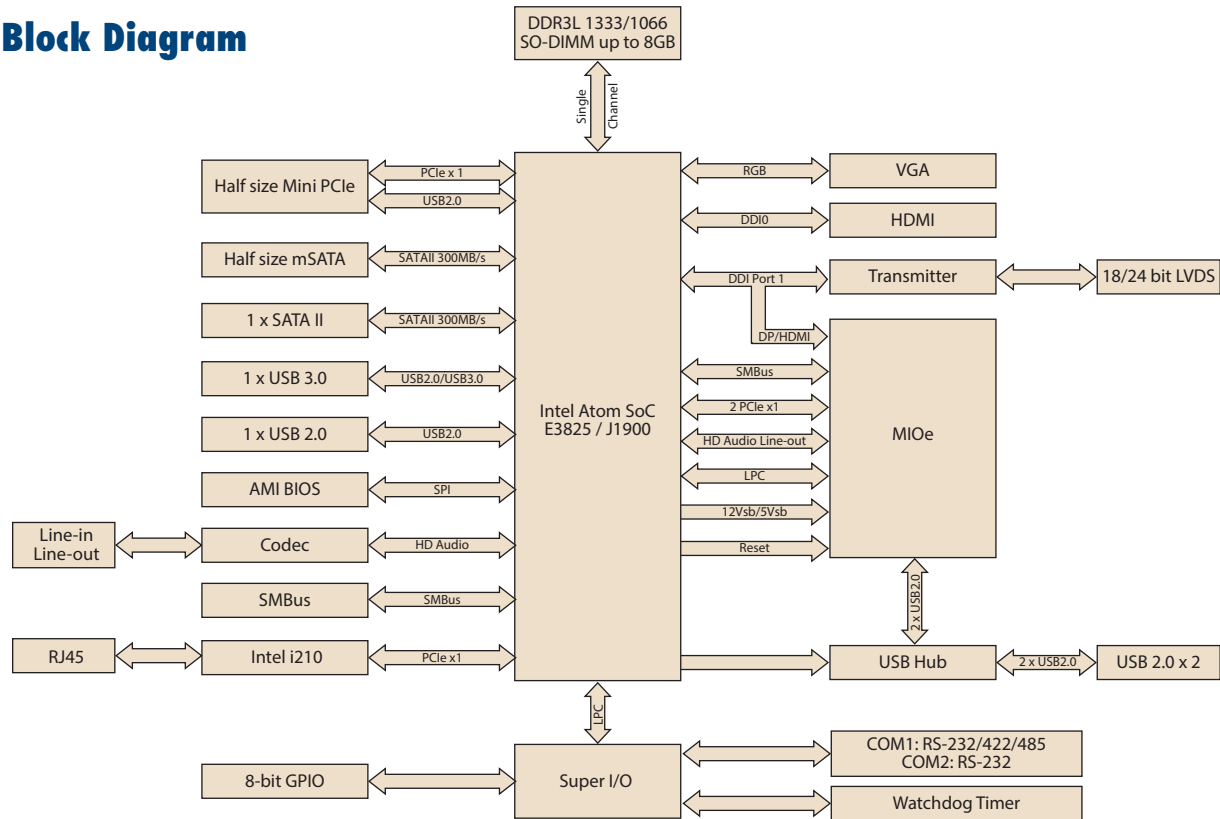
Software APIs:



Utilities:



Block Diagram



Ordering Information

Part Number	CPU	L2 Cache	Memory	LVDS	VGA	HDMI	Audio	RS-232	RS-232/422/485	USB 3.0	USB 2.0	mSATA	SATA II	MIOe	Mini PCIe	Thermal solution	Operating Temp
MIO-2263E-S3A2	E3825, 1.33 GHz	1MB	SO-DIMM	24-bit	Yes	-	Yes	1	1	1	3	Yes	1	Yes	Half-size	Passive	0 ~ 60° C
MIO-2263J-U0A2	J1900 2.0 GHz	2MB	SO-DIMM	24-bit	Yes	-	Yes	1	1	1	3	Yes	1	Yes	Half-size	Passive	0 ~ 60° C
MIO-2263JH-U0A2	J1900 2.0 GHz	2MB	SO-DIMM	24-bit	-	Yes	Yes	1	1	1	3	Yes	1	Yes	Half-size	Passive	0 ~ 60° C
MIO-2263EZ-2GS3A2	E3825, 1.33 GHz	1MB	2GB bundle	24-bit	Yes	-	Yes	1	1	1	3	Yes	1	Yes	Half-size	Passive	-20 ~ 80° C
MIO-2263EZ22GS3A2	E3825, 1.33 GHz	1MB	2GB bundle	24-bit	Yes	-	Yes	1	1	1	3	Yes	1	Yes	Half-size	Passive	-40 ~ 85° C

* Default BIOS supports 64 bits OS installation, BIOS for 32 bits OS installation is supported by project.

Packing List

Part No.	Description	Quantity
	MIO-2263 SBC	1
	Startup Manual	1
1700006291	SATA cable 30cm	1
1700019656	SATA power cable 5P-1.25/5P-2.0+SATA 5P 15 cm	1
1701200220	RS-232 x 2 ports 2.0mm pitch 22cm	1
170002444-01	Audio cable 2.0 mm pitch 20 cm (line-in & line-out)	1
1700002172	USB cable 2.0 mm pitch USB-A(F) 17 cm	1
1700019705	AT power cable 12 cm	1
9666226300E	Screw and stud pack (2 screw for Mini PCIe, 4 x M3 studs and screws for heatsink)	1
1960063455T001	CPU heatsink for MIO-2263	1

Optional Accessories

Part No.	Description
96PSA-A60W12W7-3	ADP A/D 100-240V 60W 12V C14 LOCKABLE DC PLUG
1700021335-41	A Cable 2*2P-4.2/DC Jack 20cm
1960065074N021	MIO-2263 Heat spreader (99.5 x 70.5 x 11.2 mm)

Embedded OS/API

Embedded OS/API	Part No.	Description
WES8	TBD	WES8E ENG
WES7	2070012999	WES7E MIO-2263 x64 V5.6.8 US/ CN/TW/JP
WEC7	TBD	CE7.0 ENG
VxWorks		6.9
Linux		Ubuntu V13.10
Software		SUSI V4.0

Rear I/O View



MIO-2263E-S3A1E
MIO-2263J-U0A1E



MIO-2263JH-U0A1E

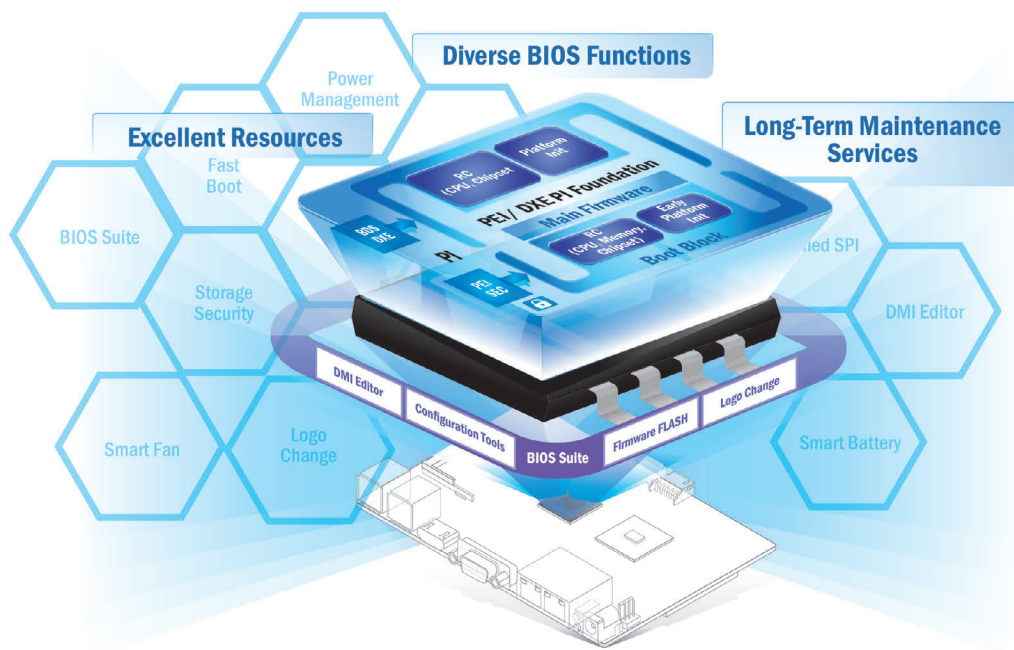


MIO-2263 w/DC Jack (by request)

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

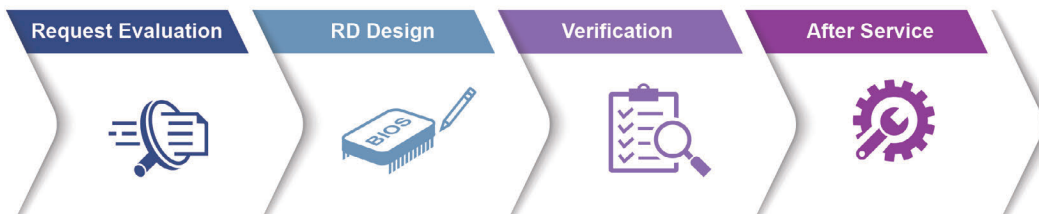
Diverse BIOS Functions

- 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

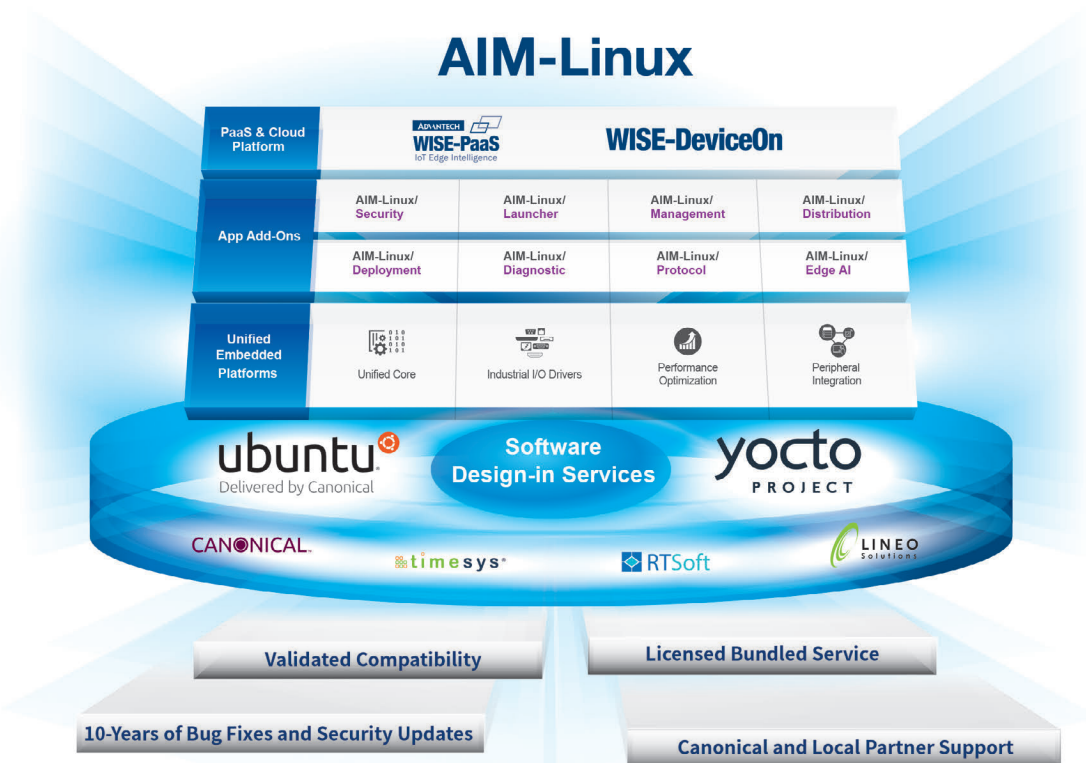
Value-Added Customization Process



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)

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

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

- Devices status
- Peripherals/firmware
- Open for extension

Remote Access

- Real-time monitoring
- Remote controls
- Troubleshooting

Efficient Operations

- 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