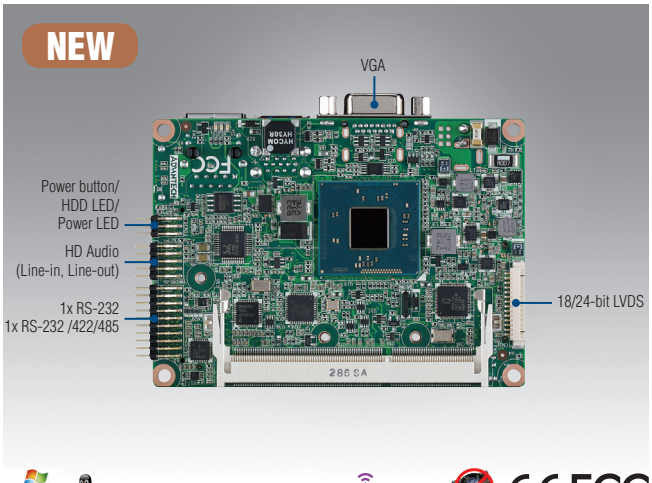
MIO-2263

Intel® Atom™ SoC E3825/ J1900 Pico-ITX SBC, DDR3L, 24-bit LVDS, VGA or HDMI, 1 GbE, Half-size Mini PCIe, 4 USB, 2 COM, SMBus, mSATA & MIOe



Features

- Embedded Intel® Atom™ SoC E3825 & Celeron J1900 up to Quad-Core processor design, DDR3L 1333MHz support up to 8GB
- Intel Gen 7 DirectX®11.1 support, dual independent display by 24-bit LVDS + VGA or 24-bit LVDS + HDMI
- Flexible design using integrated multiple I/O: MIOe to approach vertical applications & keep domain knowhow
- Rich I/O interface with 2 COM, 1 SATA, USB3.0, PCIe Mini Card and mSATA
- Supports SUSIAcccess and Embedded Software APIs

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

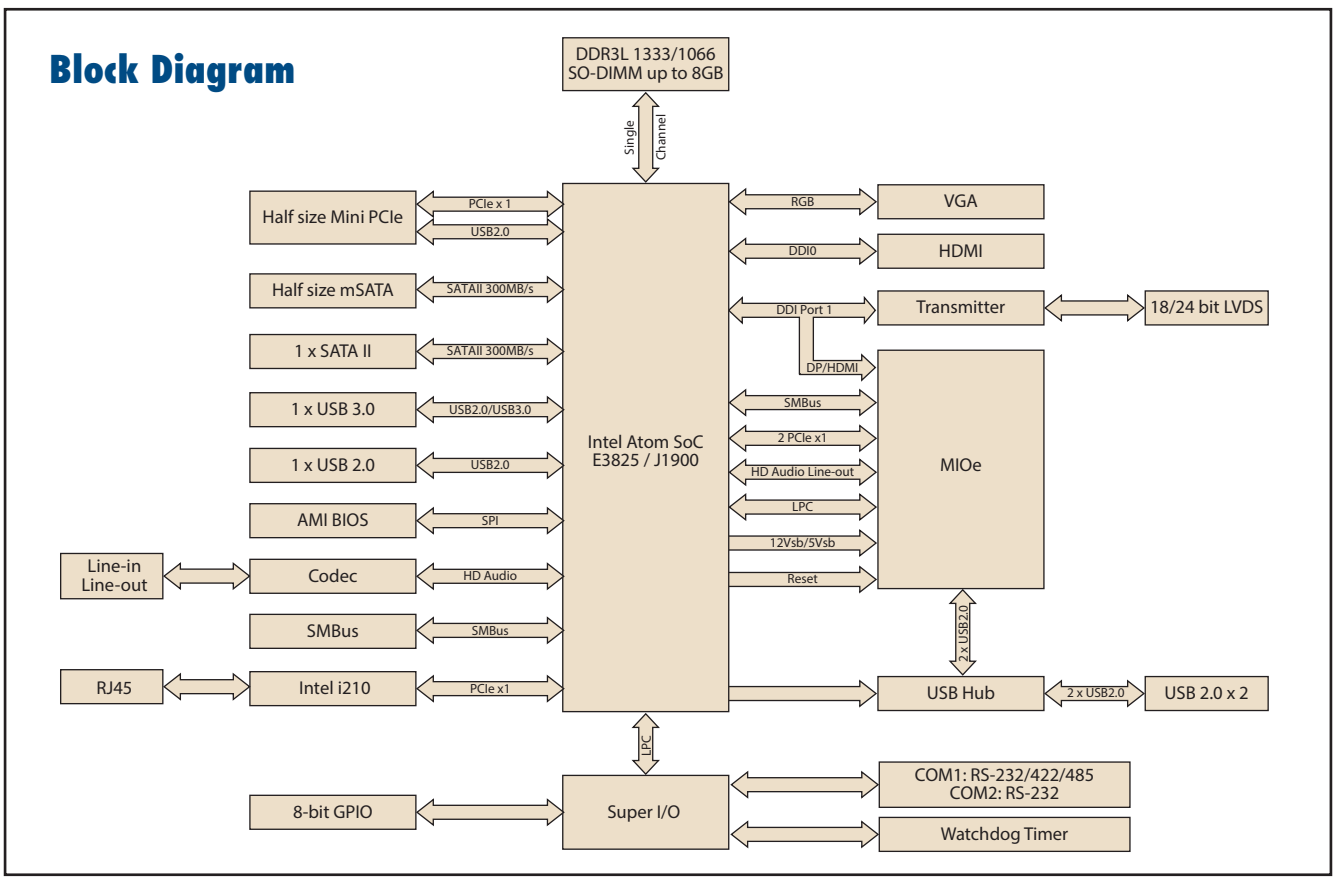
Utilities: Monitoring

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

* Support by request

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-S3A1E	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-U0A1E	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-U0A1E	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-2GS3A1E	E3825, 1.33 GHz	1MB	SO-DIMM	24-bit	Yes	-	Yes	1	1	1	3	Yes	1	Yes	Half-size	Passive	-20 ~ 80° C
MIO-2263EZ22GS3A1E	E3825, 1.33 GHz	1MB	SO-DIMM	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
1700022444-01	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
1960065074N001	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)