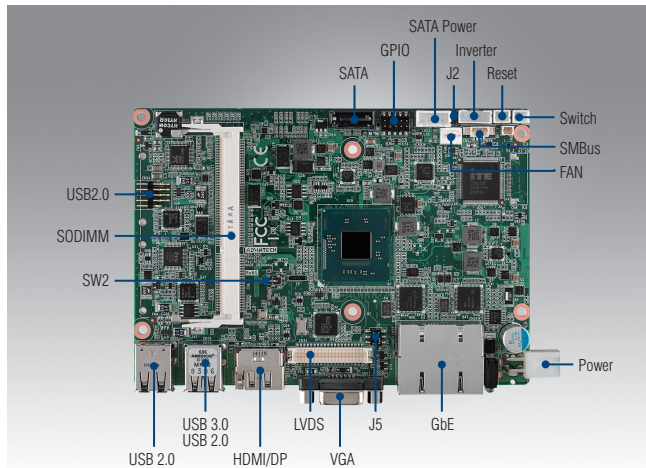


MIO-5251

Intel® Celeron J1900 & Atom™ E3825/ E3845, 3.5" MI/O-Compact SBC, DDR3L, VGA, HDMI/DP, 48-bit LVDS/eDP, 2GbE, Mini PCIe, mSATA, iManager, MIOe



iManager susiAccess CE FCC

Specifications

		Intel Celeron J1900	Intel Atom E3845	Intel Atom E3825
Processor System	CPU	Intel Celeron J1900	Intel Atom E3845	Intel Atom E3825
	Base Frequency	2 GHz (Quad-Core)	1.91GHz (Quad-Core)	1.33 GHz (Dual-Core)
	Burst Frequency	2.42 GHz	-	-
	L2 Cache	2MB	2MB	1MB
	BIOS	AMI UEFI BIOS at 64 Mb		
Memory	Technology	DDR3L 1333 MHz	DDR3L 1333MHz	DDR3L 1066 MHz
	Max. Capacity	8 GB		
	Socket	1 x 204-pin SODIMM		
Display	Controller	Intel Gen7 graphic engine		
	Graphic Features	DirectX11, OpenGL3.2, OpenCL1.2 HW Decode: H.264, MPEG2, MVC, VC-1, WMV9, MJPEG and VP8. HW Encode: H.264 (MPEG2 and MVC only for J1900)		
	VGA	2560 x 1600 at 60Hz		
	LVDS	48-bit LVDS up to WUXGA 1920 x 1200 at 60Hz Supports 3.3/5/12V for VDD power, 5/12V for inverter		
	eDP*	up to 2560 x 1600 at 60Hz		
	HDMI / DisplayPort*	HDMI 1.4a for HD video playback, 1080P at 60Hz Displayport*, up to 2560 x 1600 at 60Hz		
	Mult-Display	VGA + HDMI/Displayport*, VGA+ LVDS/eDP*, HDMI/Displayport* +LVDS/eDP		
Ethernet	Speed	10/100/1000Mbps		
	Controller Connector	Intel i210 2 RJ45		
Audio	Codec Amplifier*	Realtek ALC888S, High Definition Audio (HD), Line-in, Line out, Mic-in Optional via MIOe		
WatchDog Timer		Output System reset, Programmable counter from 1 ~ 255 minutes/ seconds		
Storage	SATA	1, up to 3Gb/s (300 MB/s)		
	mSATA	1 x Full-size		
Rear I/O	Ethernet	2 (10/100/1000Mbps)		
	VGA	1		
	HDMI / DisplayPort*	1		
	USB 2.0	3		
	USB 3.0	1		
	LED	Power, HDD		
	DC Jack*	1		
Internal I/O	Serial	2 x RS-232 from COM1/2, 2 x RS-232/422/485 from COM3/4 with auto flow control (ESD protection: air gap ±15kV, contact ±8kV)		
	USB2.0	1		
	I ² C	1 (Shared with SMBus pin)		
	SMBus	1		
	GPIO	8-bit (5V tolerance)		
Expansion	Mini PCIe	1 x Full-size with SIM holder		
	MIOe	SMBus, 3 x USB2.0, LPC, 1 x PCIe x1, line out, DisplayPort*, +5 Vsb/+12 Vsb power, Power On, Rest		
Power	Power Type	Single 12V DC power input		
	Power Supply Voltage	12V ± 10%		
	Power Consumption (Typical)	MIO-5251J-U0A1E:	0.62A @12V (7.44W)	
		MIO-5251EW-S9A1E:	0.51A @12V (6.12W)	
		MIO-5251E-S3A1E:	0.39A @12V (4.68W)	
	Power Consumption (Max, test in HCT)	MIO-5251J-U0A1E:	1.16A @12V (13.92W)	
		MIO-5251EW-S9A1E:	0.92A @12V (11.04W)	
MIO-5251E-S3A1E:		0.78A @12V (9.36W)		
Power Management	ACPI			
Battery	Lithium 3 V / 210 mAH			
Environment	Operating	Standard: 0 ~ 60° C (32 ~ 140° F), Extend: -40 ~ 85° C (-40 ~ 185° F) Storage: -40 ~ 85° C (-40 ~ 185° F)		
	Non-Operating	-40° C ~ 85° C and 60° C @ 95% RH Non-Condensing		
Physical Characteristics	Dimensions (L x W)	146 x 102 mm (5.7" x 4"), same as 3.5"		
	Weight	0.5kg (1.1lb), weight of total package		
	Height	Top Side: 19 mm; Bottom Side: 6.8 mm; PCB: 1.6 mm		

* This specification is supported by request

Features

- Intel® Celeron J1900 & Atom™ E3825/E3845, DDR3L-1066/1333MHz SODIMM up to 8GB
- DirectX11, OpenGL3.2, OpenCL1.2, multi-display: VGA+LVDS/eDP+ HDMI/DP*
- Flexible design using integrated multiple I/O: MIOe to approach vertical applications & keep domain knowhow
- 2 Intel i210 GbE, rich I/O: 4COM, SATA, USB3.0, SMBus/I²C, GPIO full-size Mini PCIe w/ SIM holder, full-size mSATA
- Supports iManager, SUSI APIs, WISE-DeviceOn

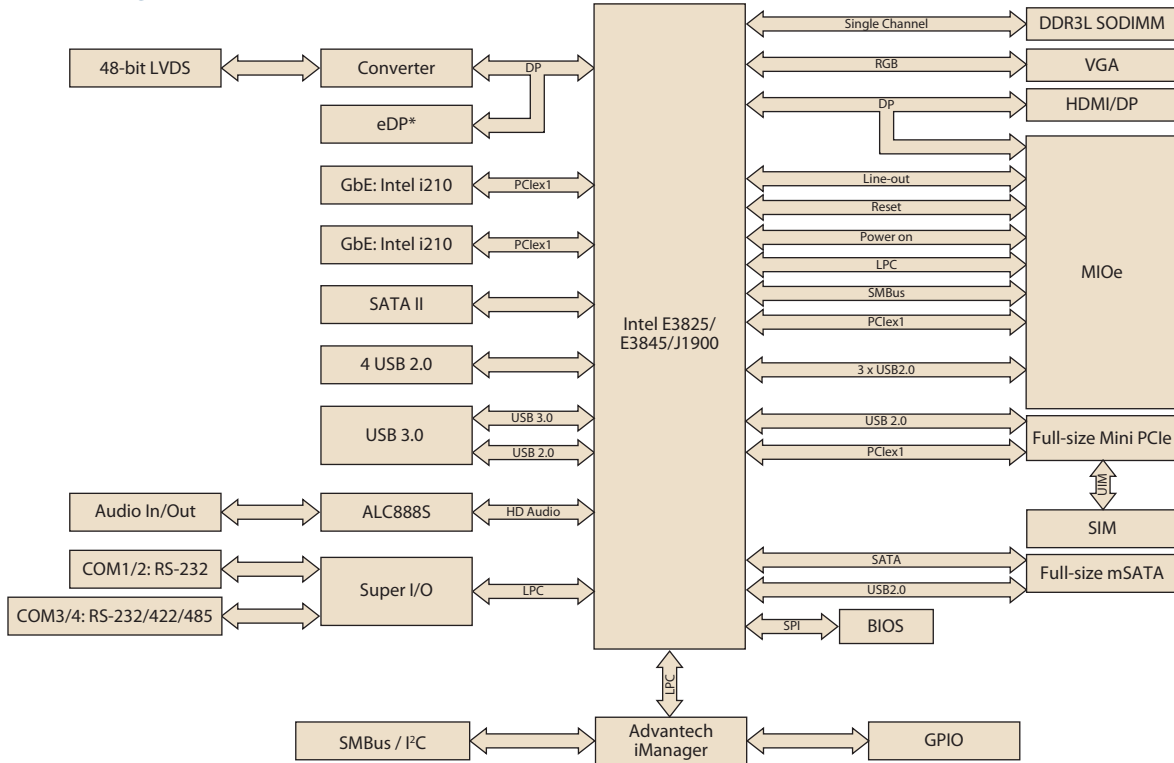
Software APIs:



Utilities:



Block Diagram



*: Supported by request

Ordering Information

Part No.	CPU	L2 Cache	Memory	LVDS	VGA	HDMI/DP	GbE	Audio	RS-232/422/485	RS-232	USB 3.0	USB 2.0	SATAII	Mini PCIe	mSATA	MIOe	Power connector	Thermal Solution*	Operating Temp.
MIO-5251J-U0A1E	Intel J1900 2GHz 10W	2MB	SODIMM	48-bit	Yes	1	2	Yes	2	2	1	4	1	Full-size	Full-size	Yes	2x2pin	Passive	0°C~60°C
MIO-5251E-S3A1E	Intel E3825 1.33GHz 6W	1MB	SODIMM	48-bit	Yes	1	2	Yes	2	2	1	4	1	Full-size	Full-size	Yes	2x2pin	Passive	0°C~60°C
MIO-5251EW-S9A1E	Intel E3845 1.91GHz 10W	2MB	SODIMM	48-bit	Yes	1	2	Yes	2	2	1	4	1	Full-size	Full-size	Yes	2x2pin	Passive (higher)	-40°C~85°C
MIO-5251JZ-2GA1E	Intel J1900 2GHz	2MB	2GB bundled	48-bit	Yes	1	2	Yes	2	2	1	4	1	Full-size	Full-size	Yes	2x2pin	Passive (higher)	-20°C~80°C
MIO-5251JZ2-2GA1E	Intel J1900 2GHz	2MB	2GB bundled	48-bit	Yes	1	2	Yes	2	2	1	4	1	Full-size	Full-size	Yes	2x2pin	Passive (higher)	-40°C~85°C

Note1: J1900 and E3845/E3825 with different version BIOS and only for 64bit Win8/Win7, 32bit supported by T-P/N. (Default setting is Legacy boot)
 Note2: passive=fanless

Packing List

Part No.	Description	Quantity
	MIO-5251 SBC	1
2006525100	Startup Manual	1
1700006291	SATA Cable, 30cm	1
1700018785	SATA Power Cable, 35cm	1
1701200220	COM Port Cable, 2 ports, 22cm	2
1700019584-01	Audio Cable, 20cm	1
	mini Jumper pack	1
1960062791T001	Heatsink (104.4 x 65.8 x 19 mm) for MIO-5251E/J	1
1960066556T001	Wide temp. Heatsink (145.4 x 84.2 x 29 mm) for MIO-5251JZ/JZ2/EW	1

Optional Accessories

Part No.	Description
1960065073N001	Heat spreader (16.7mm height)
96PSA-A60W12W7-3	ADP 100-240V 60W 12V C14 LOCKABLE DC PLUG
1700021335-41	Adapter Cable (2x2pin to lockable DC-IN Jack), 20cm
1703100264	Internal USB Cable, 1 port, 22.5cm

Embedded OS/API

Embedded OS/API	Part No.	Description
Win10 IoT Ent.	2070014805	LTSB 2016, 64bit, 1609, ENG
WES8	2070013167	64bit (ENG/T-CH/S-CH/JP)
WES7E	2070013061	64bit (ENG/T-CH/S-CH/JP)
WEC7	2070013993	img WEC7 MIO-5251 v1.0 EN
Linux		Ubuntu 14.04
VxWorks		6.9.3.3
Software API	Website Download	SUSI API

Rear I/O View

