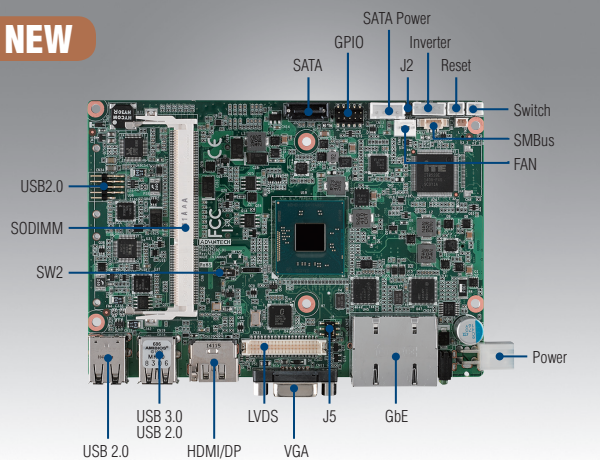


MIO-5251

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

NEW



iManager susiAccess **CE FCC**

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 or SD card
- Supports iManager, SUSIAccess and Embedded Software APIs

Software APIs:



Utilities:

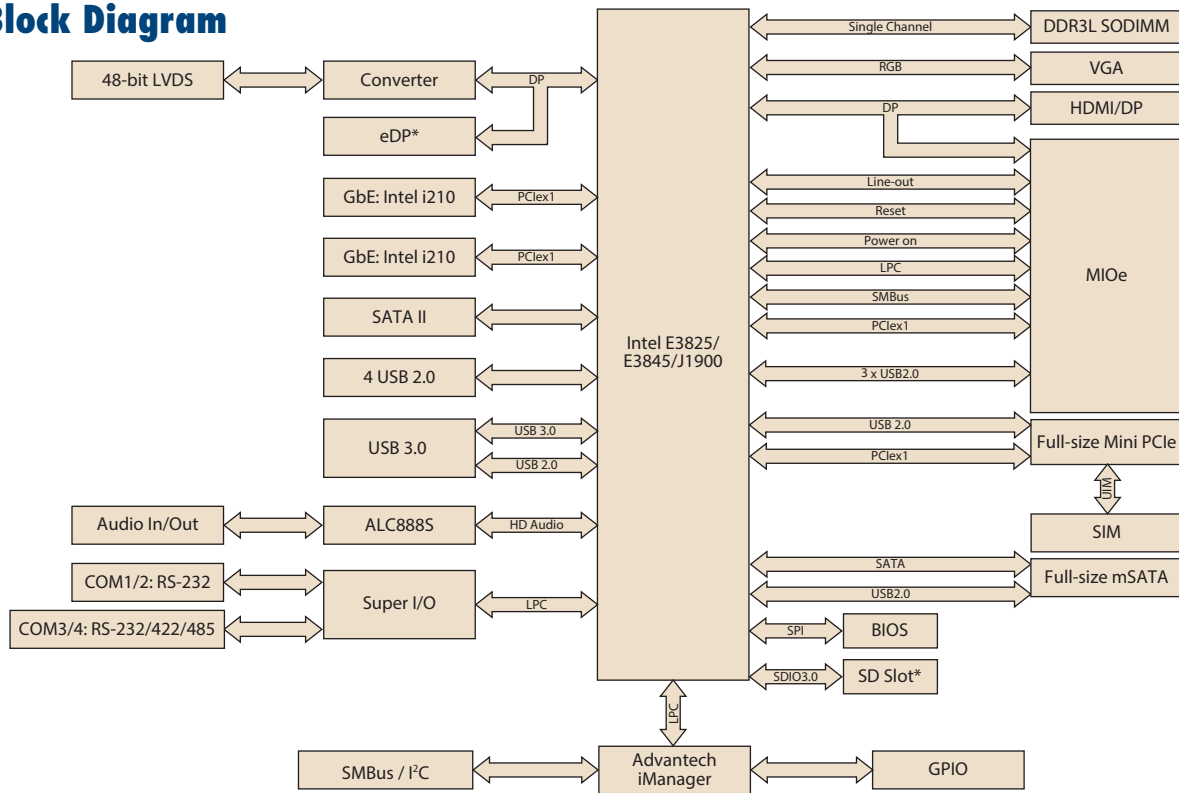


Specifications

Processor System		Intel Celeron J1900	Intel Atom E3845	Intel Atom E3825
		Base Frequency 2 GHz (Quad-Core)	1.91GHz (Quad-Core)	1.33 GHz (Dual-Core)
Memory		Burst Frequency 2.42 GHz	-	-
		L2 Cache 2MB	2MB	1MB
Display		BIOS AMI UEFI BIOS at 64 Mb		
		Technology DDR3L 1333 MHz	DDR3L 1333MHz	DDR3L 1066 MHz
Ethernet		Max. Capacity 8 GB		
		Socket 1 x 204-pin SODIMM		
Audio		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)		
WatchDog Timer		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		
Storage		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		
Rear I/O		Multit-Display VGA + HDMI/Displayport*, VGA+ LVDS/eDP*, HDMI/Displayport* +LVDS/eDP		
		Speed 10/100/1000Mbps		
Internal I/O		Controller Intel i210		
		Connector 2 RJ45		
Expansion		Codec Realtek ALC888S, High Definition Audio (HD), Line-in, Line out, Mic-in		
		Amplifier* Optional via MIOe		
Power		Output System reset, Programmable counter from 1 ~ 255 minutes/ seconds		
		SATA 1, up to 3Gb/s (300 MB/s)		
Environment		mSATA 1 x Full-size		
		SD slot* 1 (Shared with mSATA), only support on E3825/E3845		
Physical Characteristics		Ethernet 2 (10/100/1000Mbps)		
		VGA 1		
Power		HDMI / DisplayPort* 1		
		USB 2.0 3		
Expansion		USB 3.0 1		
		LED Power, HDD		
Power		DC Jack* 1		
		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)		
Power		USB2.0 1		
		I ² C 1 (Shared with SMBus pin)		
Power		SMBus 1		
		GPIO 8-bit (5V tolerance)		
Power		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		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		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)		
Physical Characteristics		Non-Operating -40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing		
		Dimensions (L x W) 146 x 102 mm (5.7" x 4"), same as 3.5"		
Physical Characteristics		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

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	M Cable SATA 7P/SATA 7P 30cm C=R 180/90	1
1700018785	SATA 35cm power cable	1
1701200220	COM RS-232 Cable 2*10P-2.0/D-SUB 9P (M)*2 22CM	2
1700019584	Audio Cable 2*5P-2.0/JACK*3 20cm	1
9689000002	mini Jumper pack	1
1960062791T001	Heatsink (104 x 83 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)
1757003934	Adapter 100-240V 60W 12V 5A W/O PFC
1703100264	Internal 1 port USB cable 22.5cm

Embedded OS/API

Embedded OS/API	Part No.	Description
WE8S	2070013167	64bit (ENG/T-CH/S-CH/JP)
WE57E	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
Android		Kit Kat 4.4
Software API		iManager 2.0

Rear I/O View



Mouser Electronics

Authorized Distributor

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[MIO-5251J-U0A1E](#) [MIO-5251E-S3A1E](#)