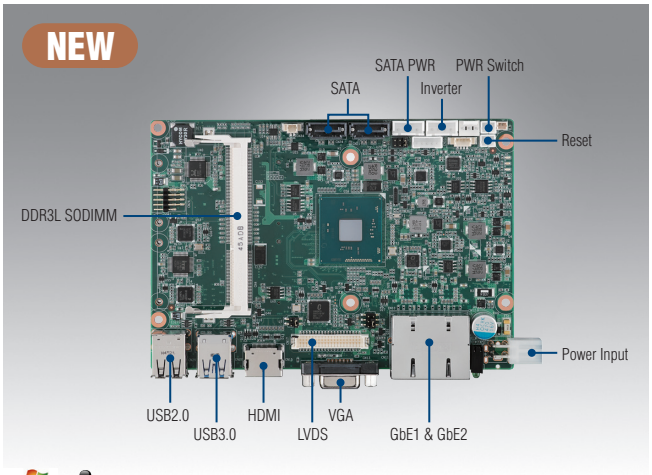
PCM-9310

Intel® Celeron N3160/N3060 SoC, Intel® Atom E8000 SoC, 3.5" SBC



Windows Embedded

iManager WISE-PaaS/RMM CE FCC

Features

- Intel® Celeron QC/DC SoC, Intel® Atom QC
- DDR3L-1600MHz SODIMM up to 8GB
- DirectX11.1, OpenGL4.2, OpenCL1.2, 3 independent display: VGA + HDMI + LVDS/eDP*
- Rich I/O: 4 x COM, 2 x SATA, 2 x USB3.0, 4 x USB2.0, TPM2.0, SMBus/I²C, GPIO, full-size Mini PCIe w/ SIM holder, full-size mSATA
- Supports SUSI API

Software APIs: GPIO, H/W Monitor, Brightness, Watchdog, Backlight On/Off, I²C, CPU Speed, System Throttling

Utilities: Monitoring

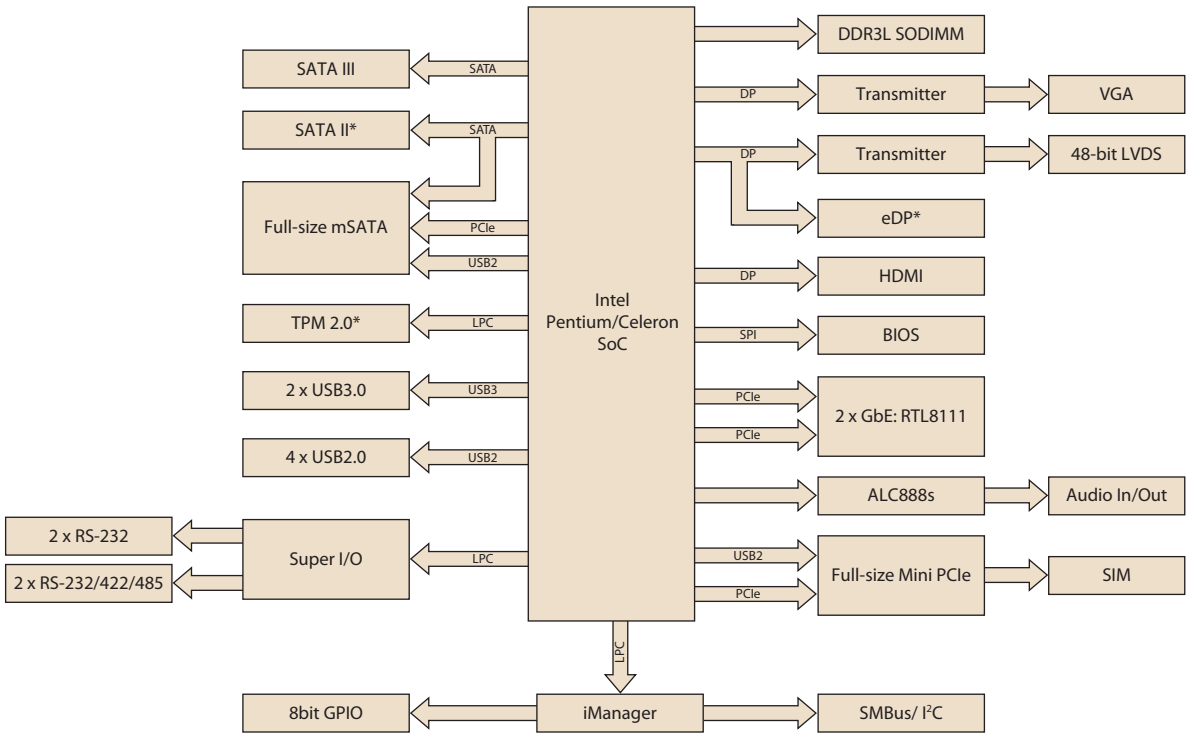
Specifications

Processor System	CPU	Intel Celeron N3160	Intel Celeron N3060	Intel Atom E8000
	Base Frequency	1.6 GHz (Quad-Core)	1.6 GHz (Dual-Core)	1.04 GHz (Quad-Core)
	Burst Frequency	2.24 GHz	2.48 GHz	2.00 GHz
	L2 Cache	2MB		
	BIOS	AMI UEFI BIOS at 64 Mb		
Memory	Technology	DDR3L-1600MHz		
	Max. Capacity	8 GB		
	Socket	1 x 204-pin SODIMM		
Display	Controller	Intel® HD Graphics 400		
	Graphic Features	DirectX11.1, OpenGL4.2, OpenCL1.2 (OpenCL not for Win7) HW Decode: H.265/HEVC @ level 5, H.264 @ Level 5.2, MPEG2, MVC, VC-1, WMV9, JPEG, VP8. HW Encode: H.264 @ Level 5.1, MVC, JPEG		
	VGA	1920 x 1200 at 60Hz		
	LVDS	Single/dual-ch 18/24bit up to 1920 x 1200 at 60Hz 3.3/ 5/ 12V for VDD power, 5/12V for inverter		
	eDP*	eDP 1.3 up to 2560x1440 (Optional)		
	HDMI	HDMI 1.4b up to 2560x1600 at 60Hz		
	3 Independent Display	VGA + HDMI + LVDS/eDP*		
Ethernet	Speed	10/100/1000Mbps		
	Controller	RTL8111E		
	Connector	2 RJ45		
Audio	Codec	ALC888s, High Definition Audio (HD), Line-in, Line out, Mic-in		
WatchDog Timer		Output System reset, Programmable counter from 1 ~ 255 minutes/ seconds		
Storage	SATA	1 x SATA III up to 600 MB/s 1 x optional SATA II up to 300 MB/s		
	mSATA	1 x Full-size (support Mini PCIe by request)		
Rear I/O	Ethernet	2 (10/100/1000Mbps)		
	VGA	1		
	HDMI	1		
	USB 2.0	2		
	USB 3.0	2		
	LED	Power, HDD		
	DC Jack*	1 (Optional)		
Internal I/O	Serial	2 x RS-232, 2 x RS-232/422/485 with auto flow control (ESD protection: air gap ±15kV, contact ±8kV)		
	USB2.0	2		
	I²C	1 (Shared with SMBus pin)		
	SMBus	1 (Shared with I²C pin)		
	GPIO	8-bit (5V tolerance)		
Expansion	Mini PCIe	1 x full-size with SIM holder 1 x full-size (default support mSATA)		
Power	Power Type	Single 12V DC power input		
	Power Supply Voltage	12V ± 10%		
	Power Consumption (Typical)	0.58 A @ 12 V (7.05 W)	0.38 A @ 12 V (4.55 W)	0.58A @ 12V (6.95W)
	Power Consumption (Max)	1.03A @ 12 V (12.27 W)	0.85A @12 V (10.20 W)	0.85A @ 12 V (10.20W)
	Power Management	ACPI		
	Battery	Lithium 3 V / 210 mAH		
Environment	Operational	0 ~ 60° C (32 ~ 140° F) (Operational humidity: 40° C @ 95% RH Non-Condensing)		
	Non-Operational	-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")		
	Weight	0.6 kg (1.2 lb)		
	Height			

* The specification is supported by request

All product specifications are subject to change without notice.

Block Diagram



Ordering Information

Part No.	CPU	L2 Cache	Memory	LVDS	VGA	HDMI	GbE	Audio	RS-232/ 422/485	RS-232	USB 3.0	USB 2.0	SATA III	Mini PCIe	mSATA	Power connector	Thermal Solution*	Operation Temp.
PCM-9310CQ-S6A1E	Intel N3160 2.24 GHz 6W	2MB	SODIMM	48-bit	Yes	1	2	Yes	2	2	2	4	1	Full-size	Full-size	2 x 2pin	Passive	0 ~ 60° C
PCM-9310CQ-S6A1N	Intel N3160 2.24GHz 6W	2MB	SODIMM	48-bit	Yes	1	2	No	2	2	2	4	1	Full-size	Full-size	2 x 2pin	Passive	0 ~ 60° C
PCM-9310CD-S6A1E	Intel N3060 2.48 GHz 6W	1MB	SODIMM	48-bit	Yes	1	2	Yes	2	2	2	4	1	Full-size	Full-size	2 x 2pin	Passive	0 ~ 60° C
PCM-9310AQ-S6A1E	Intel E8000 2.00GHz 5W	2MB	SODIMM	48-bit	Yes	1	2	Yes	2	2	2	4	1	Full-size	Full-size	2 x 2pin	Passive	0 ~ 60° C

Note1: passive=fanless

Packing List

Part No.	Description	Quantity
	PCM-9310 SBC	1
	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	1
9689000002	mini Jumper pack	1
1960071176T001	Heatsink	1

Optional Accessories

Part No.	Description
1960075286T001	Heat spreader
1703100260	Internal USB cable

Embedded OS/API

Embedded OS/API	Part No.	Description
Win10	2070015309	64bit
Win8.1		64bit
WES7	2070014560	64bit
VxWorks		(TBD)
Software API		SUSI API

Rear I/O View

