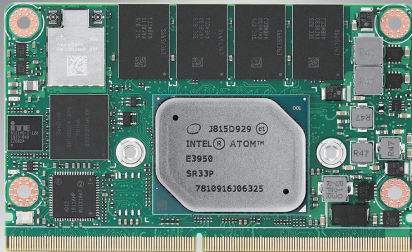


SOM-2569

Intel® Atom™ E3900 / Pentium® / Celeron® N Series SMARC Module

Preliminary



Windows Embedded

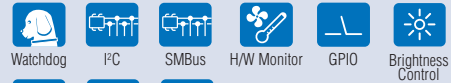
iManager WISE-PaaS/RMM



Features

- Intel® Atom™ E3900 / Pentium® / Celeron® N Series Processors
- Integrated dual GbE. Wireless module on Board Design
- Dual channel LPDDR4 2/4/8 GB memory down & onboard eMMC
- Triple Display (DP++, HDMI, LVDS)
- Supports iManager, WISE-PaaS/RMM and Embedded Software APIs

Software APIs:



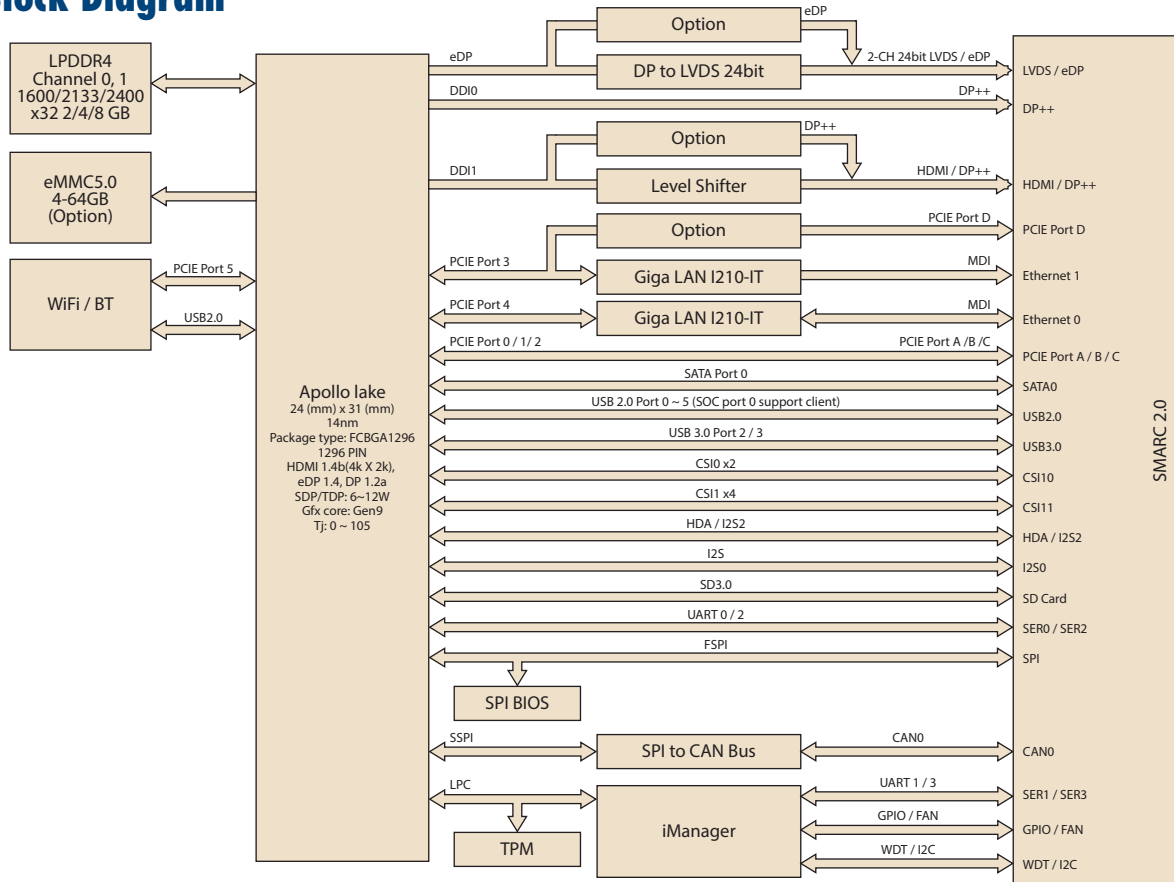
Utilities:



Specifications

Form Factor	Form Factor	SMARC 2.0				
	PCB Size	82 mm x 50 mm				
Processor System	CPU	Atom X7-E3950	Atom X5-E3940	Atom X5-E3930	Pentium N4200	Celeron N3350
	Base Frequency	1.6GHz	1.6GHz	1.3GHz	1.1GHz	1.1GHz
	Turbo Boost Frequency	2GHz	1.8GHz	1.8GHz	2.5GHz	2.4GHz
	Core/Thread	4/4	4/4	2/2	4/4	2/2
	LLC	2 MB	2 MB	2 MB	2 MB	2 MB
	CPU TDP	12 W	9.5 W	6.5 W	6 W	6 W
	BIOS	AMI UEFI BIOS @ 64 Mb				
Memory	Technology	LPDDR4 2400MT/s				
	ECC Support	N/A				
	Max. Capacity	8GB				
	Channel / Socket	Dual Channel / On Board Memory				
Graphics	Controller	Intel® HD Graphics 505	Intel® HD Graphics 500	Intel® HD Graphics 500	Intel® HD Graphics 505	Intel® HD Graphics 500
	Max. Frequency	650MHz	600MHz	550MHz	750MHz	650MHz
	Graphic Memory	Intel DMVT5.0				
	3D/HW Acceleration	DX (9.3, 10, 11.3, 12), OpenGL 4.3, OGL ES 3.0, OpenCL 2.0 HEVC (H.265) @ L5, H.264 @ 5.2, MVC, MPEG2, VP8, VP9, VC-1, WMV9, JPEG/MJPEG HW Decode, HEVC (H.265) @ L4, H.264 @ 5.2, MVC, VP8, VP9, JPEG/MJPEG HW Encode				
Display	LCD (LVDS/eDP)	LVDS: Dual-channel 18/24-bit, up to 1366 x 768 (option support eDP 4096 x 2304@60Hz, 24bpp)				
	DP++	1 Port (up to 4096 x 2160 @ 60Hz)				
	HDMI	1 Port (up to 3840 x 2160 @ 30Hz, option support DP++ up to 4096 x 2160 @ 60Hz)				
	Multiple Display	Triple displays with each display combinations				
Expansion	PCI Express x1 (Gen2)	Up to 4 PCIe x1				
	Audio Interface	1 Intel HD Audio Interface / Up to 2 I2S				
	LPC	Yes				
Serial Bus	SMBus	Yes				
	I2C Bus	Yes				
	CAN Bus	Yes (optional)				
Ethernet	Controller	Intel I210				
	Speed	10/100/1000 Mbps				
	Connector (RJ45)	Up to 2 Ports				
I/O	SATA3.0	1 Port (6Gbps)				
	USB3.0	2 Ports				
	USB2.0	6 Ports (480Mbps, include 1 client port)				
	GPIO	12 GPIOs				
	Watchdog	65536 level, 0-65535 sec				
	COM Port	4 Ports (2 Ports 4-wire / 2 Ports 2-wire)				
	Onboard Storage	Up to 64GB eMMC				
	TPM	TPM2.0 (Infineon SLB9665)				
	Smart Fan	N/A				
	SPI Bus	Yes				
	SDIO (SD Card)	Yes				
	Wifi / BT Module	1 Wifi / BT Module on Board				
	CSI	2 Ports (1 Port 2-lane / 1 Port 4-lane)				
Power	Type	ATX: Vin, VSB, AT: Vin				
	Supply Voltage	Vin: 4.75-5.25V, RTC Battery: 2.0V ~ 3.3V				
	Power Consumption (Max.)	TBD				
	Power Consumption (Idle)	TBD				
Environment	Operating Temperature	Standard: 0 ~ 60 °C (32 ~ 140 °F) Extend: -40 ~ 85 °C (-40 ~ 185 °F)				
	Storage Temperature	-40 ~ 85 °C (-40 ~ 185 °F)				
	Humidity	Operating: 40 °C @ 95% relative humidity, non-condensing Storage: 60 °C @ 95% relative humidity, non-condensing				
	Vibration Resistance	3.5 Grms				
Mechanical	Dimensions	82 mm x 50 mm				

Block Diagram



Ordering Information

Part No.	CPU	Freq.	Cores	CPU TPD	Memory (On Board)	Thermal Solution	Operating Temperature
TBD	Celeron N3350	1.1	2	6W	LPDDR4 / Non-ECC	Passive	0 ~ 60 °C
TBD	Pentium N4200	1.1	4	6W	LPDDR4 / Non-ECC	Passive	0 ~ 60 °C
TBD	Atom x5-E3930	1.3	2	6.5W	LPDDR4 / Non-ECC	Passive	0 ~ 60 °C
TBD	Atom x5-E3940	1.6	4	9.5W	LPDDR4 / Non-ECC	Passive	0 ~ 60 °C
TBD	Atom x7-E3950	1.6	4	12W	LPDDR4 / Non-ECC	Passive	0 ~ 60 °C
TBD	Atom x7-E3950	1.6	4	12W	LPDDR4 / Non-ECC	Passive	-40 ~ 85 °C

*Any other sku or combination is project based support. Please contact sales for details.

Packing List

Part No.	Description	Quantity
TBD	SOM-2569 SMARC Module	1
TBD	Heatspreader	1

Optional Accessories

Part No.	Description
TBD	Semi-Heatsink
TBD	Semi-Cooler

Development Board

Part No.	Description
TBD	Development Board for SMARC

Embedded OS

OS	Part No.	Description
WEC	TBD	TBD