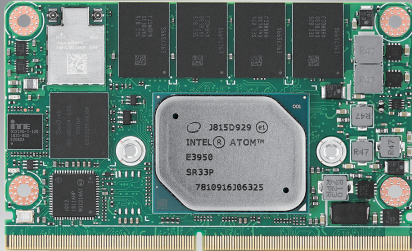


SOM-2569

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

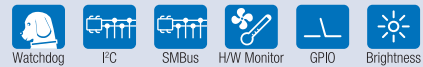
NEW



Features

- SMARC2.0 & SMARC2.1 Compliance
- 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/DeviceOn and embedded software APIs

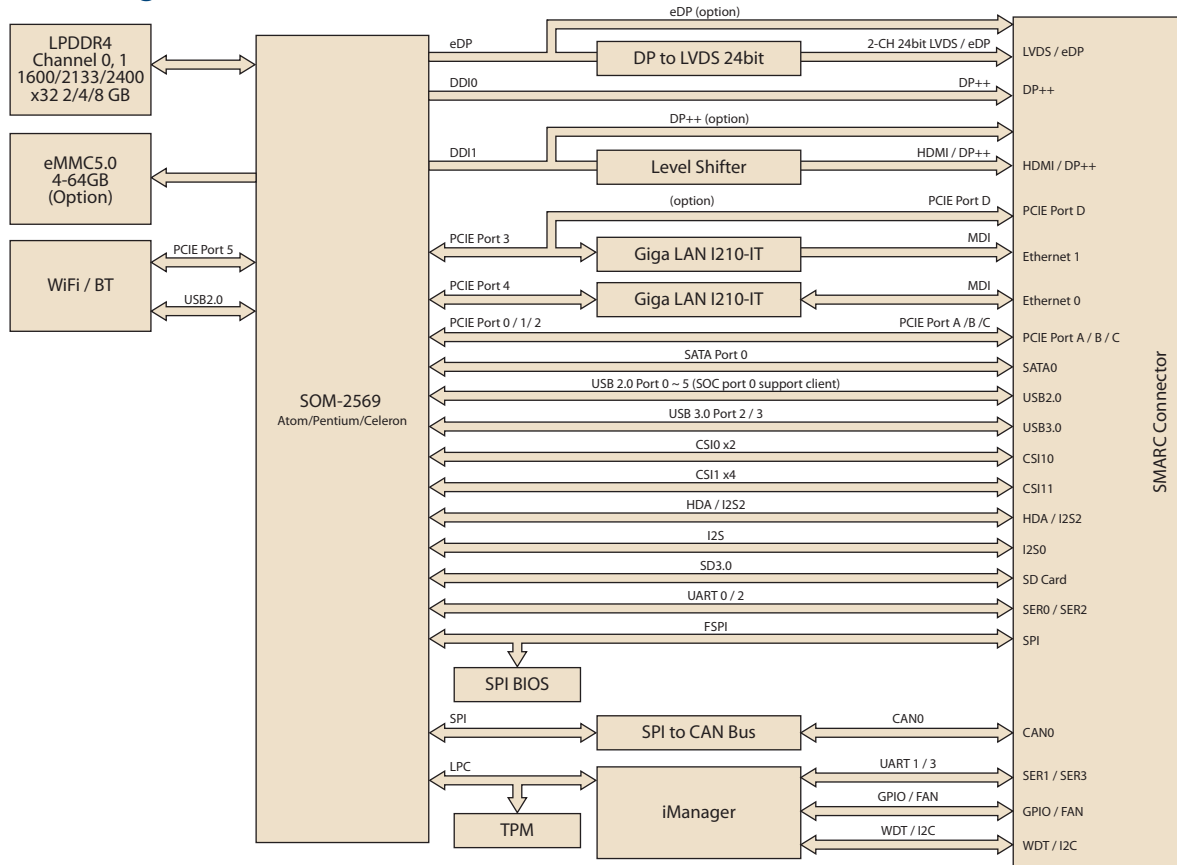
Software APIs:



Specifications

Form Factor	Form Factor	SMARC2.0 & SMARC2.1 Compliance				
	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 DVM T5.0				
	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 1920 x 1080 (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 (Optional)				
	CSI	2 Ports (1 Port 2-lane / 1 Port 4-lane)				
Power	Type	AT/ATX : Vin				
	Supply Voltage	Vin: 4.75-5.25V, RTC Battery: 2.0V ~ 3.3V				
	Power Consumption (Max.)	14.11 W				
	Power Consumption (Idle)	3.45 W				
Environment	Operating Temperature	Standard: 0 ~ 60 °C (32 ~ 140 °F) Extended: -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

P/N	CPU	Freq.	Cores	CPU TDP	Memory	eMMC	Wi-Fi/BT	Thermal Solution	Operating Temperature
SOM-2569CNC-CA-S7A1	Atom x7-E3950	1.6	4	12W	8GB	64GB	Yes	Passive	0 ~ 60 °C
SOM-2569BNBCA-S7A1	Atom x7-E3950	1.6	4	12W	4GB	32GB	Yes	Passive	0 ~ 60 °C
SOM-2569BNBC-S7A1	Atom x7-E3950	1.6	4	12W	4GB	32GB	-	Passive	0 ~ 60 °C
SOM-2569BNBC-S6A1	Atom x5-E3940	1.6	4	9.5W	4GB	32GB	-	Passive	0 ~ 60 °C
SOM-2569BNOC-S3A1	Atom x5-E3930	1.3	2	6.5W	4GB	-	-	Passive	0 ~ 60 °C
SOM-2569CNC-CA-S2A1	Pentium N4200	1.1	4	6W	8GB	64GB	Yes	Passive	0 ~ 60 °C
SOM-2569BCBC-S1A1	Celeron N3350	1.1	2	6W	4GB	32GB	-	Passive	0 ~ 60 °C
SOM-2569BNBX-S7A1	Atom x7-E3950	1.6	4	12W	4GB	32GB	-	Passive	-40 ~ 85 °C

*Any other SKU or combination has project-based support. Please contact sales team for details.

Packing List

Part No.	Description	Quantity
-	SOM-2569 SMARC Module	1
1960093125T001	SOM-2569 E3900 SKU heat spreader	1
1970004428N001	SOM-2569 N Series SKU heat spreader	1

Optional Accessories

Part No.	Description
1960093089T001	Semi-Heatsink, 82L x 34W x 18H

Embedded OS

OS	P/N	Description
Win10	20706WX9HS0040	Win10 IoT 2019 Enterprise LTSC High End
Win10	20706WX9VS0043	Win10 IoT 2019 Enterprise LTSC Value
Win10	20706WX9ES0053	Win10 IoT 2019 Enterprise LTSC Entry

Development Board

Part No.	Description
SOM-DB2500-00A1	Development Board for SMARC 2.0