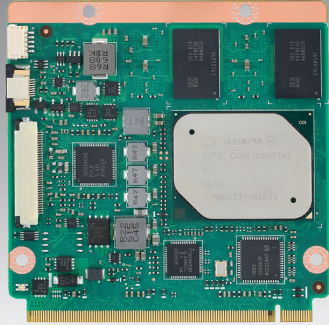


SOM-3569

Intel® Atom™/Pentium®/Celeron® Series Qseven CPU Module

Preliminary



Features

- Intel® Atom™/Pentium®/Celeron® Series SoC
- Qseven® 2.1 Specification
- Onboard LPDDR4 up to 8GB, onboard eMMC up to 64GB
- Support HEVC/H.265, H.264 MPEG2 HW Decode
- GbE, 4 PCIe x1, 1 USB3.0, 8 USB2.0
- Supports iManager WISE-PaaS/RMM, and Embedded Software APIs

Software APIs:

- Watchdog
- I²C
- SMBus
- H/W Monitor
- Brightness Control

Utilities:

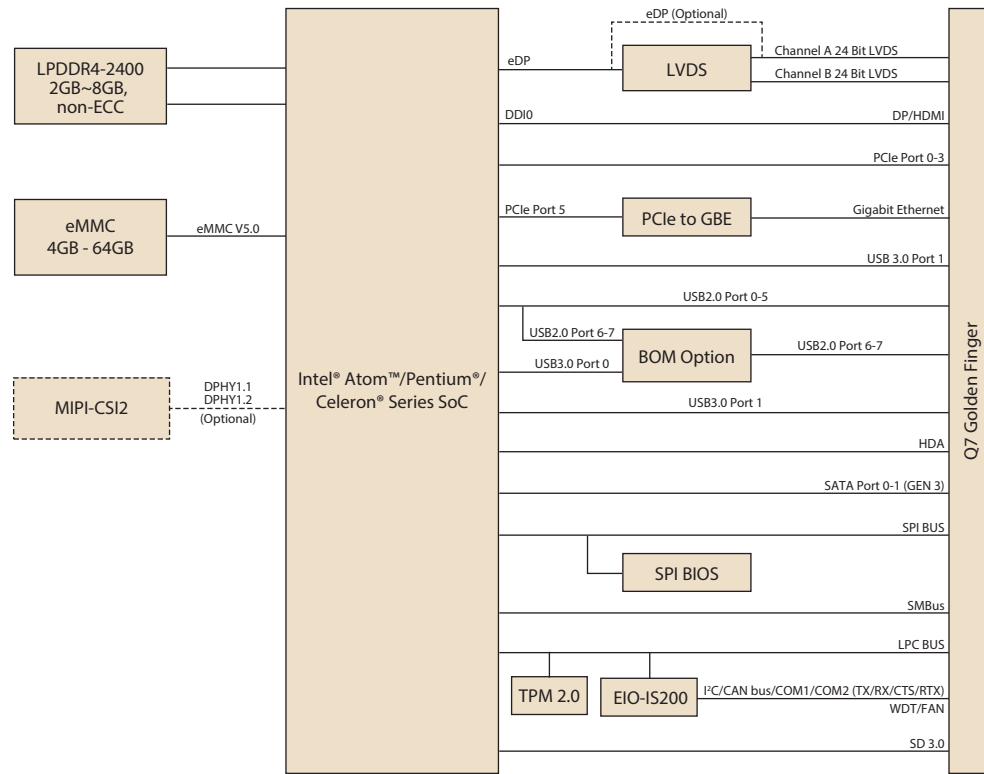
- BIOS flash
- Monitoring
- Embedded Security ID



Specifications

Compliance	Form-Factor	QSeven 70 x 70 mm				
	Pin-out Type	QSeven 2.1				
Platform	Processor	Pentium® N4200	Celeron N3350	Atom X7-E3950	Atom X5-E3940	Atom X5-E3930
	Base Frequency	1.1GHz	1.1GHz	1.6GHz	1.6GHz	1.3GHz
	Burst Frequency	2.5GHz	2.4GHz	2.0GHz	1.8GHz	1.8GHz
	Core/Tread	4 / 4	2 / 2	4 / 4	4 / 4	2 / 2
	LLC	2MB	2MB	2MB	2MB	2MB
	CPU TDP	6W	6W	12W	9W	6W
	Chipset	N/A				
Memory	BIOS	AMI UEFI BIOS @ 128 Mb				
	Technology	LPDDR4-2400				
	ECC Support	Not support				
	Channel/Socket	Dual Channel / Onboard Memory				
Graphics	Max. Capacity	Up to 8GB				
	Controller	Intel® HD Graphics				
	Base/Turbo Freq.	200/750MHz	200/650MHz	500/650MHz	400/600MHz	400/550MHz
	Graphics Video Max. Memory	8GB	8GB	2GB	2GB	2GB
	3D/HW Acceleration	DX (9.3, 10, 11.3, 12), OpenGL 4.3, OGL ES 3.0, OpenCL 2.0 HW Decode: HEVC/H.265, H.264, MVC, VP8, VP9, MPEG2, VC-1, WMV9, JPEG/MJPEG HW Encode: HEVC/H.265, H.264, MVC, VP8, JPEG/MJPEG				
Display	LCD	Dual Channel 18/24-bit LVDS, up to 1920 x 1200				
	DDI	1 DDI port supports HDMI/DP HDMI 1.4b: up to 3840 x 2160 @ 30Hz DP 1.2: up to 4096 x 2160 @ 60Hz				
	Multiple Display	Dual Display				
Expansion	PCI Express x1	4 PCIe x1 (or 1 PCIe x4)				
	Audio Interface	HD Audio				
	LPC	Yes				
Serial Bus	SMBus	Yes				
	I²C Bus	Yes				
Ethernet	Controller	Intel® i211AT				
I/O	Speed	10/100/1000 Mbps				
	Onboard Storage	eMMC/SATA SSD	eMMC5.0, 4GB to 64GB			
	SATA	2 Ports, Support Gen3 (6Gb/s) and Gen2 (3 Gb/s) or Gen 1(1.5 Gb/s)				
	USB3.0	1 Port (up to 2 Ports by BOM option)				
	USB2.0	8 Ports				
	USB Client	N/A (up to 1 Port by BOM option)				
	SPI Bus	Support SPI BIOS EEPROM				
	GPIO	N/A				
	SDIO/SDXC	Support SD 3.0				
	Watchdog	65536 level, 0 ~ 65535 sec				
Power	COM Port	2 Ports (4-wire COM 1 port, 2-wire COM 1 port)				
	TPM	Yes				
	MIPI-CSI	Optional				
	CAN Bus	Yes				
	Smart Fan	1 Ports				
	Type	ATX: Vin, VSB, AT: Vin				
	Supply Voltage	Vin: 5V±5%, VSB: 5V±5%, RTC Battery: 2.0-3.3V				
Power Consumption	TBD					
Environment	Temperature	Operating Standard: 0 ~ 60 °C (32 ~ 140 °F) Extend Temp.: -40 ~ 85 °C (-40 ~ 185 °F) Storage: -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	70 x 70 mm (2.75" x 2.75")				

Block Diagram



Ordering Information

Part No.	CPU	Freq.	Core	CPU TDP	Memory	eMMC	Thermal Solution	Operating Temperature
SOM-3569CN0C-S2A1	Pentium N4200	1.1GHz	4C	6W	4GB	N/A	Passive	0 ~ 60 °C
SOM-3569CN0C-S1A1	Celeron N3350	1.1GHz	2C	6W	4GB	N/A	Passive	0 ~ 60 °C
SOM-3569CNBC-S7A1	Atom E3950	1.6GHz	4C	12W	4GB	32GB	Passive	0 ~ 60 °C
SOM-3569CN0C-S6A1	Atom E3940	1.6GHz	4C	9W	4GB	N/A	Passive	0 ~ 60 °C
SOM-3569CN0C-S3A1	Atom E3930	1.3GHz	2C	6W	4GB	N/A	Passive	0 ~ 60 °C

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

Packing List

Part No.	Description	Quantity
-	SOM-3569 Qseven CPU Module	1
1960083260N001	SOM-3569 non-I-APL Heatspreader (N4200 & N3350)	1
1960083261N001	SOM-3569 I-APL Heatspreader (E3930, E3940 & E3950)	1

Development Board

Part No.	Description
SOM-DB3520-00A1E	Qseven Development Board

Optional Accessories

Part No.	Description
1960058145N001	Semi-Heatsink, 70L x 63W x 13.2H (0 ~ 60 °C)
1960061089N001	Semi-Heatsink, 70L x 63W x 34H (-40 ~ 85 °C)

Embedded OS

OS	Part No.	Description
WIN10	20706WX6VS0000	img W10 16VL SOM-3569 64b 1701 ENU