

SOM-3568

Intel® Pentium®/Celeron® N3000 Series and Atom Series QSeven CPU Module

NEW



Features

- Intel® Pentium®/Celeron® N3000 Series and Atom™ SoC
- Qseven® 2.1 Specification
- Onboard DDR3L up to 8GB, onboard eMMC up to 32GB
- Support HEVC/H.265, H.264 MPEG2 HW Decode
- GbE, 3 PCIe1, 2 USB3.0, 5 USB2.0
- Supports iManager, and Embedded Software APIs

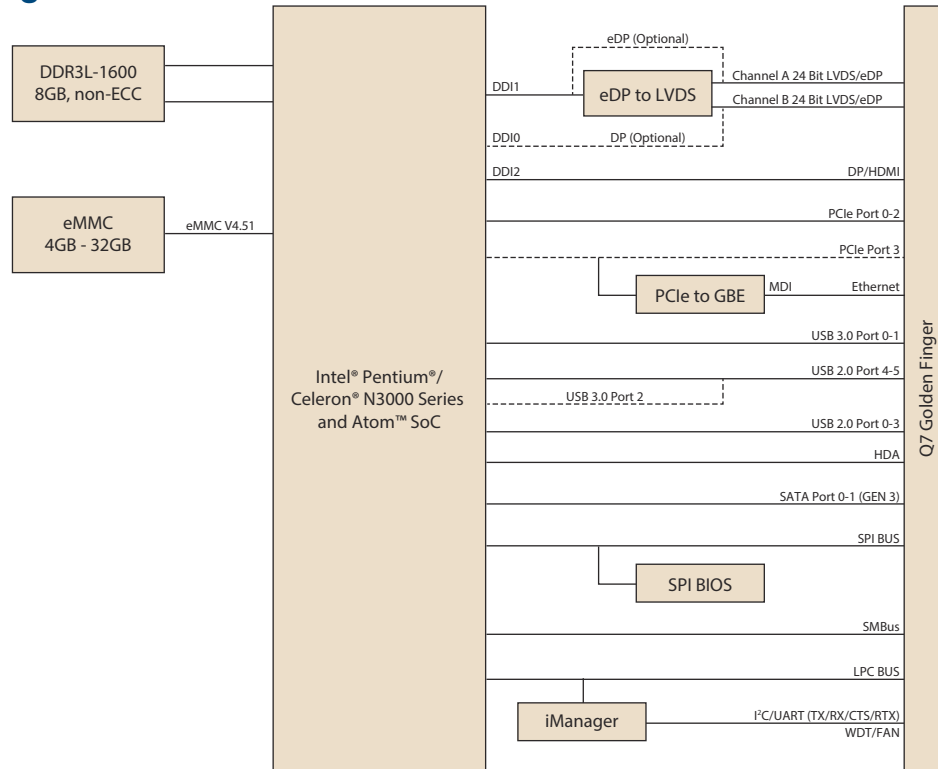
Software APIs: Watchdog, I²C, SMBus, H/W Monitor, GPIO, Brightness Control

Utilities: BIOS flash, Monitoring, Embedded Security ID

Specifications

Compliance	Form-Factor	QSeven 70 x 70 mm				
	Pin-out Type	QSeven R2.1				
Platform	Processor	Pentium® N3710	Celeron® N3160	Celeron® N3060	Celeron® N3010	Atom™ X5-E8000
	Base Frequency	1.6GHz	1.6GHz	1.6GHz	1.04GHz	1.04GHz
	Burst Frequency	2.56GHz	2.24GHz	2.48GHz	2.24GHz	2GHz
	Core/Tread	4/4	4/4	2/2	2/2	4/4
	LLC	2MB	2MB	2MB	2MB	2MB
	CPU TDP	6W	6W	6W	4W	5W
	Chipset	N/A				
Memory	BIOS	AMI UEFI BIOS @ 64Mb				
	Technology	DDR3L-1600				
	ECC Support	Not support				
	Channel/Socket	Dual Channel / Onboard Memory				
Graphics	Max. Capacity	Up to 8GB				
	Controller	Intel® HD Graphics				
	Base/Turbo Freq.	400/700MHz	320/640MHz	320/600MHz	320/600MHz	320/320MHz
	Graphics Memory	TBD				
Display	3D/HW Acceleration	DX 11.1, OpenGL 4.2, OpenGL ES 3.0, OpenCL 1.2, HW Decode: HEVC (H.265) @ L5, H.264 @ 5.2, MPEG2, MVC, VC-1, WMV9, JPEG/MJPEG, VP8 HW Encode: H.264 @ 5.1, MVC, JPEG/MJPEG				
	LCD	LVDS: Dual channel 18/24-bit, up to 1920 x 1200 Optional eDP 1.4: Up to 2560 x 1440 @ 60Hz 24bpp 1 DDI port supports HDMI/DP/DVI				
	DDI	HDMI 1.4b: up to 3840 x 2160 @ 30Hz or 2560 x 1600 @ 60Hz, 24bpp DP 1.1a: up to 3840 x 2160 @ 30Hz or 2560 x 1600 @ 60Hz, 24bpp DVI: up to 1920 x 1200 @ 60Hz				
Expansion	Multiple Display	Triple independent display				
	PCI Express x1	3 PCIe1 (option 1 PCIe4 without LAN)				
	Audio Interface	HD Audio				
Serial Bus	LPC	Yes				
	SMBus	Yes				
Ethernet	I²C Bus	Yes				
	Controller	Intel® i211AT				
Onboard Storage	Speed	10/100/1000 Mbps				
	eMMC/SATA SSD	eMMC4.51, 4GB to 32GB				
I/O	SATA	2 Ports, Support Gen3.1 (6Gb/s) and Gen2 (3 Gb/s) or Gen 1(1.5 Gb/s)				
	USB3.0	2 Ports				
	USB2.0	5 Ports				
	USB Client	N/A				
	SPI Bus	Support SPI BIOS EEPROM				
	GPIO	N/A				
	SDIO/SDXC	N/A				
	Watchdog	65536 level, 0 ~ 65535 sec				
	COM Port	4-wire COM 2 Ports; optional mux with GPIO 8-bit				
	TPM	N/A				
	MIPI-CSI	N/A				
	CAN Bus	N/A				
	Smart Fan	1 Ports				
Power	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	0 ~ 60° C (32 ~ 140° 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.	SoC	Base Freq. / Burst Freq.	Core	LLC	CPU TDP	Onboard Memory	Onboard Flash	Thermal Solution	Operating Temperature
SOM-3568CMBC-S6A1E	Intel® Pentium® N3710	1.6GHz / 2.56GHz	4	2MB	6W	4GB	MLC 32GB	Passive	0 ~ 60° C
SOM-3568BM0C-S6A1E	Intel® Celeron® N3160	1.6GHz / 2.24GHz	4	2MB	6W	2GB	N/A	Passive	0 ~ 60° C
SOM-3568BM0C-S5A1E	Intel® Celeron® N3060	1.6GHz / 2.48GHz	2	2MB	6W	2GB	N/A	Passive	0 ~ 60° C
SOM-3568BM0C-S0A1E	Intel® Celeron® N3010	1.04GHz / 2.24GHz	2	2MB	4W	2GB	N/A	Passive	0 ~ 60° C
SOM-3568BM0C-S1A1E	Intel® Atom™ X5-E8000	1.04GHz / 2GHz	4	2MB	5W	2GB	N/A	Passive	0 ~ 60° C

Packing List

Part No.	Description	Quantity
-	SOM-3568 CPU Module	1
1960075743N001	Heatspreader	1

Development Board

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

Optional Accessories

Part No.	Description
1960061089N001	Heatsink I- 70x63x34-SC
96LEDK-A084SV45NB2	8.4" LED PANEL 450N 800X600(G) G084SN05 V9(V901)
96CB-L2040PAB4	LVDS CABLE 20-40PIN 50CM AB4 TYPE(G) (18BIT)
96CB-E0405PIB3	LED CABLE 4-5PIN 50CM IB3 TYPE(G)
IDK-2121WN-K2FHA2E	21.5" LED panel 1200N 1920x1080(G)
96CB-L3040PAF5	LVDS CABLE 30-40PIN 50CM AF5 TYPE(G)
96CB-E0605HAB1	LED CABLE 6-5PIN 50CM AB1 TYPE(G)

Embedded OS

OS	Part No.	Description
Win 10Ent	2070014542	img Win10Ent SOM-3568 X64 Eng
WE8.1 IndustryPro	2070014543	img WE8.1 IndustryPro SOM-3568 X64 Eng