

# SOM-7569

## Intel® Atom™ E3900 & Pentium™ and Celeron™ N Series Processors COM-Express Mini Module

NEW



### Features

- COM R.2.1 Type 10 Mini Module
- Intel® Atom™ E3900 & Pentium™ and Celeron™ N Series Processors
- Max 8GB DDR3L onboard memory (support ECC, E3900 SKU only)
- Dual Display: LVDS, HDMI/DisplayPort
- onboard eMMC(default 32GB), TPM2.0
- Supports H.264/AVC, H.265/HEVC, VP9, VP8 HW DECODE
- Supports -40 ~ 85 °C industrial operating temperature
- iManager and Embedded Software APIs

**Software APIs:**

- Watchdog
- I<sup>2</sup>C
- SMBus
- H/W Monitor
- GPIO
- Brightness Control

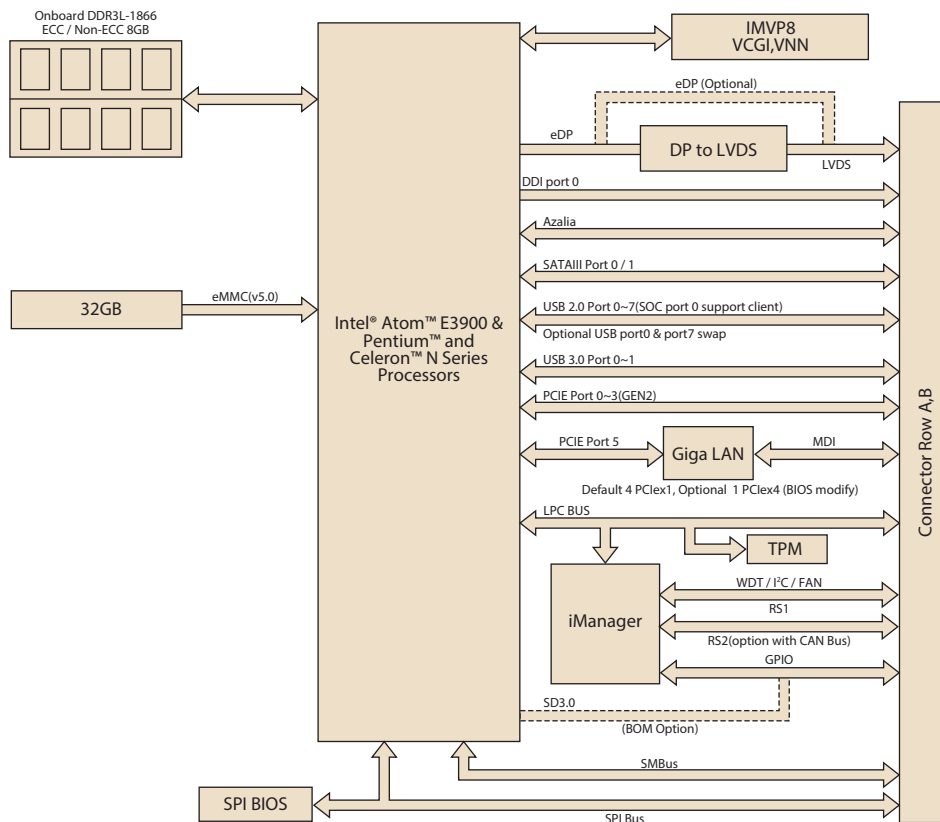
**Utilities:**

- BIOS flash
- Monitoring
- Embedded Security ID

### Specifications

Form Factor	Form Factor	COM-Express 2.1				
	Pin-out Type	Mini Module, Type 10 Pin-out				
Processor System	SoC	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
	Burst Frequency	2GHz	1.8GHz	1.8GHz	2.5GHz	2.4GHz
	Core/Thread	4 / 4	4 / 4	2 / 2	4 / 4	2 / 2
	LLC	2MB	2MB	2MB	2MB	2MB
	CPU TDP	12W	9.5W	6.5W	6W	6W
	Chipset	integrated in CPU				
Memory	BIOS	AMI UEFI BIOS @ 64Mb				
	Technology	One channel, up to DDR3L 1866				
	ECC Support	Yes (E3900 SKU only)				
	Max. Capacity	8GB				
Graphics	Socket	Onboard DDR				
	Controller	Intel® HD Graphics 505	Intel® HD Graphics 500	Intel® HD Graphics 500	Intel® HD Graphics 505	Intel® HD Graphics 500
	Graphics Burst 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: Single-channel 18/24-bit, up to 1366 x 768 eDP: Up to 4096 x 2160 @ 60 Hz			
DD0 (HDMI/DisplayPort)		HDMI 1.4b: Upto 3840 x 2160 @ 30 Hz DP 1.2: Upto 4096 x 2160 @ 60 Hz				
Dual Display		LVDS, HDMI/DisplayPort eDP, HDMI/DisplayPort (optional)				
Expansion	PCI Express x1	4 PCIe x1, 1 PCIe x4 (optional)				
	Audio Interface	HD Audio				
Serial Bus	LPC	Yes				
	SMBus	Yes				
	I <sup>2</sup> C Bus	Yes				
Ethernet	Controller	Intel® i210IT/i210AT				
	Speed	10/100/1000 Mbps				
I/O & Features	SATA	2 Ports, Support Gen 1(1.5 Gb/s) or Gen2 (3 Gb/s) and Gen3.1 (6Gb/s)				
	Onboard Storage	32GB eMMC 5.0 interface				
	USB3.0	2 Ports				
	USB2.0	8 Ports				
	Audio	Intel® HD Audio				
	GPIO	8-bit GPIO				
	SDIO	Optional				
	Watchdog	65536 level, 0 ~ 65535 sec				
	COM Port	2 Ports (2-Wire)				
	CAN Bus	1 CAN Bus (option)				
	Express Card	Yes				
Power	TPM	TPM2.0				
	Smart Fan	2 Ports; 1 Port on COM Module, Support 12V Fan, 1 Port on Carrier Board				
	Type	ATX, AT				
	Supply Voltage	ATX (Vin 4.75-20V, Vsb 4.75-5.25V) AT (Vin 4.75-20V)				
Environment	Power Consumption (Max.)	Max. 12.886Watt. (N4200), 11.999Watt. (N3350)				
	Power Consumption (Idle)	Idle 2.555Watt.(N4200), 2.783Watt. (N3350)				
	Temperature	Operating: 0 ~ 60 °C (32 ~ 140 °F), Storage: -40 ~ 85 °C (-40 ~ 185 °F) Extend: -40 ~ 85 °C (-40 ~ 185 °F) (E3900 SKU only)				
	Humidity	Operating: 40 °C @ 95% relative humidity, non-condensing Storage: 60 °C @ 95% relative humidity, non-condensing				
Mechanical	Vibration Resistance	3.5 Grms				
	Dimensions	84 x 55 mm (3.3" x 2.17")				

## Block Diagram



## Ordering Information

Part No.	CPU	Core	Base Freq.	CPU TDP	LLC	Onboard DDR3L	ECC support	Onboard eMMC	Power	Thermal solution	Operating Temp.
SOM-7569BCBCC-S6B1	X7-E3950	4	1.6GHz	12W	2MB	4GB	ECC	32GB	AT/ATX	Passive	0 ~ 60 °C
SOM-7569BCBCC-S5B1	X5-E3940	4	1.6GHz	9.5W	2MB	4GB	ECC	32GB	AT/ATX	Passive	0 ~ 60 °C
SOM-7569BC0CC-S3B1	X5-E3930	2	1.3GHz	6.5W	2MB	4GB	ECC	N/A	AT/ATX	Passive	0 ~ 60 °C
SOM-7569BNBCC-S6B1	X7-E3950	4	1.6GHz	12W	2MB	4GB	non ECC	32GB	AT/ATX	Passive	0 ~ 60 °C
SOM-7569CCBCC-S6B1	X7-E3950	4	1.6GHz	12W	2MB	8GB	ECC	32GB	AT/ATX	Passive	0 ~ 60 °C
SOM-7569BCBXC-S6B1	X7-E3950	4	1.6GHz	12W	2MB	4GB	ECC	32GB	AT/ATX	Passive	-40 ~ 85 °C
SOM-7569BCBXC-S5B1	X5-E3940	4	1.6GHz	9.5W	2MB	4GB	ECC	32GB	AT/ATX	Passive	-40 ~ 85 °C
SOM-7569BC0XC-S3B1	X5-E3930	2	1.3GHz	6.5W	2MB	4GB	ECC	N/A	AT/ATX	Passive	-40 ~ 85 °C
SOM-7569CCBXC-S6B1	X7-E3950	4	1.6GHz	12W	2MB	8GB i-grade	ECC	32GB	AT/ATX	Passive	-40 ~ 85 °C
SOM-7569CCBXC-S5B1	X5-E3940	4	1.6GHz	9.5W	2MB	8GB i-grade	ECC	32GB	AT/ATX	Passive	-40 ~ 85 °C
SOM-7569CCBXC-S3B1	X5-E3930	2	1.3GHz	6.5W	2MB	8GB i-grade	ECC	32GB	AT/ATX	Passive	-40 ~ 85 °C

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

## Packing List

Part No.	Description	Quantity
-	SOM-5992 COM module	1
1960079610T000	Heat spreader (when use Atom E3900 SKU)	1

## Development Board

Part No.	Description
SOM-DB5800-U0A2E	Development Board for COM Express® R2.1 Type 6 / 10 Modules

## Optional Accessories

Part No.	Description
1960056280N001	Semi-Heatsink 84L x 55W x 13.2H mm (0 ~ 60° C)
1960050950N001	Semi-Heatsink 84L x 55W x 34H mm (85° C)
96LEDK-1057VG50NA1	5.7" LED PANEL 500N 640X480(G)
96LEDK-A084SV45NB2	8.4" LED PANEL 450N 800X600(G) G084SN05 V9
96LEDK-C150XG40NG1	15" LED PANEL 400N 1024X768(G) G150XGE-L04

## Embedded OS

OS	Part Number	Description
Win10	2070015218	img W10 16HL SOM-7569 64b 1701 ENU
Win10	2070015219	img W10 16VL SOM-7569 64b 1701 ENU
Win10	2070015220	img W10 16EL SOM-7569 64b 1701 ENU