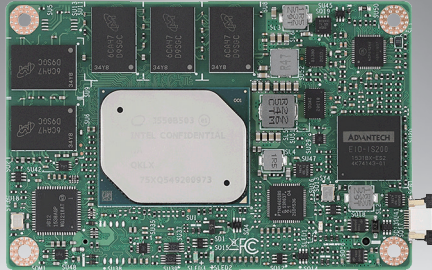


SOM-7569

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



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 (optional)
- 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:



Utilities:



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 N4200E	Celeron N3350E
	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, DDR3L up to 1866(non-ECC), up to 1600(ECC)				
	ECC Support	Yes (E3900 SKU only)				
	Max. Capacity	8GB				
Graphics	Socket	Memory down				
	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				
	LPC	Yes				
Serial Bus	SMBus	Yes				
	I²C 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 (optional)				
	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.)	Burn in: (E3950)14.73W; (N4200)12.89W				
	Power Consumption (Idle)	Idle: (E3950) 4.68W; (N4200) 2.56W				
	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)				
Mechanical	Humidity	Operating: 40 °C @ 95% relative humidity, non-condensing Storage: 60 °C @ 95% relative humidity, non-condensing				
	Vibration Resistance	3.5 Grms				
Mechanical	Dimensions	84 x 55 mm (3.3" x 2.17")				

Block Diagram

