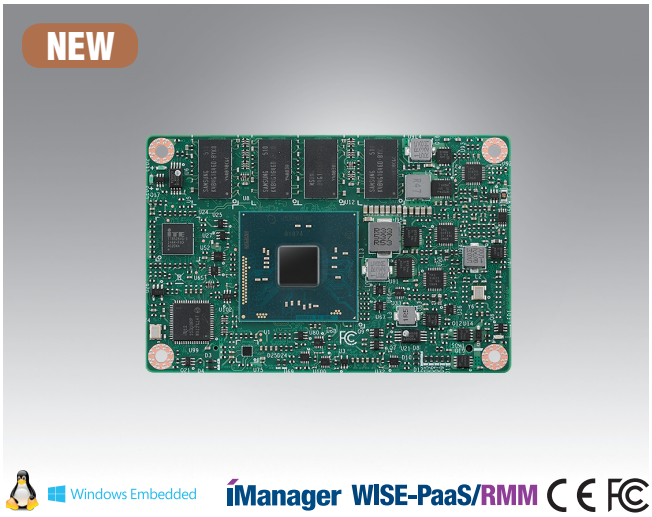
SOM-7568

Intel® Pentium®/Celeron® N3000 Series and Atom Series COM Express Mini Module Type 10



Windows Embedded iManager WISE-PaaS/RMM CE FC

Features

- Intel® Pentium®/Celeron® N3000 Series and Atom™ SoC
- Dual Channel DDR3L 1600 non-ECC onboard memory up to 8 GB
- Support HEVC/H.265, H.264 MPEG2 HW Decode
- Support rich display interface: LVDS/eDP, HDMI/DisplayPort/DVI
- iManager WISE-PaaS/RMM, and Embedded Software APIs

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

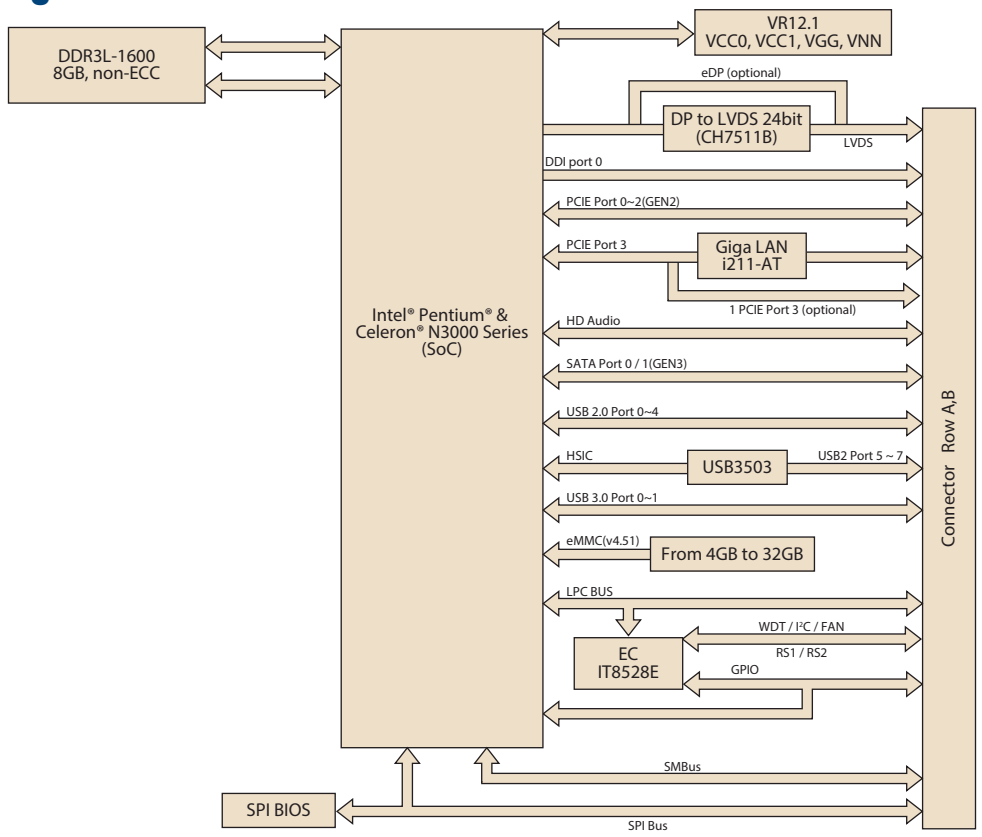
Specifications

Form Factor	Form Factor	COM Express Mini Module Compatible				
	Pin-out Type	COM Express R2.1 Type 10 Pin-out Compatible				
Processor System	SoC	Pentium® N3710	Celeron® N3160	Celeron® 3060	Celeron® N3010	Atom™ X5-E8000
	Base Frequency	1.6 GHz	1.6 GHz	1.6 GHz	1.04 GHz	1.04 GHz
	Burst Frequency	2.56 GHz	2.24 GHz	2.48 GHz	2.24 GHz	2 GHz
	Core/Thread	4/4	4/4	2/2	2/2	4/4
	LLC	2 MB	2 MB	2 MB	2 MB	2 MB
	CPU TDP	6W	6W	6W	4W	5W
	BIOS	AMI UEFI BIOS @ 64Mb				
Memory	Technology	Onboard DDR3L-1600				
	ECC Support	N/A				
	Channel	Dual-Channel				
	Max. Capacity	8GB				
Graphics	Controller	Intel® HD Graphics	Intel® HD Graphics	Intel® HD Graphics	Intel® HD Graphics	Intel® HD Graphics
	Base Freq.	400 MHz	320 MHz	320 MHz	320 MHz	320 MHz
	Graphics Burst Frequency	700 MHz	640 MHz	600 MHz	600 MHz	320 MHz
	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				
Display	LCD	LVDS: Single channel 18/24-bit, up to 1366 x 768 Optional eDP: Up to 3840 x 2160 @ 30Hz or 2560 x 1600 @ 60Hz; eDP Version 1.4				
	DDI	HDMI & DisplayPort: Up to 3840 x 2160 @ 30Hz or 2560 x 1600 @ 60Hz, 24 bpp; HDMI Version 1.4b; DisplayPort Version 1.1a				
	Multiple Display	LVDS, HDMI/DisplayPort Optional: eDP, HDMI/DisplayPort				
Expansion	PCI Express x1	3 PCIex1; (Optional 1 PCIex4 without LAN)				
	Audio Interface	HD Audio				
	LPC	Yes				
Serial Bus	SMBus	Yes				
	I²C Bus	Yes				
Ethernet	Controller	Intel® i211AT				
	Speed	10/100/1000 Mbps				
Onboard Storage	eMMC/SATA SSD	eMMC4.51, 4GB to 32GB				
I/O	SATA	2 Ports, Support Gen3 (6Gb/s) and Gen2 (3 Gb/s) or Gen 1(1.5 Gb/s)				
	USB3.0	2 Ports				
	USB2.0	8 Ports				
	SPI Bus	Yes				
	SDIO/SDXC	Support 4 GPI and 4 GPO				
	GPIO	8-bit GPIO				
	Watchdog	65536 level, 0 ~ 65535 sec				
	COM Port	2 Ports (2-Wire)				
	Express Card	2 Ports				
	Smart Fan	2 Ports; 1 Port on COM Module. Support 12V Fan, 1 Port on Carrier Board				
Power	Type	ATX: Vin, VSB, AT: Vin				
	Supply Voltage	Vin: 4.75 (5-5%) ~ 20V (19+5%), VSB: 5V±5%, RTC Battery: 2.0-3.3V				
	Power Consumption (Max.)	Max. 6.99Watt. (N3700)				
	Power Consumption (Idle)	Idle 2.64Watt. (N3700)				
Environment	Temperature	Operating: 0 ~ 60° C (32 ~ 140° F), with 0.7m/s air flow 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	84 x 55 mm (3.3" x 2.17")				

All product specifications are subject to change without notice

Last updated : 2-May-2017

Block Diagram



Ordering Information

Part No.	SoC	CPU Stepping	Base / Burst Frequency	Core	LLC	CPU TDP	Onboard Memory	Onboard Flash	Thermal Solution	Operating Temperature
SOM-7568CMBC-S7A1E	Intel® Pentium® N3710	D	1.6GHz / 2.56GHz	4	2MB	6W	4GB	MLC 32GB	Passive	0 ~ 60° C
SOM-7568BM0C-S6A1E	Intel® Celeron® N3160	D	1.6GHz / 2.24GHz	4	2MB	6W	2GB	N/A	Passive	0 ~ 60° C
SOM-7568BM0C-S5A1E	Intel® Celeron® N3060	D	1.6GHz / 2.48GHz	2	2MB	6W	2GB	N/A	Passive	0 ~ 60° C
SOM-7568BM0C-S0A1E	Intel® Celeron® N3010	D	1.04GHz / 2.24GHz	2	2MB	4W	2GB	N/A	Passive	0 ~ 60° C
SOM-7568BM0C-S1A1E	Intel® Atom™ X5-E8000	D	1.04GHz / 2GHz	4	2MB	5W	2GB	N/A	Passive	0 ~ 60° C

Note: Intel C stepping CPU might be EOL after Intel D stepping CPU ready.

Packing List

Part No.	Description	Quantity
-	SOM-7568 CPU Module	1
1960072329N001	Heatspreader	1

Development Board

Part No.	Description
SOM-DB5800-U0A2E	COMe Devel. Board Type10 pint-out

Optional Accessories

Part No.	Description
1960056280N001	Semi-Heatsink 84L x 55W x 13.2H mm (0 ~ 60° C)
96LEDK-I057VG50NA1	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
96LEDK-A170SX35NF1	17" LED 350N 1280X1024(G) G170EG01 V1

Embedded OS

OS	Part No.	Description
WE8.1 IndustryPro	2070014373	img WE8.1 IndustryPro SOM-7568 X64 V1.0 EN
WES7P	2070014003	img WES7P SOM-7568 X64 V5.6.6 Eng