

SOM-2532

Intel Atom® x6000, Pentium® and Celeron® x6000 Series Processor SMARC Module

NEW



Features

- Intel Atom® x6000, Pentium® and Celeron® x6000 Series processor
- SMARC2.1.1 pinout, small size
- Dual-CH LPDDR4 3200MT/s up to 16GB, support IB ECC
- Triple displays up to 4K2K (DP++, HDMI, LVDS/eDP/MIPI-DSI)
- Multiple I/O expansion: PCIe gen3, USB3.2 Gen2, USB2.0, SATA
- On board eMMC up to 64GB
- Supports iManager, Embedded Software APIs and Wise-DeviceOn

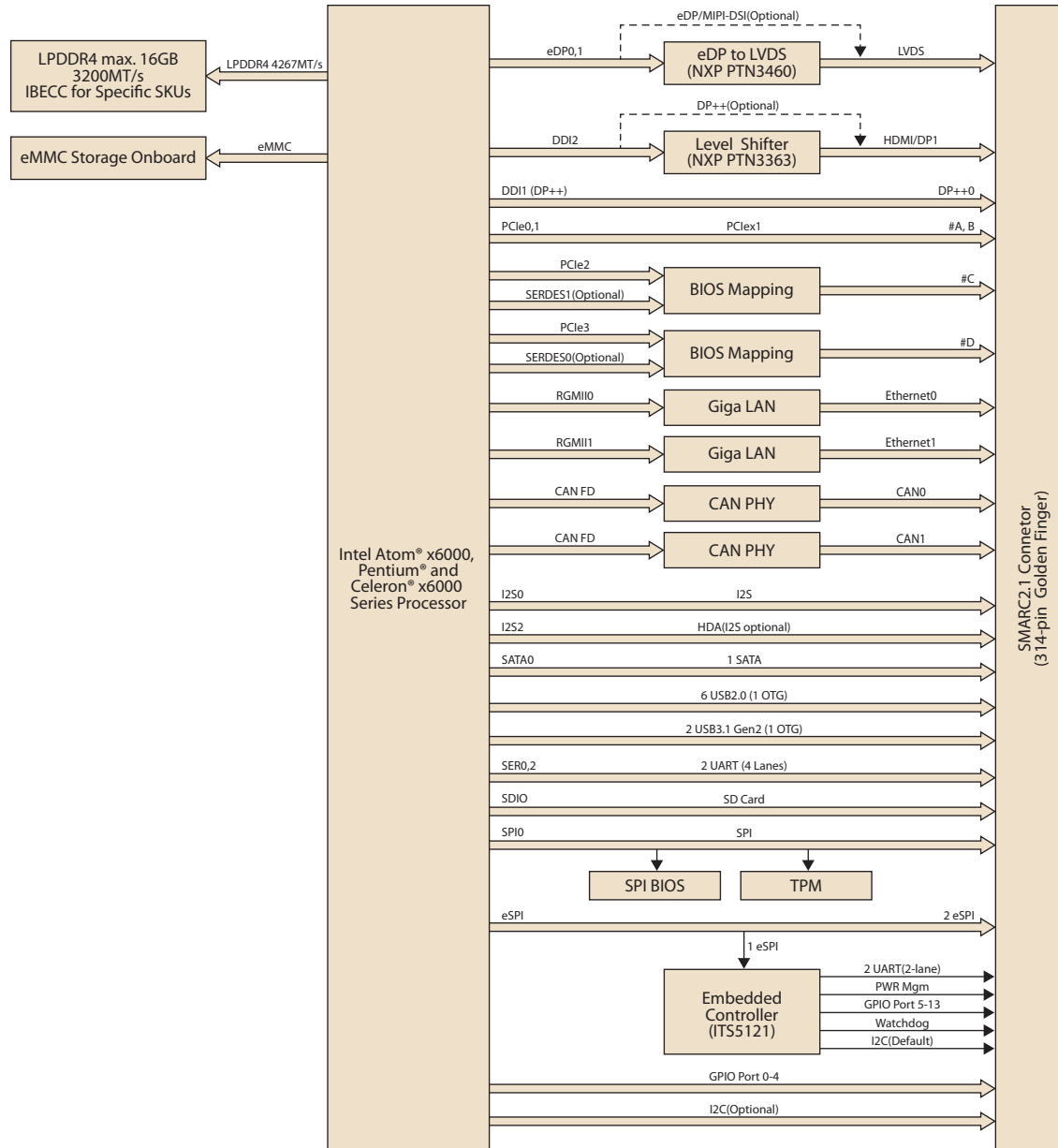


iManager WISE-DeviceOn

Specifications

Form Factor	Form Factor	SMARC2.1.1					
	PCB Size	82 mm x 50 mm					
Processor System	CPU	Atom® X6425E	Atom® X6425RE	Atom® x6200FE	Celeron® J6413	Pentium® N6415	
	Base Frequency	1.8 GHz	1.9 GHz	1.0 GHz	1.8 GHz	1.2 GHz	
	Burst Frequency	3.0 GHz	N/A	N/A	3.0 GHz	3.0 GHz	
	Cores	4	4	2	4	4	
	Cache	1.5MB L2 Cache	1.5MB L2 Cache	1 MB L2 Cache	1.5MB L2 Cache	1.5MB L2 Cache	
	CPU TDP	12W	12W	4.5W	10W	6.5W	
	IB ECC	Yes	Yes	Yes	N/A	N/A	
	BIOS	AMI UEFI 256Mbit					
Memory	Technology	LPDDR4	LPDDR4	LPDDR4	LPDDR4	LPDDR4	
	Speed	3200	3200	3200	3200	3200	
	ECC Support	IB ECC supported by Specific CPU SKUs					
	Max. Capacity	Max. 16GB					
	Channel / Socket	Dual channel / Memory down					
Graphics	Controller	Intel® UHD Graphics for 10th Gen Intel® Processors					
	Base Frequency	500MHz	400MHz	N/A	400MHz	350MHz	
	Burst Frequency	750 MHz	N/A	N/A	800MHz	800MHz	
	3D/HW Acceleration	OpenGL® 4.5, DirectX® 12, OpenCL® 1.2, Vulkan 1.1					
Display	LCD (LVDS/eDP/MIPI-DSI)	1 Port LVDS: 1920 x 1200 @ 60Hz/eDP: 4096 x 2160 @ 60Hz (Optional/MIPI-DSI)					
	DP++	1 Port (up to 4096 x 2160 @ 60 Hz)					
	HDMI	1 Port HDMI 1.4b: Up to 3840 x 2160 @ 30 Hz, DP 1.2: Up to 4096 x 2160 @ 60 Hz (Optional)					
	Multiple Display	Triple Simultaneous Independent Display					
Expansion	PCI Express x1 (Gen3)	4 PCIe1 (PCIe2 colay SERDES 1, PCIe3 colay SERDES 0 by BOM option)					
	Audio Interface	Intel HD Audio/ up to 2 I2S					
	eSPI	eSPI					
Serial Bus	SMBus	N/A					
	I2C Bus	Yes					
Ethernet	Gigabit	2 Ports I210 (10/100/1000BASE-T), Support TSN by specific SKUs					
	SATA3.0	1 Port (6 Gbps)					
I/O	USB3.2 (Gen2)	2 Ports (10 Gbps)					
	USB2.0	6 Ports (480 Mbps)					
	SPI Bus	Yes. For BIOS EEPROM and TPM					
	Onboard Storage	eMMC (Default 32GB, up to 64GB)					
	GPIO	14-bit					
	Watchdog	65536 level, 0 – 65535 sec					
	COM Port	4 Ports (2 Ports 4-wire / 2 Ports 2-wire)					
	TPM	Yes					
	CAN-FD	2 Ports (Only by Linux)					
	Smart Fan	N/A					
	Power	Type	ATX/ATX: Vin				
		Supply Voltage	Vin: 4.75-5.25V, RTC Battery: 2.0V ~ 3.3V				
		Power Consumption (Max.)	TBD				
Power Consumption (Idle)		TBD					
Environment	Operating Temperature	Standard: 0 ~ 60 °C (32 ~ 140 °F) Extend: -40 ~ 85 °C (-40 ~ 185 °F)					
	Storage Temperature	-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	82 mm x 50 mm					

Block Diagram



Ordering Information

Part No.	CPU SKU	CPU	Core	Graphics	Base Freq.	Max. Boost Freq.	GFX HFM	GFX Burst Mode	CPU TDP	Onboard Memory	EMMC	IBECC	TCC	FUSA	Thermal solution	Operating Temp.
SOM-2532DNCX-S9A1	SKU10	Atom® x6425RE	4	32EU	1.9GHz	N/A	400MHz	N/A	12W	16GB	64GB	Yes	Yes	No	Passive	-40 ~ 85 °C
SOM-2532DNCX-S8A1	SKU7	Atom® x6425E	4	32EU	1.8GHz	3.0GHz	500MHz	750MHz	12W	16GB	64GB	Yes	No	No	Passive	-40 ~ 85 °C
SOM-2532DNBX-S5A1	SKU6	Atom® x6413E	4	16EU	1.5GHz	3.0GHz	500MHz	750MHz	9W	16GB	32GB	Yes	No	No	Passive	-40 ~ 85 °C
SOM-2532DNBX-S2A1	SKU5	Atom® X6211E	2	16EU	1.2GHz	3.0GHz	350MHz	750MHz	6W	16GB	32GB	Yes	No	No	Passive	-40 ~ 85 °C
SOM-2532DNAX-S0A1	SKU12	Atom® x6200FE	2	N/A	1.0GHz	N/A	N/A	N/A	4.5W	16GB	16GB	Yes	Yes	Yes	Passive	-40 ~ 85 °C
SOM-2532CCBCA-S9A1	SKU10	Atom® x6425RE	4	32EU	1.9GHz	N/A	400MHz	N/A	12W	8GB	32GB	Yes	Yes	No	Passive	0 ~ 60 °C
SOM-2532DCCCA-S8A1	SKU7	Atom® x6425E	4	32EU	1.8GHz	3.0GHz	500MHz	750MHz	12W	16GB	64GB	Yes	No	No	Passive	0 ~ 60 °C
SOM-2532CCBCA-S8A1	SKU7	Atom® x6425E	4	32EU	1.8GHz	3.0GHz	500MHz	750MHz	12W	8GB	32GB	Yes	No	No	Passive	0 ~ 60 °C
SOM-2532CNBCA-S8A1	SKU2	Pentium® J6425	4	32EU	1.8GHz	3.0GHz	400MHz	850MHz	10W	8GB	32GB	No	No	No	Passive	0 ~ 60 °C
SOM-2532CNBCA-S5A1	SKU6	Atom® x6413E	4	16EU	1.5GHz	3.0GHz	500MHz	750MHz	9W	8GB	32GB	Yes	No	No	Passive	0 ~ 60 °C
SOM-2532CNBCA-S2A1	SKU5	Atom® X6211E	2	16EU	1.2GHz	3.0GHz	350MHz	750MHz	6W	8GB	32GB	Yes	No	No	Passive	0 ~ 60 °C
SOM-2532CNBCA-S8A1	SKU1	Celeron® J6413	4	16EU	1.8GHz	3.0GHz	400MHz	800MHz	10W	8GB	32GB	No	No	No	Passive	0 ~ 60 °C
SOM-2532CNBCB-S2A1	SKU4	Pentium® N6415	4	16EU	1.2GHz	3.0GHz	350MHz	800MHz	6.5W	8GB	32GB	No	No	No	Passive	0 ~ 60 °C
SOM-2532CNACA-S1A1	SKU12	Atom® x6200FE	2	N/A	1.0GHz	N/A	N/A	N/A	4.5W	8GB	16GB	Yes	Yes	Yes	Passive	0 ~ 60 °C

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

Optional Accessories

Part No.	Description
TBD	Semi-Heatsink

Development Board

Part No.	Description
SOM-DB2500	SMARC Development Board, SMARC2.0 & 2.1 compliance

Packing List

Part No.	Description	Quantity
-	SOM-2532 COM module	1
TBD	Heatspreader	1

Embedded OS

OS	Part No.	Description
Win10	TBD	TBD