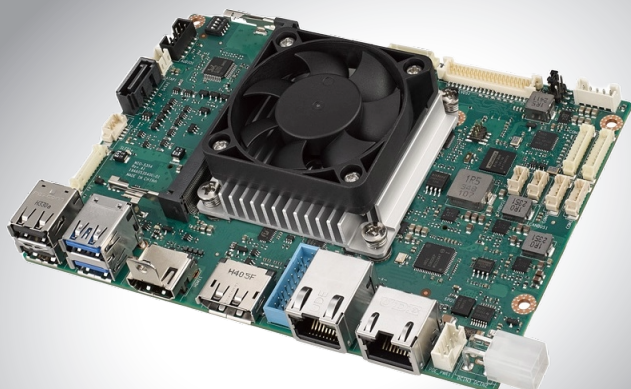


IPC-B3A5354

Intel® Atom™ x7835RE, x7433RE, x7211RE; Core™ i3-N305; Processor N97 on 3.5" SBC



Features

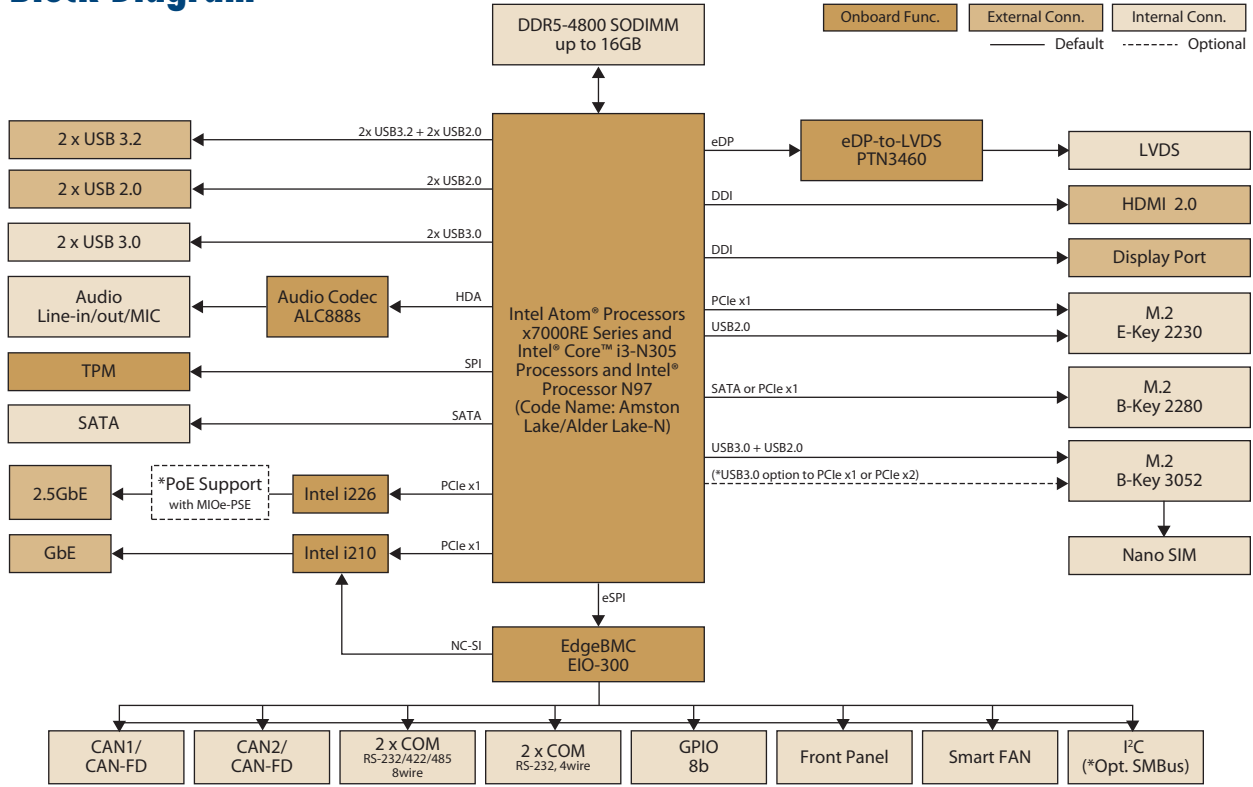
- Intel® Atom™ x7835RE, x7433RE, x7211RE, support Extend Temp.
- DDR5-4800 up to 16GB, support IB ECC by Platform
- 3 independent display: LVDS + HDMI + DP
- 2x LAN, 6x USB, 4x COM, 2x CAN-FD, SMBus/I²C, DC-in 12~24V
- Expansion: M.2 E-Key 2230, M.2 B-Key 2280 & M.2 B-Key 3052
- Supports EdgeBMC (for OOB control) & Software APIs, DeviceOn

Specifications

Platform	Processor	x7835RE	x7433RE	x7211RE	i3-N305	N97
	Max. Frequency	3.60 GHz	3.40 GHz	3.20 GHz	3.80 GHz	3.60 GHz
	Base Frequency	1.30 GHz	1.50 GHz	1.00 GHz	1.80 GHz	2.00 GHz
	Core	8	4	2	8	4
	LLC	6MB	6MB	6MB	6MB	6MB
	CPU TDP	12W	9W	6W	15W	12W
	Chipset	Intel 300 Series Chipset (SoC Integrated)				
Memory	BIOS	AMI UEFI 256Mbit				
	Technology	DDR5 4800 MT/s				
	Max. Capacity	Up to 16GB				
	Channel/Socket	Single Channel / One 262pin SODIMM Slot				
Graphics	ECC Support	Support IB ECC by Platform				
	Controller	Intel® UHD Graphics				
	Max. Frequency	1.20 GHz	1.00 GHz	1.00 GHz	1.25 GHz	1.20 GHz
	Execution Unit	32	32	16	32	24
	3D/HW Acceleration	DX12, OGL4.0, OCL1.2, HW Encode: HEVC/H265, AVC/H264, VP9, HW Decode: HEVC/H265, AVC/H264, VP9				
	LCD	1 x LVDS, Dual Channel 18/24-bit, up to 1920 x 1080				
Display I/F	HDMI/DP	1 x HDMI 2.0, up to 4096 x 2160 x 24bpp@48-60Hz 1 x DP1.4a, up to 4096 x 2304 x 36bpp@60Hz				
	Triple Display	3 simultaneous displays by LVDS + HDMI + DP				
	Controller	LAN1: i226; LAN2: i210				
Ethernet	Speed	LAN1: 2.5GbE; LAN2: GbE				
	Feature	LAN1: Optional Support PoE, PSE compliant to IEEE 802.3at (30W with power module: MIOe-PSE) LAN2: Support EdgeBMC, Out of Band remote control				
	Ethernet	2 x RJ-45				
External I/O	VGA/HDMI/DP	-/1/1				
	USB3.2/USB2.0	2/2				
Internal I/O	SATA	1 x SATA GenIII 6.0Gbps				
	USB3.0	2				
	Serial Bus	1 x I ² C (*BOM option to SMBus by request)				
	COM Port	2 x RS-232/422/485, 2 x RS-232				
	CAN Bus	2 x CAN-FD, 2M/4M/8M bit/s or CAN 2.0, 1M bit/s				
	GPIO	8-bit general purpose input output I/O				
	Audio	Realtek ALC888s, Line-in/Line-out/MIC				
	Inverter	5V @2A				
	Smart Fan	12V, 2A (4-wire)				
	Front Panel Control	Power-on, Reset, Buzzer, SATA LED, Power LED, Case Open				
	Board Feature	Watchdog Timer	65536 level, 0-65535 sec			
TPM		Discrete TPM2.0				
iManager 3.0		SW API for Hardware Monitor, Smart Fan Control, Brightness Control, I ² C, GPIO, WDT				
Expansion	M.2 E-Key	1 x E-Key 2230 (PCIe x1, USB2.0)				
	M.2 B-Key	1 x B-Key 2280 (SATA or PCIe x1)				
		1 x B-Key 3052 (USB3.0, USB2.0) w/ Nano-SIM. (*BOM option: USB3.0 to PCIe x1 or PCIe x2)				
Power	Supply Voltage	Vin: DC 12V-24V ± 10%; RTC Battery: Lithium 3V/200mAH, support w/o CMOS Battery				
	Connector	ATX 2pin 180D (*BOM Option to ATX 2pin 90D or DC-IN Jack by request)				
	Power Management	AT, ATX				
	Max. Consumption	TBC	TBC	TBC	TBC	TBC
Environment	Idle Consumption	TBC	TBC	TBC	TBC	TBC
	Temperature	Operating: Standard: 0 ~ 60 °C (32 ~ 140 °F) with 0.7m/s airflow; Extend: -40 ~ 85 °C (-40 ~ 185 °F) with 0.7m/s airflow 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				
Certification	EMC	CE, FCC Class B, ESD 8KV/15KV Criteria A				
Mechanical	Dimensions	146 x 102 mm (5.7" x 4")				
	Net Weight	145g				

* All information contained in this document is subject to change without prior notice.

Block Diagram

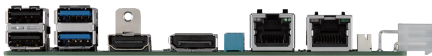


*Optional PoE support on LAN2 requires external power module: MIOe-PSE

Ordering Information

Part No.	CPU	CPU Max. Frequency	Core	TDP	Memory IB ECC	GPU	GPU Max. Frequency	Execution Units	Thermal Solution	Operating Temperature
IPC-B3A5354-X5	x7835RE	3.60 GHz	8	12W	Yes	Intel® UHD Graphics	1.20 GHz	32	Active	-40 ~ 85 °C
IPC-B3A5354-X3	x7433RE	3.40 GHz	4	9W	Yes	Intel® UHD Graphics	1.00 GHz	32	Passive	-40 ~ 85 °C
IPC-B3A5354-X1	x7211RE	3.20 GHz	2	6W	Yes	Intel® UHD Graphics	1.00 GHz	16	Passive	-40 ~ 85 °C
IPC-B3A5354-I	i3-N305	3.80 GHz	8	15W	Yes	Intel® UHD Graphics	1.25 GHz	32	Passive	0 ~ 60 °C
IPC-B3A5354-N	N97	3.60 GHz	4	12W	Yes	Intel® UHD Graphics	1.20 GHz	24	Passive	0 ~ 60 °C

Rear I/O View



Optional Accessories

Description

IPC-B3A5354 CPU Heatspreader
 Dual USB 3.0 Cable 35cm
 COM3/COM4 Cable 20cm
 MIOe-PSE PoE Module A1 Single 30W

Embedded OS/API

OS	Part No.	Description
Windows 11 LTSC	TBD	Win11 IoT Ent. 2024 LTSC 64bit
Ubuntu 22.04 LTS	TBD	Ubuntu Desktop 22.04 LTS 64-bit
Software API	Website Download	SUSI v4.0

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