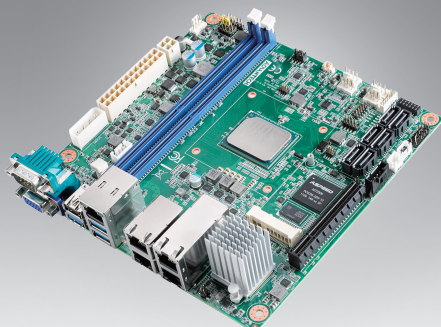


AIMB-290

**Intel ATOM C3000 processor with
DDR4 ECC/non-ECC memory, VGA,
Dual GbE, Dual 10GbE, PCIe x8, eMMC
ATX or DC Input**

NEW



Windows Server 2016

WISE-PaaS/RMM



CE FCC

Features

- Support IPMI 2.0
- Intel ATOM C3000 processor up to 16 core
- eMMC on board
- Two 288-pin DDR4 ECC/non-ECC DIMM up to 64GB/32GB DDR4 2400/2133 MHz DRAM
- Dual 10GbE and Dual GbE LANs
- EMMC 5.1, 6xSATAIII, 1x mSATA
- TPM 2.0 (optional)
- Support DC 12V 4-pin or ATX 24-pin connector

Software APIs:



SMBus



H/W Monitor



Watchdog



GPIO

Utilities:



BIOS flash



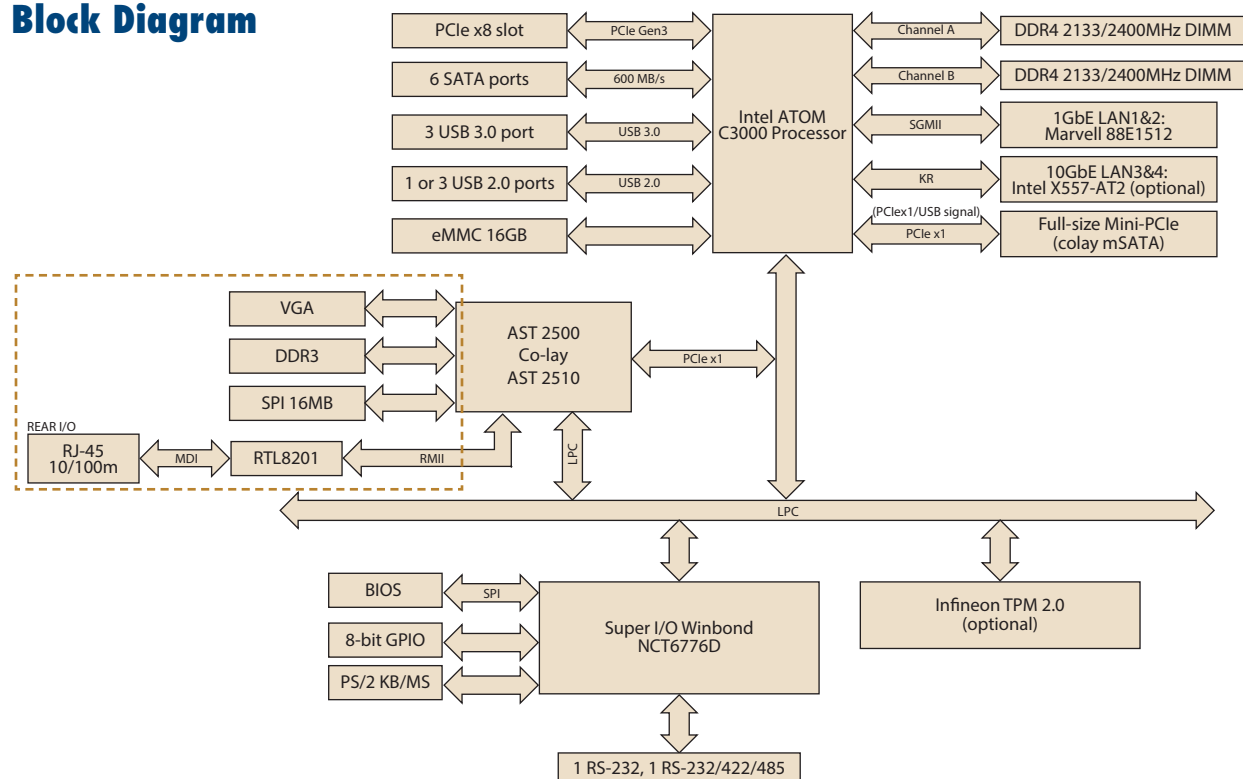
Monitoring

Specifications

Processor System	CPU	C3958	C3758	C3558
	Core Number	16c	8c	4c
	Max Speed	2.0GHz	2.2 GHz	2.2GHz
	L2 Cache	16MB	16 MB	8MB
	TDP	31W	25 W	16W
	BIOS	AMI EFI 128Mbit SPI		
Expansion Slot	Mini-PCIe	1 F/S miniPCIe slot support mSATA		
	PCIe x8 (Gen3)	8 GB/s per direction, 1 slot (by sku)		
Memory	Technology	Dual Channel, DDR4 1600/1866/2133/2400MHz ECC/Non-ECC with 288-pin U-DIMM/R-DIMM		
	Max. Capacity	16GB/per DIMM for DDR4 non-ECC/ECC 2400MHz with U-DIMM, 32GB/per DIMM for DDR4 ECC 2400MHz with R-DIMM		
	Socket	2 x 288pin DDR4 DIMM socket		
Graphics	Controller	ASPEED AST2500/2510 BMC controller (by sku)		
	VGA	Yes, supports max. resolution 1920 x 1200 @ 60 Hz		
Ethernet	Interface	2x 100/1000Mbps & 2x 10GbE		
	Controller	LAN 1/2: Marvell 88E1512 with RJ45 for 1GbE LAN 3/4: Intel X557-AT2 with RJ45 for 10GbE (optional) LAN 5: Realtek RTL8201 with RJ45 for IPMI (optional)		
	Connector	5 x RJ-45 (optional)		
eMMC	Capacity	16GB		
SATA	Max Data Transfer Rate	600 MB/s (SATA 3.0)		
	Channel	6 (SATA III)		
Rear I/O	VGA	1		
	Ethernet	5 (optional)		
	USB	4 (3 x USB3.0, 1 x USB2.0)		
	Serial	1 (RS-232)		
Internal I/O	USB	0 or 2 (USB2.0) (by sku)		
	Serial	1 (RS-232/422/485 autoflow control)		
	SATA	6 (SATA III)		
	Mini-PCIe	1 (F/S Mini-PCIe colay mSATA)		
	GPIO	8bit		
	KB/MS	1		
Watchdog Timer	Output	System reset		
	Interval	Programmable 1 ~ 255 sec/min		
Power Requirements	Input power	ATX 24-pin or 12V 4-pin *		
	Power Consumption	Intel C3958 + 32GB RAM + 64GB SSD: 35W		
Environment		Operating		Non-Operating
	Temperature	0 ~ 60° C (32 ~ 140° F) (Use AIMB-290 STD cooler and System Fan for 10GbE IC)		-40 ~ 85° C (-40 ~ 185° F)
Physical Characteristics	Dimensions	170 mm x 170 mm (6.69" x 6.69")		

* Please use either EATXPWR1 or ATX12V1. Do not use both connectors at the same time.

Block Diagram



Ordering Information

P/N	CPU	eMMC	VGA	GbE LAN	10GbE	COM	SATA	USB3.0/2.0	MiniPCle	TPM	PCIEx8	IPMI
AIMB-290G4-S1A1E	C3958	16GB	1	2	2	2	6	3/1	1 F/S	(1)	1	Yes
AIMB-290G4-S2A1E	C3758	16GB	1	2	2	2	6	3/1	1 F/S	(1)	1	Yes
AIMB-290G2-S3A1E	C3558	16GB	1	2	0	2	6	3/3	1 F/S	(1)	0	NA

*() BOM options available on MP version.

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	4
1700027538-01	SATA power cable	1
1700100250	Serial port cable (1 port, 25cm)	1
1960084693T000	I/O port bracket	1
2006029000	Startup manual	1
2026029000	China RoHS letter	1
1960054541N031	CPU cooler	1

Optional Accessories

Part Number	Description
1703100121	USB 2.0 cable with two ports, 12 cm
1703100261	USB 2.0 cable with two ports, 26 cm
1703060191	KB/MS cable 1*6P-2.0/M-DIN 6P(F)*2, 19cm
AIMB-RF10F-01A1E	Riser, PCIe16 to PCIe16
AIMB-RF20F-02A1E	Riser, PCIe16 to 2 PCIe16

Optional Chassis

Part Number	Description
AIMB-B2000-15ZE	Mini-ITX chassis with 150W power

Note :

- (1) To prevent interference, when you integrate AIMB MB into AIMB-B2000 series, please confirm the Part Number of CPU cooler with Chassis Datasheet again.
- (2) The temperature of 10GbE Lan IC is high due to its outstanding performance. When you assemble the enclosure with AIMB-290, please make sure the implemented system FAN can bring out the heat of 10GbE Lan IC in the chassis.

Embedded OS/API

OS/API	Description
Windows Server	Windows Server 2016
Linux Server	Red Hat Enterprise Linux Server (x64)

Rear I/O

