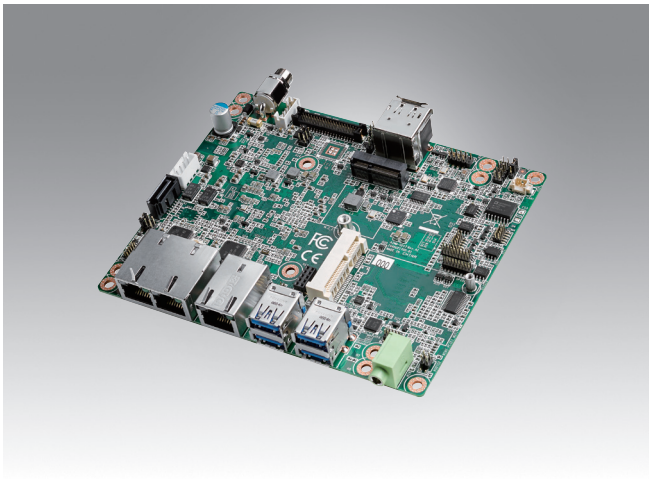
AIMB-U217

Intel® Atom™ E3950/E3940 QC 1.6 GHz UTX Industrial Motherboard with HDMI/eDP (LVDS)/DP++, 4 COMs and 3 LANs



ubuntu® Windows 10

CE FCC RoHS

Features

- Supports Intel® Atom™ Quad core E3950/E3940 up to 2.0 / Up to 1.8 GHz processor
- Single 204-pin SO-DIMM up to 8 GB DDR3L 1866 MHz SDRAM
- Supports HDMI/DP++, eDP (co-lay dual-channel 48-bit LVDS)
- Supports 1 Mini-PCIE expansion slot, M.2 E-Key slot, 4 COMs (2 RS-232, 2 RS-232 or 422 or 485), 4 USB 3.0, 3 LANs
- Supports CANBus
- Supports eMMC 32GB on board
- Supports wide DC in 12V to 24V
- Supports wide temperature -20 ~ 70 °C (-4 ~ 158 °F)

Specifications

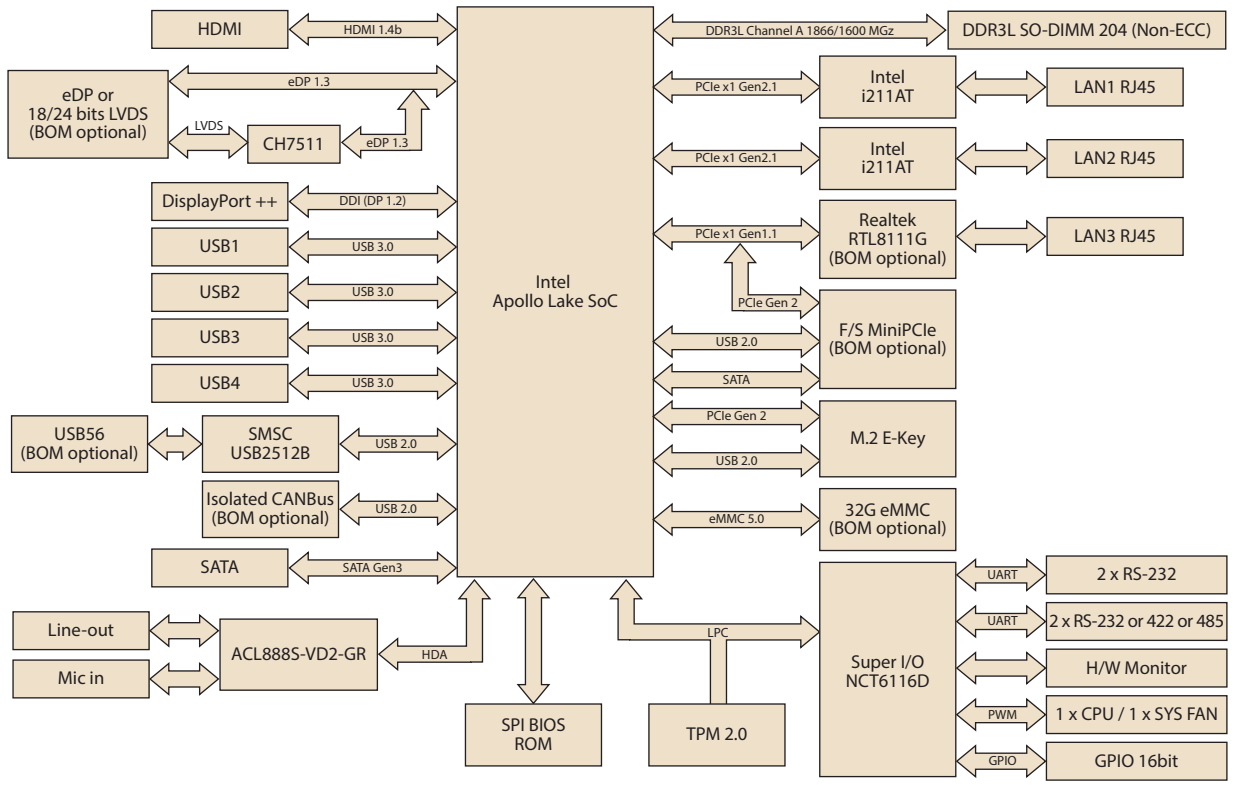
Processor System	CPU (14nm)	Intel Atom E3950/ E3940	
	Max. Speed	Up to 2.0 / Up to 1.8 (Quad Core)	
	L2 Cache	2 MB	
	BIOS	AMI 128Mb SPI	
Expansion Slot	Mini-PCIe	F/S Sharing PCIe with LAN3, NO PCIe signal when LAN3 is installed	
	M.2	E-Key	
Memory	Technology	Singl channel DDR3L 1866MHz SDRAM	
	Max. Capacity	8GB	
	Socket	1 x 204-pin SO-DIMM (Non-ECC)	
Graphics	Controller	Intel Gen 9 Graphics Engines and media encode/decode engine; Graphics Base Frequency: 500 MHz	
	HDMI	1, Supports HDMI1.4b up to 3840 x 2160 @ 30Hz	
	eDP	1, Supports eDP1.3, max resolution up to 3840 x 2160@60 Hz, Co-lay with LVDS	
	LVDS	1, Supports 24-bit dual channel and up to 1920 x 1200, Co-lay with eDP (BOM Optional)	
	Displayport	1, Supports DP++ 1.2, max resolution up to 4096 x 2160 @ 60Hz	
Ethernet	Interface	10/100/1000 Mbps	
	Controller	LAN1/2: Intel i211AT LAN3: Realtek 8111G (BOM optional, Co-lay with Mini-PCIe)	
	Connector	3, RJ45 (LAN3 is BOM optional)	
SATA	Max Data Transfer Rate	600 MB/s (SATA 3.0)	
	Channel	1	
Rear I/O	HDMI	1	
	Displayport	1	
	Ethernet	3 (LAN3 is BOM optional)	
	USB	4 x USB3.0	
	Audio	1 (Line-out)	
	DC jack	1 (2.5mm)	
Internal Connector	eDP or LVDS (BOM option) & Inverter	1/1	
	Serial	2, RS-232 2, RS-232 or RS-422 or RS-485 (BOM optional)	
	SATA	1, (SATA 3.0) SATA PWR connector	
	USB	2, USB2.0 connector	
	16-bit GPIO	1	
Watchdog Timer	Output	System reset	
	Interval	Programmable 1 ~ 255 sec/min	
Power	Single voltage 1	12V ~ 24V DC input; 1 x External DC jack	
	Typical Power Consumption	TBC	
Environment		Operating	Non-Operating
		-20 ~ 70 °C (-4 ~ 158 °F)	-40 ~ 85 °C (-40 ~ 185 °F)
Physical Characteristics	Dimensions	112 x 137 mm (4.4" x 5.4")	

昊佑讯佰科技 15323776600

All product specifications are subject to change without notice.

Last updated: 26-Feb-2021

Block Diagram



Ordering Information

P/N	CPU	SODIMM	HDMI 1.4b	eDP/ LVDS	DP++ 1.2	GbE LAN 1/2/3	32G eMMC	SATA	Isolated CANBUS	RS232	RS232/422/485	USB3.0	USB2.0	M.2	F/S MiniPCIe	TPM 2.0
AIMB-U217DZ-FLA1E	E3950	1	1	1/(1)	1	1/1/1, 3 (WGI211AT*2 + Realtek)	1	1	1	2	(2)/ 1/ 1	4	2	1	1	1
AIMB-U217DZ-S6A1E	E3950	1	1	1/(1)	1	1/1/(1), 2 (WGI211AT*2, LAN1&2)	(1)	1	(1)	2	(2)/ 1/ 1	4	2	1	(1)	(1)
AIMB-U217EZ-S6A1E	E3940	1	1	1/(1)	1	1/1/(1), 2 (WGI211AT*2, LAN1&2)	(1)	1	(1)	2	(2)/ 1/ 1	4	2	1	(1)	(1)

*() BOM Options

Packing List

Description	Quantity
SATA HDD cable	1
SATA power cable	1
Serial port cable	4
Startup manual	1
CPU Cooler	1 (On board)

Embedded OS/API

OS/API	Part No.	Description
Win 10	20706WX9HS0027	Windows 10 IoT Enterprise 2019 LTSC 64-bit
Ubuntu 20.04	360SU117000101	Ubuntu V20.04 image of AIMB-U217

I/O View



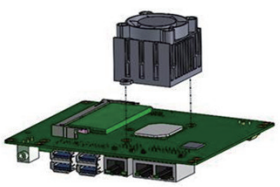


Optional Accessories

Part Number	Description
1960090365T001	Motherboard Heat Sink (eMMC should NOT serve as OS boot device if the motherboard heat sink is installed.)
1700029091-01	CANBus cable

Thermal Solution

CPU Cooler (Default)



Motherboard Heat Sink (Optional)

