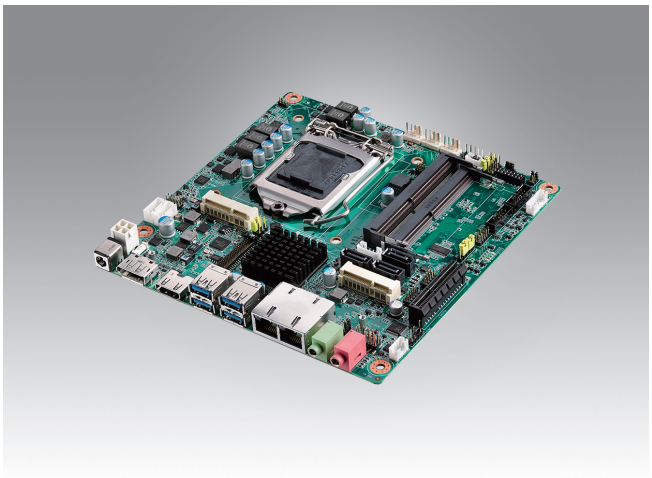
AIMB-285 A2

Intel® Core™ i7/i5/i3 LGA 1151 Mini-ITX with DP++/HDMI/VGA, 2 COM, Dual LAN, PCIe x4, miniPCIe, DDR4, DC Input



Features

- Supports Intel® 7th & 6th Gen Core™ i processor (LGA1151) with Intel H110 chipset
- Two 260-pin SO-DIMM up to 32GB DDR4 2400/2133 MHz SDRAM
- Supports Dual display of DP/HDMI/VGA
- Supports PCIe x4 (Gen 3), 1 F/S miniPCIe and 1 H/S miniPCIe
- Support 12V DC Input and low profile height
- Supports 4 USB 3.0, 4 USB 2.0, 3 SATAIII, TPM 1.2 / 2.0 (optional)
- Supports WISE-PaaS/RMM and Embedded Software APIs

Software APIs: Hardware Monitor, Brightness, Watch Dog Timer, GPIO, Smart Fan, SMBus

Windows Embedded

WISE-PaaS/RMM CE FC RoHS COMPLIANT 2002/95/EC

Specifications

Processor System	CPU	KBL-S SKL-S	i7-7700 i7-6700	i7-7700T i7-6700TE	i5-7500 i5-6500	i5-7500T i5-6500TE	i3-7101E i3-6100	i3-7101TE i3-6100TE	- Pentium G4400/4400TE	- Pentium G3900/3900TE
	Core Number		4	4	4	4	2	2	2 / 2	2 / 2
	Max Speed	KBL-S SKL-S	3.6GHz 3.4GHz	2.9GHz 2.4GHz	3.4GHz 3.2GHz	2.7GHz 2.3GHz	3.9GHz 3.7GHz	3.4GHz 2.7GHz	3.3GHz / 2.9GHz	2.8GHz / 2.6GHz
	L3 Cache		8M	8M	6M	6M	4M	4M	3M / 3M	2M / 2M
	TDP		65W	35W	65W	35W	54W / 51W	35W	54W / 35W	51W / 35W
	Chipset		H110							
	BIOS		AMI EFI 128 Mbit SPI							
Expansion Slot	Mini-PCIe		1 F/S miniPCIe slot support mSATA; 1 H/S miniPCIe slot with SIM card holder							
	PCIe x4 (Gen3)		4 GB/s per direction, 1 slot							
Memory	Technology		Dual Channel DDR4 2400/2133 MHz SDRAM							
	Max. Capacity		32GB (up to 16GB per SO-DIMM)							
	Socket		2 x 260 PIN DDR4 SO-DIMM (Non-ECC)							
Graphics	Controller		Supports OpenGL 5.x, DirectX12, OpenCL 2.X							
	VRAM		Shared system memory, 2 GB and above, total system memory shared 1 GB maximum video memory							
	VGA		Yes, supports max. resolution 1920 x 1200 @ 60 Hz							
	LVDS		Supports dual channel 48-bit up to 1920 x 1200 (BOM optional for G2/L sku)							
	HDMI		Yes, supports max. resolution 4096 x 2160 @ 24 Hz (HDMI 1.4)							
	Display Port 1.2		Yes, supports max. resolution 4096 x 2160 @ 60Hz							
	Dual Display		DP+HDMI, DP+VGA, HDMI+VGA,DP+LVDS, HDMI+LVDS, VGA+ LVDS							
Ethernet	Interface		10/100/1000 Mbps							
	Controller		GbE LAN: Realtek 8111H x2							
	Connector		RJ-45 x 2							
SATA	Max Data Transfer Rate		600 MB/s (SATA 3.0)							
	Channel		3 (SATA III)							
Rear I/O	HDMI		1 (HDMI 1.4)							
	Display Port 1.2		1							
	Ethernet		2							
	USB		4 (USB 3.0)							
	Audio		2 (Mac-in, Line-out) *("Mic-in" could be configured as "Line-in" under Win OS.)							
	DC Jack		1							
Internal Connector	USB		4 (USB 2.0)							
	LVDS/ nverter		1 (BOM optional for G2/L sku)							
	Serial		2 (one support RS-232/422/485 and one support 5V/12V)							
	SATA		3 (SATA III)							
	Mini-PCIe		2 (1 F/S and 1 H/S)							
	GPIO		8-bit							
Watchdog Timer	Output		System reset							
	Interval		Programmable 1 ~ 255 sec/min							
Power Requirements	Input power		ATX							
			Win Idle 9.3W (Intel core i7-7700 3.6GHz / DDR4 2133 MHz 16G x 2)							
Environment			Operating					Non-Operating		
	Temperature		0 ~ 60° C (32 ~ 140° F), depends on CPU speed and cooler solution					-40 ~ 85° C (-40 ~ 185° F)		
Physical Characteristics	Dimensions		170 mm x 170 mm (6.69" x 6.69")							

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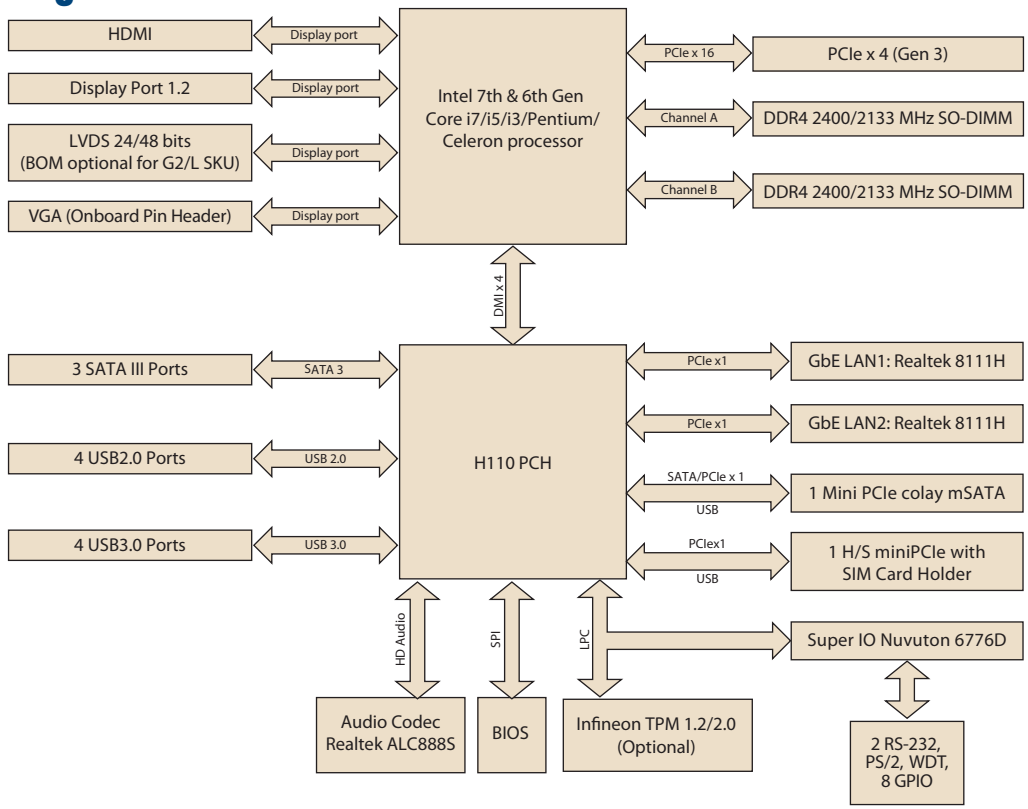
All product specifications are subject to change without notice.

Last updated: 25-May-2021

Block Diagram



Ordering Information

P/N	Chipset	DP	VGA	LVDS	HDMI	GbE LAN	COM	SATA	USB 3.0/2.0	MiniPCIe	TPM	AMP	PCIex4
AIMB-285G2-00A2E	H110	1	1 (pin header)	(1)	1 (HDMI 1.4)	2	2	3	4/4	2 (1 F/S & 1 H/S)	(1)	(1)	1
AIMB-285L-00A2E	H110	1	0	(1)	1 (HDMI 1.4)	1	1	2	4/0	1(F/S)	(1)	0	0
AIMB-285G2-LVA2E	H110	1	1 (pin header)	1	1 (HDMI 1.4)	2	2	3	4/4	2 (1 F/S & 1 H/S)	(1)	(1)	1

*() BOM options available on MP version.

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	1
1700018785	SATA power cable	1
1700100250	Serial port cable (1 port, 25cm)	2
19Z0001209T000	I/O port bracket	1
2006028510	Startup manual	1

Optional Chassis

Part Number	Description
AIMB-B2000-00YE	Mini-ITX chassis (Optional external AC-DC 84W/120W Adaptor)
EPC-T22855A-00Y0E	EPC-T2285 barebone,w/ I5-6500TE, w/o ADP,RAM,HDD

Rear I/O

Optional Accessories

Part Number	Description
1700026162-01	USB 2.0 cable with two ports, 30 cm with bracket
1703060191	KB/MS cable 1*6P-2.0/M-DIN 6P(F)*2, 19cm
1960053207N001	LGA1150 CPU cooler for CPU TDP 65W, 92.9 (W) x 92.9 (L) x 46 (H) mm
1960060732N001	LGA1150 CPU cooler for CPU TDP ≦35W, 80 (W) x 80 (L) x 32.2 (H) mm
96PSA-A120W12V1	ADP A/D 100-240V 120W 12V C14 DC Plug 180°
1700023082-11	A cable 2*10P-4.2/1*3P-2.0 15cm
1700025816-01	VGA cable (M cable 2*5P-2.0/D-SUB 15P(F) 35cm)

Embedded OS/API

OS/API	Part No.	968 P/N	Description
windows 10	2070014483	968QW10LTE	Win10 IoT Enterprise x64 multi-language (SKL-S)
WE8.1	2070014246	968QWE8IP1	WE8.1 Industry Pro x64 multi-language (SKL-S)
Win10	20706WX6HS0000	968QW16HLE	img W10 16HL AIMB-285 64b 1709 ENU (KBL-S)
Win10	20706WX6VS0003	968QW16HLE	img W10 16VL AIMB-285 64b 1709 ENU (KBL-S)