

# AIMB-585SV

## Micro-ATX Motherboard 6th/7th Gen Intel® Xeon® E3 Processor LGA1151



### Features

- Supports Intel® Xeon®/ 6th & 7th Gen Core™ i7/i5/i3 processor with C236 chipset
- Up to four DIMM sockets support up to 64 GB DDR4 2133 MHz SDRAM
- Supports DVI-D, HDMI, DP++, eDP, VGA display
- Supports Intel AMT 11.0 and Intel vPro competent
- Supports PCIe Gen3, upto 10 x USB 3.0, 8 x SATAIII and dual GbE LAN, mini-PCIe with mSATA
- Supports Software RAID 0, 1, 5, 10, TPM 1.2/2.0 (optional)
- Supports WISE-PaaS and Embedded Software APIs

**Software APIs:**

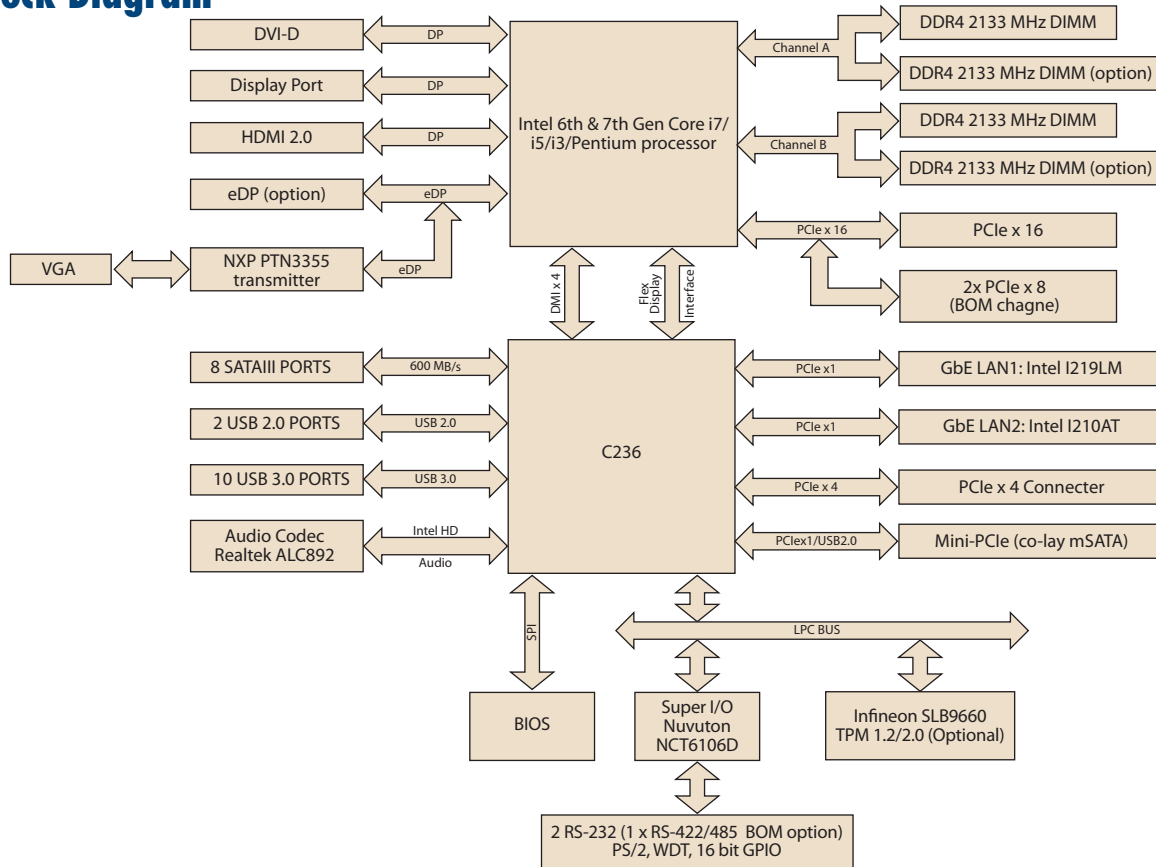
**Utilities:**



### Specifications

	CPU	E3-1275 v6	E3-1275 v5	E3-1225 v5	E3-1268L v5	i7-7700 / i7-7700T	i7-6700 / i7-6700TE	i5-7500 / i5-7500T	i5-6500 / i5-6500TE	i3-7101 / i3-7101TE	i3-6100 / i3-6100TE	Pentium G4400 / G4400TE	Celeron G3900 / G3900TE	
Processor System	Core Number	4	4	4	4	4/4	4 / 4	4/4	4 / 4	2/2	2/2	2/2	2/2	
	Max. Speed	3.8GHz	3.6GHz	3.3GHz	2.4GHz	3.6GHz / 2.9GHz	3.4GHz / 2.4GHz	3.4GHz / 2.7GHz	3.2GHz / 2.3GHz	3.9GHz / 3.4GHz	3.7 GHz / 2.7GHz	3.3GHz / 2.9GHz	2.8GHz / 2.6GHz	
	Integrated Graphics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
	L3 Cache	8M	8M	6M	8M	8M/8M	8M / 8M	6M/6M	6M / 6M	3M/3M	4M / 4M	3M / 3M	2M / 2M	
	TDP (W)	80W	80W	80W	35W	65W/35W	65W / 35W	65W/35W	65W / 35W	54W/35W	51W / 35W	54W / 35W	47W / 35W	
	Chipset	C236												
	BIOS	AMI EFI 128 Mbit SPI												
Expansion Slot	PCIe x4 (Gen3)	4 GB/s per direction, 1 slot												
	PCIe x16 (Gen3)	16 GB/s per direction, 1 slot (BOM change to 2 PCIe x8)												
Memory	Technology	Dual Channel DDR4 2133 MHz SDRAM												
	Max. Capacity	64 GB/16 GB per DIMM												
	Socket	2 x 288-pin DIMM (can up to 4 DIMM)												
Graphics	Controller	Intel HD Graphics Supports DirectX11.1, OpenGL 5.0 and OpenCL 2.1												
	VRAM	1 GB maximum shared memory with 2 GB and above system memory installed												
	HDMI	Supports max resolution HDMI 2.0, 4096 x 2160 @ 60 Hz												
	VGA	Max resolution 1920 x 1200 @ 60 Hz												
	DVI-D	Supports max. resolution 1920 x 1200 @ 60 Hz												
	eDP	Internal pin header, supports max. resolution 3840 x 2160 @ 60 Hz (on board, option)												
	Display Port	Supports max resolution 4096 x 2304 @ 60 Hz												
Triple Display	eDP/ VGA + DP++ + HDMI, eDP/ VGA + HDMI + DVI-D, DP++ + eDP/ VGA + DVI-D, DVI-D + DP++ + HDMI													
	Dual Display	DP++ + HDMI, DP++ + DVI-D, DP++ + eDP/ VGA, HDMI + DVI-D, HDMI + eDP/ VGA, eDP, VGA + DVI-D												
Ethernet	Interface	10/100/1000 Mbps												
	Controller	GbE LAN1: Intel I219LM, GbE LAN2: Intel I210AT												
	Connector	RJ-45 x 2												
SATA	Max Data Transfer Rate	600 MB/s (SATA 3.0)												
	Channel	8												
Rear I/O	DVI-D	1												
	Display Port	1												
	HDMI	1												
	VGA	1												
	Ethernet	2												
	USB	8 (6 x USB 3.0, 2 x USB 2.0)												
	Audio	2 (Mic-in/ Line-out) (Mic-in could be configured as "Line-in" under Win OS.)												
Internal Connector	USB 3.0	4												
	Serial	2 (2 x RS-232, 1 x RS-422/485 BOM change)												
	SATA	8 (SATA 3.0)												
	Extended Display Port (eDP)	0 (option)												
	JTAG	1												
	mini-PCIe	1 Full-size colay mSATA												
	GPIO	16-bit GPIO												
Watchdog Timer	Output	System reset												
	Interval	Programmable 1 ~ 255 sec/min												
Power Requirements	Intel Core i7-6700 3.4 GHz, 16 GB DDR4 2133 MHz x 4pcs													
	Power On	+5 V	3.3 V	12 V	5 Vsb								-12 V	
		1.31A	0.35A	4.52A	0.06A								0A	
Environment	Operating													Normal
	Temperature	0 ~ 60° C (14 ~ 158° F), depends on CPU speed and cooler solution												
Physical Characteristics	Dimensions	244 mm x 244 mm (9.6" x 9.6")												
Power	Input Mode	ATX input (Default)												

### Block Diagram



### Ordering Information

Part Number	Chipset	Memory	USB 3.0	USB 2.0	VGA	DP	HDMI	DVI-D	eDP	SATAIII	PCIe x16/ PCIEx8	PCIe x4	COM	TPM	GbE LAN	AMP
AIMB-585WG2-SVA1E	C236	ECC/Non-ECC	10	2	1	1	1	1	(1)	8	1/(2)	1	2	(1)	2	(1)

\*() BOM options available on MP version.

### Riser Card

Part Number	Description
AIMB-RF10F-01A1E	1U riser card with 1 PCIe x16 expansion
AIMB-RF20F-02A1E	2U PCIe x16 to 2 PCIe x8
AIMB-R43PF-21A1E	2U PCIe x16/PCIe x4 to 1 PCIe x16 + 2 PCI

### Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	2
1700022749-13	SATA power cable	2
TBD	I/O port bracket	1
2006058510	Startup manual	1

### I/O View



### Optional Accessories

Part Number	Description
1700020277-01	Dual port USB 3.0 cable 30cm with IO bracket
1960047669N001	LGA1156 CPU cooler for 4U and wallmount chassis, for CPU TDP ≤ 84W, 4.72" (W) x 4.72" (L) x 3.03" (H)
1960047831N001	LGA1156 CPU cooler for 2U and backplane version of chassis, for CPU TDP ≤ 65W, 3.27" (W) x 3.27" (L) x 2.17" (H)
1960053207N001	LGA1155 CPU cooler for 2U and wallmount chassis, for CPU TDP ≤ 45W, D=3.66" (W) x 3.66" (L) x 1.81" (H)
1703060191	KBMS cable 1*6P-2.0/DIN-6P(F)*2, 22 cm
1700025715-01	KBMS cable 1*6P WAFER/PS2*2 w/ BRAKET 35CM
1700026163-01	COM2,1 to 1 COM cable 60cm (IDE 10P-2.0) w/ Bracket

Note: Purchasing AIMB-585's proprietary CPU cooler from Advantech is a must, other CPU cooler are NOT compatible with AIMB-585. The complete thermal solution is composed of CPU cooler and system fans for the CPU TDP as above.

### Embedded OS/API

OS/API	Part No.
WES7P	2070014308
WE8.1	2070014247
win10 IoT Ent	2070014621