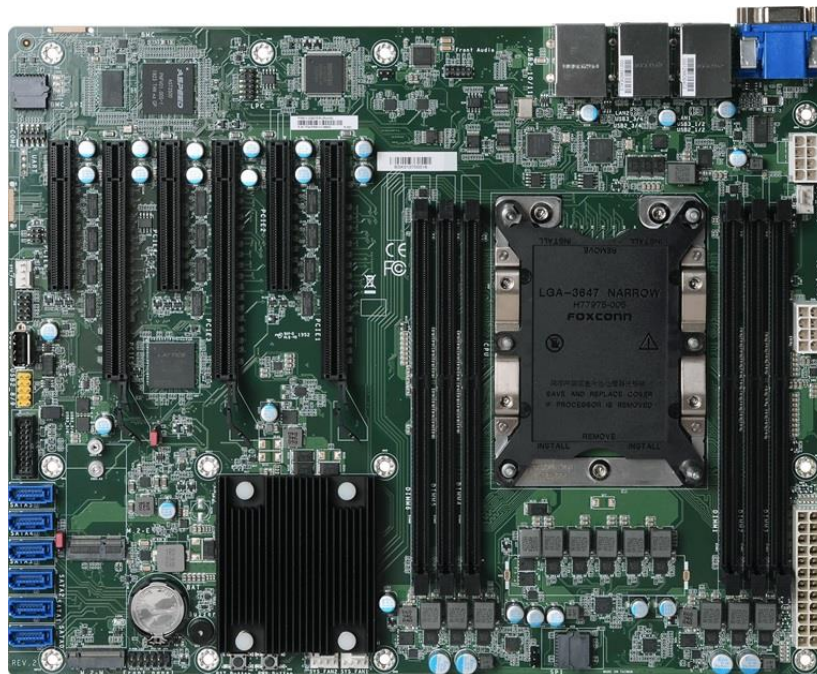


MBU4173

Industrial Motherboard Series



MBU4173

PRODUCT HIGHLIGHTS

- ▶ 1st/2nd Gen Intel® Xeon® Scalable Family
- ▶ Intel® C621 Chipset
- ▶ 6 DDR4 RDIMM up to 192GB
- ▶ Multiple expansion: 3 PCIe x16, 3 PCIe x8 (share w/ PCIe x16), 2 M.2
- ▶ Rich I/O: 2 Intel GbE, 1 COM, 6 SATA 3, 5 USB 2.0, 6 USB 3.1 Gen 1
- ▶ 6 x SATA 3.0, supports RAID 0/1/5/10
- ▶ 15-Year CPU Life Cycle Support Until Q3' 30 (Based on Intel IOTG Roadmap)



VGA port on MBU4174 only

TECHNICAL INFORMATION

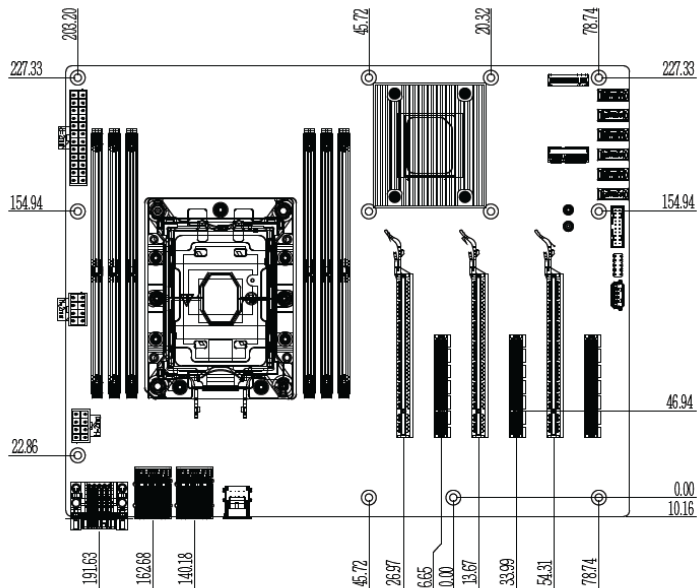
SYSTEM	PROCESSOR	1st Generation Intel® Xeon® Scalable Processor Family, LGA 3647 Socket: Intel® Xeon® Platinum 8160T (24 Cores, 27.5M Cache, up to 3.7 GHz); 150W Intel® Xeon® Gold 6138T (20 Cores, 27.5M Cache, up to 3.7 GHz); 125W Intel® Xeon® Gold 6138 (20 Cores, 27.5M Cache, up to 3.7 GHz); 125W Intel® Xeon® Gold 6130T (16 Cores, 22M Cache, up to 3.7 GHz); 125W Intel® Xeon® Gold 6130 (16 Cores, 22M Cache, up to 3.7 GHz); 125W Intel® Xeon® Gold 6126T (12 Cores, 19.25M Cache, up to 3.7 GHz); 125W Intel® Xeon® Gold 6126 (12 Cores, 19.25M Cache, up to 3.7 GHz); 125W Intel® Xeon® Gold 5120T (14 Cores, 19.25M Cache, up to 3.2 GHz); 105W Intel® Xeon® Gold 5119T (14 Cores, 19.25M Cache, up to 3.2 GHz); 85W Intel® Xeon® Gold 5118 (12 Cores, 16.5M Cache, up to 3.2 GHz); 105W Intel® Xeon® Silver 4116T (12 Cores, 16.5M Cache, up to 3.0 GHz); 85W Intel® Xeon® Silver 4116 (12 Cores, 16.5M Cache, up to 3.0 GHz); 85W Intel® Xeon® Silver 4114T (10 Cores, 13.75M Cache, up to 3.0 GHz); 85W Intel® Xeon® Silver 4110 (8 Cores, 11M Cache, up to 3.0 GHz); 85W Intel® Xeon® Silver 4109T (8 Cores, 11M Cache, up to 3.0 GHz); 70W Intel® Xeon® Bronze 3106 (8 Cores, 11M Cache, 1.7 GHz); 85W 2nd Generation Intel® Xeon® Scalable Processor Family, LGA 3647 Socket: Intel® Xeon® Gold 6252N (24 Cores, 35.75M Cache, up to 3.6 GHz); 150W Intel® Xeon® Gold 6238T (22 Cores, 30.25M Cache, up to 3.7 GHz); 125W Intel® Xeon® Gold 6230T (20 Cores, 27.5M Cache, up to 3.9 GHz); 125W Intel® Xeon® Gold 6230N (20 Cores, 27.5M Cache, up to 3.5 GHz); 125W Intel® Xeon® Gold 6230 (20 Cores, 27.5M Cache, up to 3.9 GHz); 125W Intel® Xeon® Gold 6226 (12 Cores, 19.25M Cache, up to 3.7 GHz); 125W Intel® Xeon® Gold 5220T (18 Cores, 24.75M Cache, up to 3.9 GHz); 105W Intel® Xeon® Gold 5218T (16 Cores, 22M Cache, up to 3.8 GHz); 105W Intel® Xeon® Gold 5218N (16 Cores, 22M Cache, up to 3.7 GHz); 110W Intel® Xeon® Gold 5215 (10 Cores, 13.75M Cache, up to 3.4 GHz); 85W Intel® Xeon® Silver 4216 (16 Cores, 22M Cache, up to 3.2 GHz); 100W Intel® Xeon® Silver 4215 (8 Cores, 11M Cache, up to 3.5 GHz); 85W Intel® Xeon® Silver 4214 (12 Cores, 16.5M Cache, up to 3.2 GHz); 85W Intel® Xeon® Silver 4210 (10 Cores, 13.75M Cache, up to 3.2 GHz); 85W Intel® Xeon® Silver 4209 (8 Cores, 11M Cache, up to 3.2 GHz); 70W
	CHIPSET	Intel® C621 Chipset
	MEMORY	Six 288-pin RDIMM up to 192GB Single Channel DDR4 up to 2933MHz
	BIOS	Insyde SPI 128Mbit
	GRAPHICS	
	CONTROLLER	NA (For VGA version please see MBU4174)
	FEATURE	N/A
	DISPLAY	N/A
	TRIPLE DISPLAYS	N/A

TECHNICAL INFORMATION (CONTINUED)

EXPANSION	INTERFACE	3 x PCIe x16 (Gen 3) 3 x PCIe x8 (Gen 3) (share w/PCIe x16) 1 x M.2 Key 2280 (PCIe/SATA Gen 3 x4 NVMe) 1 x M.2 E Key 2230 (USB 2.0/PCIe Gen 3 x2)
AUDIO	AUDIO CODEC	ALC887
ETHERNET	CONTROLLER	2 x Intel® I210AT PCIe (10/100/1000Mbps) IPMI: RTL8211F (opt., MOQ required)
REAR I/O	ETHERNET	2 x GbE (RJ-45) 1 x dedicated IPMI LAN (opt., MOQ required)
	SERIAL	1 x RS-232 (DB-9)
	USB	4 x USB 3.1 (Gen1) 2 x USB 2.0 stack (opt., MOQ required w/ RJ45+USB2.0 stack)
	PS/2	N/A
	DISPLAY	N/A
	AUDIO	N/A
INTERNAL I/O	SERIAL	N/A
	USB	2 x USB 2.0 header (2 x USB 2.0) 1 x USB 2.0 vertical Type A 1 x USB 3.1 Gen 1 header (2 x USB 3.1 Gen 1)
	AUDIO	N/A
	SATA	6 x SATA 3.0 RAID 0/1/5/10
	DIO	N/A
	LPC	N/A
	SMBUS	1 x SMBus
	OUTPUT & INTERVAL	System Reset, Programmable via Software from 1 to 255 Seconds
	SECURITY TPM	TPM2.0 (opt., MOQ required)
	TYPE	ATX
	CONNECTOR	8-pin ATX 12V power 24-pin ATX power
	CONSUMPTION	Idle: Xeon Gold 5218 - 3.3V @ 0.06A (0.198Watt); 5V @ 1.75A (8.75Watt); 12V @ 1.67A (20.04Watt) Max.: Xeon Gold 5218 - 3.3V @ 0.08A (0.264Watt); 5V @ 2.94A (14.7Watt); 12V @ 11.53A (138.36Watt) Idle: Xeon Platinum 8276M - 3.3V @ 0.03A (0.099Watt); 5V @ 1.65A (8.25Watt); 12V @ 1.63A (19.56Watt) Max.: Xeon Platinum 8276M - 3.3V @ 0.05A (0.165Watt); 5V @ 2.65A (13.25Watt); 12V @ 18.43A (221.16Watt)
OS SUPPORT	RTC BATTERY	CR2032 Coin Cell
		Windows 10 IoT Enterprise LTSB RS5 64-bit Windows Server 2019 Windows Server 2016 Linux
ENVIRONMENT	TEMPERATURE	Operating: -5 to 65°C Storage: -40 to 85°C
	HUMIDITY	Operating: 5 to 90% RH, Non-condensing Storage: 5 to 90% RH, Non-condensing
	MTBF	558,025 hrs @ 25°C; 339,879 hrs @ 45°C ; 224,136 hrs @ 60°C With IPMI-Mgmt: 510,709 hrs @ 25°C; 306,113 hrs @ 45°C ; 200,130 hrs @ 60°C Calculation Model: Telcordia Issue 4 Environment: GB, GC - Ground Benign, Controlled
MECHANICAL	DIMENSIONS	ATX Form Factor 305mm (12") x 244mm (9.6")
	HEIGHT	PCB: 1.6mm Top Side: 37.34mm
CERTIFICATIONS		CE, RoHS

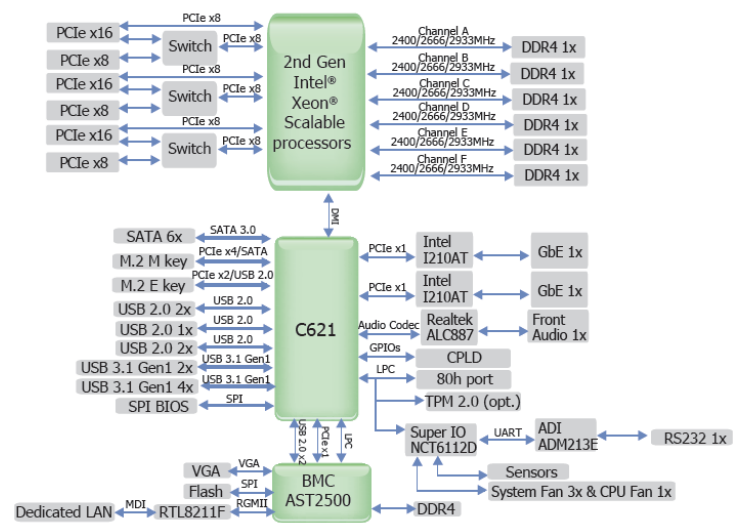
MBU4173

MECHANICAL DRAWING

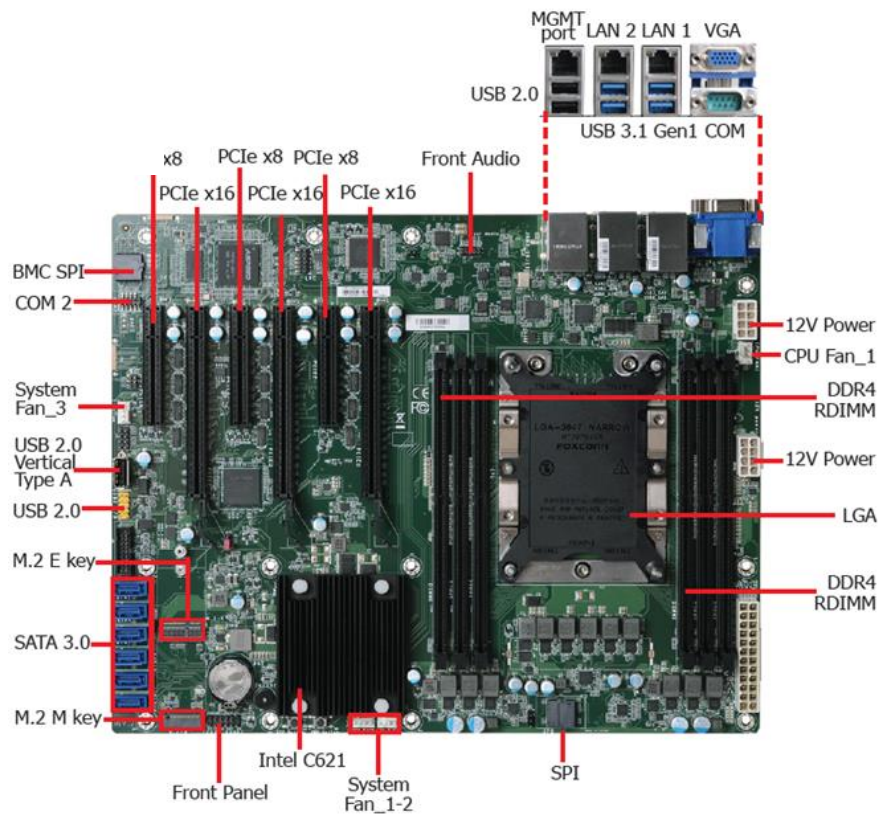


VGA port on MBU4174 only

BLOCK DIAGRAM



MOTHERBOARD LAYOUT



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