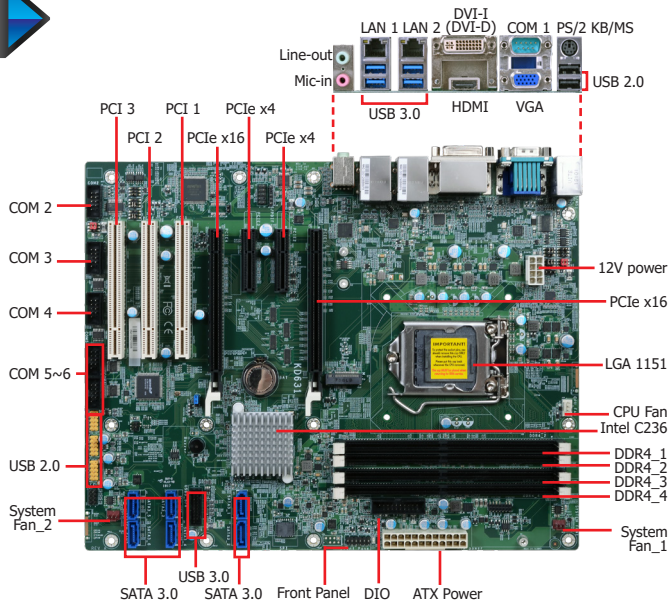




KD631-C236

Workstation

C236

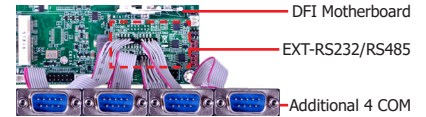
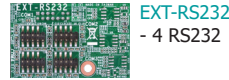


Features

- 4 DDR4 ECC/Non-ECC DIMM up to 64GB
- 3 independent displays: VGA + DVI-I (DVI-D signal) + HDMI
- HDMI resolution up to 4096x2160 @ 24Hz
- Multiple expansion: 2 PCIe x16 (1 x16 or 2 x8 signal), 2 PCIe x4, 3 PCI, 1 M.2
- Rich I/O: 2 Intel GbE, 6 COM, 6 USB 3.0, 8 USB 2.0
- LPC EXT-RS232/485 module extends additional 4 COM ports



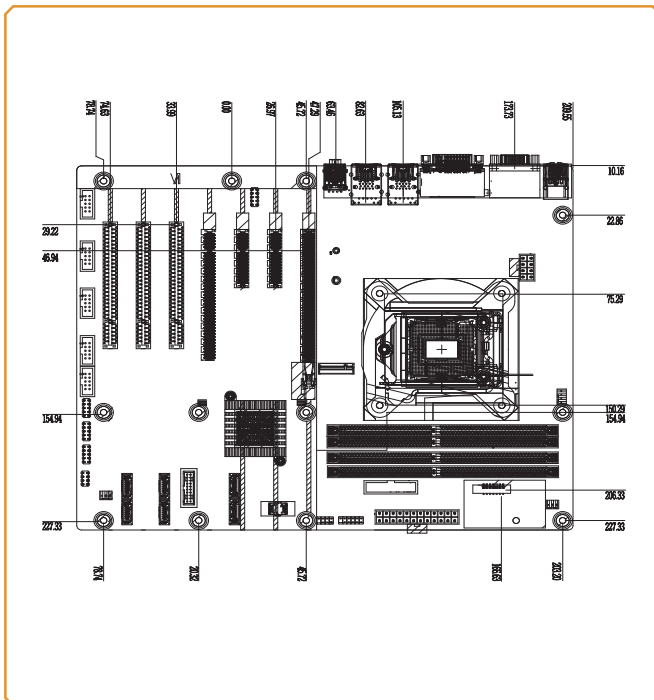
2 Extension Modules for Additional 4 COM Ports (via the LPC connector)



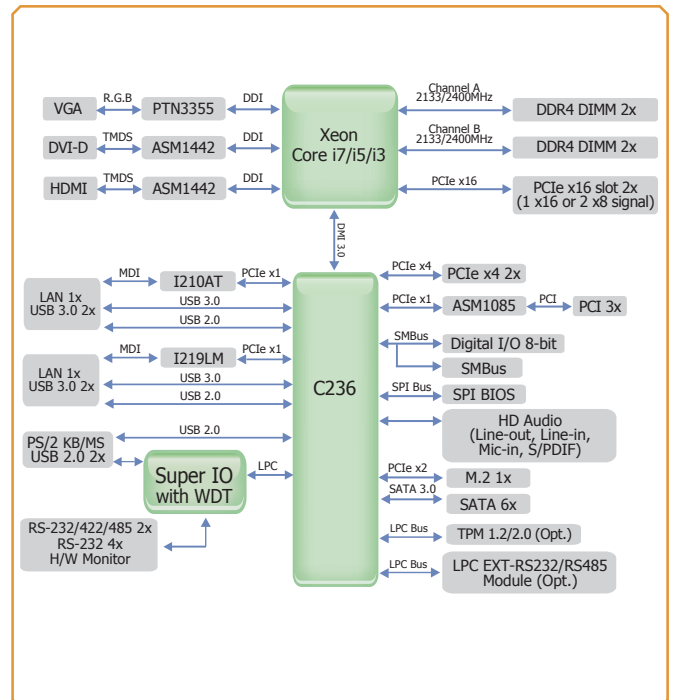
Ordering Information

Model Name	P/N	Memory	GbE	RS-232/422/485	RS-232	USB 3.0	USB 2.0	TPM	Power	Thermal	Temp.
KD631-C236CRM	770-KD6312-100G	4 ECC/Non-ECC DIMM	2	2	4	6	8	0	24-pin ATX	Active	0 to 60°C
KD631-C236CRM	770-KD6312-400G	4 ECC/Non-ECC DIMM	2	2	4	6	8	TPM 2.0	24-pin ATX	Active	0 to 60°C
KD631-C236CRM	770-KD6312-500G	4 ECC/Non-ECC DIMM	2	2	4	6	8	TPM 1.2	24-pin ATX	Active	0 to 60°C

Mechanical Drawing



Block Diagram



Specifications

SYSTEM	Processor	7th Gen Intel® Core™/Pentium®/Celeron® LGA 1151 Socket Processors with TDP up to 95W: Intel® Core™ i7-7700K (4 Cores, 8M Cache, up to 4.5 GHz); 91W (Non-LTS) Intel® Core™ i7-7700 (4 Cores, 8M Cache, up to 4.2 GHz); 65W Intel® Core™ i7-7700T (4 Cores, 8M Cache, up to 3.8 GHz); 35W Intel® Core™ i5-7500 (4 Cores, 6M Cache, up to 3.8 GHz); 65W Intel® Core™ i5-7500T (4 Cores, 6M Cache, up to 3.3 GHz); 35W Intel® Core™ i3-7101E (2 Cores, 3M Cache, 3.9 GHz); 65W Intel® Core™ i3-7101TE (2 Cores, 3M Cache, to 3.4 GHz); 35W	6th Gen Intel® Xeon®/Core™/Pentium®/Celeron® LGA 1151 Socket Processors with TDP up to 95W: Intel® Xeon® E3-1275 v5 (4 Cores, 8M Cache, up to 4.50 GHz); 80 W Intel® Xeon® E3-1225 v5 (4 Cores, 4M Cache, up to 4.50 GHz); 80 W Intel® Xeon® E3-1268L v5 (4 Cores, 8M Cache, up to 4.50 GHz); 35 W Intel® Core™ i7-6700K (Cores, 8M Cache, up to 4.2 GHz); 91W (Non-LTS) Intel® Core™ i7-6700 (4 Cores, 8M Cache, up to 4.0 GHz); 65W Intel® Core™ i7-6700TE (4 Cores, 8M Cache, up to 3.4 GHz); 35W Intel® Core™ i5-6500 (4 Cores, 6M Cache, up to 3.6 GHz); 65W Intel® Core™ i5-6500TE (4 Cores, 6M Cache, up to 3.3 GHz); 35W Intel® Core™ i3-6101E (2 Cores, 4M Cache, 3.7 GHz); 65W Intel® Core™ i3-6101TE (2 Cores, 4M Cache, to 2.7 GHz); 35W Intel® Pentium® G4400 (2 Cores, 3M Cache, 3.3 GHz); 65W Intel® Pentium® G400TE (2 Cores, 3M Cache, 2.9 GHz); 35W Intel® Celeron® G3900 (2 Cores, 2M Cache, 2.8 GHz); 65W Intel® Celeron® G3900TE (2 Cores, 2M Cache, 2.6 GHz); 35W
	Chipset	Intel® C236 Chipset	
	Memory	Four 288-pin ECC/Non-ECC DIMM up to 64GB	Dual Channel DDR4 2133/2400MHz (Core i5/i7 only support non-ECC)
	BIOS	Insyde SPI 128Mbit	
	GRAPHICS	Controller	Intel® HD Gen 9 Graphics
	Feature	OpenGL 5.0, DirectX 12, OpenCL 2.1 HW Decode: AVC/H.264, MPEG2, VC1/WMV9, JPEG/MJPEG, HEVC/H265, VP8, VP9 HW Encode: MPEG2, AVC/H264, JPEG, HEVC/H265, VP8, VP9	
	Display	1 x VGA 1 x DVI-I (DVI-D signal) 1 x HDMI	VGA: resolution up to 1920x1200 @ 60Hz DVI-D: resolution up to 1920x1200 @ 60Hz HDMI: resolution up to 4096x2160 @ 24Hz
	Triple Displays	VGA + DVI-I (DVI-D signal) + HDMI	
EXPANSION	Interface	2 x PCIe x16 (1 x16 or 2 x8 signal) (Gen 3) 2 x PCIe x4 (Gen 3) 3 x PCI	1 x M.2 2260/2280 M key (SATA3.0/PCIe Gen3 x2 NVMe) (Optane memory support)
AUDIO	Audio Codec	Realtek ALC888S-VD2-GR	
ETHERNET	Controller	1 x Intel® I210AT PCIe (10/100/1000Mbps) 1 x Intel® I219LM PCIe with iAMT11.0 (10/100/1000Mbps) (only Xeon, Core i7/i5 supports iAMT)	
REAR I/O	Ethernet	2 x GbE (RJ-45)	
	USB	4 x USB 3.0	2 x USB 2.0
	Serial	1 x RS-232/422/485 (RS-232 w/ power) (DB-9)	
	PS/2	1 x PS/2 (mini-DIN-6)	
	Display	1 x VGA 1 x DVI-I (DVI-D signal)	1 x HDMI
	Audio	1 x Line-out, 1 x Mic-in, 1 x Line-in (opt. by request, MOQ required)	
INTERNAL I/O	Serial	1 x RS-232/422/485 (RS-232 w/ power) (2.54mm pitch)	4 x RS-232 (2.54mm pitch)
	USB	2 x USB 3.0 (2.00mm pitch) 6 x USB 2.0 (2.54mm pitch) or 4 x USB 2.0 (2.54mm pitch) + 1 x Vertical USB 2.0 (type A) (opt., MOQ required)	
	Audio	1 x Front Audio Header	1 x S/PDIF
	SATA	6 x SATA 3.0 (up to 6Gb/s)	RAID 0/1/5/10
	DIO	1 x 8-bit DIO	
	LPC	1 x LPC (supports LPC EXT-RS232/RS485 module)	
	SMBus	1 x SMBus	
	WATCHDOG TIMER	Output & Interval	System Reset, Programmable via Software from 1 to 255 Seconds
SECURITY	TPM	Infineon TPM2.0/1.2 (opt., MOQ required)	
POWER	Type	ATX	
	Connector	8-pin ATX 12V power	24-pin ATX power
	Consumption	TBD	
	RTC Battery	CR2032 Coin Cell	
OS SUPPORT		Windows 7 32/64-bit Windows 8.1 64-bit Windows 10 64-bit	Linux Note: 7th Gen CPU SKU ONLY support Windows 10 64-bit & Linux.
ENVIRONMENT	Temperature	Operating: 0 to 60°C Storage: -30 to 60°C with RTC Battery; -40 to 85°C without RTC Battery	
	Humidity	Operating: 5 to 90% RH	Storage: 5 to 90% RH
	MTBF	378,681 hrs @ 25°C; 218,225 hrs @ 45°C; 139,476 hrs @ 60°C Calculation model: Telcordia Issue 2 Environment: GB, GC – Ground Benign, Controlled	

Packing List

• 1 KD631-C236 motherboard	
• 1 COM port cables (Length: 400mm, 2 x COM ports)	A81-015012-001G
• 1 Serial ATA data cable (Length: 500mm)	332-553001-005G
• 1 I/O shield	A49-KD6310-000G
• 1 M.2 standoff	A33-725019-090G
• 1 M.2 screw	A32-112016-041G

Optional Items

• USB 2.0 port cable (Length: 350mm)	A81-001066-016G
• USB 3.0 port cable (Length: 320mm)	A81-001052-023G
• COM port cable (Length: 400mm, 2 x COM ports)	A81-015012-001G
• Serial ATA data cable (Length: 500mm, W/LOCK)	332-553001-005G
• Thermal solution (For 35W, Height: 37.3mm)	A71-103004-000G
• Thermal solution (For 65W, Height: 72.8mm)	552-200049-000G
• Thermal solution (For 95W, Height: 69.3mm)	761-103001-000G
• LPC EXT-RS232 module (4 x RS232 ports)	770-EXTRS1-000G
• LPC EXT-RS485 module (4 x RS485 ports)	770-EXTRS1-100G