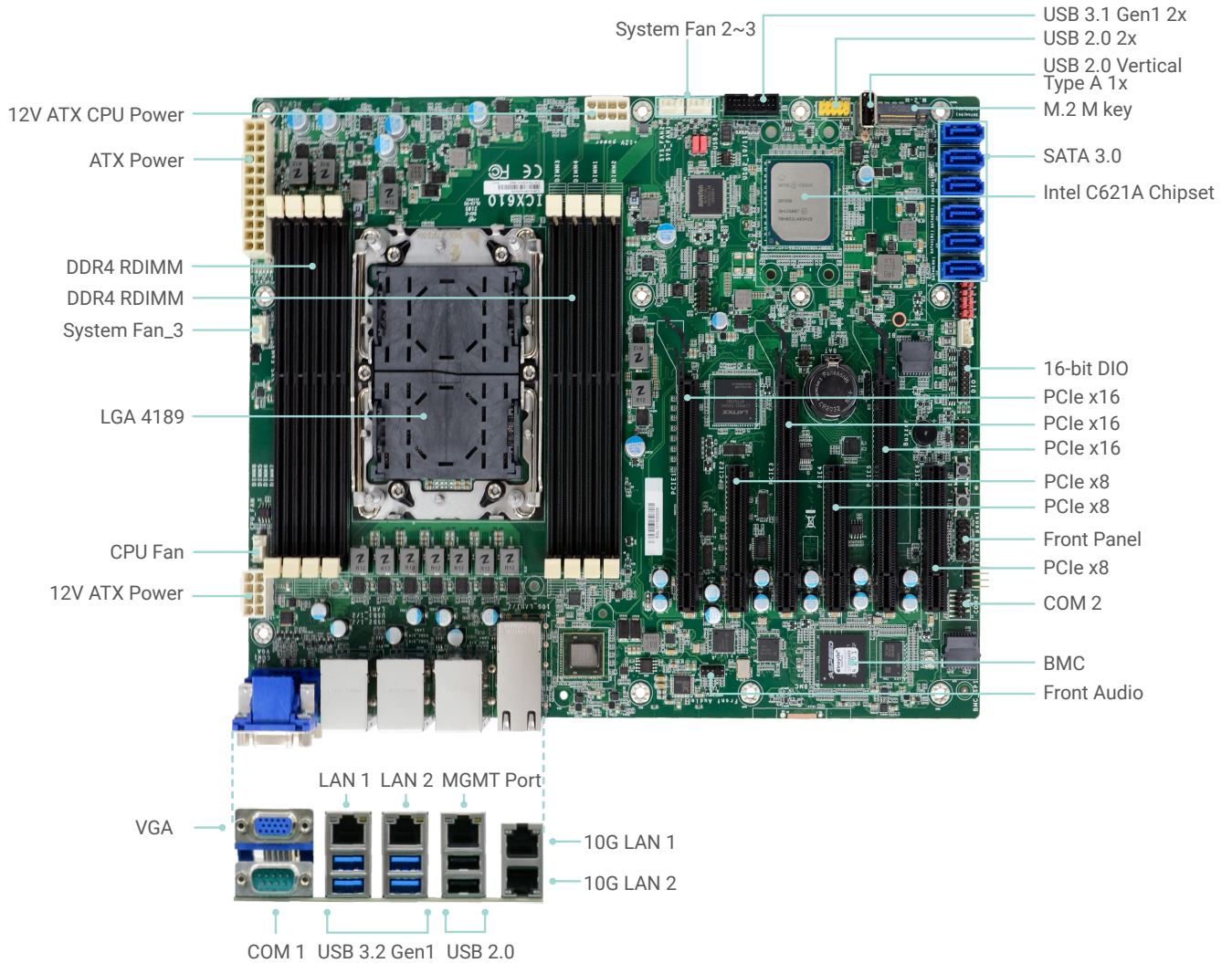


# ICX610-C621A Server Grade

3rd Gen Intel® Xeon® Scalable Processor Family  
ATX



Top View

## KEY FEATURES



### DDR4

8 ECC-RDIMM up to 512GB



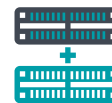
### 10GLAN

2 10GbE



### IPMI

OOB Remote Management



### Multiple Expansion

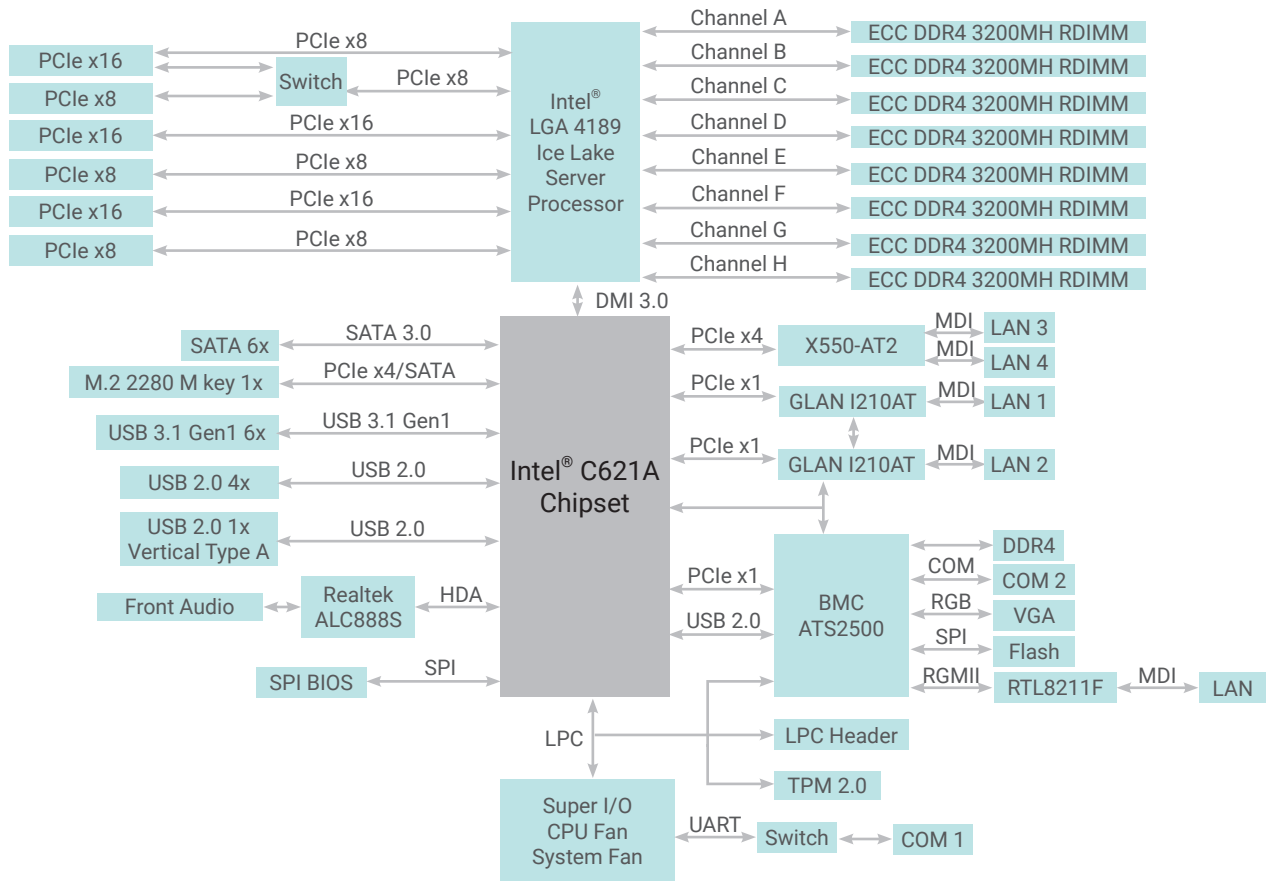
3 PCIe x16 (Gen4),  
2 PCIe x8 (Gen4),  
1 M.2 M key



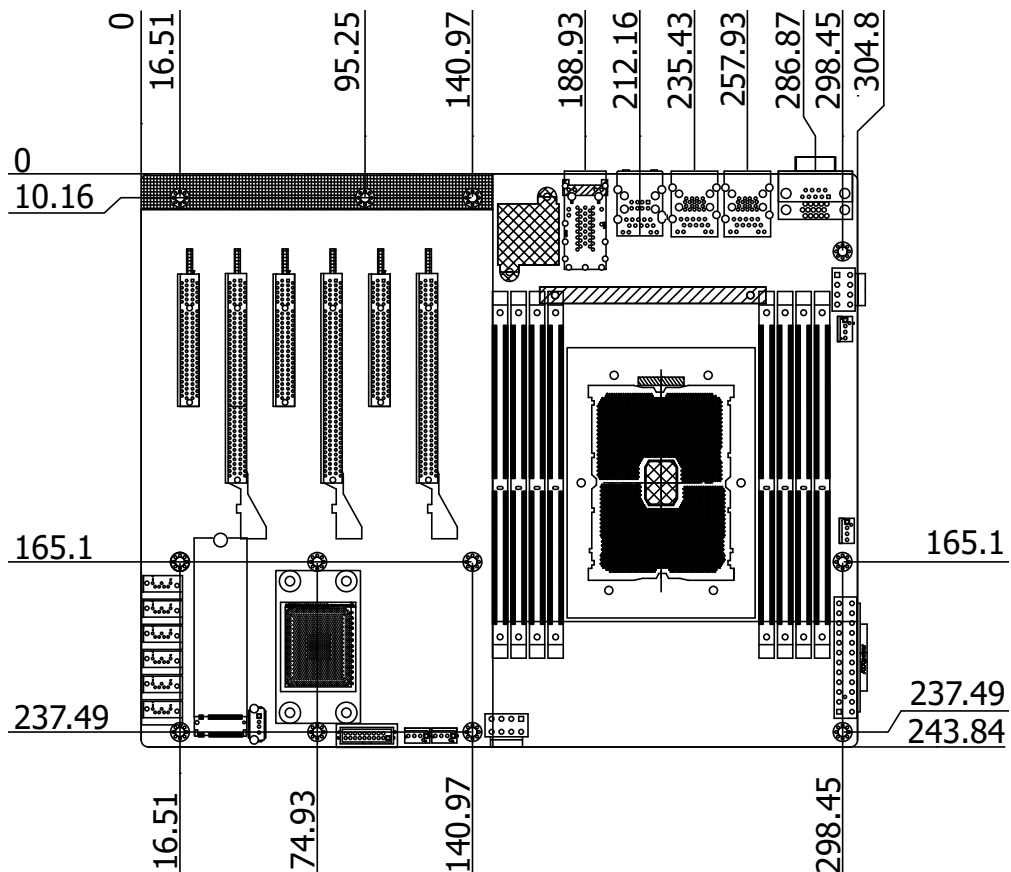
### Rich I/O

2 Intel GbE, 2 COM,  
1 Dedicated IPMI,  
6 USB 3.1 Gen1,  
5 USB 2.0

## BLOCK DIAGRAM



## MECHANICAL DRAWING



## SPECIFICATION

SYSTEM	Processor	3rd Gen Intel® Xeon® Scalable Processor Family, LGA 4189 (Socket P+) Intel® Xeon® Gold 6338N ( 32 Cores, 48 MB Cache, up to 3.50 GHz ) Intel® Xeon® Gold 6338T ( 24 Cores, 36 MB Cache, up to 3.40 GHz ) Intel® Xeon® Gold 6336Y ( 24 Cores, 36 MB Cache, up to 3.60 GHz ) Intel® Xeon® Gold 6330 ( 28 Cores, 42 MB Cache, up to 3.10 GHz ) Intel® Xeon® Gold 6330N ( 28 Cores, 42 MB Cache, up to 3.40 GHz ) Intel® Xeon® Gold 6326 ( 16 Cores, 24 MB Cache, up to 3.50 GHz ) Intel® Xeon® Gold 6314U ( 32 Cores, 48 MB Cache, up to 3.40 GHz ) Intel® Xeon® Gold 6312U ( 24 Cores, 36 MB Cache, up to 3.60 GHz ) Intel® Xeon® Gold 5320T ( 20 Cores, 30 MB Cache, up to 3.50 GHz ) Intel® Xeon® Gold 5318N ( 24 Cores, 36 MB Cache, up to 3.40 GHz ) Intel® Xeon® Gold 5318Y ( 24 Cores, 36 MB Cache, up to 3.40 GHz ) Intel® Xeon® Gold 5317 ( 12 Cores, 18 MB Cache, up to 3.60 GHz ) Intel® Xeon® Gold 5315Y ( 8 Cores, 12 MB Cache, up to 3.60 GHz ) Intel® Xeon® Silver 4316 ( 20 Cores, 30 MB Cache, up to 3.40 GHz ) Intel® Xeon® Silver 4314 ( 16 Cores, 24 MB Cache, up to 3.40 GHz ) Intel® Xeon® Silver 4310 ( 12 Cores, 18 MB Cache, up to 3.30 GHz ) Intel® Xeon® Silver 4310T ( 10 Cores, 15 MB Cache, up to 3.40 GHz )	
	Chipset	Intel® C621A Chipset	
	Memory	8 x 288-pin ECC-RDIMM up to 512GB Single Channel DDR4 up to 3200 MHZ	
	BIOS	Insyde SPI 128Mbit	
	GRAPHICS	Controller	BMC AST2500
GRAPHICS	Display	1 x VGA	VGA: resolution up to 1920x1200 @ 60Hz
	Single Display	VGA	
EXPANSION	Interface	3 x PCIe x16 Gen4 slot (#1/#3/#5), 3 x PCIe x8 Gen4 slot (#2/#4/#6) Note: PCIe#1#2 can be auto detected as (x16/0) or (x8/x8) 1 x M.2 2280 M key (SATA/PCIe Gen3 x4 NVMe)	
AUDIO	Audio Codec	ALC888S	
ETHERNET	Controller	2 x Intel® I210AT PCIe (10/100/1000Mbps) 2 x Intel® X550-AT2 PCIe (10Gbps) IPMI: RTL8211F	
	Ethernet	2 x GbE (RJ-45) 2 x 10GbE (RJ-45) 1 x Dedicated IPMI LAN	
	Serial	1 x RS-232 (DB-9)	
REAR I/O	USB	4 x USB 3.1 Gen1 (w/ RJ45 + USB 3.1 stack) 2 x USB 2.0 (w/ RJ45 + USB 2.0 stack)	
	Display	1 x VGA (DB-15)	
	INTERNAL I/O	USB	2 x USB 3.1 Gen1 2 x USB 2.0 1 x USB 2.0 Vertical Type A
INTERNAL I/O	Serial	1 x RS-232 (2x5-pin)	
	Audio	1 x Front Audio Header	
	SATA	6 x SATA 3.0 (up to 6Gb/s)	RAID 0/1/5/10
	LPC	1 x LPC	
	DIO	1 x 16-bit DIO	
	SMBus	1 x SMBus	
WATCHDOG TIMER	Output & Interval	System Reset, Programmable via Software from 1 to 255 Seconds	
SECURITY	TPM	Infineon TPM2.0	
POWER	Type	ATX	
	Connector	8-pin ATX 12V CPU power 24-pin ATX power	
	Consumption	TBD	
	Battery	CR2032 Coin Cell	
OS SUPPORT	Windows	Windows 10 IoT Enterprise LTSC RS5(64-bit) Windows Server 2019	
	Linux	Ubuntu 20.04	
ENVIRONMENT	Temperature	Operating: 0 to 55°C Storage: -40 to 85°C	
	Humidity	Operating: 5 to 90% RH, Non-condensing Storage: 5 to 90% RH, Non-condensing	
	MTBF	TBD	
MECHANISM	Dimensions	ATX Form Factor 305mm (12") x 244mm (9.6")	
	Height	PCB: 1.6mm	Top Side: 37.34mm
Standards and Certifications	Certifications	CE, FCC, RoHS, UKCA	

## ORDERING INFORMATION

Model Name	P/N	10GbE	1GbE	IPMI	VGA	COM	USB 3.1 Gen1	USB 2.0	Temperature
ICX610-C621A	770-ICX6101-000G	2	2	1	1	2	6	5	0 to 55°C
ICX610-C621A	770-ICX6101-100G	2	2	0	1	1	6	5	0 to 55°C
ICX610-C621A	770-ICX6101-200G	2	2	0	0	1	6	5	0 to 55°C
ICX610-C621A	770-ICX6101-300G	0	2	0	1	1	6	5	0 to 55°C

## PACKING LIST

1 ICX610-C621A Motherboard	770-ICX6101-000G
1 M.2 screw	A32-112016-041G
1 M.2 standoff	A33-725019-090G
1 IO Shield	A49-ICX610-000G
1 Serial ATA data cable (Length: 500mm)	332-553001-005G

## OPTIONAL ITEMS

USB 2.0 port cable (Length: 350mm)	A81-001066-016G
USB 3.1 Gen1 cable (Length: 320mm)	A81-001052-023G
Serial ATA data cable (Length: 500mm)	332-553001-005G
2U CPU cooler, LGA 4189 113 x 84 x 71.6mm	A71-101141-000G
4U CPU cooler, LGA 4189 116.7 x 92.5 x 125.5mm	A71-101142-000G