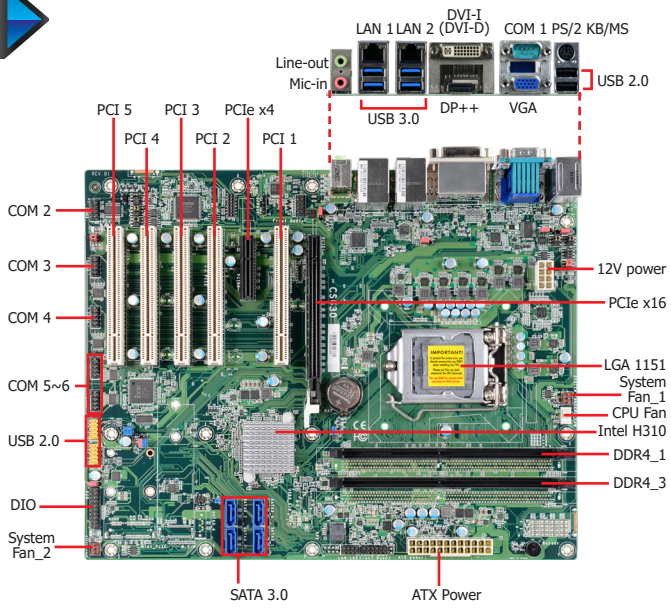
IoT Solutions Alliance

CS630-H310

H310

Desktop



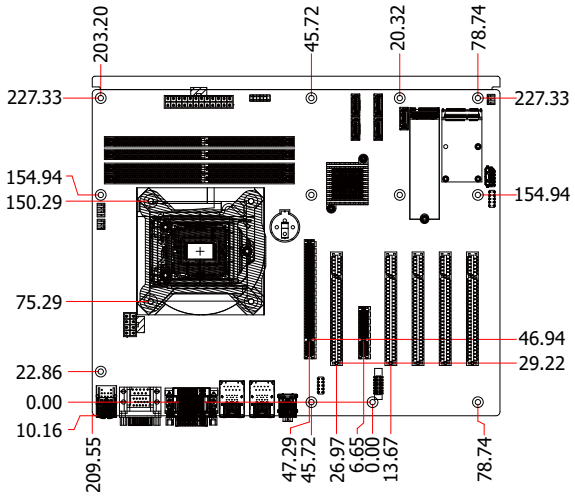
Features

- 2 DDR4 DIMM up to 64GB
- Three display ports: VGA, DVI-D, DP++
  Supports two independent displays
- DVI-D: resolution up to 1920x1200 @ 60Hz
  DP++ resolution up to 4096x2160 @ 60Hz
- Multiple expansion:
  1 PCIe x16 (Gen 3), 1 PCIe x4 (Gen 2), 5 PCI
- Rich I/O: 2 Intel GbE, 6 COM, 4 USB 3.1 Gen1, 6 USB 2.0

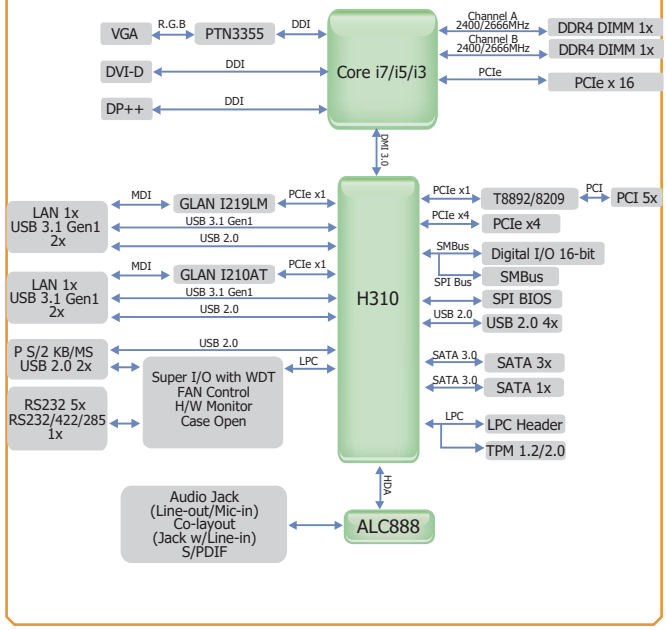
Ordering Information

Model Name	P/N	Memory	GbE	RS-232/ 422/485	RS-232	USB 3.1 Gen 1	USB 2.0	PCI BRIDGE	M.2 M-key	DIO	TPM 2.0	Power	Thermal	Temp.
CS630-H310C	770-CS6304-000G	2 DDR4 DIMM	2	2	4	4	6	T8892/8209	-	16-bit DIO	-	24-pin ATX	Active	-5 to 65°C
CS630-H310C	770-CS6304-200G	2 DDR4 DIMM	2	2	4	4	6	T8892/8209	-	16-bit DIO	1	24-pin ATX	Active	-5 to 65°C

Mechanical Drawing



Block Diagram



Specifications

SYSTEM	**Processor**	8th Generation Intel® Core™ /Pentium®/Celeron® LGA 1151 Socket Processors, TDP support up to 95W: Intel® Core™ i7-8700 (6 Cores, 12M Cache, up to 4.6 GHz); 65W Intel® Core™ i7-8700T (6 Cores, 12M Cache, up to 4.0 GHz); 35W Intel® Core™ i5-8500 (6 Cores, 9M Cache, up to 4.1 GHz); 65W Intel® Core™ i5-8500T (6 Cores, 9M Cache, up to 3.5 GHz); 35W Intel® Core™ i3-8100 (4 Cores, 6M Cache, 3.6 GHz); 65W Intel® Core™ i3-8100T (4 Cores, 6M Cache, to 3.1 GHz); 35W Intel® Pentium® G5400 (2 Cores, 4M Cache, 3.7 GHz); 58W Intel® Pentium® G5400T (2 Cores, 4M Cache, 3.1 GHz); 35W Intel® Celeron® G4900 (2 Cores, 2M Cache, 3.1 GHz); 54W Intel® Celeron® G4900T (2 Cores, 2M Cache, 2.9 GHz); 35W 9th Generation Intel® Core™ LGA 1151 Socket Processors, TDP support up to 95W: Intel® Core™ i7-9700E (8 Cores, 12M Cache, up to 4.4 GHz); 65W Intel® Core™ i7-9700TE (8 Cores, 12M Cache, up to 3.8 GHz); 35W Intel® Core™ i5-9500E (6 Cores, 9M Cache, up to 4.2 GHz); 65W Intel® Core™ i5-9500TE (6 Cores, 9M Cache, up to 3.6 GHz); 35W Intel® Core™ i3-9100E (4 Cores, 6M Cache, 3.7 GHz); 65W Intel® Core™ i3-9100TE (4 Cores, 6M Cache, to 3.2 GHz); 35W	
	Chipset	Intel® H310 Chipset	
	Memory	Two 288-pin DIMM up to 64GB	Dual Channel DDR4 2400/2666MHz
	BIOS	AMI 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 DP++	VGA: resolution up to 1920x1200 @ 60Hz DVI-D: resolution up to 1920x1200 @ 60Hz DP++: resolution up to 4096x2160 @ 60Hz
	Dual Displays	VGA + DVI-D / VGA + DP++ / DP++ + DVI-D	
EXPANSION	**Interface**	1 x PCIe x16 (Gen 3)	
		1 x PCIe x4 (Gen 2)	
		5 x PCI (use IT8892+IT8209)	
AUDIO	**Audio Codec**	Realtek ALC888	
ETHERNET	**Controller**	1 x Intel® I210AT PCIe (10/100/1000Mbps)	1 x Intel® I219V Lan Phy (10/100/1000Mbps)
REAR I/O	**Ethernet**	2 x GbE (RJ-45)	
	USB	4 x USB 3.1 (Gen1)	2 x USB 2.0
	Serial	1 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 DP++	1 x DVI-I (DVI-D signal)
	Audio	1 x Line-out, 1 x Mic-in, 1 x Line-in (opt., 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	4 x USB 2.0 (2.54mm pitch)	
	Audio	1 x S/PDIF	1 x Front Audio Header
	SATA	4 x SATA 3.0 (up to 6Gb/s)	
	DIO	1 x 16-bit DIO	
	LPC	1 x LPC	
	SMBus	1 x SMBus	
WATCHDOG TIMER	**Output & Interval**	System Reset, Programmable via Software from 1 to 255 Seconds	
SECURITY	**TPM**	TPM2.0/1.2 (opt., MOQ required)	
POWER	**Type**	ATX	
	Connector	8-pin ATX 12V power	24-pin ATX power
	Consumption	Typical: i7-8700K: 3.3V @ 0.19A (0.627Watt); 5V @ 0.5A (2.5Watt); 12V @ 0.37A (4.44Watt) Max.: i7-8700K:3.3V @ 0.24A (0.792Watt); 5V @ 1.03A (5.15Watt); 12V @ 13.02A (156.24Watt)	
	RTC Battery	CR2032 Coin Cell	
OS SUPPORT		Windows 10 IoT Enterprise 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	551,561 hrs @ 25°C; 313,962 hrs @ 45°C ; 196,617 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: 31.47mm Bottom Side: 4.4mm
CERTIFICATIONS		CE, FCC, RoHS, KC, UKCA	

Packing List

• 1 CS630-H310 motherboard	
• 1 COM port cables (W/Bracket, Length: 300mm, 2 x COM ports)	A81-015026-023G
• 1 Serial ATA data cable (Length: 500mm)	332-553001-005G
• 1 I/O shield	A49-KD6000-000G

Optional Items

• USB 2.0 port cable (Length: 350mm)	A81-001066-016G
• USB 3.1 Gen2 port cable (Length: 300mm)	A81-001075-017G
• D-SUB cable (W/Bracket, Length: 300mm, 2 x COM ports)	A81-015026-023G
• Serial ATA data cable (W/Lock, Length: 500mm)	332-553001-005G
• Serial ATA data cable (W/Lock, Length: 500mm, 90D)	A81-002128-017G
• Thermal solution (For 35W, Height: 37.3mm)	A71-101107-000G
• Thermal solution (For 65W, Height: 74.47mm)	A71-101158-000G
• Thermal solution (For 95W, Height: 77.2mm)	761-103001-000G
• DP to HDMI dongle	612-D2H13M-000G

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