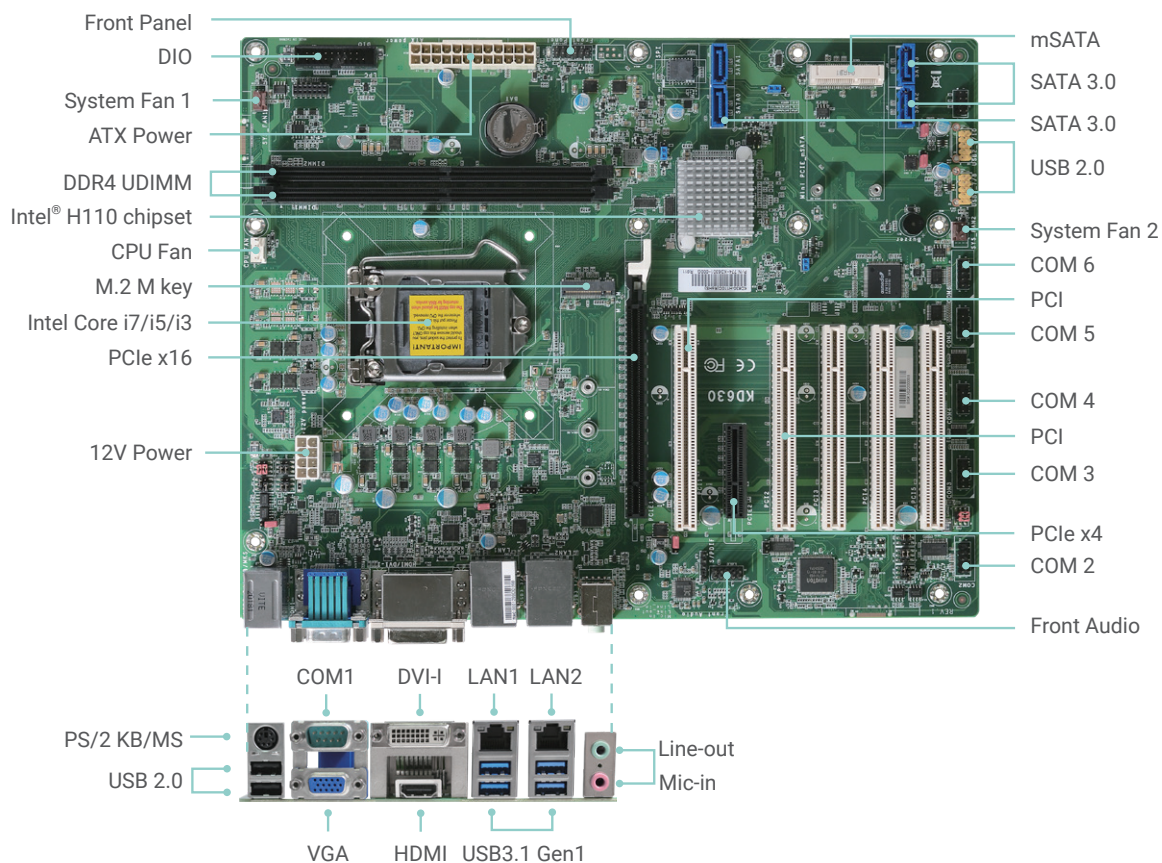


# KD630-H110 Desktop

6th/7th Gen Intel® Core™  
ATX



Top View

## KEY FEATURES



### DDR4

2 DDR4 UDIMM up to 32GB



### 4K High Resolution

Supports 4K/ 2K resolution



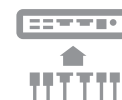
### 2 Independent Displays

VGA+DVI-I / VGA+HDMI / DVI-I+HDMI



### Multiple Expansion

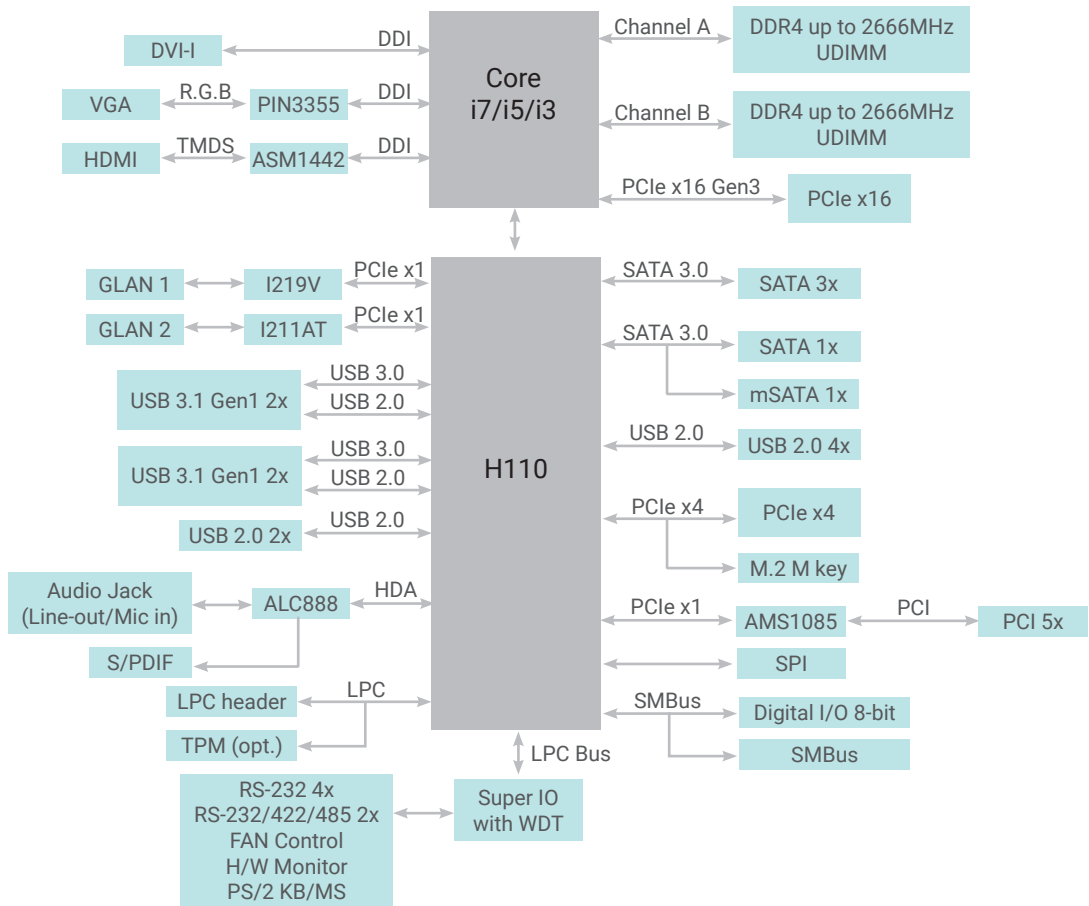
1 PCIe x16, 1 PCIe x4, 5 PCI, 1 M.2 M key, 1 mSATA



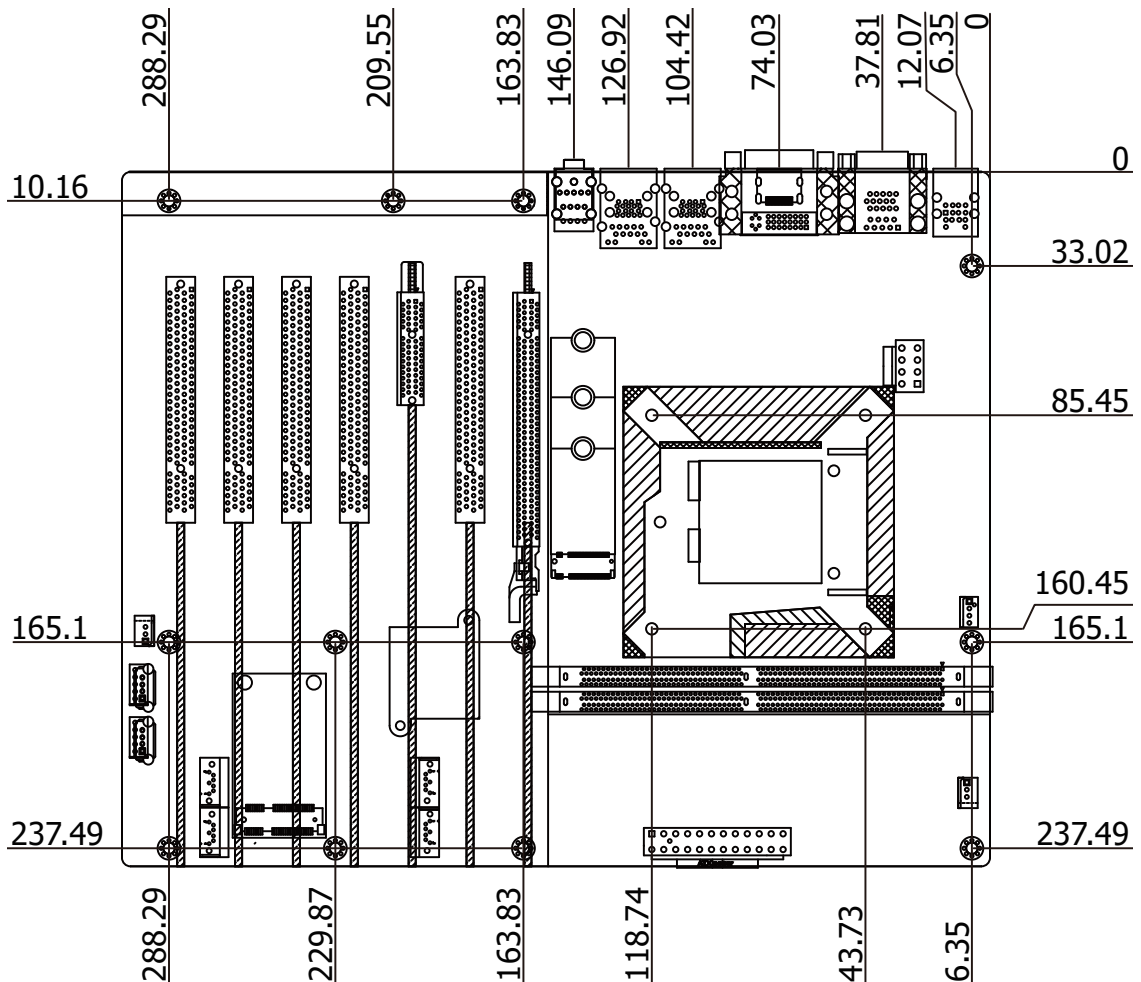
### Rich I/O

2 Intel GbE, 6 COM, 4 USB 3.1 Gen1, 6 USB 2.0

## BLOCK DIAGRAM



## MECHANICAL DRAWING



## SPECIFICATION

SYSTEM	<b>Processor</b>	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® Core™/Pentium®/Celeron® LGA 1151 Socket Processors with TDP up to 95W: 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	
	<b>Chipset</b>	Intel® H110 Chipset	
	<b>Memory</b>	Two 288-pin UDIMM up to 32GB Dual Channel DDR4 up to 2666MHz	Core™ i5/i7 only support non-ECC
	<b>BIOS</b>	Insyde SPI 128Mbit	
	<b>GRAPHICS</b>	<b>Controller</b>	Intel® HD Gen 9 Graphics
	<b>Feature</b>	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	
	<b>Display</b>	1 x VGA 1 x DVI-I (DVI-D signal) 1 x HDMI1.4b VGA: resolution up to 1920x1200 @ 60Hz DVI-I: resolution up to 1920x1200 @ 60Hz HDMI1.4b: resolution up to 4096x2160 @ 24Hz	
	<b>Dual Displays</b>	VGA + DVI-I / VGA + HDMI / DVI-I + HDMI	
<b>EXPANSION</b>	<b>Interface</b>	1 x PCIe x16 (Gen 3) 1 x PCIe x4 (Gen 2) 5 x PCI 1 x M.2 2242/2260/2280 M key (PCIe Gen3 x 4 NVMe, share with PCIe x4 slot) 1 x mSATA (Share with SATA connector)	
<b>AUDIO</b>	<b>Audio Codec</b>	Realtek ALC888S-VD2-GR	
<b>ETHERNET</b>	<b>Controller</b>	1 x Intel® I211AT (10/100/1000Mbps) 1 x Intel® I219V (10/100/1000Mbps)	
<b>REAR I/O</b>	<b>Ethernet</b>	2 x GbE (RJ-45)	
	<b>Serial</b>	1 x RS-232/422/485 (RS-232 w/ power) (DB-9)	
	<b>USB</b>	4 x USB 3.1 Gen1 2 x USB 2.0	
	<b>PS/2</b>	1 x PS/2 (mini-DIN-6)	
	<b>Display</b>	1 x VGA 1 x DVI-I (DVI-D signal) 1 x HDMI	
	<b>Audio</b>	1 x Line-in (opt., MOQ required) 1 x Mic-in	1 x Line-out
<b>INTERNAL I/O</b>	<b>Serial</b>	1 x RS-232/422/485 (RS-232 w/ power) (2.54mm pitch) 4 x RS-232 (2.54mm pitch)	
	<b>USB</b>	4 x USB 2.0 (2.54mm pitch) or up to 2 x Vertical USB 2.0 (type A) (opt., MOQ required)	
	<b>Audio</b>	1 x Audio 1 x S/PDIF	
	<b>SATA</b>	4 x SATA 3.0 (up to 6Gb/s)	
	<b>DIO</b>	1 x 8-bit DIO	
	<b>LPC</b>	1 x LPC (supports LPC EXT-RS232/RS485 module)	
	<b>SMBus</b>	1 x SMBus	
<b>WATCHDOG TIMER</b>	<b>Output &amp; Interval</b>	System Reset, Programmable via Software from 1 to 255 Seconds	
<b>SECURITY</b>	<b>TPM</b>	Infineon TPM2.0/1.2 (opt., MOQ required)	
<b>POWER</b>	<b>Type</b>	ATX	
	<b>Connector</b>	8-pin ATX 12V power 24-pin ATX power	
	<b>Consumption</b>	Typical: i7-7700K: 3.3V @ 0.28A (0.924W); 5V @ 0.36A (1.8W); 12V @ 0.17A (2.04W) Max.: i7-7700K:3.3V @ 0.29A (0.957W); 5V @ 1.22A (6.1W); 12V @ 10.13A (121.56W)	
	<b>RTC Battery</b>	CR2032 Coin Cell	
<b>OS SUPPORT</b>	<b>Microsoft</b>	Windows 7 32/64-bit (6th Gen Intel® Core™/Pentium®/Celeron® processors only) Window 8.1 64-bit (6th Gen Intel® Core™/Pentium®/Celeron® processors only) Windows 10 64-bit	
	<b>Linux</b>	Linux	

<b>ENVIRONMENT</b>	<b>Temperature</b>	Operating: -5 to 65°C Storage: -30 to 60°C with RTC Battery; -40 to 85°C without RTC Battery	
	<b>Humidity</b>	Operating: 5 to 90% RH Storage: 5 to 90% RH	
	<b>MTBF</b>	537,439 hrs @ 25°C; 306,531 hrs @ 45°C; 192,776 hrs @ 60°C; 164,675 hrs @ 65°C	
<b>MECHANICAL</b>	<b>Dimensions</b>	ATX Form Factor 305mm (12") x 244mm (9.6")	
	<b>Height</b>	PCB: 1.6mm	Top Side: 38.1mm Bottom Side: 3mm
<b>CERTIFICATIONS</b>		CE, FCC, RoHS	

## PACKING LIST

1 KD630-H110 motherboard	
1 COM port cable (Length: 300mm, 2 x COM ports)	A81-015026-023G
1 Serial ATA data cable (Length: 500mm)	332-553001-005G
1 I/O shield	A49-SD6300-001G
1 M.2 standoff	A33-725019-090G
1 M.2 Screw	A32-112016-041G
1 Mini PCIe Screw	A32-112016-041G

## OPTIONAL ITEMS

USB port cable (Length: 350mm)	A81-001066-016G
COM port cable (Length: 300mm, 2 x COM ports)	A81-015026-023G
Serial ATA data cable (Length: 500mm)	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
Mini PCIe bracket (expansion for full sized mini PCIe)	A31-028423-000G
Mini PCIe Screw (expansion for full sized mini PCIe)	A32-31201F-020G