

E521F-A Series



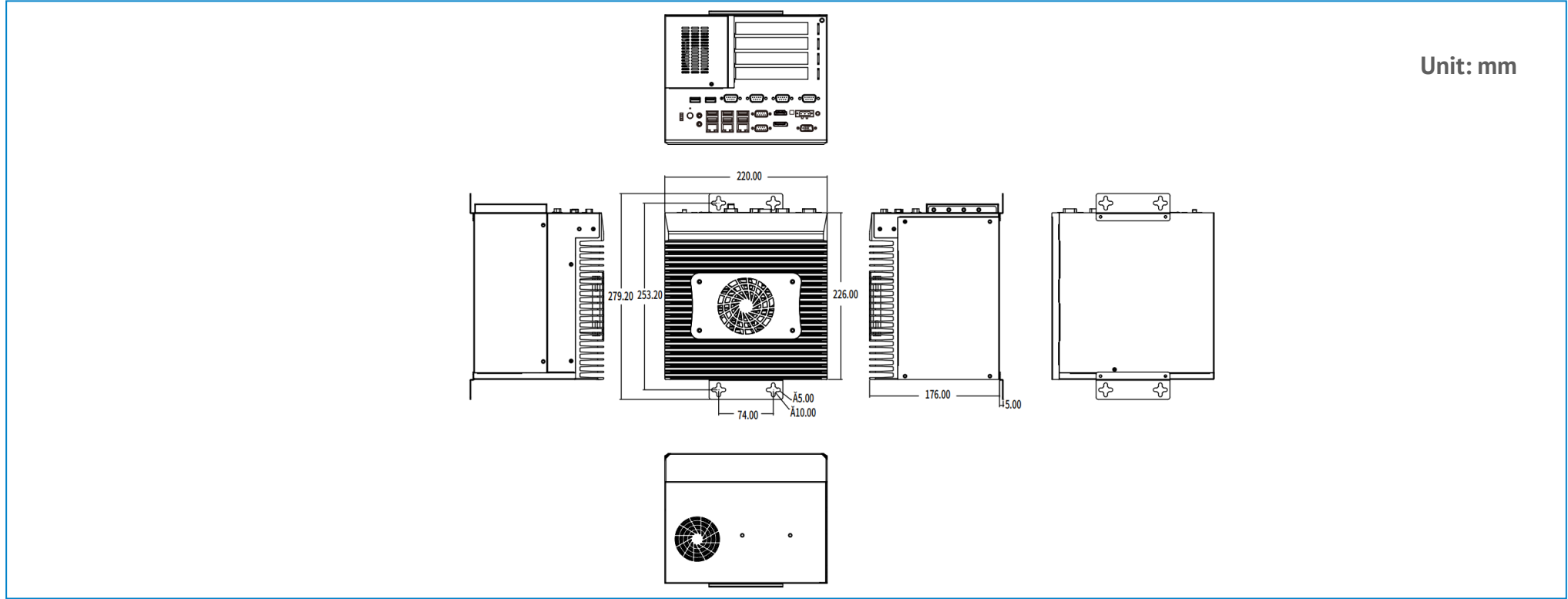
Features

- Intel® 10th generation Core™ i3/ i5/ i7 Series CPU
- Q470 / H470 / H420E Chipset
- Dual channel DDR4 up to 64GB
- 3 displays: DP, VGA and HDMI (H420E: 2 independent display, Q470/H470: 3 independent display)
- 3 GbE LAN (2 x Intel i210, 1 x Intel i219)
- 1 RS-232/422/485, 3 RS-232/485, 2 RS-232
- 4 USB3.0, 4 USB2.0 (H420E) or 6 USB3.0, 2 USB2.0 (Q470/H470)
- 1 PCIe 3.0 x16, 1 PCIe 3.0 x4 (x2 signal), 2 PCI expansion slots
- Q470/H470 support 2 SATA RAID (support RAID 0/RAID 1, switchable in BIOS)
- Support 4G/5G, Wi-Fi module expansion
- DC 24V (9-36V configuration is optional)
- Optional configuration of external UPS module
- 220 x 226 x 176 mm (L x W x H), support Wall-mounting
- Modular and cable-free design
- CE/FCC Class B, ESD 8KV/15KV
- Windows 10/11 and Linux multiple version OS

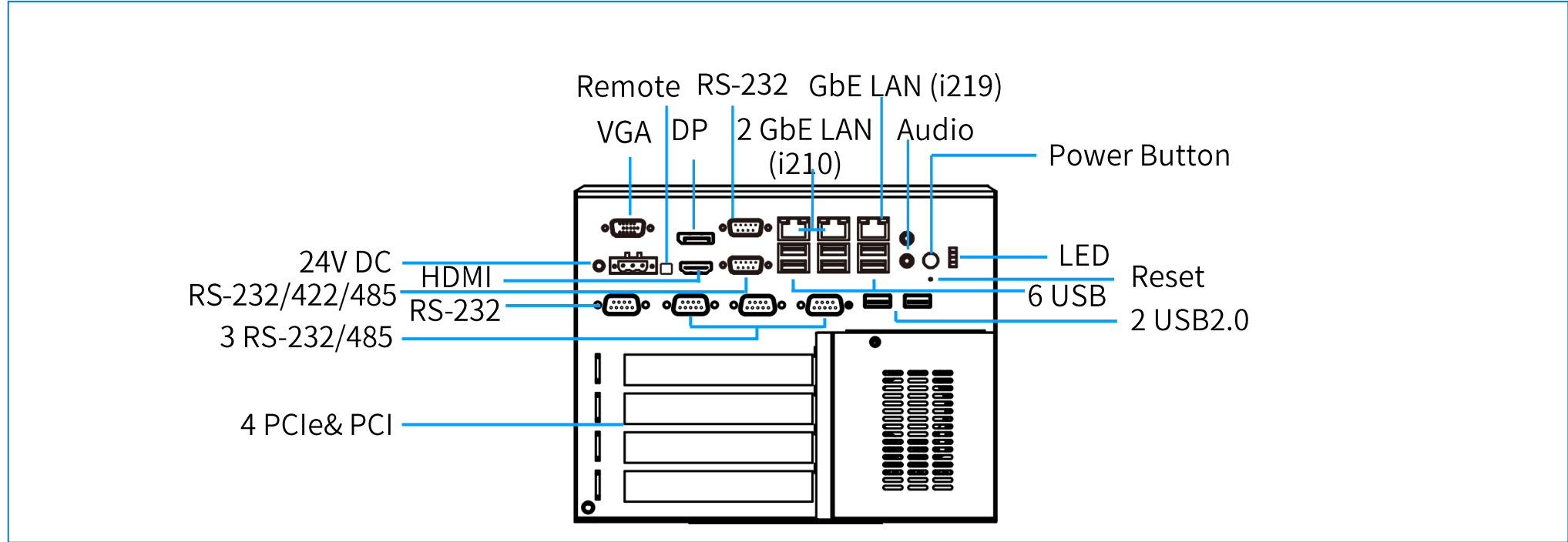
Specifications

Item	Sub-Items	Descriptions
Processor System	CPU	Intel® 10th Gen Core™ Processors
	TDP	65W MAX
	Socket	LGA1200
	Chipset	Q470 / H470 / H420E
	BIOS	AMI 256Mbit SPI Flash
Memory	Sockets	Dual channel 260-PIN DDR4 SO-DIMM
	Capacity	Max. 64GB
Graphics	Controller	Intel UHD Graphics supports DirectX12, OpenGL 4.5 and OpenCL 2.1
	Graphic Features	3D Acceleration: Direct3D 2015, OpenGL4.5, OpenCL2.1 HW Decode: HEVC/H.265 (8/10-bit), AVC/H.264, VP9(8/10-bit),VP8, MPEG2,MJPEG,VC-1 HW Encode: HEVC/H.265 (8/10-bit), AVC/H.264, VP9(8-bit),VP8, MPEG2,MJPEG
External I/O	DP	1 x DP1.4 up to 4096x2304@60Hz
	HDMI	1 x HDMI2.0 up to 4096 x 2160@60 Hz
	VGA	1 x VGA up to 1920 x 1080@60Hz
	LAN	2 x Intel i210 GbE LAN, 1 x Intel i219 GbE LAN
	Serial Ports	COM 1: RS-232/422/485, COM 2&6: RS-232, COM 3~5: RS-232/485
	USB 3.0	4 (H420E)/ 6 (Q470/H470)
	USB 2.0	4 (H420E)/ 2 (Q470/H470)
	Audio	1 x Line out, 1 x Mic in
Expansion Slot	PCIe	1 x PCIe 3.0 x16, 1 x PCIe 3.0 x4 (x2 signal)
	PCI	2 x PCI
LED & Switch	Reset	1 x Reset Button
	Power Button	1 x Power Button
	LED	SATA, Memory, User-defined 1, User-defined 2
Expansion	USB 2.0	1 x internal USB2.0 Type-A
	SATA 3.0	2 x SATA 3.0
	M.2 E-Key	1 x M.2 2230 support Wi-Fi (Q470/H470: support both CNVI and PCIe protocol; H420E: support PCIe protocol)
	M.2 B-Key	1 x M.2 3052 B-Key support 4G/5G
	M.2 M-Key	2 x M.2 2280 M-Key SATA3.0 (Q470 / H470 support RAID 0/RAID 1, switchable in BIOS)
	SIM	1 x Nano SIM
Power Requirement	Power Type	24V DC input (9-36V configuration is optional)
	Power management	AT/ATX
	Max. Consumption	150W
Others	Watchdog	65536 lever, 0~65535 sec
	TPM	TPM2.0 (Optional)
Physical Characteristics	Construction	Aluminum Alloy
	Mounting	Wall Mounting
	Dimensions	220 x 226 x 176 mm (L x W x H)
	Weight	4.3 kg
Environment	Operating Temperature	0~50°C (32~122°F)
	Storage Temperature	-40~85 °C (-40~185°F)
	Operating Humidity	95% @ 40 °C(Non-Condensing)
	Storage Humidity	95% @ 60 °C(Non-Condensing)
Certification	EMC	CE, FCC
OS	Operation system	Windows 10/11, centos 8, ubuntu 20.04/22.04/24.04

Dimensions



Interface



Ordering Information

Model	CPU	TDP	Turbo Frequency	Core	Thread	LAN	COM	USB3.0	USB2.0	DP	HDMI	VGA	Expansion Slots	Power
E521F-A-3000	i3-10100	65W	4.30 GHz	4	8	3	6	4 or 6	4 or 2	1	1	1	1 PCIe 3.0 x16 1 PCIe x4(x2 signal), 2 PCI	24V DC
E521F-A-5000	i5-10400	65W	4.30 GHz	6	12	3	6	4 or 6	4 or 2	1	1	1	1 PCIe 3.0 x16 1 PCIe x4(x2 signal), 2 PCI	24V DC
E521F-A-5000	i5-10500	65W	4.50 GHz	6	12	3	6	4 or 6	4 or 2	1	1	1	1 PCIe 3.0 x16 1 PCIe x4(x2 signal), 2 PCI	24V DC
E521F-A-7000	i7-10700	65W	4.80 GHz	8	16	3	6	4 or 6	4 or 2	1	1	1	1 PCIe 3.0 x16 1 PCIe x4(x2 signal), 2 PCI	24V DC

Optional Accessories

Part Number	Description
MF0A000000000069	WIFI+BT module M.2 2230 WIFI6 2T2R AW-XB547NF
MF0A000000000016	5G module, M.2 RM500Q-GL Sub-6 GHz Worldwide (Excluding US)
MF0A000000000042	5G LTE module, M.2 RM520NGLAA-M20-SGASA, Worldwide
MF0A000000000036	4G LTE module, M.2 EM05CEFC-128-SGAS, China
MF0A000000000066	5G LTE module, M.2 RM500UCNVAA-D10-SNADA EMEA/Asia-Pacific

Packing List

Part Number	Description	Quantity
-	E521F-A Series Embedded PC	1
KE0A000000000004	Round head screws	4
ZM0A000000000020	Three-plug power cord	1
ZM0A000000000028	24V 5A power adaptor with 3 PIN Phoenix terminal (Below i7)	1
ZM0A000000000084	24V 7.5A Power adaptor with 3PIN terminal (i7)	1
MC0A000000000019	Wall-mounting kits (100*37*1mm)	1

OS Support

	Description
Windows	Win10 IoT Ent 2019 LTSC Entry OEM
	Win10 IoT Ent 2019 LTSC MultiLang ESD OEI High End
	Win10 IoT Ent 2019 LTSC MultiLang ESD OEI Value
	Win10 IoT Ent 2021 LTSC Multilang ESD OEI Entry
	Win 11
Linux	centos 8
	ubuntu 20.04~24.04

E521F-B Series



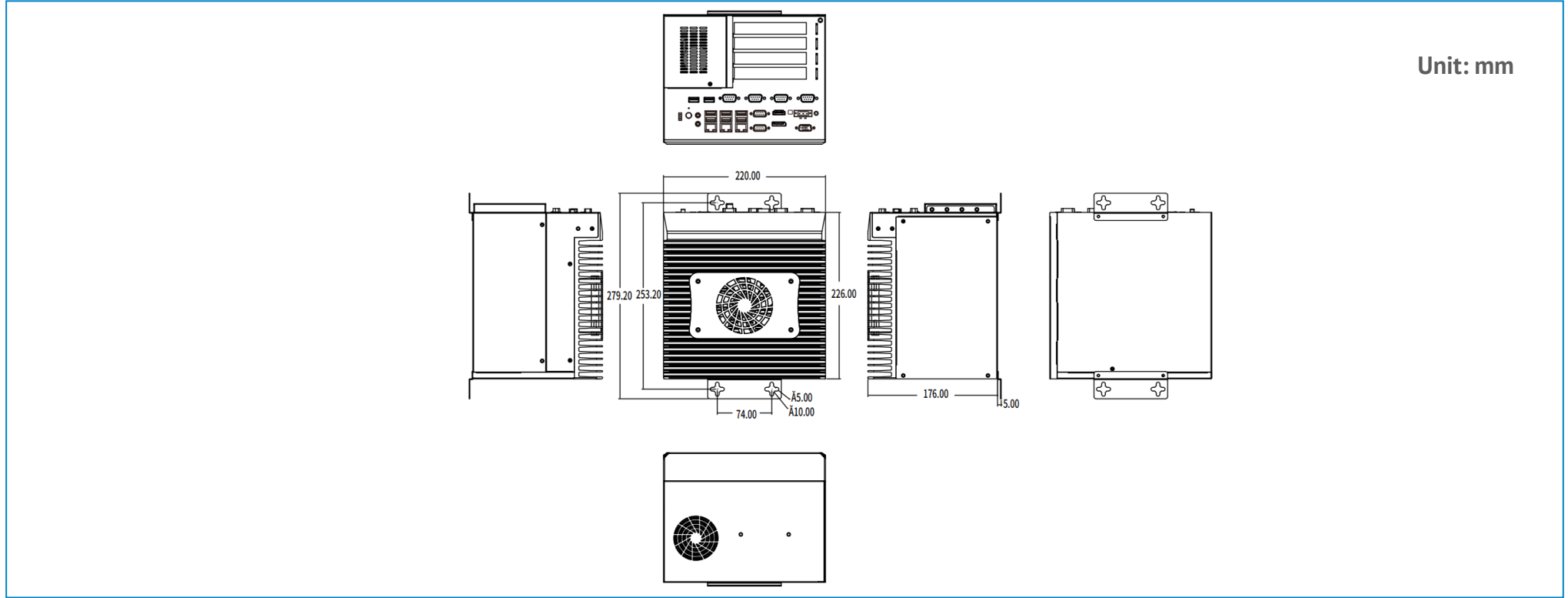
Features

- Intel® 11th generation Core™ Series CPU
- Q470 / H470 / H420E Chipset
- Dual channel DDR4 up to 64GB
- 3 displays: DP, VGA and HDMI (H420E: 2 independent display, Q470/H470: 3 independent display)
- 3 GbE LAN (2 x Intel i210, 1 x Intel i219)
- 1 RS-232/422/485, 3 RS-232/485, 2 RS-232
- 4 USB3.0, 4 USB2.0 (H420E) or 6 USB3.0, 2 USB2.0 (Q470/H470)
- 1 PCIe 3.0 x16, 1 PCIe 3.0 x4 (x2 signal), 2 PCI expansion slots
- Q470/H470 support 2 SATA RAID (support RAID 0/RAID 1, switchable in BIOS)
- Support 4G/5G, Wi-Fi module expansion
- DC 24V (9-36V configuration is optional)
- Optional configuration of external UPS module
- 220 x 226 x 176 mm (L x W x H), support Wall-mounting
- Modular and cable-free design
- CE/FCC Class B, ESD 8KV/15KV
- Windows 10/11 and Linux multiple version OS

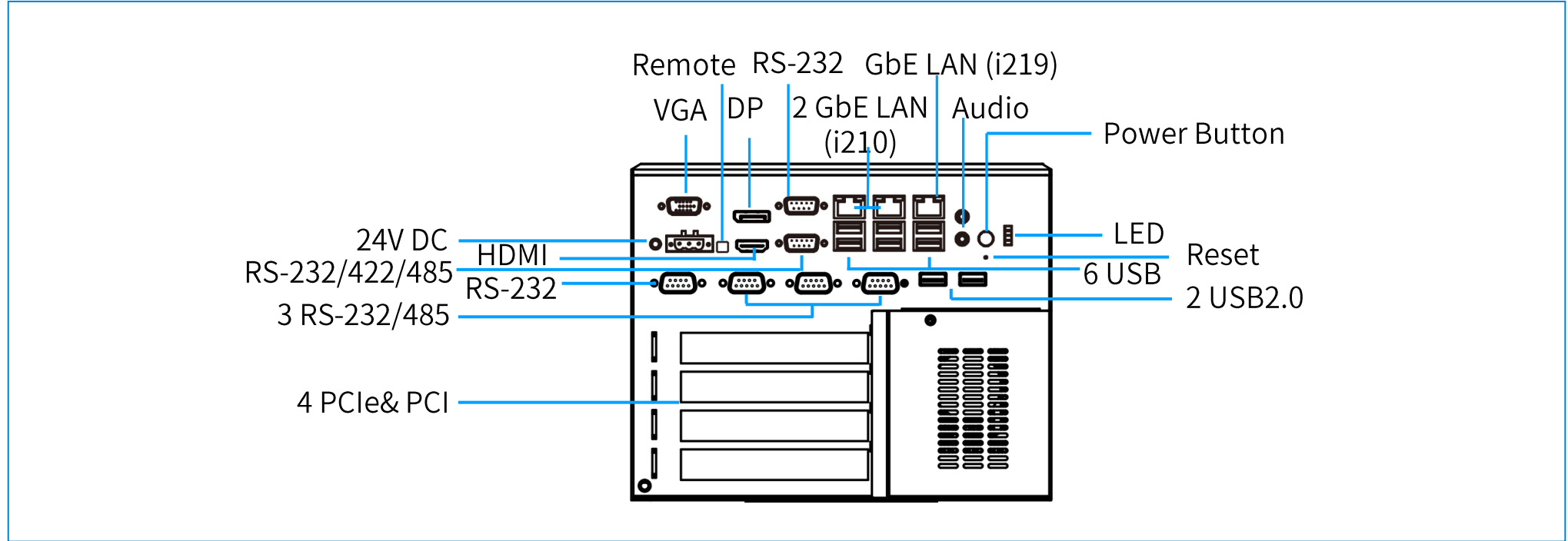
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	Socket	LGA1200
	Chipset	Q470 / H470 / H420E
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	Capacity	Max. 64GB
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