

E512F-C/D/E Series

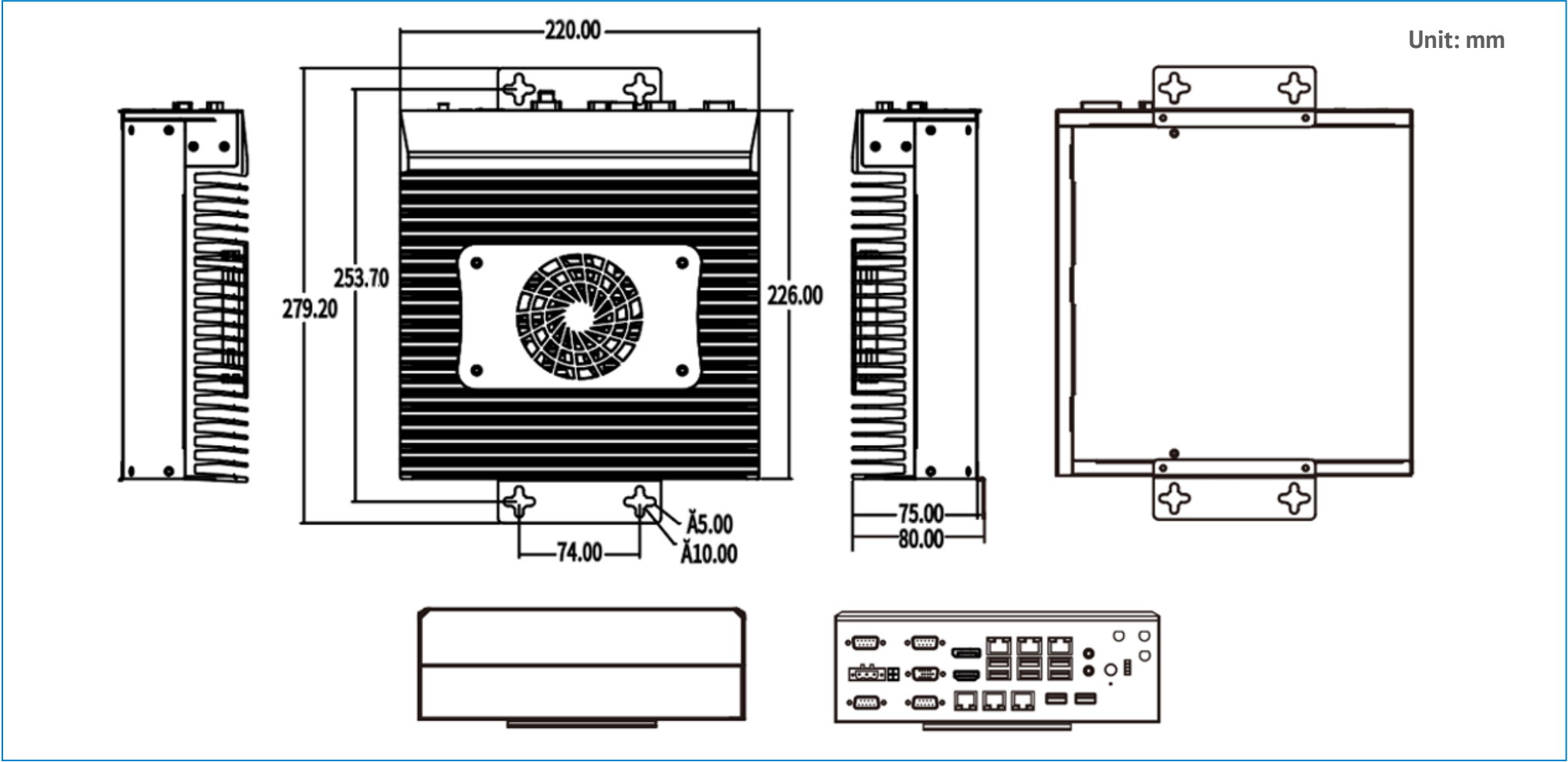
Feature

- Intel® 12-14th generation Core™ i3/ i5/ i7 Series CPU
 - H610/H670/Q670 Chipset
 - Dual channel DDR5 up to 64GB
 - 3 displays: DP, HDMI and VGA
 - 6 GbE LAN (5 x Intel i210, 1 x Intel i219)
 - 1 RS-232/422/485, 2 RS-232/485, 1 RS-232
 - 4 USB3.2, 4 USB2.0 (H610) or 6 USB3.2, 2 USB2.0 (H670/Q670)
 - Q670/H670 support 2 SATA RAID (support RAID 0/RAID 1, switchable in BIOS)
 - Support 4G/5G, Wi-Fi module expansion
 - Optionally support 2 SATA 7+15
 - DC 24V (9-36V configuration is optional)
 - 220 x 226 x 75 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

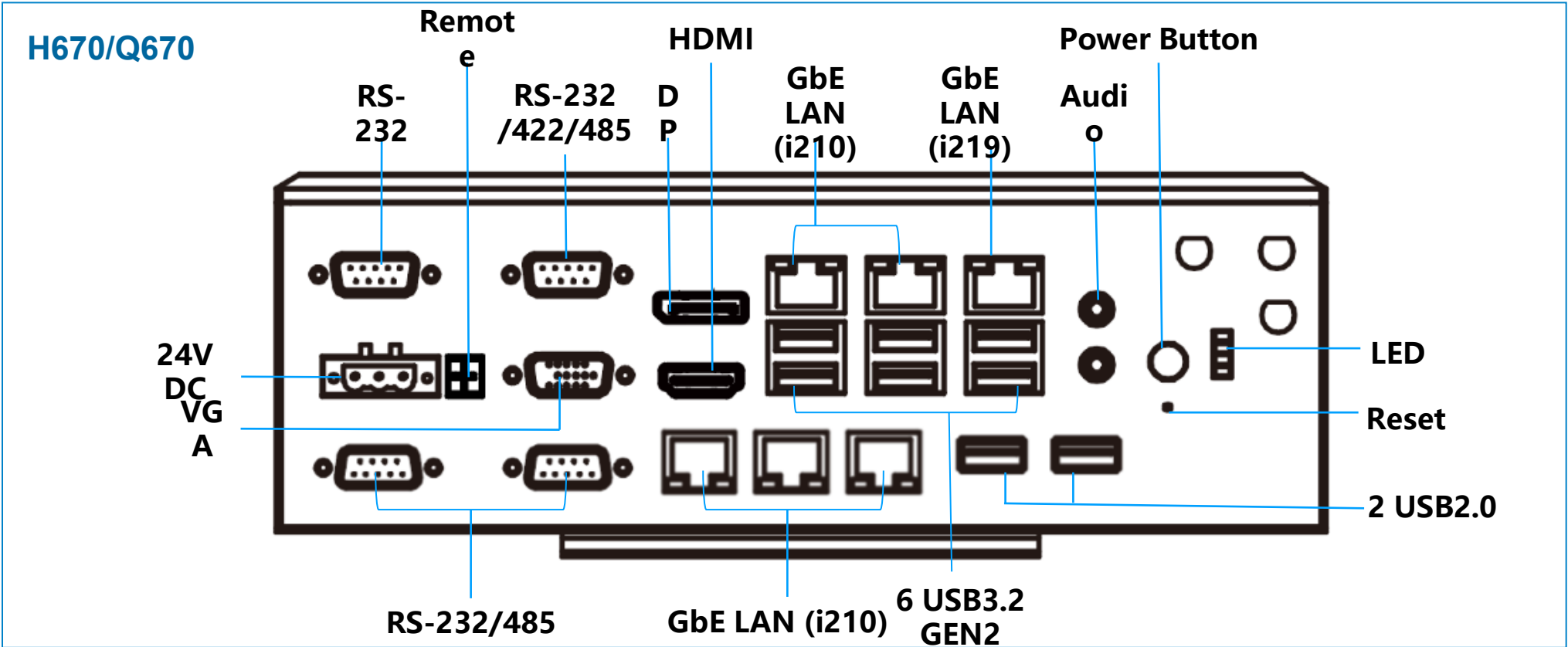
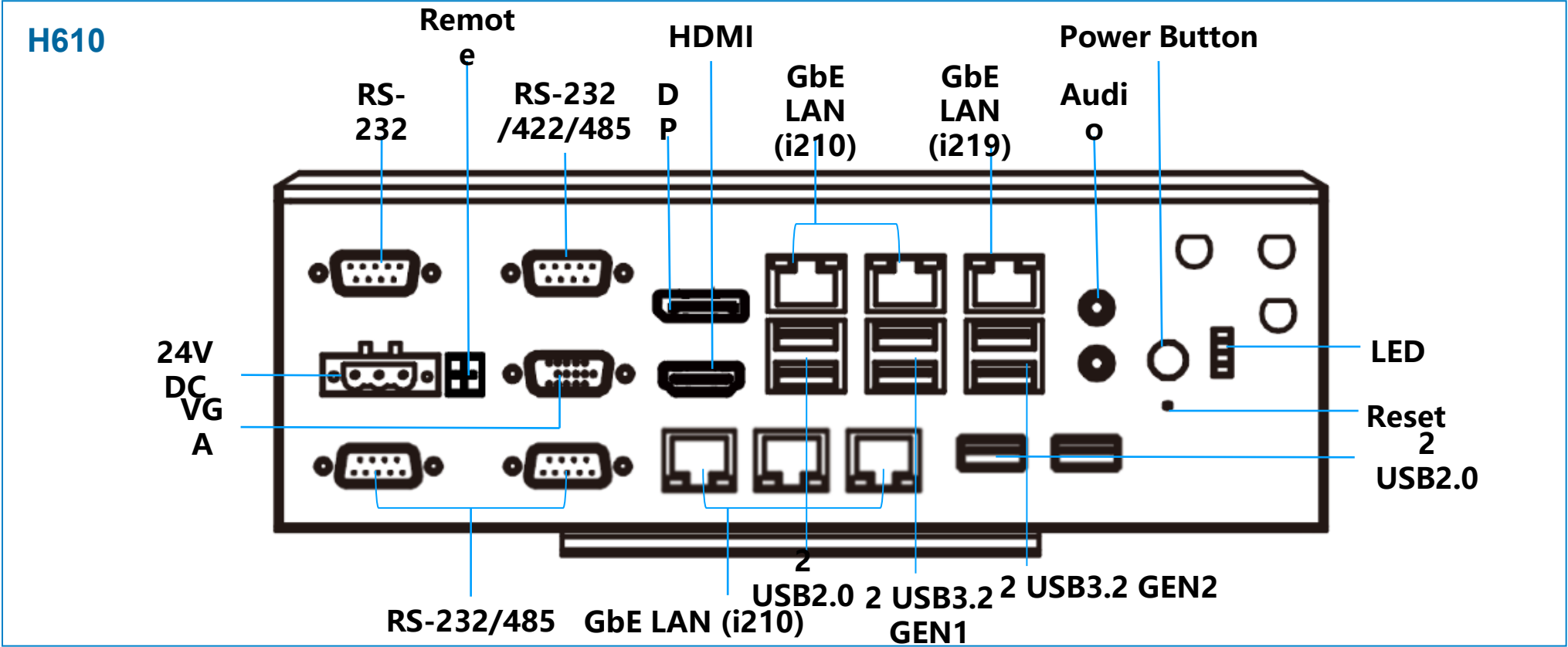


Specifications

Item	Sub-Items	Descriptions
Processor System	CPU	Intel® 12-14th Gen Core™ Processors
	Processor Base Power	65W MAX
	Socket	LGA1700
	Chipset	H610/H670/Q670
	BIOS	AMI 128Mbit SPI Flash
Memory	Sockets	Dual channel DDR5 SO-DIMM
	Capacity	Max. 64GB
Graphics	Controller	Intel UHD Graphics 770
	DP	1 x DP1.4a up to 4096x2304@60Hz
	HDMI	1 x HDMI2.0b up to 4096 x 2160@60 Hz
	VGA	1 x VGA up to 1920 x 1200@60Hz
External I/O	LAN	5 x Intel i210 GbE LAN, 1 x Intel i219 GbE LAN
	Serial Ports	COM 1: RS-232/422/485, COM 2: RS-232, COM 3~4: RS-232/485
	USB 3.2	H610: 4 USB3.2 (2 x GEN1, 2 x GEN2) Q670/H670: 6 USB3.2 (GEN2)
	USB 2.0	H610: 4 USB2.0 Q670/H670: 2 USB2.0
	Audio	1 x Line out, 1 x Mic in
LED & Switch	Power Button	1x Power Button
	Reset	1 x Reset Button
	LED	4 (SATA, Memory, User1, User 2)
Expansion	USB	1 x USB2.0 (Type A)
	M.2 E-Key	1 x M.2 2230 support Wi-Fi (Support PCIe protocol)
	M.2 B-Key	1 x M.2 3042 B-Key support 4G (H610), 1 x M.2 3052 B-Key support 4G/5G (H670/Q670); or 1 x M.2 2280 support SATA3.0
	M.2 M-Key	1 x M.2 2280 M-Key SATA3.0(Default), H670/Q670 can be optionally modified to NVMe. (Q670 / H670 support RAID 0/RAID 1, switchable in BIOS)
	SATA	Optionally support 2 SATA 7+15
	SIM	1 x NANO SIM
Power Requirement	Power Type	24V DC input (9-36V configuration is optional)
	Power management	AT/ATX
	Max. Consumption	Typical: 79.2W Maximum: 196.8W
Others	Watchdog	65536 lever, 0~65535 sec
	TPM	TPM2.0 (Optional)
Physical Characteristics	Mounting	Wall Mounting
	Dimensions	220 x 226 x 75 mm (L x W x H)
	Weight	3.4 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



Interface



Ordering Information

Part Number	CPU	Processor Base Power	Max. Frequency	Core	Thread	GbE	COM	USB3.2	USB2.0	M.2	DC-Input
E512F-C-3000	i3-12100	60W	4.30 GHz	4	8	6	4	4 or 6	4 or 2	3	24V DC
E512F-C-5000	i5-12400	65W	4.40 GHz	6	12	6	4	4 or 6	4 or 2	3	24V DC
E512F-C-5000	i5-12500	65W	4.60 GHz	6	12	6	4	4 or 6	4 or 2	3	24V DC
E512F-C-7000	i7-12700	65W	4.90 GHz	12	20	6	4	4 or 6	4 or 2	3	24V DC
E512F-D-3000	i3-13100	60W	4.50 GHz	4	8	6	4	4 or 6	4 or 2	3	24V DC
E512F-D-5000	i5-13400	65W	4.60 GHz	10	16	6	4	4 or 6	4 or 2	3	24V DC
E512F-D-5000	i5-13500	65W	4.80 GHz	14	20	6	4	4 or 6	4 or 2	3	24V DC
E512F-D-7000	i7-13700	65W	5.20 GHz	16	24	6	4	4 or 6	4 or 2	3	24V DC
E512F-E-3000	i3-14100	60W	4.70 GHz	4	8	6	4	4 or 6	4 or 2	3	24V DC
E512F-E-5000	i5-14400	65W	4.70 GHz	10	16	6	4	4 or 6	4 or 2	3	24V DC
E512F-E-5000	i5-14500	65W	5.00 GHz	14	20	6	4	4 or 6	4 or 2	3	24V DC
E512F-E-7000	i7-14700	65W	5.40 GHz	20	28	6	4	4 or 6	4 or 2	3	24V DC

Optional Accessories

Part Number	Description
MF0A000000000070	WiFi+BT module M.2 2230 PCIe WIFI5 2T2R AW-CB515NF
MF0A000000000069	WiFi+BT module M.2 2230 PCIe WIFI6 2T2R AW-XB547NF
MF0A0000000000016	5G module, M.2 RM500Q-GL Sub-6 GHz Worldwide (Excluding US)
MF0A0000000000042	5G LTE module, M.2 RM520NGLAA-M20-SGASA, Worldwide
MF0A0000000000036	4G LTE module, M.2 EM05CEFC-128-SGAS, China
MF0A0000000000066	5G LTE module, M.2 RM500UCNVAA-D10-SNADA EMEA/Asia-Pacific

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

Packing List

Part Number	Description	Quantity
-	E512F-C/D/E Series Rugged and Compact Industrial PC	1
ZM0A0000000000254	Power Adapter	1
KE0A0000000000004	Round head screws	4
ZM0A0000000000020	Three-plug power cord	1
MC0A0000000000019	Wall-mounting kits (100*37*1mm)	1