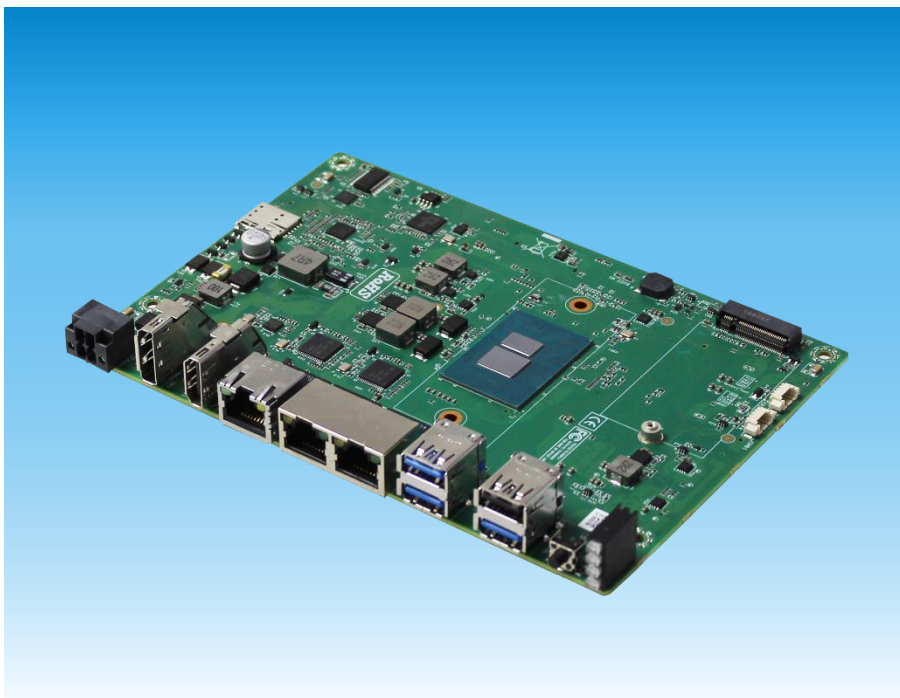


IEM-5170 Series

Product Features

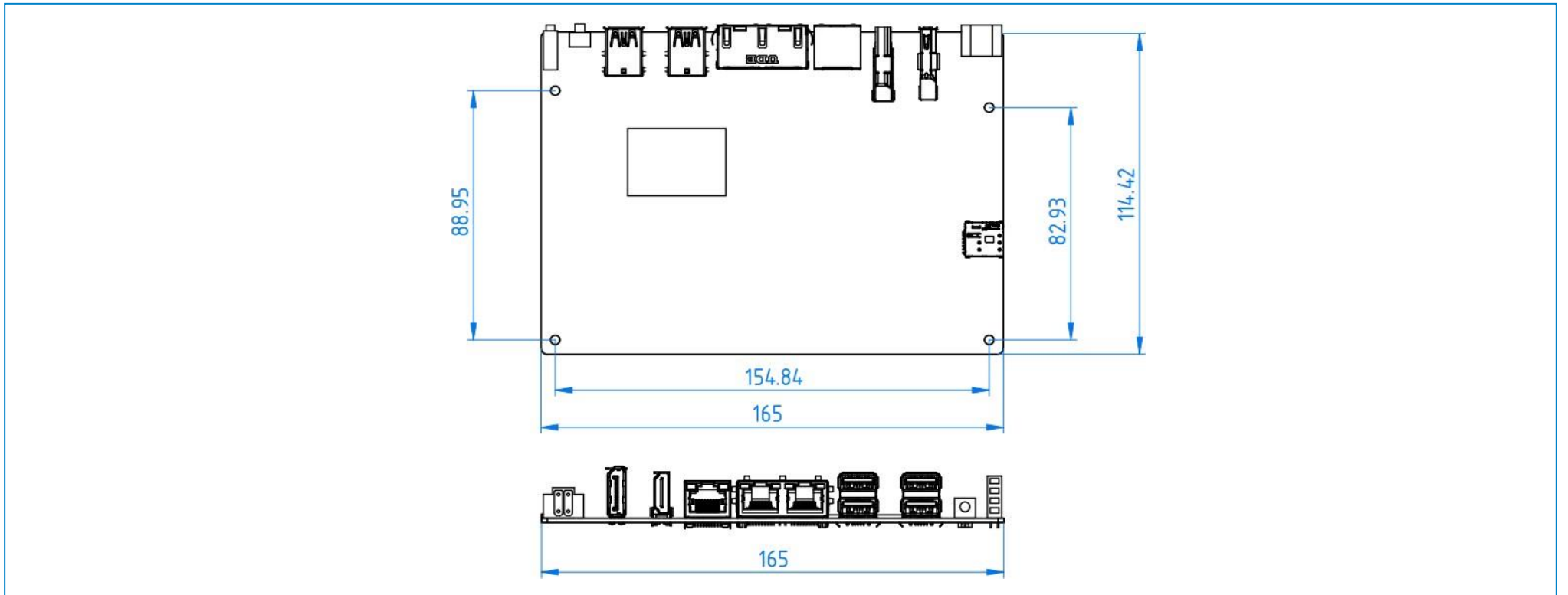
- Intel® Alder Lake-N N50/ N97/ N200/ i3-N305
- Single channel DDR5-4800 up to 16GB
- 3 independent display: DP, HDMI, eDP/LVDS(BIOS control switch)
- 3 LAN (2 x Intel i210 support PoE optional, 1 x Realtek RTL8111H)
- Support 4G/5G, WiFi6 module expansion
- Support PCIe x1/ USB2.0/ GPIO/ TTL/ HDA by BTB connector
- 5 USB, 2 COM, 4 TTL, 8GPIO, 1eSPI
- DC 9-36V, support UPS module
- 165 x 115mm (L x W)
- CE/FCC Class B, ESD 8KV/15KV
- Windows 10/11, centos 8, ubuntu 20.04/22.04



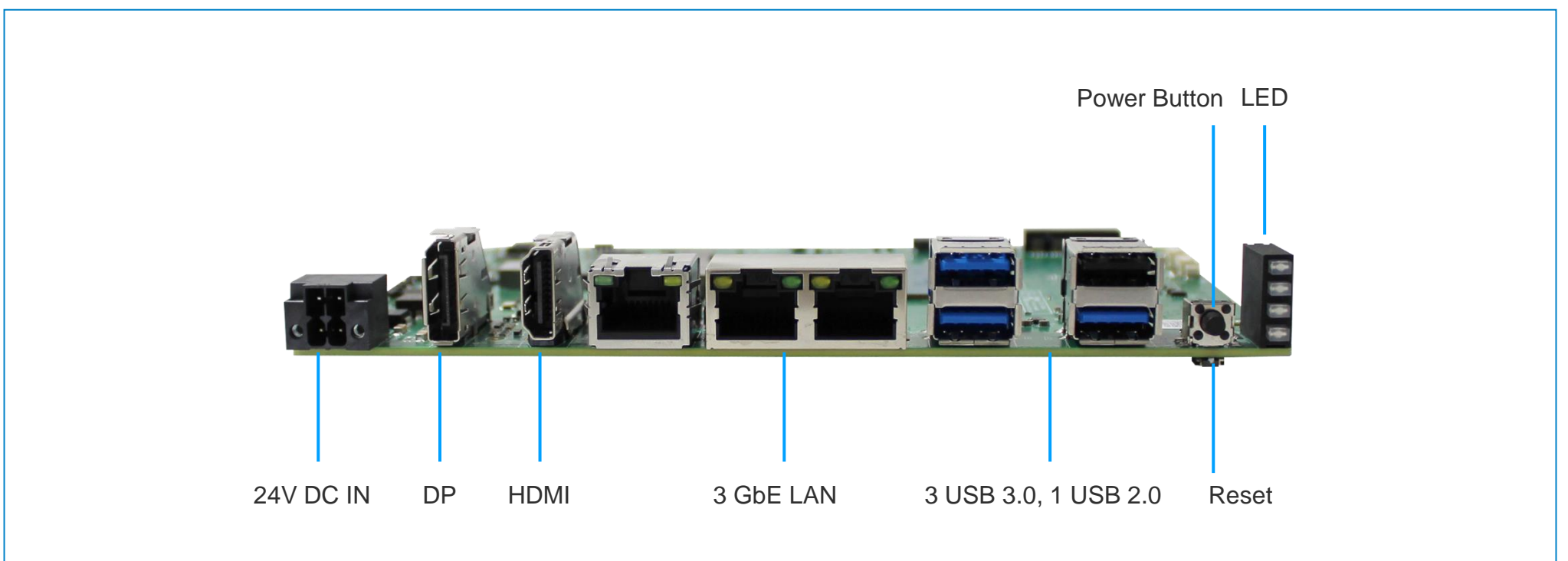
Specifications

Items	Description	
Processor System	CPU	Intel® Alder Lake-N series N50/ N97/ N200/ i3-N305
	TDP	Max 15W
	BIOS	AMI 128Mbit SPI Flash
Memory	Technology	Single channel DDR5 4800MT/s SO-DIMM
	Capacity	Max. 16GB
Graphics	Controller	Intel Gen12 UHD Graphics Engines (SoC integrated)
	Features	DX12, Open GL 4.6, Vulkan 1.2
Display	DP	1 x DP1.4a resolution up to 4096 x 2304@60Hz
	HDMI	1 x HDMI2.0b resolution up to 4Kx2K@60Hz
	LCD1	1 x eDP1.4b resolution up to 4096 x 2304 @ 60Hz or LVDS dual channel 18/24-bit resolution up to 1920 x 1200
External I/O	DP/HDMI	1/1
	Ethernet	2 x Intel i210 GbE LAN (PoE optional), 1 x Realtek RTL8111H GbE LAN
	USB	1 x USB2.0, 3 x USB3.0
Internal Connectors	USB 2.0	1 x internal USB2.0 (Pin-Out)
	LCD	1 x eDP1.4b/ LVDS
	COM	1 x RS-232/422/485 (BIOS control), 1 x RS-232
	GPIO	8-bit GPIO
	Audio	1 x HDA
	eSPI Bus/ SMBus	1/1
	SIM	1 x Nano SIM
	Invertor	1 x Invertor
	CPU FAN	1 x CPU FAN
	UPS	1 (Optional)
LED & Switch	LED indicator	Power status, HDD, User-defined 1, User-defined 2
	Power Button	1 x Power Button
	Reset	1 x Reset Button
Expansion	M.2 E-Key	1 x M.2 2230 support CNVI
	M.2 B-Key	1 x M.2 3042/3052 support 4G/5G
	M.2 M-Key	1 x M.2 2280 SATA3.0
	BTB Connector	1 x PCIe x 1/2 x USB2.0/1 x I2C/1 x eSPI/4 x TTL (TX/RX/CTS/RTS/GND)
Others	Watchdog Timer	65536 level, 0-65535 sec
	TPM	TPM 2.0 (Optional)
Power	Power Input	DC 9-36V ± 5%
	Power Management	AT/ATX
	Max. Consumption	30W (N50, N97, N200) /45W (i3-N305)
Environment	Operating Temperature	0~ 60° C (32~140°F)
	Storage Temperature	-40° C ~ 85° C (-40~185°F)
	Operating Humidity	95% @ 40° C (Non-condensing)
	Storage Humidity	95% @ 60° C (Non-condensing)
Characteristic Features	Dimension	165 x 115 mm (L x W)
Certification	EMC	CE, FCC
Operation System	OS	Windows 10/11, centos 8, ubuntu 20.04/22.04

Dimension



Interfaces



Ordering Information

Model	CPU	TDP	Turbo Frequency	Core	Thread	LAN	USB 3.0	USB 2.0	COM	M.2	Power
IEM-5170-01	N50	6W	3.40 GHz	2	/	3	2	3	2	1 x M.2 B-Key+1 x M.2 M-Key + 1 x M.2 E-Key	9~36V DC
IEM-5170-02	N97	12W	3.60 GHz	4	/	3	2	3	2	1 x M.2 B-Key+1 x M.2 M-Key + 1 x M.2 E-Key	9~36V DC
IEM-5170-03	N200	6W	3.70 GHz	4	4	3	2	3	2	1 x M.2 B-Key+1 x M.2 M-Key + 1 x M.2 E-Key	9~36V DC
IEM-5170-04	i3-N305	15W	3.80 GHz	8	8	3	2	3	2	1 x M.2 B-Key+1 x M.2 M-Key + 1 x M.2 E-Key	9~36V DC

Optional Accessories

Part Number	Description
MF0A00000000069	WiFi+Bt module M.2 2230 WIFI6 2T2R AW-XB547NF
MF0A00000000070	WiFi module M.2 2230 WIFI+BT5.0 1T1R AW-CB515NF
MF0A00000000016	5G module, M.2 RM500Q-GL Sub-6 GHz Worldwide (Excluding US)
MF0A00000000042	5G LTE module, M.2 RM520NGLAA-M20-SGASA, Worldwide
MF0A00000000066	5G LTE module, M.2 RM500UCNVAA-D10-SNADA EMEA, Asia-Pacific
MF0A00000000036	4G LTE module, M.2 EM05CEFC-128-SGAS, China
82UPS00000000002	Internal UPS module

Operation System

Part Number	Description
AA0A000000000002	Win10 IoT Ent 2019 LTSC Entry OEM
AA0A000000000003	Win10 IoT Ent 2019 LTSC MultiLang ESD OEI High End
AA0A000000000004	Win10 IoT Ent 2019 LTSC MultiLang ESD OEI Value
AA0A000000000005	Win10 IoT Ent 2021 LTSC Multilang ESD OEI Entry
-	Win 11
-	centos 8 (IEM-5170)
-	ubuntu 20.04 (IEM-5170)
-	ubuntu 22.04 (IEM-5170)

Packing List

Part Number	Description	Quantity
-	IEM-5170 Single Board PC	1