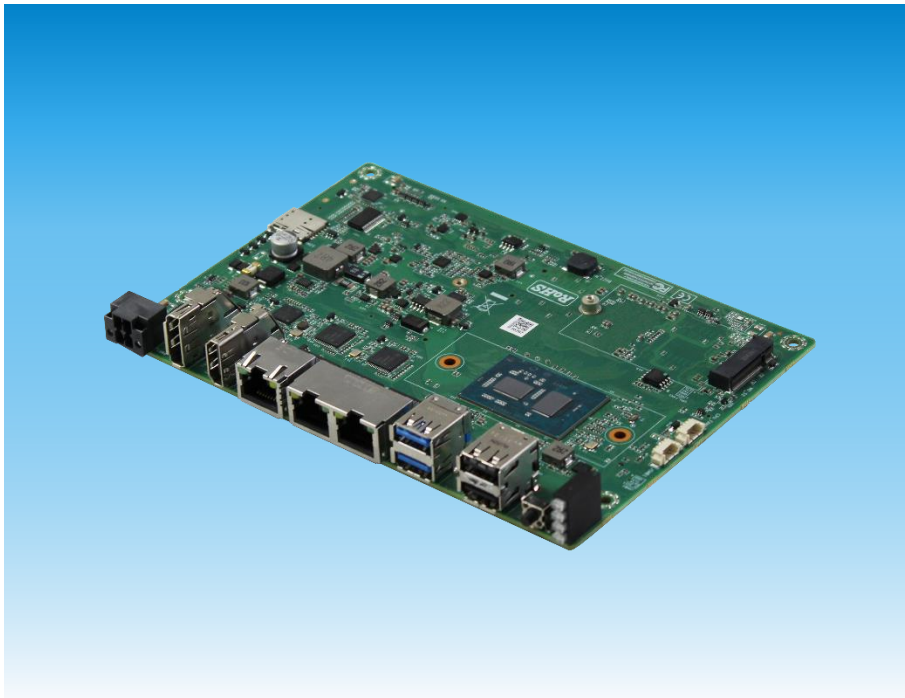


IEM-5160 Series



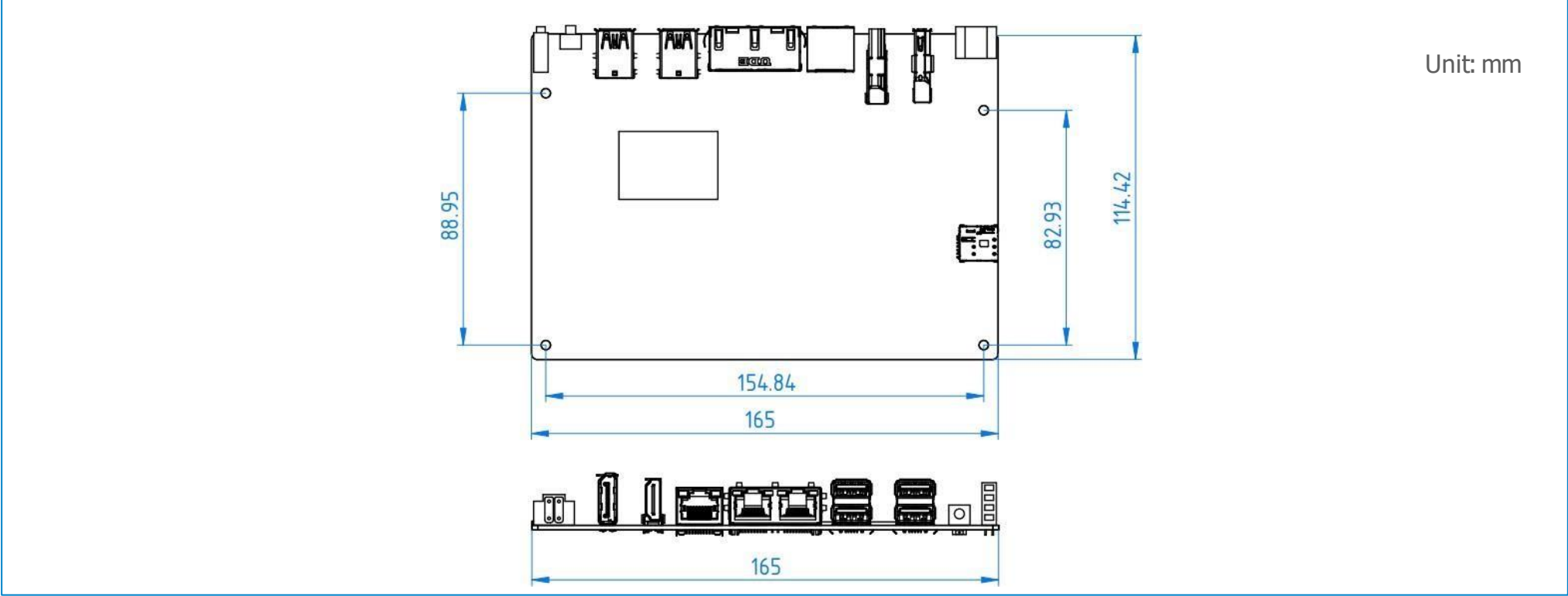
Product Features

- Intel® Atom Elkhart Lake J6412/ N6210/ X6425E
- Dual channel DDR4 up to 32GB
- 3 independent display: DP, HDMI, eDP/LVDS(BIOS control switch)
- 3 LAN (2 x Intel i210 support PoE optional, 1 x Intel i226-V)
- Support 4G/5G, WiFi module expansion
- Support PCIe x1/ USB2.0/ GPIO/ TTL/ HDA by BTB connector
- 6 USB, 2 COM, 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

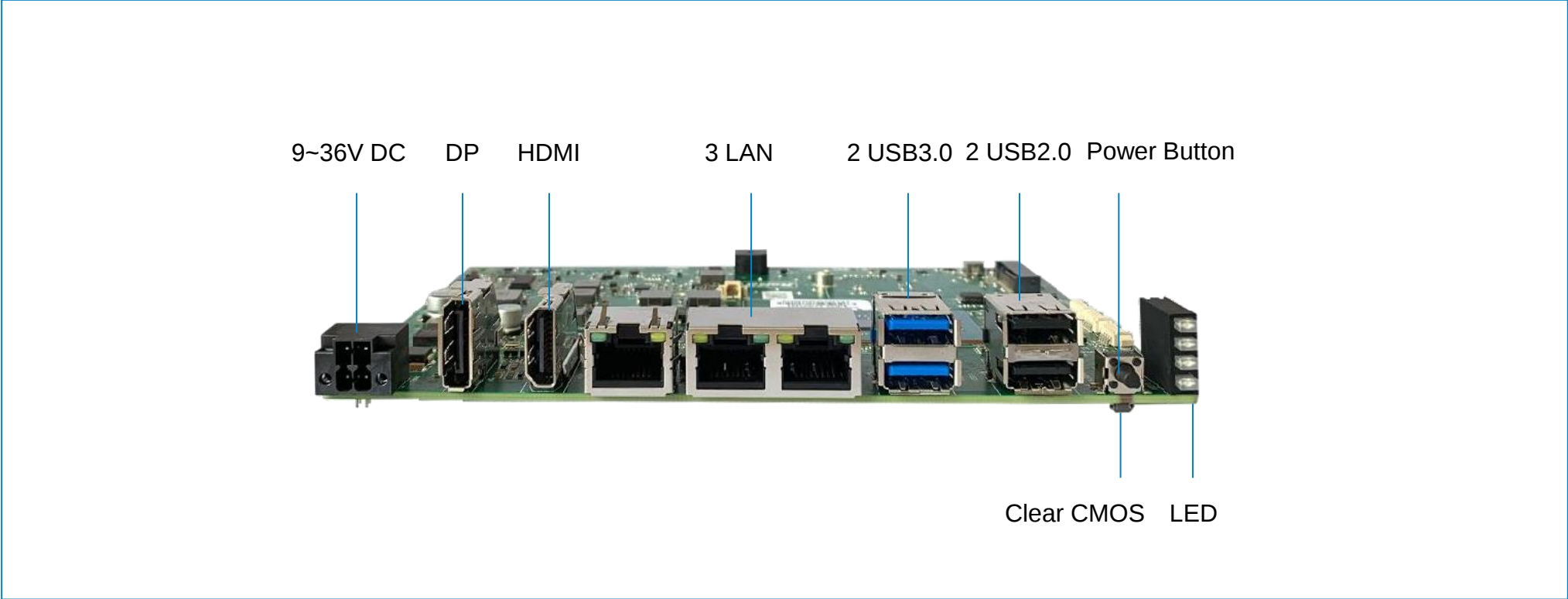
Specifications

Items		Description
Processor System	CPU	Intel® Elkhart Lake platform J6412/N6210/X6425E CPU
	TDP	12W MAX
	BIOS	AMI 128Mbit SPI Flash
Memory	Technology	2 x DDR4 SO-DIMM
	Max. Capacity	32 GB
Graphics	Controller	Intel Gen11 Graphics Engines (SoC integrated)
	Graphic Features	DX12, OGL4.5, OCL1.2, Vulkan 1.1, MPEG2, H.264, JPEG/MJPEG, H.265(HEVC)
Display	DP	1 x DP 1.4 up to 4096 x 2160@ 60Hz
	HDMI	1 x HDMI 2.0b up to 4096 x 2160@ 60Hz
	LCD1	1 x eDP or LVDS Dual Channel 18/24-bit up to 1920 x 1200
External I/O	HDMI/DP	1/1
	Ethernet	2 x Intel i210-AT GbE LAN (PoE function optional), 1 x Intel i226-V 2.5 GbE LAN
	USB	2 x USB2.0, 2 x USB3.0
Internal Connectors	USB2.0	2 x USB 2.0 (Pin-Out)
	LCD1	1 x eDP or LVDS dual channel 18/24-bit, up to 1920 x 1200
	SATA	1 x SATA3.0
	Serial ports	1 x RS-232/422/485(BIOS Control), 1 x RS-232
	GPIO	8-bit general purpose input/output
	Audio	1 x HDA
	eSPI Bus/ SMBus	1/1
	SIM	1 x Nano SIM
	Invertor	1 x Invertor
	FAN	1 x CPU FAN
LED & Switch	UPS	1 (Optional)
	LED	Power status, HDD, User-defined 1, User-defined 2
	Power Button	1 x Power Button
	Clear CMOS	1 x Clear CMOS Button
Expansion	M.2 E-Key	1 x M.2 2230 support Wi-Fi (Support PCIe)
	M.2 B-Key	1 x M.2 3052 support 4G/5G
	M.2 M-Key	1 x M.2 2280 SATA 3.0
	Board to Board	1 x PCIe x 1/2 x USB2.0/1 x I2C/1 x eSPI/4 x TTL (TX/RX/CTS/RTS/GND)
Board Feature	Watchdog Timer	65536 lever, 0~65535 sec
	TPM	1 x TPM2.0 (Optional)
Power	Supply voltage	DC 9~36V ± 10%
	Power Management	AT/ATX
	MAX. Consumption	30 W
Environment	Operational Temperature	0~ 60° C (32~140°F)
	Storage Temperature	-40° C ~ 85° C (-40~185°F)
	Relative Humidity (Operating)	95% @ 40 °C (non-condensing)
	Relative Humidity (Storage)	95% @ 60 °C (non-condensing)
Physical Characteristics	Dimensions	165 x 115mm (LXW)
OS Support	OS Support	Windows 10/11, centos 8 ubuntu 20.04/22.04

Dimensions



Interfaces



Ordering Information

Part Number	CPU	TDP	Max. Frequency	Core	Thread	LAN	USB 3.0	USB 2.0	COM	M.2	SATA 3.0
IEM-5160-01	Celeron-J6412	10W	2.60 GHz	4	4	3	2	5	2	1 x M.2 B-Key+1 x M.2 M-Key + 1 x M.2 E-Key	1
IEM-5160-02	Celeron-N6210	6.5W	3.00 GHz	2	2	3	2	5	2	1 x M.2 B-Key+1 x M.2 M-Key + 1 x M.2 E-Key	1
IEM-5160-03	X6425E	12W	3.00 GHz	4	4	3	2	5	2	1 x M.2 B-Key+1 x M.2 M-Key + 1 x M.2 E-Key	1

Optional Accessories

Part Number	Description
MF0A000000000069	WiFi+Bt module M.2 2230 WIFI6 2T2R AW-XB547NF
MF0A000000000070	WiFi module M.2 2230 WIFI+BT5.0 1T1R AW-CB515NF
MF0A000000000016	5G module, M.2 RM500Q-GL Sub-6 GHz Worldwide (Excluding US)
MF0A000000000042	5G LTE module, M.2 RM520NGLAA-M20-SGASA, Worldwide
MF0A000000000066	5G LTE module, M.2 RM500UCNVAA-D10-SNADA EMEA, Asia-Pacific
MF0A000000000036	4G LTE module, M.2 EM05CEFC-128-SGAS, China
82UPS000000000002	Internal UPS module

OS Support

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-5160)
-	ubuntu 20.04 (IEM-5160)
-	ubuntu 22.04 (IEM-5160)

Packing List

Part Number	Description	Quantity
-	IEM-5160 Single Board PC	1