

MERA-3100 Series

Arestech

Modular Embedded Computers with Intel® 9th / 8th LGA1151 Processor



Features

- Supports 9th / 8th Gen Intel® LGA 1151 Processors
- IEEE 802.3at PoE+ Offers up to 25.5W DC Power to Device
- GbE Supports Wake-on-LAN and PXE
- Cable-free and Jumper-less Design to Enhance Reliability
- Supports VGA, DVI, and DP
- Multiple Storage Capability (SATA HDD, mSATA / CFAST)
- 9~48V DC Input with Power Ignition Function
- -40°C ~ 70°C Wide Operating Temperature

Applications

- Digital Signage Control Systems
- Factory Automation
- Image Processing
- Gaming and Entertainment Industries
- Network Communications

➔ Ordering Information

Part No.	Description
MERA-3100-3L	Intel® 9th/8th Core™ i LGA1151 CPU, Q370 Fanless Box PC, 6x USB3.0, 2x USB2.0, 6x RS232/422/485, 3x GbE, 1x DP, 1x VGA, 1x DVI-D, 1x Flexible I/O Window Slot, 1x Removable 2.5" SATA HDD Bay, 1x Internal 2.5" SATA HDD Bay, DC 9~48V, Terminal Block Connector
MERA-3110-3L	Intel® 9th/8th Core™ i LGA1151 CPU, Q370 Fanless Box PC, 6x USB3.0, 2x USB2.0, 6x RS232/422/485, 3x GbE, 1x DP, 1x VGA, 1x DVI-D, 1x Flexible I/O Window Slot, 4x Removable 2.5" SATA HDD Bays, DC 9~48V, Terminal Block Connector
MERA-3110-7L	Intel® 9th/8th Core™ i LGA1151 CPU, Q370 Fanless Box PC, 6x USB3.2, 2x USB2.0, 6x RS232/422/485, 7x GbE, 1x DVI-D, 1x DP, 1x VGA, 1x Flexible I/O Window Slot, 4x Removable 2.5" SATA HDD Bays, DC 9~48V, Terminal Block Connector
MERA-3110-3L-4P	Intel® 9th/8th Core™ i LGA1151 CPU, Q370 Fanless Box PC, 6x USB3.2, 2x USB2.0, 6x RS232/422/485, 3x GbE, 4x PoE+, 1x DP, 1x VGA, 1x DVI-D, 1x Flexible I/O Window Slot, 4x Removable 2.5" SATA HDD Bays, DC 9~48V, Terminal Block Connector
MERA-3110-3L-4ML	Intel® 9th/8th Core™ i LGA1151 CPU, Q370 Fanless Box PC, 6x USB3.0, 2x USB2.0, 6x RS232/422/485, 7x GbE (3x GbE w/ RJ45 + 4 GbE w/ M12), 1x DP, 1x VGA, 1x DVI-D, 1x Flexible I/O Window Slot, 4x Removable 2.5" SATA HDD Bays, DC 9~48V, Terminal Block Connector
MERA-3110-3L-4MP	Intel® 9th/8th Core™ i LGA1151 CPU, Q370 Fanless Box PC, 6x USB3.0, 2x USB2.0, 6x RS232/422/485, 3x GbE, 4x PoE+ w/M12, 1x Flexible I/O Window Slot, 4x Removable 2.5" SATA HDD Bays, DC 9~48V, Terminal Block Connector
MERA-3110-11L	Intel® 9th/8th Core™ i LGA1151 CPU, Q370 Fanless Box PC, 6x USB3.0, 2x USB2.0, 6x RS232/422/485, 11x GbE, 1x DP, 1x VGA, 1x DVI-D, 1x Flexible I/O Window Slot, 4x Removable 2.5" SATA HDD Bays, DC 9~48V, Terminal Block Connector
MERA-3110-3L-8P	Intel® 9th/8th Core™ i LGA1151 CPU, Q370 Fanless Box PC, 6x USB3.0, 2x USB2.0, 6x RS232/422/485, 3x GbE, 8x PoE+, 1x DP, 1x VGA, 1x DVI-D, 1x Flexible I/O Window Slot, 4x Removable 2.5" SATA HDD Bays, DC 9~48V, Terminal Block Connector
MERA-3110-3L-8ML	Intel® 9th/8th Core™ i LGA1151 CPU, Q370 Fanless Box PC, 6x USB3.0, 2x USB2.0, 6x RS232/422/485, 11x GbE (3x GbE w/ RJ45 + 8x GbE w/ M12), 1x DP, 1x VGA, 1x DVI-D, 1x Flexible I/O Window Slot, 4x Removable 2.5" SATA HDD Bays, DC 9~48V, Terminal Block Connector
MERA-3110-3L-8MP	Intel® 9th/8th Core™ i LGA1151 CPU, Q370 Fanless Box PC, 6x USB3.0, 2x USB2.0, 6x RS232/422/485, 3x GbE, 8x PoE+ w/ M12, 1x DP, 1x VGA, 1x DVI-D, 1x Flexible I/O Window Slot, 4x Removable 2.5" SATA HDD Bays, DC 9~48V, Terminal Block Connector

→ Packing List

Description
1 x MERA-3100 Series Machine
1 x Wall Mount Kit

→ Optional Items

Part No.	Description
AWD-4G003	4G(LTE) EG25-G + 2 Antennas, Full Size (for Global)
AWD-4G004	4G(LTE) EC25EFA + 2 Antennas, Full Size (for Europe/Taiwan/China/Hong Kong)
AWD-WF001	Wi-Fi 802.11 b/g/n (1T1R) + 1 Antenna, Half Size
AWD-WF003	Wi-Fi 802.11 a/b/g/n/ac/BT4.0 (2T2R) + 2 Antennas (Dual Band), Half Size
i7-9700TE	Intel® Core™ i7-9700TE (8-core, up to 3.8 GHz, 35W TDP)
i5-9500TE	Intel® Core™ i5-9500TE (6-core, up to 3.6 GHz, 35W TDP)
i7-8700T	Intel® Core™ i7-8700T (6-core, up to 4.0 GHz, 35W TDP)
i5-8500T	Intel® Core™ i5-8500T (6-core, up to 3.5 GHz, 35W TDP)
i3-8100T	Intel® Core™ i3-8100T (4-core, up to 3.1 GHz, 35W TDP)
55000-0023-M5	Adapter AC/DC 24V 5A 120W with 3-pin Terminal Block Plug 5.0mm Pitch
55000-0024-M5	Adapter AC/DC 24V 9.2A 220W with 3-pin Terminal Block Plug 5.0mm Pitch
30100-0003-CA	Power Cord, 3-pin US Type, 180 cm
30101-0005-CA	Power Cord, 3-pin EU Type, 180 cm
5E400-0004-AV	External Fan Module Kit for MEVA (MERA) Series (92 x 92 x 25 mm)

MERA-3100 Series

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→ Specifications

Model		MERA-3100-3L/ MERA-3110-3L	MERA-3110-7L/ MERA-3110-3L-4ML	MERA-3110-11L/ MERA-3110-3L-8ML
Processor System	CPU	LGA 1151 Processors 9th / 8th Intel® Core™ i3 / i5 / i7 Desktop 35W		
	System Chipset	Intel® Q370 Express		
	BIOS	AMI BIOS, 256Mbit SPI Flash ROM Built on Board		
Memory	Technology	Dual Channel DDR4 2400/2666 MHz SO-DIMM		
	Max. Capacity	64 GB (Un-buffered and Non-ECC)		
	Socket	2x DDR4 260-pin SO-DIMM		
Display	Graphics Engine	Integrated Intel® UHD Graphics 630 (Core™ i7/ i5/ i3) Integrated Intel® UHD Graphics 610 (Pentium/ Celeron)		
	VGA	1x VGA, up to 1920 x 1200		
	DVI	1x DVI-D, up to 1920 x 1200		
	HDMI	N/A		
	DP	1x DP, up to 4096 x 2160		
I/O Interface	USB	6x USB3.2 and 2x USB2.0		
	Serial Port	6x COM (RS-232/422/485), with Auto Flow Control, DB9		
	GPIO	8x Isolated DI and 8x Isolated DO Port, 2x9-pin Terminal Block		
	Ethernet	3x GbE w/ RJ45, Support Wake-on-LAN and PXE GbE1: Intel® i219-LM GbE2~GbE3: Intel® i210-AT	7x GbE w/ RJ45 (MERA-3110-7L), Support Wake-on-LAN and PXE 3x GbE w/ RJ45 and 4x GbE w/M12 (MERA-3110-3L-4ML), Support Wake-on-LAN and PXE GbE1: Intel® i219-LM GbE2~GbE3: Intel® i210-AT GbE4~GbE7: Intel® i350-AM4 (Module)	11x GbE w/ RJ45 (MERA-3110-11L), Support Wake-on-LAN and PXE 3x GbE w/ RJ45 and 8x GbE w/ M12 (MERA-3110-3L-8ML), Support Wake-on-LAN and PXE GbE1: Intel® i219-LM GbE2~GbE3: Intel® i210-AT GbE4~GbE11: Intel® i350-AM4 (Module)
	Audio	Line Out, Mic In		
	CMOS Battery	1x Removable CMOS Battery		
	Antenna Hole	12 (MERA-3100-3L) 8 (MERA-3110-3L)	8	8
	Flexible I/O Window Slot	1		
	Others	1x External Clear CMOS Switch		
	Expansion	Mini-PCIe	2x Full-size Mini-PCIe Sockets (mux with mSATA) and 2x Full-size Mini-PCIe Sockets	
M.2		N/A		
PCI / PCIe		N/A		
SIM Holder		4		
Storage		2.5" SATA HDD Bay	1x Removable and 1x Internal (MERA-3100-3L) 4x Removable (MERA-3110-3L)	4x Removable
	RAID	RAID 0, 1, 5, 10		
	CFast/mSATA	2x CFast Sockets (Shared by 2x mSATA)		
	M.2	N/A		
Power	Power Mode	AT / ATX		
	Remote Power	1x Remote Power On/Off Connector, 2-pin Terminal Block		
	Power Supply Voltage	9~48V DC		
	Connector Type	1x 3-pin Terminal Block Connector		
	Power Ignition	Power Ignition Sensing		
	Protection	Over Voltage Protection (OVP) up to 52V Reverse Voltage Protection (RVP) up to -48V Over Current Protection (OCP) 20A		
	Car Mode	1x PC/Car Mode Switch		
Mounting	Type	Wall Mount / Stand Mount		
Environment	Operating Temperature	35W CPU: -40~70° C (-40~158° F) ; 65W CPU: -40~60° C (-40~140° F) (Optional External Fan Kit Is Required)		
	Storage Temperature	-40~85° C (-40~185° F)		
	Humidity	10%~95%, Non-condensing		
	Vibration	5 Grms, 5-500 Hz, 3 Axis		
	Shock	50 Grms, Half-sine 11 ms		
General	Certification	CE/FCC		
	Thermal Dissipation	Fanless System (35W) ; Fanbased System (65W)		
	Material	Extruded Aluminum with Heavy Duty Metal		
	Dimensions (W x H x D)	241.5 x 73 x 230 mm (9.50" x 2.87" x 9.06")	241.5 x 92.6 x 230 mm (9.50" x 3.65" x 9.06")	241.5 x 92.6 x 230 mm (9.50" x 3.65" x 9.06")
	Net Weight	3.3 kg (7.28 lb) (MERA-3100-3L) 3.95 kg (8.71 lb) (MERA-3110-3L)	4.15 kg (9.15 lb) (MERA-3110-7L) 4.35 kg (9.59 lb) (MERA-3110-3L-4ML)	4.35 kg (9.59 lb) (MERA-3110-11L) 4.55 kg (10.03 lb) (MERA-3110-3L-8ML)
	Operating System	Windows 10 (IoT / Professional), Linux		

→ Specifications

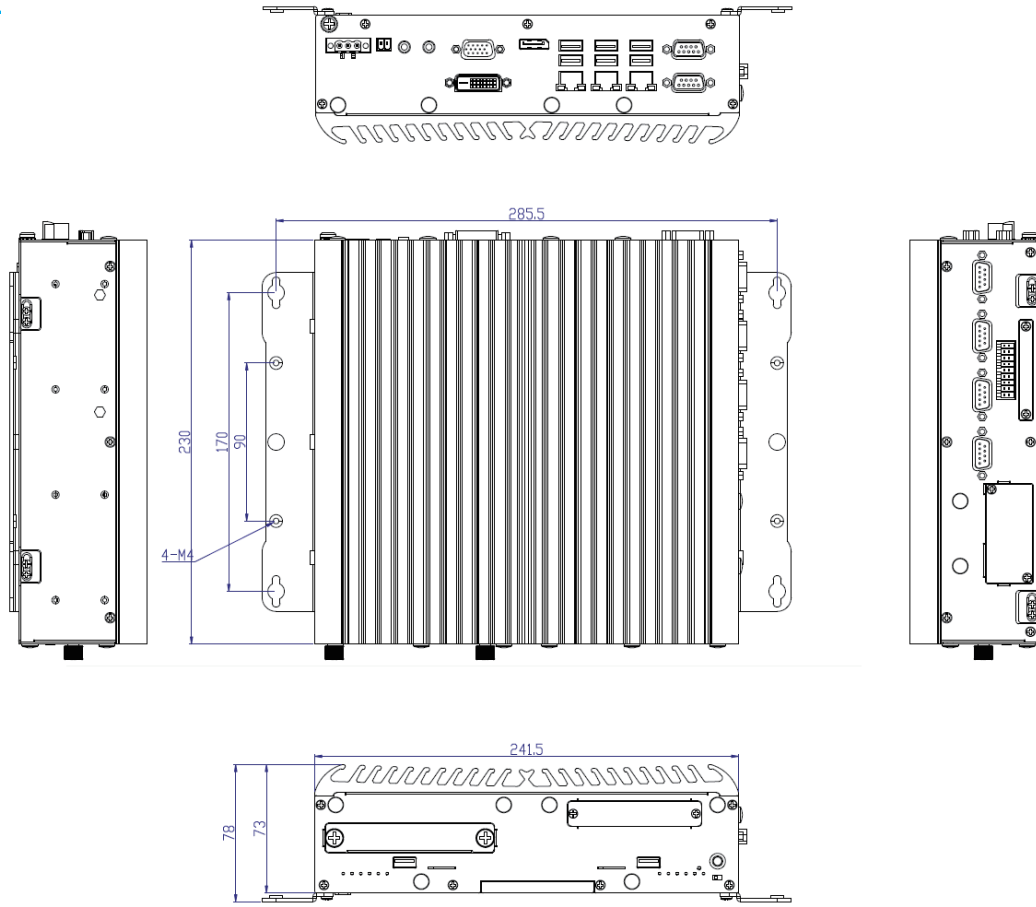
Model		MERA-3110-3L-4P/ MERA-3110-3L-4MP	MERA-3110-3L-8P/ MERA-3110-3L-8MP
Processor System	CPU	LGA 1151 Processors 9th / 8th Intel® Core™ i3 / i5 / i7 Desktop 35W	
	System Chipset	Intel® Q370 Express	
	BIOS	AMI BIOS, 256Mbit SPI Flash ROM Built on Board	
Memory	Technology	Dual Channel DDR4 2400/2666 MHz SO-DIMM	
	Max. Capacity	64 GB (Un-buffered and Non-ECC)	
	Socket	2x DDR4 260-pin SO-DIMM	
Display	Graphics Engine	Integrated Intel® UHD Graphics 630 (Core™ i7/ i5/ i3) Integrated Intel® UHD Graphics 610 (Pentium/ Celeron)	
	VGA	1x VGA, up to 1920 x 1200	
	DVI	1x DVI-D, up to 1920 x 1200	
	HDMI	N/A	
	DP	1x DP, up to 4096 x 2160	
I/O Interface	USB	6x USB3.2 and 2x USB2.0	
	Serial Port	6x COM (RS-232/422/485), with Auto Flow Control, DB9	
	GPIO	8x Isolated DI and 8x Isolated DO Port, 2x9-pin Terminal Block	
	Ethernet	3x GbE w/ RJ45, Support Wake-on-LAN and PXE GbE1: Intel® i219-LM GbE2~GbE3: Intel® i210-AT	
	PoE+	4x IEEE 802.3at PoE+ (25.5W), Support Wake-on-LAN and PXE GbE4~GbE7: Intel® i350-AM4 GbE (Module) 4x PoE+ w/ RJ45 (MERA-3110-3L-4P) 4x PoE+ w/ M12 (MERA-3110-3L-4MP)	8x IEEE 802.3at PoE+ (25.5W), Support Wake-on-LAN and PXE GbE4~GbE11: Intel® i350-AM4 GbE (Module) 8x PoE+ w/ RJ45 (MERA-3110-3L-8P) 8x PoE+ w/ M12 (MERA-3110-3L-8MP)
	Audio	Line Out, Mic In	
	CMOS Battery	1x Removable CMOS Battery	
	Antenna Hole	8	
	Flexible I/O Window Slot	1	
	Others	1x External Clear CMOS Switch	
Expansion	Mini-PCIe	2 x Full-size Mini-PCIe Sockets (mux with mSATA) and 2x Full-size Mini-PCIe Sockets	
	M.2	N/A	
	PCI / PCIe	N/A	
	SIM Holder	4	
Storage	2.5" SATA HDD Bay	4x Removable	
	RAID	RAID 0, 1, 5, 10	
	CFast/mSATA	2x CFast Sockets (Shared by 2x mSATA)	
	M.2	N/A	
Power	Power Mode	AT / ATX (Supporting Hardware AT, ATX Power Mode)	
	Remote Power	1x Remote Power On/Off Connector, 2-pin Terminal Block	
	Power Supply Voltage	9~48V DC	
	Connector Type	1x 3-pin Terminal Block Connector	
	Power Ignition	Power Ignition Sensing	
	Protection	Over Voltage Protection (OVP) up to 52V Reverse Voltage Protection (RVP) up to -48V Over Current Protection (OCP) 20A	
Car Mode	1x PC/Car Mode Switch		
Mounting	Type	Wall Mount / Stand Mount	
Environment	Operating Temperature	35W CPU: -40~70° C (-40~158° F) ; 65W CPU: --40~60° C (-40~140° F) (Optional External Fan Kit Is Required)	
	Storage Temperature	-40~85° C (-40~185° F)	
	Humidity	10%~95%, Non-condensing	
	Vibration	5 Grms, 5-500 Hz, 3 Axis	
	Shock	50 Grms, Half-sine 11 ms	
General	Certification	CE/FCC	
	Thermal Dissipation	Fanless System (35W) : Fanbased System (65W)	
	Material	Extruded Aluminum with Heavy Duty Metal	
	Dimensions (W x H x D)	241.5 x 92.6 x 230 mm(9.50" x 3.65" x 9.06")	
	Net Weight	4.2 kg (9.26 lb) (MERA-3110-3L-4P) 4.4 kg (9.70 lb) (MERA-3110-3L-4MP)	4.45 kg (9.81 lb) (MERA-3110-3L-8P) 4.65 kg (10.25 lb) (MERA-3110-3L-8MP)
	Operating System	Windows 10 (IoT / Professional), Linux	

MERA-3100 Series

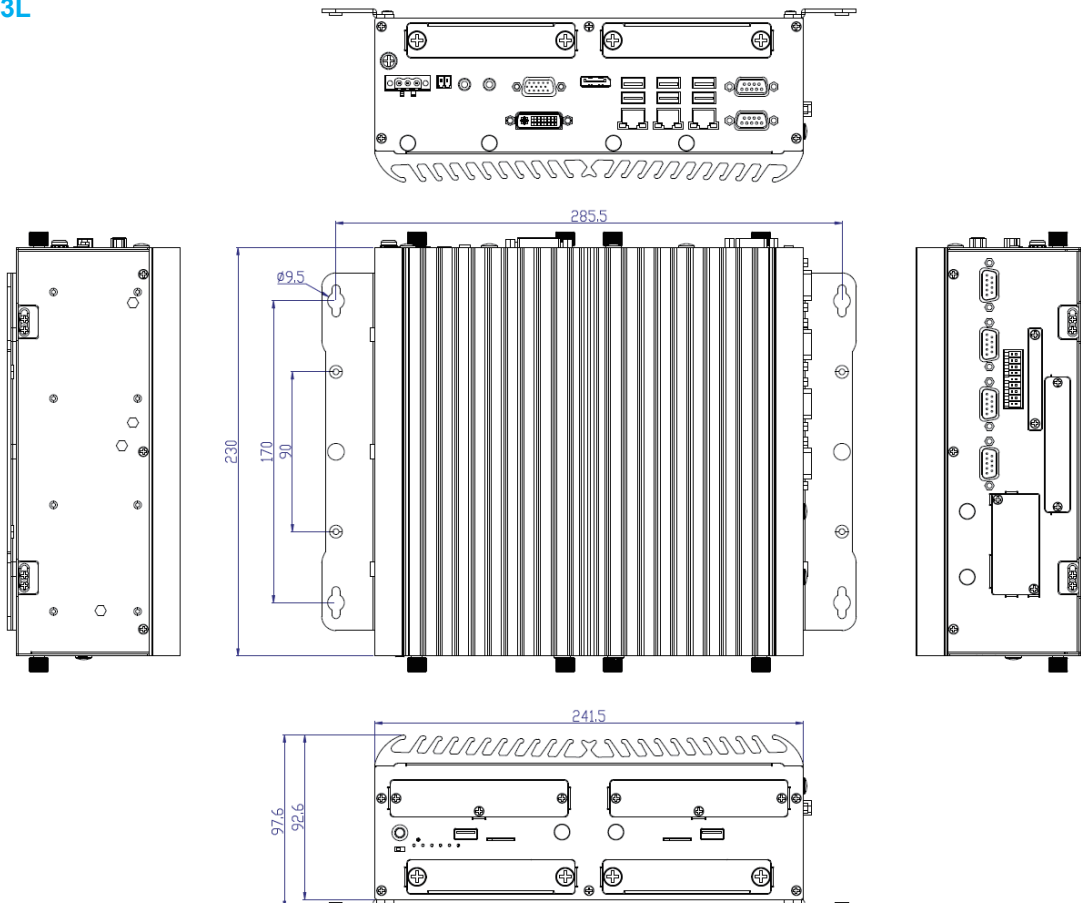
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→ Dimensions

MERA-3100-3L



MERA-3110-3L

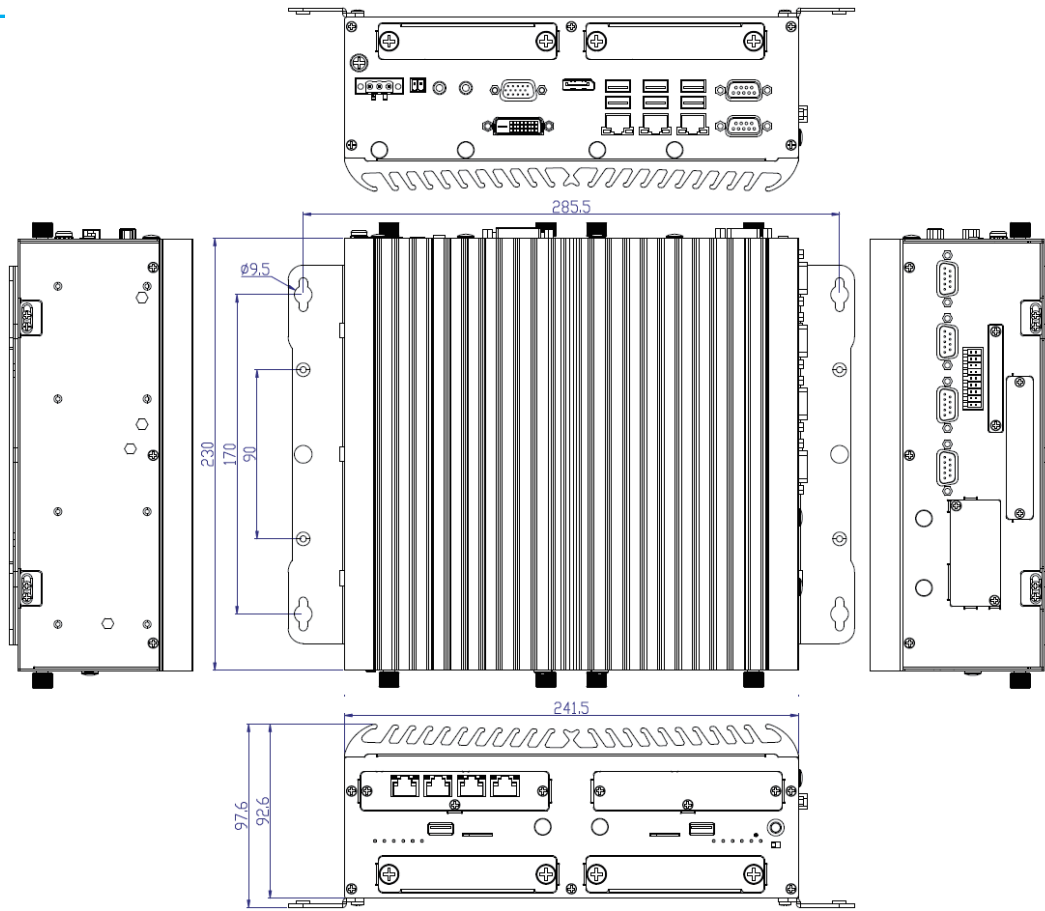


MERA-3100 Series

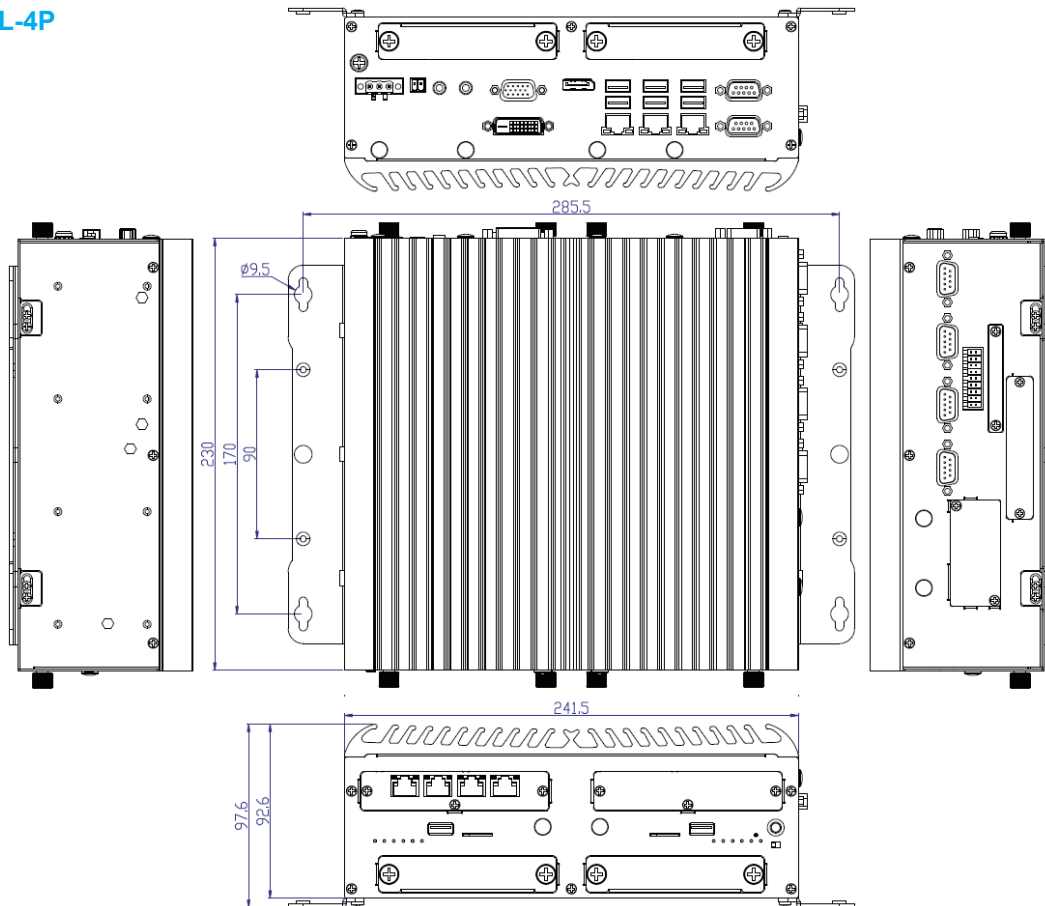
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→ Dimensions

MERA-3110-7L



MERA-3110-3L-4P

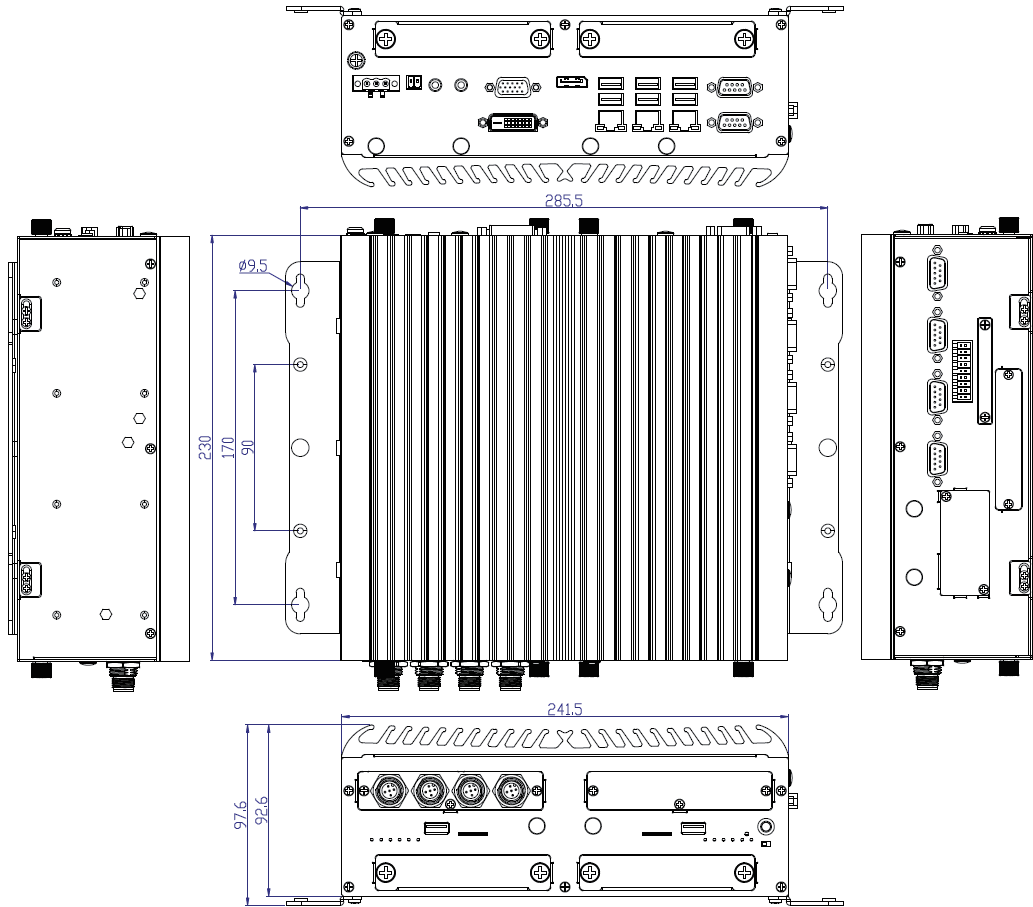


MERA-3100 Series

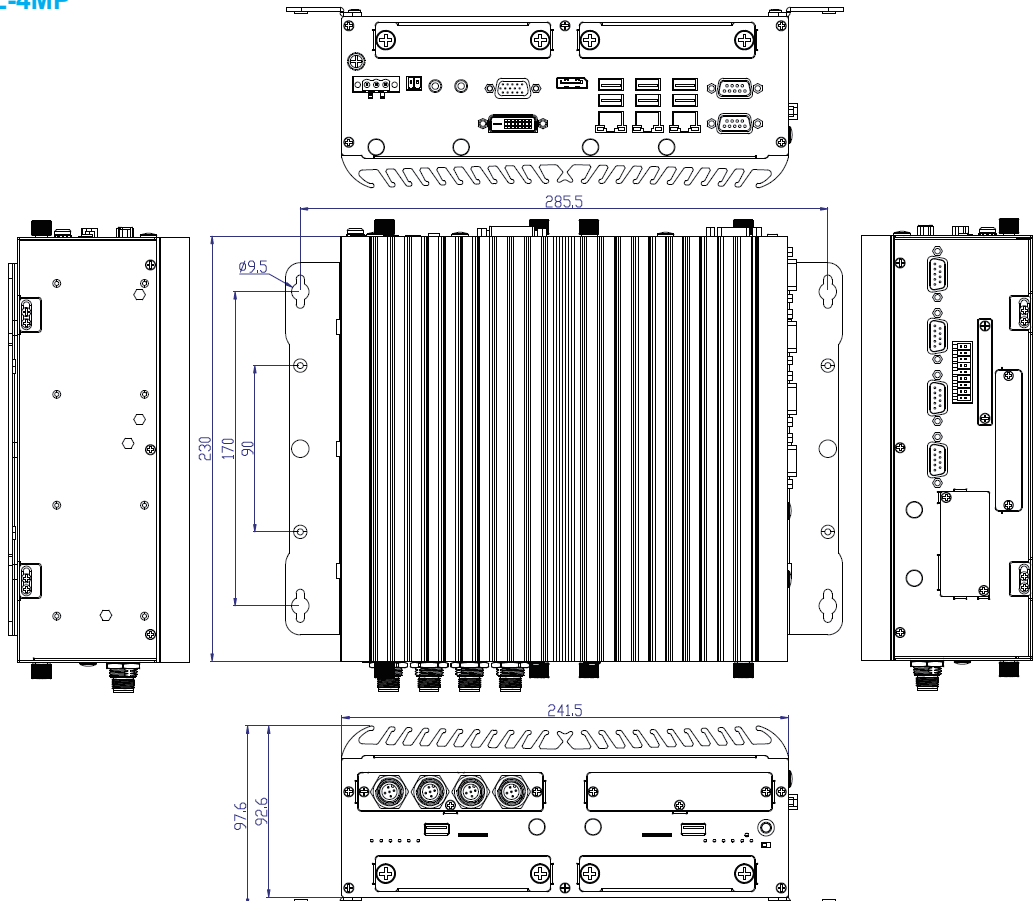
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→ Dimensions

MERA-3110-3L-4ML



MERA-3110-3L-4MP

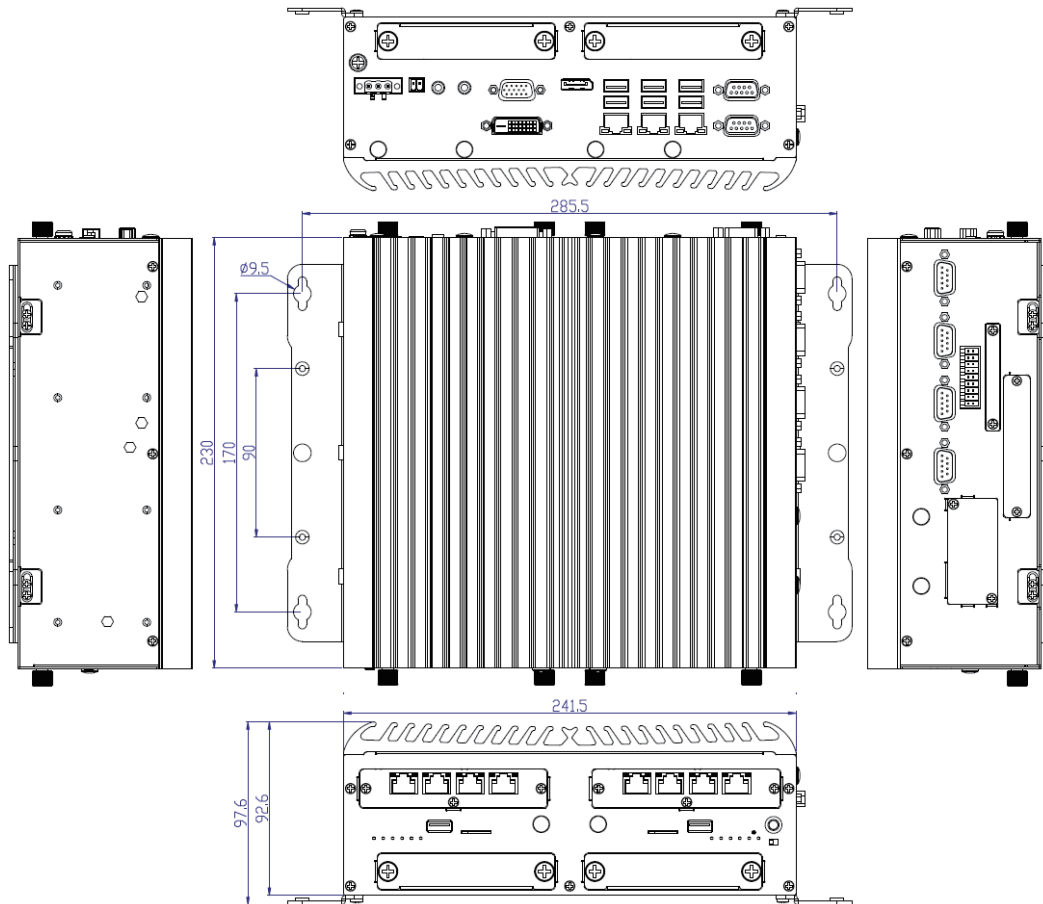


MERA-3100 Series

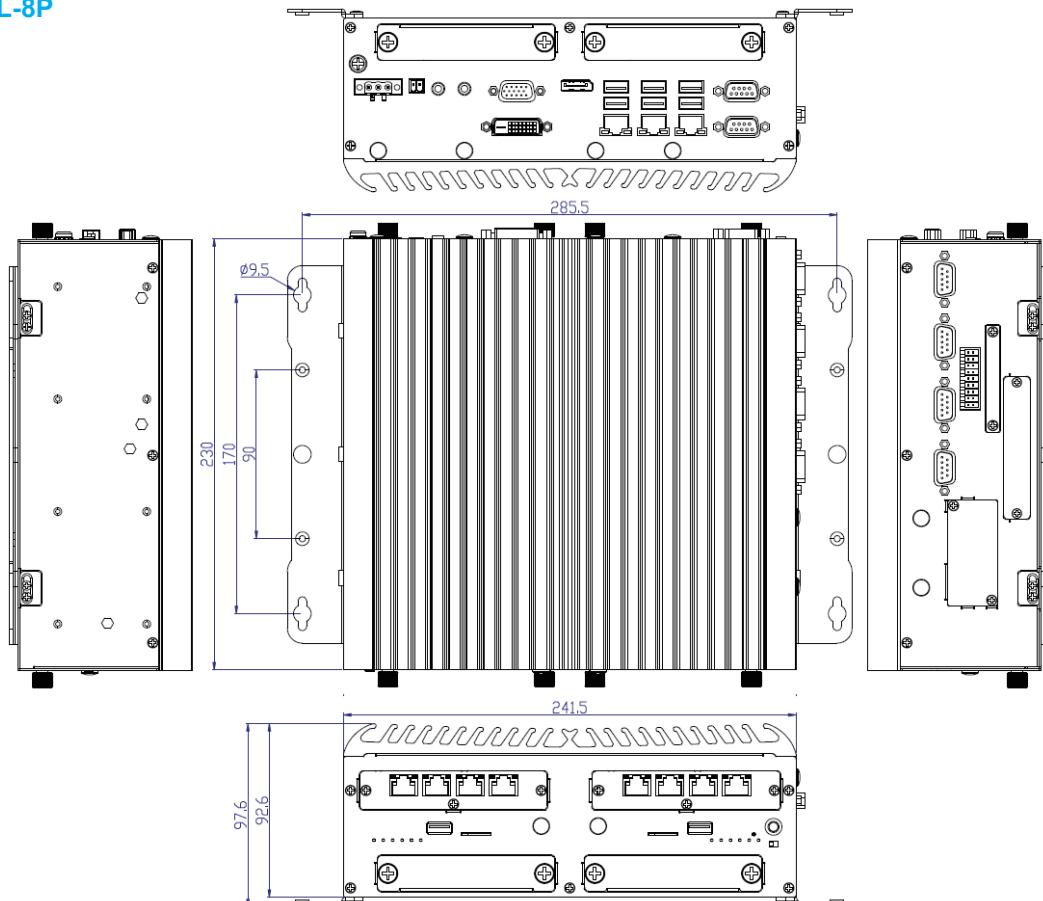
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→ Dimensions

MERA-3110-11L



MERA-3110-3L-8P

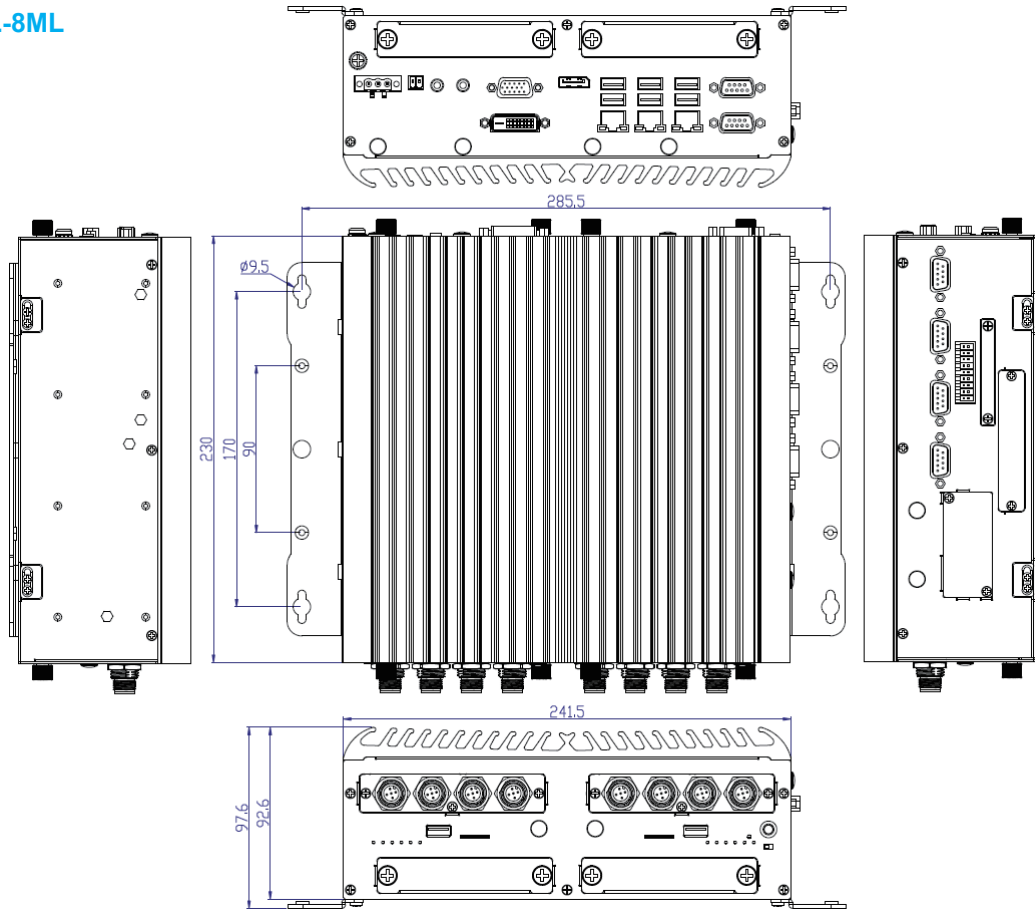


MERA-3100 Series

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→ Dimensions

MERA-3110-3L-8ML



MERA-3110-3L-8MP

