MIC-785

Compact Fanless System with AMD AM5 (LGA1718)



Features

- Support AMD AM5 architecture Ryzen™ Embedded 7000/9000 and EPYC 4005 Processors
- Hgih performance, high frenquency CPU computing and terrific graphic performance, suitable for machine vision and high end machine controller application
- Support multi independent display
- Whole system for fanless desgin promise realiability in industrial robust enviorments
- IP40 dust proof for deployment in harsh environment
- Align with MIC-770/780 design, one side IO, easy cabling
- Versatile IO, GbE, USB 3.2, COM,
- Multiple storage 2 x 2.5" HDD/SSD and 1 x NVMe M.2
- 12 ~ 36 V_{DC} input power range, fit in industrial deployement
- Supports FlexIO, iDoor and iModule technology, easy to configure your edge computing solution
- Supports Advantech SUSI API and embedded software APIs
- Out of band control, supported by Advantech iBMC 1.2 technology

Specifications

Processor Systen	CPU	Ryzen 9 PRO 7945	Ryzen 7 PRO 7745	Ryzen 5 PRO 7645	AMD Ryzen™ 7 9700X	AMD Ryzen™ 5 9600X	AMD EPYC™ 4545P	AMD EPYC™ 4465P	AMD EPYC™ 4345P	AMD EPYC™ 4245P
	Cores	12	8	6	8	6	16	12	8	6
	Threads	24	16	12	16	12	32	24	16	12
	Max. Boost Clock	5.4 GHz	5.3 GHz	5.1 GHz	Up to 5.5 GHz	Up to 5.4 GHz	Up to 5.4 GHz	Up to 5.4 GHz	Up to 5.5 GHz	Up to 5.4 GHz
	Base Clock	3.7 GHz	3.8 GHz	3.8 GHz	3.8 GHz	3.9 GHz	3 GHz	3.4 GHz	3.8 GHz	3.9 GHz
	L3 Cache	64MB	32MB	32MB	32MB	32MB	64MB	64MB	32MB	32MB
	Default TDP	65W	65W	65W	65W	65W	65W	65W	65W	65W
	Socket	LGA 1718								
	Chipset	B650								
	BIOS	AMI 256Mbit SPI Flash								
Memory	Technology	Dual-channel DDR5 5200 MHz								
	Socket	2 x 262-pin DDR5 SODIMM (up to 48GB per socket)								
	Maximum Capacity	96GB								
Display	Chipset	AMD Radeon™ Graphics								
	DP	1 x DP, up to DP 1.4, 3840x2160@60Hz								
	HDMI	2 x HDMI, up to HDMI 2.0, 3840x2160@60Hz								
	Multiple Display	3 x independent displays								
Ethernet	Controller	Ethernet 1/2: Intel® i210IT								
	Interface	2 x RJ45								
Storage	HDD	2 x 2.5" 7mm SSD/HDD or 1 x 2.5" 15mm HDD								
	NVMe M.2	1 x M Key 2280 with PCIe Gen5 x4								
	RAID	0/1/10								
I/O	USB	6 x USB 3.2 (Gen2), 3 x USB2.0 (2 ports pin head on MB, 1 port dongle with typeA on MB)								
	Serial Port	2 x DB9, RS-232/422/485 support auto flow control; 4 x RS-232 (Optional 98R17500601)								
	Audio	2 (1 x line out and 1 x mic in)								
Expansion	Module	Supports Advantech MIC-78 series i-Module								
	Mini PCIe	1 x mini PCIe (PCIe/ USB2.0) for iDoor								
	M.2	1x M.2 2242 B-key (PCIe x1, USB 3.0, USB 2.0) for 5G & iDoor								
LED and Switch	LED	2 (1 x Storage and 1 x GPIO)								
	Button	1 x Power on/off switch								
	Remote Switch	Yes, 2pin terminal block (Optional 98R17500701)								
Power	Type	ATX/AT								
	Input Voltage	12 ~ 36 V_{DC}								
	Power consumption	Maximun: 92W								
Watchdog Timer	Output	System reset								
	Interval	Programmable 1 ~ 255 sec/min								
Environment	Temperature	65W CPU w/ industrial wide Temp. SSD			50W CPU w/ industrial wide Temp. SSD				Non-operating	
		Standard: -20 ~ 40°C with 0.7 m/s air flow			Standard: -20 ~ 50°C with 0.7 m/s air flow				-40 ~ 85°C	
	Humidity	95% @ 40 °C (non-condensing)								
	Vibration	With SSD: 3 Grms @ 5 ~ 500 Hz, random, 1 hr/axis							2G	
	Shock	With SSD: 20G, IEC-68-2-27, half-sine wave, 11 ms duration							50G 11 ms	
Mechanical	Dimensions (W x H x D)	195 x 80 x 240 mm (7.6" x 3.1" x 9.5")								
	Bare-bone Weight	Net weight 3.9KG (8.6lbs), Gross weight 5KG (11lbs)								
	Installation	Desktop, Wall mount (optional 98R17500501), Din rail mount (optional 98R17500210)								
Certifications	EMC	CE/FCC Class A, CCC, BSMI								
	Safety	CB/UL, CCC, BSMI								
OS Support		Windows10/11, Linux OS								

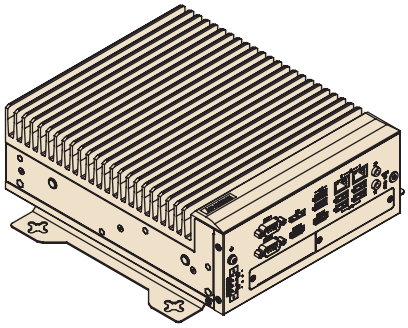
Note 1: The CPU PCIe slot can support graphic cards only due to Intel design specification. Other types of add-on cards will have no function installed on this slot.
Note 2: For the 65W CPU, the operating temperature could support up to 50 degrees and may cause thermal throttling when continued system full-loading which could adjust the CPU power config from BIOS to increase the operating temperature.

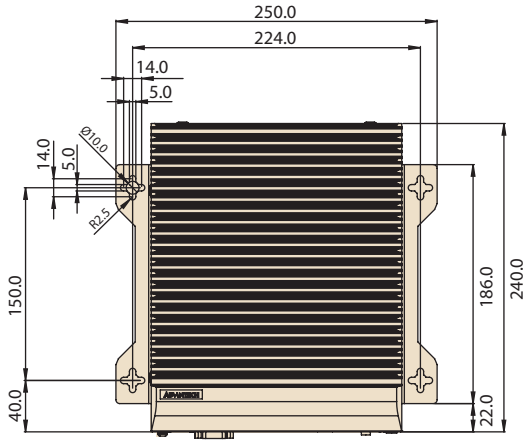
All product specifications are subject to change without notice.

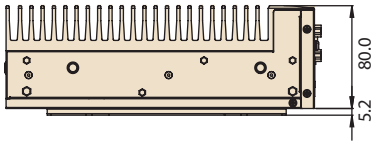
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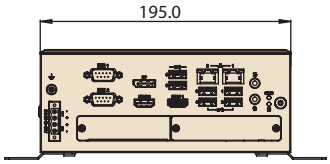
Dimensions

Unit: mm

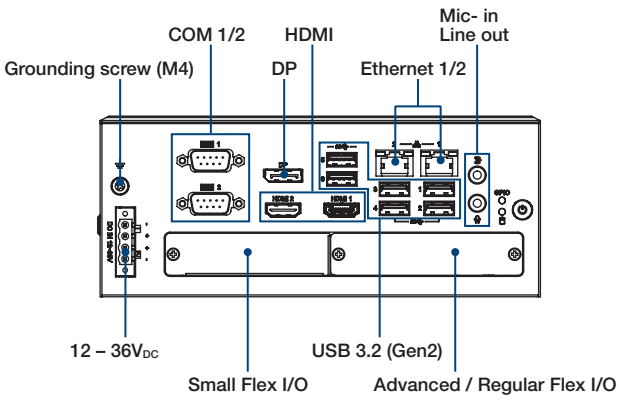








Front View



Rear View



iDoor module view



1.iDoor module or 2 x DB9 connectors from optional (98R17500601 or 98R17500901)
2.If need to add iDoor
For PCM, need to add 1960065854N021 iDoor bracket For MOS, doesn't need additional bracket

Ordering Information

Part Number	COO	HDMI	DP	2.5" SSD	mPCIe	M.2 M Key (PCIex4 gen5)	USB3.2 (Gen2)	M.2 B Key	GbE	COM	PCIe	Power
MIC-785-00A1	China	2	1	2	1	1	6	1	2	2, up to 6 (Optional)	i-Module (optional)	12 ~ 36VDC

Packing List

Part Number	Description	Quantity
MIC-785	MIC-785 bare-bone system	1
2041078500	MIC-780 startup manual (ENG+TC+SC)	1
1652003234	4-pin Phoenix power connector	1
1960070543T00A	Mounting bracket	2
1700013095-01	SATA cable	1
1700024372-01	SATA power cable	1

Cables, Connectors, Thermal PAD, Screws, all accesory are in 9651785V100 accesory box

Optional i-Modules**

Part Number	Description
MIC-78M10-00A1	1 slot expansion iModule (PCIex16 slots)
MIC-78M11-00A1	2 slot expansion iModule (PCIex16, PCI slots)
MIC-78M20-00A1	2 slot expansion iModule (PCIex16, PCIex4 slots)
MIC-78M20-01A1	2 slot expansion iModule (2x PCIex8 slots)
MIC-78M13-00A1	4-slot expansion module (PCIex16, 3x PCI slots)
MIC-78M40-01A1*	4-slot expansion module (4 x PCIe slots)
MIC-78MG30-00A1*	4-slot expansion module (3 x PCIe slots, 250 watt)

* No function on 1 x PCIe x 2 socket
** see detail spec in MIC-78 iModule D/S

Optional Power Adaptor/ Supply Accessories

Part Number	Description
	Adaptor
96PSA-A230W24P4-3	ADP A/D 100-240V 230W 24V C14 TERMINAL BLOCK 4P
1702002600	Power cord (USA) UL/CSA, 3-pin, 10A, 125V, 1.83 M, 180 D
1700000237-31	Power cord PSE 3P 12A 125V 183cm
1702002605	Power cord (EU), 3-pin, 10A, 250V 1.83M, 90D
	Din Rail PSU
96PSD-A240W24-MN*	A/D 100-240V 240W 24V NDR DIN RAIL
1700031170-01	DC-DC power cord, A cable TEM*4/TEM*4 UL2464 18AWG 150cm
1700029720-01	AC-DC power cord (US), M cable AC CONN 3P 183cm
1700030520-01	AC-DC power cord (CN), M cable conn 3P CCC 10A 250V 150cm
1700034561-01	AC-DC power cord (EU), M cable Type E 3P/TEMx3 80CM

Optional Flex IO* & iDoor** Kits

Part Number	Description
	Flex I/O
AIIS-DIO32-00A1E	AIIS GPIO module (32 bit)
PCA-TPMSPI-00A1	TPM 2.0 module (SPI)
98R17500401	MIC Remote power on/off FIO
98R17500601	MIC COM port kit FIO (4x COM RS-232 via 2x dual DB9 cable)
98R17500701	MIC Remote power on/off kit for SFIO
98R17500802	MIC Reset/Remote power on/off/5VDC kit FIO (SATA)
98R17500901	MIC GPIO kit FIO
	Advanced Flex I/O* **
98910770320	2 x 1GbE Ethernet Ports (Intel® i210-AT)
98910770330***	4 x 1GbE Ethernet Ports (Intel® i210-AT), 1 x M.2 NVMe Slot
98910770340	2 x 2.5GbE Ethernet Ports (Intel® i226-IT)
98910770350***	4 x 2.5GbE Ethernet Ports (Intel® i226-IT), 1 x M.2 NVMe Slot
	Mounting Kit
98R17500210	MIC Din Rail Mounting kit
98R17500501	MIC Wall Mounting kit

* Please refer to Flex I/O datasheet for more detail.
** 1.MIC-785 supports Advantech iDoor modules (both MOS and PCM series), excluding the PoE model.
2.The PCM series module requires a bracket (P/N: 1960065854N021) that must be ordered separately.
*** No feature on NVMe socket.



FCC PS

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Dodavatelem tohoto produktu jsou FCC průmyslové systémy s. r. o.

Informace o cenách, dostupnosti a dalších naleznete v našem e-shopu nebo se v případě jakéhokoliv dotazu obraťte přímo na nás.

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FCC průmyslové systémy s.r.o. jsou dodavatelem průmyslové výpočetní techniky zastupující významné výrobce v oblasti průmyslové automatizace a telekomunikační techniky.

- Panelové počítače
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- Meinberg - zdroje času