MIC-760

Compact Fanless AMR/MMR controller system with 12th/13th/14th Gen Intel® Core™ i CPU Socket (LGA 1700)



Features

- High computing, design as Intel® 12th/13th/14th Gen Core™ i CPU
- Fanless design, for 60 degree reliable operation
- Isolated DIO, CANbus and Serial ports guarantee for industrial communication
- Contact 8KV/Air 15KV IV level ESD protection , ClassB for EMI design, best choice for industrial environment
- 3 Ethernet and 4 USB3.2 (5Gbps) for Camera and Lidar connection
- 36ms for fast roaming for Industrial Wifi design
- Compact size for AMR/MMR easy installation
- Build on Ubuntu 22.04, Advantech Edge Linux, ROS2 package ready
- ROS2 package for industrial automation add on value, EtherCAT, Modbus node

Specifications

14th Generation Processors*	CPU	i9-14900	i7-14700	i5-14500	i5-14400	i3-14100	i9-14900T	I7-14700T	i5-14500T	i5-14400T	i3-14100T
	P-core Base Frequency	2.0 GHz	2.1 GHz	2.6 GHz	2.5 GHz	3.5 GHz	1.1 GHz	1.3GHz	1.7 GHz	1.5 GHz	2.7 GHz
	L3 Cache	36 MB	33 MB	24 MB	20 MB	12 MB	36 MB	33 MB	24 MB	20 MB	12 MB
	Cores	24	20	14	10	4	24	20	14	10	4
	Processor Base Power	65 W	65 W	65 W	65 W	60 W	35 W	35 W	35 W	35 W	35 W
13th Generation Processors*	CPU	i9-13900(E)	i7-13700(E)	i5-13500(E)	i5-13400(E)	i9-13900TE	i5-13500T(E)	i3-13100T(E)			
	P-core Base Frequency	2.0 GHz	2.10 GHz	2.50 GHz	2.50 GHz	1.00 GHz	1.60 GHz	2.50 GHz			
	L3 Caches	36 MB	30 MB	24 MB	20 MB	36 MB	24 MB	12 MB			
	Cores	24	16	14	10	24	14	4			
	Processor Base Power	65W	65W	65W	65W	35W	35W	35W			
12th Generation Processor*	CPU	i9-12900(E)	i7-12700(E)	i5-12500(E)	i3-12100(E)	G6900E	i7-12700TE	i5-12500TE	i3-12100TE	Pentium G7400TE	Celeron G6900TE
	Core/Thread number	16/24	12/20	6/12	4/8	2/2	12/20	6/12	4/8	2/4	2/2
	Base Frequency	2.30 GHz	2.10 GHz	2.90 GHz	3.20 GHz	3.00 GHz	1.40 GHz	1.90 GHz	2.10 GHz	3.00 GHz	2.4 GHz
	Max Turbo Frequency	5.00 GHz	4.80 GHz	4.50 GHz	4.20 GHz		4.60 GHz	4.30 GHz	4.00 GHz		
	L3 Cache	30 MB	25 MB	18 MB	5 MB	2.5 MB	16 MB	12 MB	6 MB	2.5MB	2.5MB
	Processor Base Power	65W	65W	65W	65W	46W	35W	35W	35W	35W	35W
	Temperature	-20 ~ 50 °C (w/ industrial wide-temp SSD, 0.7m/s air flow)					-20 ~ 60 °C (w/ industrial wide-temp SSD, 0.7m/s air flow)				
	Chipset	H610E									
	BIOS	AMI 256Mb SPI Flash									
Memory	Technology	Dual-channel DDR5 5600 MHz									
	Socket	2 x 262-pin DDR5 SODIMM (up to 48GB per socket)									
	Maximum Capacity	96GB									
Display	Chipset	Core i: Intel® UHD Graphics 770 Pentium/Celeron: Intel® HD Graphics 710									
	HDMI	1 x HDMI, up to 4096 x 2160@30Hz									
Ethernet	Controller	LAN1: Intel® I219V, LAN2/3: Intel® i226-IT									
	Interface	3 x RJ45									
Storage	NVMe M.2	1 x M Key 2280 with PCIe Gen 4 x 4									
	SATA	1 x M Key 2280 with SATA (Required optional thermal kit)									
I/O	USB	4 x USB3.2 (Gen1)									
	CANBus	2 x CANBus with 2.5KV isolation, via 2 x 3-pin terminal blocks interface									
	Serial Port	2 x RS-232/422/485 with 2.5 kV isolation, via 2 x 5-pin terminal block interface									
	Digital input/output	8 x DI and 8 x DO with 2.5 kV isolation									
	DC output	1 x 12 V_{DC} output @ 2 A, 1 x 4-pin terminal block									
Expansion	M.2	1 x M.2 2230 E-Key (USB and PCIe signal) 1 x M.2 2242/3042/3052 B-Key (PCIe x 1 and USB 2.0), with Nano SIM socket									
LED and Switch	LED	1 x Power status, 1 x Storage status, 1 x 5G, 1 x Wi-Fi									
	Button	1 x Power on/off switch									
	Remote Switch	2pin terminal block (Optionnal)									
Power	Type	ATX/AT									
	Input Voltage	12 ~ 36 V_{DC} with ignition on and off									
	Power consumption	Typical: 45.7W Maximum: 70.2W									
Watchdog Timer	Output	System reset									
	Interval	Programmable 1 ~ 255 sec/min									
Environment	Temperature	35W Processor w/ industrial wide Temp. RAM and storage*					Non-operating				
		Standard: -20 ~ 60°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)	200 x 55 x 160 mm (7.87" 2.17" x 6.30"); With mount kit: 230 x 59 x 160 mm (9.06" x 2.32" x 6.30")									
	Weight	Standard: 2.3 kg (5.07 lbs)									
	Installation	Desktop/wall mount									
Certifications	EMC	CE/FCC Class B, CCC, BSMI, Contact 8KV, air 15KV ESD protection									
	Safety	CCC, BSMI									
OS Support		Windows 11, Windows 10, Windows 10 IoT, Linux OS									

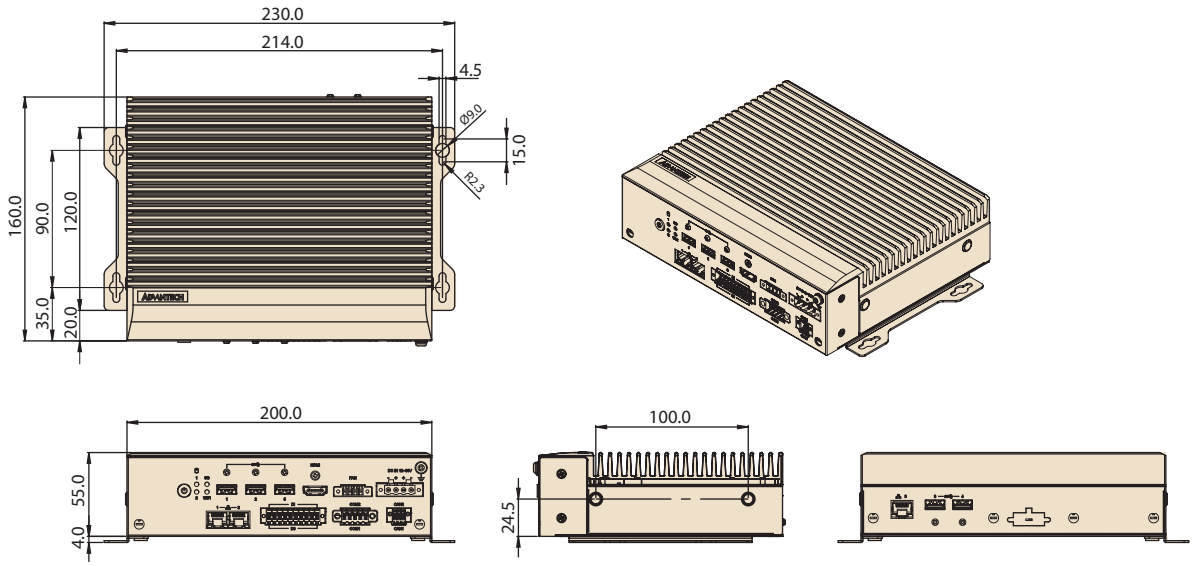
* BIOS default set up CPU as 35W to have better thermal operation

All product specifications are subject to change without notice.

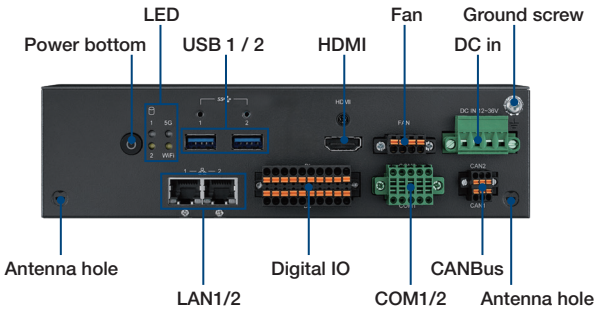
Last updated: 17-Jul-2026

Dimensions

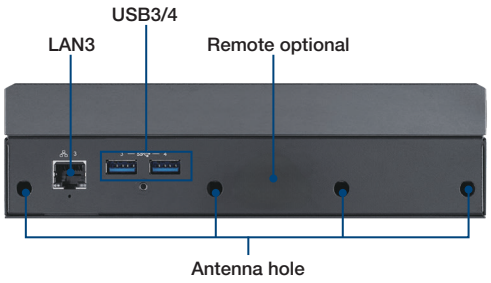
Unit: mm



Front View



Rear View



Ordering Information

Part Number	COO	HDMI	M.2 E-Key	M.2 B-Key	NVMe M.2	CANBus	USB3.2 (Gen1)	DI / DO	Ethernet	COM	Power
MIC-760H-00A1	China	1	1	1	1	2	4	8 / 8	3	2	12 ~ 36V_{DC}

Packing List

Part Number	Description	Quantity
MIC-760	MIC-760 bare system	1
2041760000	MIC-760 startup manual (ENG+TC+SC)	1
1652003234	4-pin Phoenix power connector	1
1960117951N001	Mounting bracket	2
1652005282	TEP Push-In 1x4/3.5/PA66/VA(F)/Sn/BK/ Screw/Bulk	1
1652008233-01	Terminal Plug 6P/2.54/PA66/VA/Sn/BK/W SC	1
1652007619-01	PLUG-IN BLOCK 10P 3.5mm 180D OMC601-35010-1	1
1652008720-01	TEP Push-In 2x10/3.5/PA66/VA(F)/Sn/BK/ Screw	2

Optional kit list

Part Number	Description
98R10760000	M.2 2280 SATAIII thermal kit (SATA signal)
98R10760010	USB locking and Remote SW kit
98R10760020	5G module thermal kit
98R10760030	Expansion chassis kit

Embedded OS

Part number	Description
20701U22DS0038	Image EdgeLinux-IOTG 22.04 V4.2.1-MMR for AMIC
20706WLH1S0131	img W11 24HL MIC-760 64b 24H2 ENU
20706WLV1S0131	img W11 24VL MIC-760 64b 24H2 ENU
20706WLE1S0131	img W11 24EL MIC-760 64b 24H2 ENU