

AFE-R760

Intel® Core™ Ultra 7/5 Processors AMR control system

NEW



Features

- Intel® Core™ Ultra 7/5 Processors, up to 16 Cores, TDP 28W
- Dual Channel DDR5-5600, up to 96GB
- Support 4x GMSL through connector
- Dedicate I/Os for AMR: 3x 2.5GbE, 2x USB-C, 2x USB-A, 4x COM, 2x CAN-FD, 8-bit DIO
- ESD protection : Contact 8KV, air 15KV
- Supports Ubuntu22.04/ 24.04 LTS, Windows 11 LTSC, Advantech Robotic Suite
- Integrated CPU, GPU, and NPU provide up to 32 TOPS AI performance



WISE-DeviceOn SUSI API



Specifications

Processor System	Processor	Core Ultra 7, 155H	Core Ultra 5, 125H
	Max. Frequency	4.8GHz	4.5GHz
	Base Frequency (P-Core)	1.4GHz	1.2GHz
	Core/ Thread	16, 6P+8E+2LE/ 22	14, 4P+8E+2LPE/ 18
	LLC	24MB	18MB
	TDP	28W	28W
	Chipset	On-package Intel 600 Series Chipset	
	BIOS	AMI EFI 256Mbit	
Memory	Technology	DDR5 5600 MHz	
	Max. Capacity	96 GB	
	Socket	2 x 262-pin SO-DIMM	
Graphics	Chipset	Intel® ARC® Graphics	
	3D/ HW Acceleration	DX12.2, OGL4.6, OCL3.0, HW Encode/ Decode: H.265 (HEVC), H.264, AV1, VP9	
	DP	1 x DP1.4a, up to 4096 x 2160x 36bpp @60Hz	
Ethernet	LAN1/2/3	10/100/1000/2500 Mbps Intel i226-LM GbE, support Wake On Lan	
Audio	Interface	Realtek ALC888s, Line-out/Mic-in (optional by 1700035708-01)	
Others	Watch dog Timer	65536 level, 0~65535 sec	
	TPM	Discrete TPM2.0, fTPM* support by request	
I/O Interface	Serial Port	4 x RS-232/422/485, max. 1Mbps	
	USB Type-C	2 x USB3.2 Gen2x1 10Gbps, support DisplayPort1.4 Alt. Mode	
	USB Type-A	2 x USB3.2 Gen2x1 10Gbps	
	GPIO	8-bit general purpose input output I/O	
	CANBus	2 x CAN-FD	
	FAN	1x FAN connector (12V0.35A)	
Expansions	M.2 E Key	1 x E-Key 2230 (PCIex2, USB2.0)	
	M.2 B-Key	1 x B-Key 3052 (PCIe x2/ SATA, USB2.0) w' Nano SIM	
	M.2 M-Key	2 x M-Key 2280 (PCIex4 Gen.4 NVMe)	
	GMSL	Up to 4x FAKRA, expanded through GMSL interfaced card, MIOe-GMSL (Optional)	
Software Support	Microsoft Windows	Windows 10/ 11	
	Linux	Ubuntu 22.04/ 24.04	
	ROS2	Ready by Advantech Robotic Suite	
Power Requirements	Power Input Voltage	12-24V _{oc}	
	Power Source	DC Battery or AC to DC 150W adapter (Optional)	
Power Consumption (CPU/Memory Only)	Typical (OS idle mode)	9.12W	
	Max. (Full loading)	45.12W	
Mechanical	Construction	Aluminum housing	
	Mounting	DIN-Rail mounting, Wall mounting (Optional)	
	Dimensions (W x H x D)	175 x 60 x 130 mm	
	Weight	1.6 kg (3.5 lb)	
Environment	Operating Temperature	with extended temp peripherals: -20 ~ 60° C with 0.7m/s air flow	
	Storage Temperature	-40 ~ 85° C	
	Relative Humidity	95% @ 40° C (non-condensing)	
	Vibration During Operation	3 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis.	
	Shock During Operation	30 G, IEC 60068-2-27, half sine, 11 ms duration	
	EMC	Heavy industrial certificates, CE/FCC Class B, UKCA, CCC, BSMI	
	Safety	CB, UL, UKCA, CCC, BSMI	

#1 SIM holder and M.2 slot are hardware interfaces for wireless communication integration only. System level RF certification is not available.

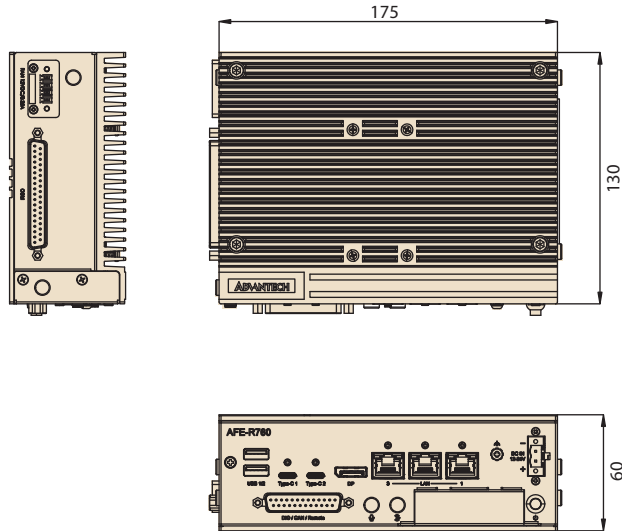
ADVANTECH

AMR CONTROLLER

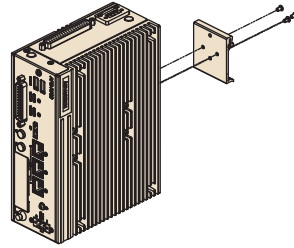
All product specifications are subject to change without notice.

Last updated: 20-Mar-2025

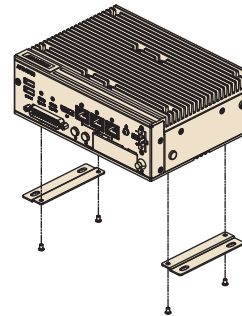
Dimensions



DinRail

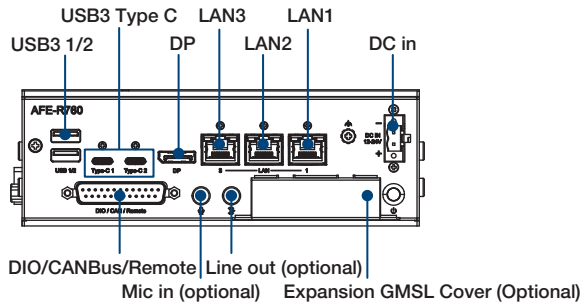


Wallmount

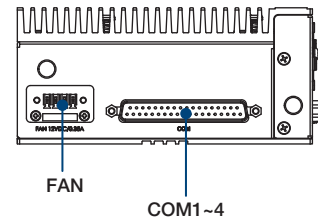


Unit: mm

Front Panel I/O



Side Panel I/O



Ordering Information

Part No.	CPU	Core	DDR5	Gbe	DP	CANBus	RS-232/422/485	USB	M.2 B key	SIM	M.2 E Key	M.2 M key	GPIO	Made in
AFE-R760-Q5A1	Core Ultra 5, 125H	14C, 4P+8E+2LPE	Up to 96GB	3	1	2	4	4	1	1	1	2	8bit	China
AFE-R760-Q8A1	Core Ultra 7, 155H	16C, 6P+8E+2LPE	Up to 96GB	3	1	2	4	4	1	1	1	2	8bit	China

Note: Memory, storage, and operating system bundled by request.

Packing List

Part Number	Description
-	AFE-R760 Unit
-	User Manual (Simplified Chinese)
-	China RoHS
1652000099	1 x 2-pin plug-in block for power in

Embedded OS

Part Number	Description
TBD	WIN11 IoT LTSC 21H2 64bit
20706U22DS0050	UbuntuD 64b 22.04 ENU
20706U24DS0000	UbuntuD 64b 24.04 ENU

Default SKU Option Items

Optional Item for Default SKU

Part Number	Description
96PSA-A150W24T2-4	AC to DC adapter, DC 24V 150W, -10 ~ 60 °C (10% derating @60 °C)
1702002600	Power cable 3-pin 183cm, USA type
1702002605	Power cable 3-pin 183cm, EU type
1702031801	Power cable 3-pin 183cm, UK type
1700000237	Power cable 3-Pin 183cm, PSE type
MIOE-GMSL-4PA1	MIOE-GMSL Module, 4x FAKRA port (Please order it along with the GMSL cover)
1950016395T10C	DIN RAIL
1960099390N002	Wall mount Bracket (Please order 2pcs)
1700021869-01	DB37(male) to 4 x DB9(male) cable (Please refer to user manual for Pin Definition)
1700035708-01	AFE-R760 Internal Audio Cable/Line out/Mic IN