

# 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+2LE/ 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, 1 x optional USB4 (Bandwidth min. 20Gbps, max. 40Gbps, with USB4/Display/PCIe) |                    |
|                                     | 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 <sub>DC</sub>                                                                                                                       |                    |
|                                     | 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                                                                                                                                     |                    |

#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.

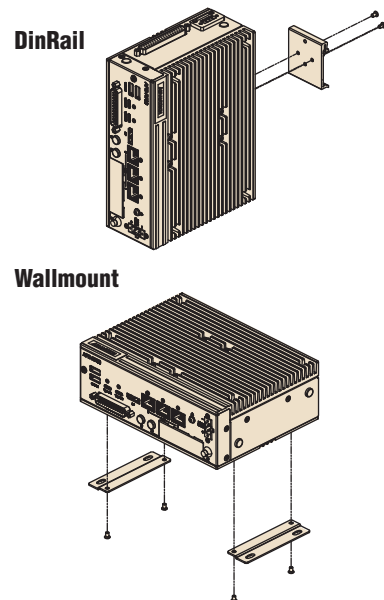
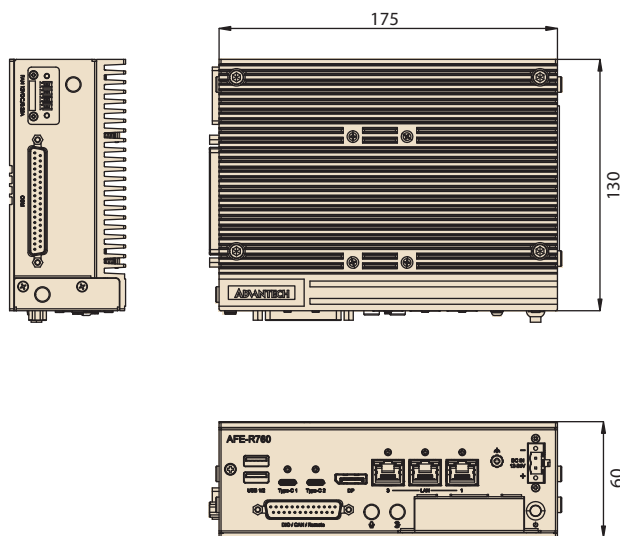
Last updated: 5-Sep-2025

## Specifications (Cont.)

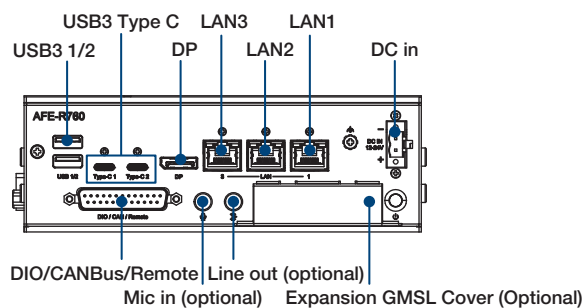
|             |                            |                                                                  |
|-------------|----------------------------|------------------------------------------------------------------|
| Mechanical  | Construction               | Aluminum housing                                                 |
|             | 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                                          |

## Dimensions

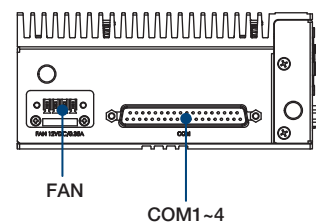
Unit: mm



## 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.

## Compatible Sensors List

| Compatible Sensors for Autonomous Applications |              |        |                                              |                            |                   |              |
|------------------------------------------------|--------------|--------|----------------------------------------------|----------------------------|-------------------|--------------|
| Sensors                                        | Manufacturer | Spec   | Sensor MPN                                   | Camera Resolution          | Camera sensor     | Advantech PN |
| GMSL Camera                                    | RealSense    | 2D+3D  | <a href="#">D457</a>                         | 1 MP (RGB)<br>1 MP (depth) | OMNIVISION OV9782 | 96ICAM-D457  |
|                                                | oToBrite     | 2D     | <a href="#">oToCAM222</a>                    | 2 MP                       | Sony ISX021       | 96ICAM-222   |
|                                                | Appro        | 2D     | <a href="#">E-09</a>                         | 8.3MP                      | Sony IMX415       | -            |
|                                                | Appro        | 2D     | <a href="#">E-10</a>                         | 5 MP                       | Sony IMX335       | -            |
|                                                | Appro        | 2D     | <a href="#">E-11</a>                         | 2.3MP                      | Onsemi AR0234     | TBD          |
|                                                | Appro        | 2D     | <a href="#">E-12</a>                         | 2 MP                       | Sony IMX290       | -            |
|                                                | Appro        | 2D     | <a href="#">E-13</a>                         | 8.3MP                      | Onsemi AR0822     | -            |
| USB Camera                                     | D3 Embedded  | 2D     | <a href="#">DesignCore® Discovery Series</a> | 3 MP                       | Sony ISX031       | -            |
|                                                | Orbbec       | 2D+3D  | <a href="#">Gemini 335L</a>                  | 1 MP (RGB)<br>1 MP (depth) |                   | TBD          |
|                                                | Innodisk     | 2D     | EV8U-LSM1                                    | 8.3MP                      | IMX415            | -            |
| IMU                                            | e-con        | 2D     | <a href="#">See3CAM_CU81</a>                 | 8.3MP                      | AR0821            | -            |
|                                                | Movella      | 9-axis | MTi-3-5A-DK                                  |                            |                   | -            |
|                                                | Movella      | 9-axis | Xsens MTi-320                                |                            |                   | TBD          |
| Lidar                                          | Slamtec      | 2D     | RPLIDAR-A2M12                                |                            |                   | -            |
|                                                | Slamtec      | 2D     | RPLIDAR C1 LiDAR                             |                            |                   | -            |
|                                                | SICK         | 2D     | NanoScan3                                    |                            |                   | -            |
|                                                | SICK         | 3D     | multiScan100                                 |                            |                   | -            |

## 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/ API

| Part Number    | Description                              |
|----------------|------------------------------------------|
| TBD            | WIN11 IoT LTSC 21H2 64bit                |
| 20706U22DS0050 | UbuntuD 64b 22.04 ENU                    |
| 20706U24DS0000 | UbuntuD 64b 24.04 ENU                    |
| Software API   | Download from website SUSI5 for AFE-R760 |
| ROS2           | Ready by Advantech Robotic Suite         |

## 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                                                   |
| 1702031801-11     | 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 GSML 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                                      |
| 1960110006N000    | M.2 3042/2242 to 3052 extension bracket                                            |
| AMK-A0053         | AFE-R760 Fan Kit                                                                   |

# Tento produkt můžete zakoupit u společnosti AutoCont IPC a.s.



## AutoCont IPC a.s.

Váš dodavatel průmyslových počítačů, komponent a speciálních průmyslových IT systémů.

 Uhlířská 1064/3, 710 00 Ostrava, Česká republika

 obchod@autocont-ipc.cz

 +420 552 301 002

 [www.autocont-ipc.cz](http://www.autocont-ipc.cz)



### PRŮMYSLOVÉ POČÍTAČE

*fanless embedded PC, do racku, ...*



### POČÍTAČE S DISPLEJEM

*panelové PC, terminály, do vozidel, ...*



### AUTOMATIZACE A SBĚR DAT

*převodníky, karty, moduly, switche, ...*



### PERIFERIE A KOMPONENTY

*monitory, klávesnice, desky, skříně, ...*



### NOTEBOOKY A TABLETY

*odolné, windows, android, IP65, ...*



### INFORMAČNÍ KIOSKY

*interiérové, venkovní, ...*



### MEDICÍNSKÁ TECHNIKA

*počítače, tablety, LCD, klávesnice, ...*



### SOFTWAREVÁ ŘEŠENÍ

*pro výrobu, zaměstnance, kiosky, ...*



### PŘEJÍT DO E-SHOPU

[eshop.autocont-ipc.cz](http://eshop.autocont-ipc.cz)



### DOPRAVA ZDARMA

Doprava zdarma v ČR a SR při objednávce nad 10 000 Kč bez DPH nebo nad 400 EUR.



### PRODLOUŽENÁ ZÁRUKA

Záruka 2 roky na vyráběné počítače s možností jejího prodloužení až na 5 let.



### ODMĚNA ZA VĚRNOST

Pravidelní zákazníci u nás nakupují za nižší ceny. Výše slevy se odvíjí od realizovaného obrátu.



### SERVIS ON-SITE A IN-TIME

K projektovým dodávkám nabízíme rozšířenou podporu a servis s garancí výměny zařízení do 48 hodin.