

# EPC-R5710

## NXP i.MX8M Plus Corter-A53 Edge AI System

Coming Soon



### Features

- NXP i.MX 8M PLUS 4xA53@1.8GHz
- Integrate 2.3 TOPS NPU and extend 8-26 TOPS AI card
- 4kP30,1080p60 HEVC, H.264, VP9, VP8 decoding
- 1080p60 H.265, H.264 encoding
- 1xHDMI2.0
- 5xGbE LAN, 1xGbE Fiber
- USB3.0,USB2.0,RS232,RS485,CAN FD,SATA,SD
- 8 Channels Mic Array
- Support AI card/5G/4G/GPS/ Wi-Fi 5/Wi-Fi6/BT
- Support TPM,TCM
- Linux and, Andriod
- Embeded DeviceOn, DeviceOn.CommBridge



### Introduction

Advantech EPC-R5710 is an AI edge intelligent industrial gateway integrating NXP's high performance of video coding/decoding and AI function. It can provide 2.3-28.3 TOPS NPU AI computing power, and support multiple network ports, a variety of industrial interfaces and storage, as well as wireless technologies including 5G/4G,Wi-Fi5/6. It also supports 8-way MIC array to realize audio and video AI analysis. Integrated cloud collaboration functions.EPC-R5710 supports a variety of PLC data acquisition and industrial protocol conversion. With its high performance and high quality, it is widely used in AI video surveillance, machine vision and industrial data acquisition applications in the fields of security, smart city, smart transportation, smart factory, energy and power.

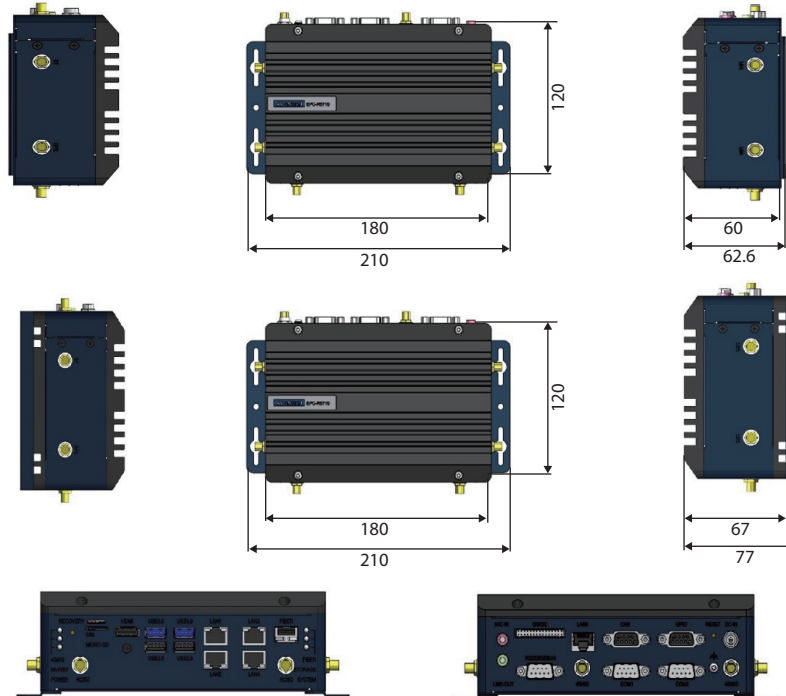
### Specifications

|                  |                       |                                                                                                                        |
|------------------|-----------------------|------------------------------------------------------------------------------------------------------------------------|
| Processor        | CPU/GPU               | NXP i.MX 8M Plus Cortex-A53 Dual/Quad Core (up to 1.8GHz) ,GPU GC7000UL                                                |
|                  | NPU                   | 2.3 TOPS Neural Network performance, extend 8-26 TOPS AI card                                                          |
|                  | MCU                   | 1 x Arm Cortex -M7 core                                                                                                |
| Memory           | Technology            | LPDDR4                                                                                                                 |
|                  | Capacity              | 2GB/4GB/6GB on board                                                                                                   |
|                  | Flash                 | 16/32GB EMMC NAND Flash for OS and 8MB SPI NOR Flash for boot loader                                                   |
| Graphics         | HDMI                  | 1 x HDMI2.0, 1920x1080                                                                                                 |
|                  | Graphics Engine       | GC7000UL with 2D/3D Graphic Acceleration supporting 1G Pixel/s, OpenVG 1.1, Open GL ES3.1, Vulkan, and Open CL 1.2 FP. |
|                  | H/W Video Codec       | Decoder: H.265, H.264, VP8/9 1080p Encoder:H.264, VP8 1080p                                                            |
| Ethernet         | Ethernet              | 5 x 10/100/1000Mbps (route/switch), 1 x 1G FSP fiber                                                                   |
| WatchDog Timer   | WatchDog Timer        | 1~6553s, default 60s, power on/off 4s                                                                                  |
| RTC              | RTC                   | Support                                                                                                                |
| TPM/TCM          | TPM/TCM               | Support                                                                                                                |
| Front I/O        | Ethernet              | 5 x 10/100/1000Mbps, 1 x 1G FSP fiber                                                                                  |
|                  | USB                   | 2 x USB3.0 type A host, 2 x USB2.0 type A host                                                                         |
|                  | HDMI                  | 1 x HDMI2.0, 1920x1080                                                                                                 |
|                  | Micro SD              | 1 x Micro SD socket                                                                                                    |
|                  | SIM                   | 1 x standard SIM socket                                                                                                |
| Rear I/O         | Audio                 | 1 x Mic , 1 x Line out,                                                                                                |
|                  | MIC Array             | 2 x I2S+1xI2C, support 8 channels MIC array (Digital or analog)                                                        |
|                  | CAN                   | 1 x CAN FD                                                                                                             |
|                  | Serial Port           | 2 x RS232/RS422/RS485, 1 x 2-wire RS232 or debug port (default:R232)                                                   |
|                  | GPIO                  | 5                                                                                                                      |
| Indicator        | LED                   | 6 Green LED for power, system, storage, 5G,4G,Wi-Fi and fiber status                                                   |
|                  | Mini PCIe             | 1 x mini PCIe slot (only USB2.0 signal for 4G/GPS)                                                                     |
| Expansion        | M.2 E Key             | 1 x M.2 E Key slot (for WiFi5/WiFi6, BT and 8-26 TOPS AI card)                                                         |
|                  | M.2 B Key             | 1 x M.2 B KEY (USB3.0 for 5G)                                                                                          |
|                  | SATA                  | 1 x SATA2.0 Header (2.5 inch SSD)                                                                                      |
|                  | Antenna Holes         | 8 (5G/4Gx4 & WIFI/BTx2&BTx1&GPSx1)                                                                                     |
| Mechanical       | System                | 210 x 120 x 62.6 mm or 220 x 120 x 77 mm (for AI card)                                                                 |
|                  | Mounting              | Wall mount                                                                                                             |
| Power            | Power supply          | 12V 3A DC-in                                                                                                           |
| Environment      | Operating temperature | 0-50°C, -40~70°C                                                                                                       |
|                  | Operating Humidity    | 5 ~ 95% relative humidity, non-condensing                                                                              |
| Operating System |                       | Linux, Android                                                                                                         |
| Certifications   |                       | CCC/CE/FCC Class B                                                                                                     |

## Dimensions

Unit: mm

For AI



## Ordering Information

| Part Number       | CPU                | Memory | Flash | HDMI | SATA | SD | LAN | Fiber | USB                  | UART                         | Can | Audio                  | GPIO | TPM | MIC Array | Operating Temperature |
|-------------------|--------------------|--------|-------|------|------|----|-----|-------|----------------------|------------------------------|-----|------------------------|------|-----|-----------|-----------------------|
| EPC-R5710NQ-BLA1E | NXP 8M PLUS 1.8GHz | 4 GB   | 16 GB | 1    | 1    | 1  | 5   | 1     | 2 USB3.0<br>2 USB2.0 | 2 x RS232/RS485<br>1 x RS232 | 1   | 1 Line out<br>1 MIC in | 5    | (1) | 1         | 0 ~ 50°C              |
| EPC-R5710NQ-ALA1E | NXP 8M PLUS 1.8GHz | 6 GB   | 16 GB | 1    | 1    | 1  | 5   | 1     | 2 USB3.0<br>2 USB2.0 | 2 x RS232/RS485<br>1 x RS232 | 1   | 1 Line out<br>1 MIC in | 5    | (1) | 1         | 0 ~ 50°C              |
| EPC-R5710IQ-XLA1E | NXP 8M PLUS 1.8GHz | 2 GB   | 16 GB | 1    | 1    | 1  | 5   | 1     | 2 USB3.0<br>2 USB2.0 | 2 x RS232/RS485<br>1 x RS232 | 1   | 1 Line out<br>1 MIC in | 5    | 1   | 1         | -40 ~ 70°C            |
| EPC-R5710IQ-BLA1E | NXP 8M PLUS 1.8GHz | 4 GB   | 16 GB | 1    | 1    | 1  | 5   | 1     | 2 USB3.0<br>2 USB2.0 | 2 x RS232/RS485<br>1 x RS232 | 1   | 1 Line out<br>1 MIC in | 5    | 1   | 1         | -40 ~ 70°C            |
| EPC-R5710IQ-ALA1E | NXP 8M PLUS 1.8GHz | 6 GB   | 16 GB | 1    | 1    | 1  | 5   | 1     | 2 USB3.0<br>2 USB2.0 | 2 x RS232/RS485<br>1 x RS232 | 1   | 1 Line out<br>1 MIC in | 5    | 1   | 1         | -40 ~ 70°C            |

(\*) (I) BOM options available on MP version.

## Packing List

| Part Number    | Description                                                        |
|----------------|--------------------------------------------------------------------|
| 1960103066N001 | WALL MOUNT 2965C for EPC-R5710                                     |
| 1960104002N101 | Wall mount Bracket for EPC-R5710 Liquid 2965C for AI configuration |

## Optional Accessories

| Part Number    | Description                                                |
|----------------|------------------------------------------------------------|
| 96PSA-A36W12W7 | ADP A/D 100-240V 36W 12V WO/PFC                            |
| 1702002605     | Power Cord 3P EU 10A 250V 183 cm (72 in)                   |
| 1702031801     | Power Cord 3P UK 10A 250V 183 cm (72 in)                   |
| 1702002600     | Power Cord UL 3P 10A 125V 183 cm (72 in)                   |
| 1700008921     | Power Cord 3P PSE 183 cm (72 in)                           |
| 1700009652     | Power Cord CCC 3P 10A 250V 187 cm (73.6 in)                |
| 968DD00064     | Quectel RM500Q-GL m.2 Wireless 5G Module                   |
| 1750009353-01  | TUBE Ant. SMA-Jack/F-BH MHF4/113 BLK 300mm for 5G          |
| 1750009372-01  | Ant.SMA/M 90/180 5G BLK 167mm RG178 for 5G                 |
| 1990038961N000 | Thermal Pad PG45A K=4.5 45*30*2MM for 5G                   |
| 968AD00584     | Quectel EC20CEFHLG Mini PCIe 4G module                     |
| 1750007965-01  | Antenna Cable R/P SMA (M) to MHF4, 300 mm (11.8 in) for 4G |

## Optional Accessories

| Part Number     | Description                                                    |
|-----------------|----------------------------------------------------------------|
| 1750008303-01   | Antenna AN0727-64SP6B5M for 4G                                 |
| 1970005269T000  | HD R2 32x32x27.4MM SC EPC-R5710 for 4G                         |
| 1990016840S000  | Thermal Pad 32x32x1.5mm GR-Hm K=6 for DAC-SC01 for 4G          |
| AIW-154BN       | AzureWare AW-CM276MA WiFi5 module                              |
| AIW-165BN       | AzureWare AW-XM458MA WiFi6 module                              |
| 1750007965-01   | WiFi Coaxial Cable, SMA (M) to MHF4, 300 mm for WiFi5/WiFi6    |
| 1750008717-01   | WiFi Dual band 2.4G and 5G Antenna for WiFi5/WiFi6             |
| 1970005268T000  | HD R2 20x20x27.4MM SC EPC-R5710 for for WiFi5/WiFi6            |
| 1990031873N020  | Thermal pad 20x20x2.5mm(t) K=4.0 TP TG4040 for WiFi5           |
| 1990033689N000  | Thermal-Pad 20x20x1mm TP K=1.2 Eapus XR-HL for WiFi6           |
| 1990030557N000  | Thermal-Pad 70x62x2mm XR-HL K=1.2 TP Eapus for SSD             |
| XCUC2SHD-MLU220 | Cambricon AI card MLU220 8Tops                                 |
| 9696R571E00     | EPC-R5710 M.2 E Key for Cambricon AI card                      |
| 9696R571B00     | EPC-R5710 M.2 B KEY board for Cambricon AI card                |
| TBD             | Cambricon AI card MLU220 power cable                           |
| 2170000021      | Thermal Grease PSX-D 1Pcs=0.5g for Cambricon AI card           |
| TBD             | Hailo-8 HM218B1C2KAE 2230 A+E key M.2 module AI Module 26 Tops |
| 1990011911N000  | Thermal Pad 20x20x1.0mm GR-Hm K=6 for Hailo H8 AI card         |
| 1700019474      | Debug cable D-SUB 9P(F)/D-SUB 9P(F) 100cm                      |

# Embedded Linux Support and Design-in Services

## Hardware Certified Ubuntu and Yocto with Eco Partner Services

Linux is the most popular embedded OS for transportation, outdoor services, factory automation, and mission critical applications. Its open source and kernel reliability features ease security updates, and make it particularly adaptable to new AI and Edge computing technology. Advantech has cooperated with Canonical and other software partners to provide hardware certified Ubuntu image and Yocto BSP as Linux offerings. The Advantech, Embedded Linux, and Android Alliance (ELAA) delivers local software services and consultation.



### Features

| Certified OS and BSP                                                                                                                    | Licensed Services                                                                                                                                                    | Numerous AI and Edge Resources                                                                                                                                          | Local Partner Alliance                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Platform compatibility tests</li> <li>Preloaded functional driver and software stacks</li> </ul> | <ul style="list-style-type: none"> <li>License authorized Canonical delivers 10-years of bug fixes and security updates</li> <li>In-house bundled service</li> </ul> | <ul style="list-style-type: none"> <li>Containerized technology for service provision and deployment</li> <li>AI resources from Caffe, TensorFlow, and mxnet</li> </ul> | <ul style="list-style-type: none"> <li>Embedded Linux and Android Alliance (ELAA)</li> </ul> |

# WISE-DeviceOn

## Massive IoT Device Management Utility

IoT deployment and management typically involves numerous disparate devices installed on multiple sites. These devices require effective monitoring, managing, and tracking. Advantech's easy-to-use WISE-DeviceOn interface enables users to remotely monitor device health, troubleshoot problems, and send software/firmware updates over-the-air (OTA). In sum, DeviceOn empowers quick real-time responsiveness to emerging problems.



### Features

#### Comprehensive Management

- Devices status
- Peripherals/firmware
- Open for extension

#### Remote Access

- Real-time monitoring
- Remote controls
- Troubleshooting

#### Efficient Operations

- Zero-touch on-boarding
- OTA updates
- Batch control

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



## AutoCont IPC a.s.

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

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### 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.