EPC-R3710

Rockchip RK3399 Cortex-A72 UIO40-Express Edge AI Box Computer

Features

- Rockchip RK3399 ARM Dual Cortex-A72 and Quad Cortex-A53 1.8 GHz
- Onboard LPDDR4 2 GB
- HDMI 1920x1080 at 60Hz
- Dual Lan, 1 2-wire RS-232, 1 USB3.0, 1 USB2.0, 1 Micro SD
- 1 mini-PCIe for LTE/WiFi/BT
- Compatible with UIO40-Express modules: UIO-4030, UIO-4032 and UIO-4034
- Supports Linux and Android
- 4 Kinds of Rear I/O for Each Vertical Focus: IEM, Self Service, Automation and Networking

Introduction

EPC-R3710 is an Arm based Box Computer powered by a high-performance Rockchip RK3399 ARM dual Cortex-A72 and quad Cortex-A53 high performance processor which supports 4K display from HDMI. It offers both rich display as dual HDMI/LVDS/eDP and rich IO as dual GbE/2serials/3USB/12GPIO. EPC-R4710 also features Mini-PCIe slot for integrating Wi-Fi, Bluetooth, and 3G/4G modules. It is an ideal solution for HMI, IoT gateway, healthcare application.

Specifications

Model		EPC-R3710NO-XAA100	EPC-R3710NO-XAA120	EPC-R3710NO-XAA140	EPC-R3710NO-XAA160
Processor System	CPU	Rockchip RK3399 ARM dual Cortex-A72 and quad Cortex-A53 1.8 GHz			
Memory	Technology	LPDDR4			
	Capacity	2 GB On-board			
	Flash	16GB of eMMC NAND Flash for OS and Advantech's boot loader			
Graphics	HDMI	1 HDMI 2.0, 1920 x 1080 at 60Hz			
	Graphics Engine	OpenGL ES 1.1/2.0/3.1, OpenCL 1.1, DirectX 11			
	H/W Video Codec	Decoder: MPEG-1, MPEG-2, MPEG-4, H.263, H.264, AVS, VC-1, VP8, MVC, HEVC/H.265 decoder, 4k@60FPS Encoder: H.264 (BP@level4.0, MP, HP@level4.0), MVC and VP8			
Ethernet	Chipset	RTL8211FSI			
	Speed	2 10/100/1000 Mbps			
Watchdog Timer	Watchdog Timer	Yes			
Front I/O	USB	1 x USB3.0 Type A, 1 x USB 2.0 Type A			
	GbE	2 x RJ45 for GbE			
Rear I/O		1 x RS-485, 1 x 2 wires RS-232 4 x DIs, 4 x DOs	2 x 2 wires RS-232 1 x GbE, 2 x USB 2.0	2 x 2 wires RS-232	4 X GbE (Hub)
Expansion	Full-Size Mini PCIe	1 Full Size Mini PCIe Slot (with PCIE/USB)			
	M.2 Micro	-			
	SD Socket	1 Micro SD Socket			
	SIM	1 Nano SIM Slot			
	Antenna Holes	3			
Power	Power Supply Voltage	+12V			
	Power Type	Lockable DC-Jack			
	Power Consumption	11.5W(burning)			
Environment	Operating Temperature	0 ~ 50 °C/-20 ~ 70 °C			
	Operating Humidity	5% ~ 95% relative humidity, non-condensing			
Mechanical	Dimensions	174 x 108 x 41 mm			
	Mounting	Wall mount			
	Weight	TBD			
Operating System	Linux	Debian			
	Android	Android			
Certifications		CCC/CE/FCC/BSMI Class B			

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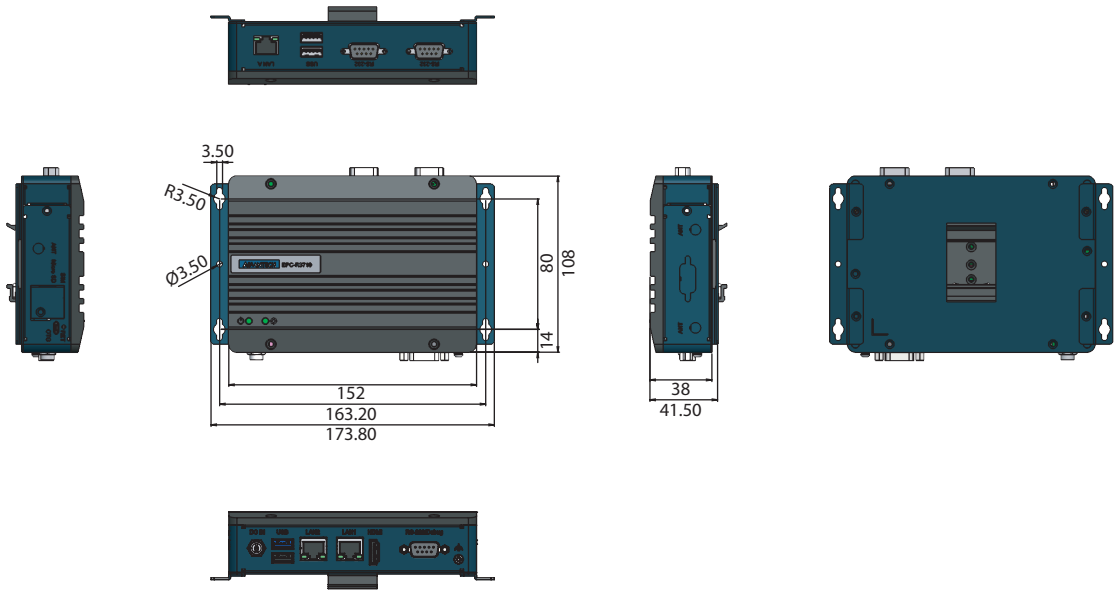
All product specifications are subject to change without notice.

Dimensions

Unit: mm



Ordering Information

Part Number	CPU	Memory	Flash	HDMI	LAN	USB	DI/DO	Serial Port	Micro SD	Nano SIM	CAN	Operating Temperature
EPC-R3710NO-XAA100	Rockchip RK3399	2 GB	16 GB	1	2	2	4/4	1 RS-232, 1 RS-485	1	1	-	0 ~ 50 °C
EPC-R3710NO-XAA120	Rockchip RK3399	2 GB	16 GB	1	3	4	-	2 RS-232	1	1	-	0 ~ 50 °C
EPC-R3710NO-XAA140	Rockchip RK3399	2 GB	16 GB	1	2	2	-	2 RS-232	1	1	-	0 ~ 50 °C
EPC-R3710NO-XAA160	Rockchip RK3399	2 GB	16 GB	1	6	2	-	-	1	1	-	0 ~ 50 °C

Packing List

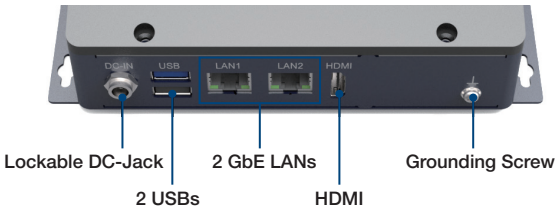
Part Number	Description
1960099634N001	EPC-R3710 mount bkt
EPC-R3710	EPC-R3710 box computer

Optional Accessories

Part Number	Description
96PSA-A36W12R1-3	ADAPTER 100-240V 36W 12V 3A
1700001524	Power cord 3P UL 10A 125 V 180 cm
170203180A	Power Code 3P UK 2.5A/3A 250V 1.83cm
170203183C	Power Code 3P Europe 183cm
1700019146	Power Cord CCC 3P 10A 250V 183cm
968AD00479*	EC20CEFAG-MINIPCIE R2.1 LTE Cat 4
EWM-C117FL06E*	LTE 4G,3G WCDMA/DC-HSPA+, 2G module, MPCI-L280H
1750006264	Antenna cable SMA(F)/MHF 15cm
1750007990-01	Antenna 4G/LTE full band L=11 cm 50 Ohm
EWM-W188M201E	WiFi 802.11ac/abgn 2T2R and BT4.2
EXM-CMPF1-M2E01	E M.2(NGFF) to MiniPCIe KEY-E Adapter
1750008800-01	Antenna Cable R/P SMA (M) to MHF4, 100mm
1750008671-01	Dipole Ant.SMA/M-R 2.4/5G 2.5/4dBi BLK 109mm
1960015198T011	DIN RAIL KIT
SQF-ISDS1-8G-82E SQF	SDHC C10 SLC 8G, 1CH (-40~85°C)

*Please contact us for suggesting suitable cellular module for your region

Front I/O



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
• Platform compatibility tests • Preloaded functional driver and software stacks	• License authorized Canonical delivers 10-years of bug fixes and security updates • In-house bundled service	• Containerized technology for service provision and deployment • AI resources from Caffe, TensorFlow, and mxnet	• Embedded Linux and Android Alliance (ELAA)

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	Remote Access	Efficient Operations
• Devices status • Peripherals/firmware • Open for extension	• Real-time monitoring • Remote controls • Troubleshooting	• Zero-touch on-boarding • OTA updates • Batch control

Product Highlights

SOM-6883
High-performance 11th Gen Intel® COMe Type 6 Module

MIO-5375
Compact 11th Gen Intel® Outdoor Focused 3.5" SBC

EPC-B5587
10th Gen Intel® Xeon® based Edge server

EPC-R3220
Arm based IoT Edge Gateway