EPC-R4680

Rockchip RK3288 Cortex-A17 ARM Based Box Computer

Features

- Rockchip ARM Cortex-A17 RK3288 Quad core up to 1.6GHz
- Onboard 2GB DDR3L memory and 8GB eMMC
- Support 4K H.264/H.265 Video decoding, OpenVG1.1, OpenGL ES1.1/2.0/3.0, OpenCL1.1, DrectX11.
- Support HDMI 3840 x 2160 at 60Hz, VGA 1920 x 1200 at 60Hz
- 6 UART, 5 USB2.0, 1 USB OTG, 1GbE, 8GPIO
- Support M.2 slot for WIFI/BT module, Mini-PCIe slot for 4G module
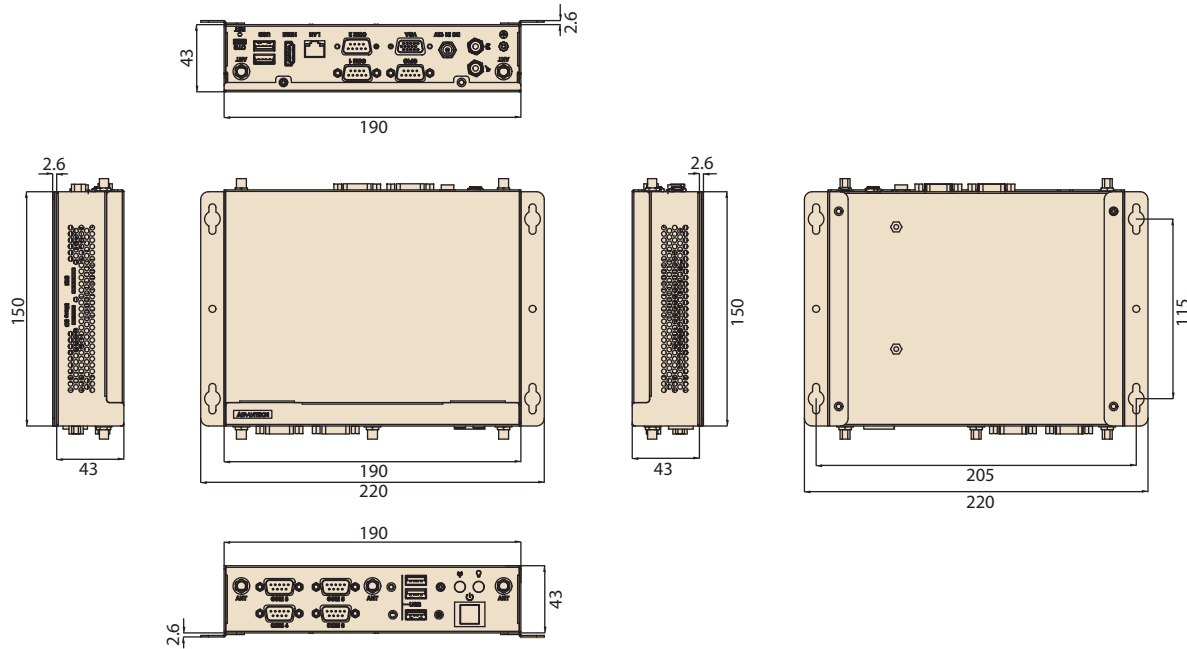- Support Linux and Android

Introduction

EPC-R4680 is an ARM based Box Computer powered by Rockchip ARM Cortex-A17 RK3288 Quad core high performance processor, which supports 4K display and 4Kx2K multi-format video decoding via HDMI. It also features M.2, Mini-PCIe and SIM card slots for WIFI, BT and 4G connectivity. EPC-R4680 also offers rich interfaces such as 6 USB2.0, 6 UART, 1 GbE and 8 GPIO. It is an ideal solution for Kiosk,Vending machine and Digital signage application.

Specifications

Form Factor		ARM-based Box Computer
Processor	CPU	Rockchip ARM® Cortex® A17 RK3288 Quad-core, up to 1.6 GHz
Memory	Technology	DDR3L 1333MHz
	Capacity	On-board 2GB DDR3L
	Flash	8GB eMMC NAND Flash for OS and Advantech boot loader 4MB SPI NOR Flash
Graphics	HDMI	1 HDMI, 3840 x 2160 at 60Hz
	VGA	1 VGA, up to 1920 x 1200 at 60Hz
	H/W Video Codec	Encode: H.264 (BP@level4.0, MP, HP@level4.0), MVC and VP8 Decode: MPEG-1, MPEG-2, MPEG-4,H.263, H.264, AVS, VC-1, VP8, MVC, HEVC/H.265 decoder, 4k@60FPS
Ethernet	Chipset	TI DP83867
	Speed	1 10/100/1000 Mbps
RTC		Yes
WatchDog Timer		Yes
Expansion	SD socket	1 x Micro SD slot
	M.2	1 x M.2 2230 Key.E
	mini PCIe	1 x Full size mini PCIe slot (USB signal only)
	SIM	1 x SIM slot
I/O	SATA	-
	SATA Power	-
	USB	5 x USB Type A, 1 x USB OTG
	Audio	1 x line-out, 1 x mic-in
	SPDIF	-
	Serial Port	1 x 4-wire RS-232/485 1 x 2-wire RS-232/Debug port, pin header selected by jumper 4 x 4-wire RS-232
	SPI	1 x SPI by pin header
	CAN	-
	GPIO	8 x GPIO via D-SUB 9 (3.3V TTL level)
	I²C	1 x I²C by pin header
	System Bus	-
	Touch	-
	I/R	-
	LED	1 x Power LED, 1 x 4G LED
	Button	1 x Power button, 1 x Reset button
Power	Power Supply Voltage	12V
	Power Type	DC-in
	Power Consumption	TBD
Environment	Operational Temperature	0 ~ 55 °C/-20 ~ 70 °C
	Operating Humidity	5% ~ 95%
Mechanical	Dimensions (W x D)	190 x 150 x 43 mm
Operating System		Android/Linux
Certifications		CCC/CE/FCC Class B

Dimensions

Unit: mm

Ordering Information

Part Number	CPU	Memory	Flash	HDMI	LAN	Serial Port	USB Host	SD	Operating Temperature
EPC-R4680CQ-XAA1E	Rockchip RK3288 Quad Core 1.6GHz	2GB	8GB	1	1	1 x 4-wire RS-232/485 1 x 2-wire RS-232/Debug port 4 x 4-wire RS-232	5 x USB Host 1 x USB OTG	1	0 ~ 55 °C
EPC-R4680WQ-XAA1E	Rockchip RK3288K Quad Core 1.6GHz	2GB	8GB	1	1	1 x 4-wire RS-232/485 1 x 2-wire RS-232/Debug port 4 x 4-wire RS-232	5 x USB Host 1 x USB OTG	1	-20 ~ 70 °C

Packing List

Part Number	Description
EPC-R4680	EPC-R4680 Box computer

Optional Accessories

Port Number	Description
96PSA-A36W12W7-5	ADP A/D 100-240V 36W 12V C6 LOCK DC JACK 62368
170203183C	Power cord 3P Europe (WS-010+WS-083) 183 cm
170203180A	Power cord 3P UK 2.5A/3A 250 V 1.83 M
1700001524	Power cord 3P UL 180cm
1700008921	Power Cord 3P PSE 183cm
1700019146	Power Cord CCC 3P 10A 250V 183cm
EWM-W172H01E	802.11ac/a/b/g/n 2T2R WIFI BT 4.2 RTL8822BU-CG Half Mini PCIe Module
1750005885	Antenna L=23cm SMALFR8-3230A-00X00R
1750008717-01	Dipole Ant. D.B 2.4/5G WIFI 3dBi SMA/M-R BLK
968AD00081*	Qucetel EC20CEFA Mini-PCIe 4G module for China
EWM-C117FL06E*	LTE 4G,3G WCDMA/DC-HSPA+, 2G module, MPCI-L280H
1750006264	Antenna cable SMA(F)/MHF 15cm
1750008303-01	Antenna AN0727-64SP6BSM
SQF-MSDM1-8G-21C	SQF MICRO SD C10 MLC 8G (-25 ~ 85 °C)

* Please contat us to get suitiable celluar module for your region.

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.

AIM-Linux

PaaS & Cloud Platform	ADVANTECH **WISE-PaaS** IoT Edge Intelligence	**WISE-DeviceOn**		
App Add-Ons	AIM-Linux/ **Security**	AIM-Linux/ **Launcher**	AIM-Linux/ **Management**	AIM-Linux/ **Distribution**
	AIM-Linux/ **Deployment**	AIM-Linux/ **Diagnostic**	AIM-Linux/ **Protocol**	AIM-Linux/ **Edge AI**
Unified Embedded Platforms	Unified Core	Industrial I/O Drivers	Performance Optimization	Peripheral Integration

ubuntu Delivered by Canonical — **Software Design-in Services** — **yocto** PROJECT

CANONICAL.   timesys   RTSoft   LINEO Solutions

Validated Compatibility   **Licensed Bundled Service**

10-Years of Bug Fixes and Security Updates   **Canonical and Local Partner Support**

Features

Certified OS and BSP

- Platform compatibility tests
- Preloaded functional driver and software stacks

Licensed Services

- License authorized Canonical delivers 10-years of bug fixes and security updates
- In-house bundled service

Numerous AI and Edge Resources

- Containerized technology for service provision and deployment
- AI resources from Caffe, TensorFlow, and mxnet

Local Partner Alliance

- 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.

WISE-DeviceOn

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