EPC-R7000

NVIDIA Jetson TX2 ARM-Based Edge AI Inference Box Computer

Features

- NVIDIA® JETSON™ TX2
  Dual-Core NVIDIA Denver2 + Quad-Core ARM Cortex-A57
- NVIDAI Pascal™ 256 CUDA Cores GPU
- 8GB LPDDR4 and 32GB eMMC NAND Flash Onboard
- 1 Gigabit Ethernet Port and 2 PoE Ports (IEEE 802.3af)
- 802.11a/b/g/n/ac 2×2 WiFi and Bluetooth 4.1
- AIM-Linux/Edge AI Software Package Support
- 4K H.264/H.265 Encoder & Decoder
- -20 ~ 60 °C Operating Temperature/ 19V DC Power Supply

Introduction

EPC-R7000 is an ARM-based Edge AI Inference Box Computer powered by NVIDIA® JETSON™ TX2 Dual-Core NVIDIA Denver2 + Quad-core ARM Cortex-A57 processor and NVIDIA Pascal™ 256 CUDA cores GPU which provides high performance computing and supports the AIM-Linux/Edge AI Software Package. It is an ideal solution for AI and Machine Vision applications.

Specifications

Form Factor		ARM-Based Box Computer
Processor	CPU	Dual-Core NVIDIA Denver 2 64-Bit CPU Quad-Core ARM® Cortex®-A57 MPCore
	GPU	NVIDIA Pascal™ GPU Architecture with 256 NVIDIA CUDA Cores
Memory	Technology	LPDDR4 1600MHz
	Capacity	On-board 8GB LPDDR4
	Flash	32GB eMMC NAND Flash
Graphics	HDMI	1 HDMI, 3840 x 2160 at 60Hz
	H/W Video Codec	Encode: H.264, H265,VP8 Decode: H.264, H265,VP8, MPEG4, 4k@60FPS
Ethernet	Chipset	Integrated RGMII
	Speed	1 10/100/1000 Mbps
RTC		Yes
WatchDog Timer		Yes
Expansion	SATA	(2.5" HDD/SSD 1TB, Optional)
Connectivity	WiFi	802.11a/b/g/n/ac 2×2 WiFi
	Bluetooth	Bluetooth 4.1
I/O	USB	4 x USB 3.0 Type-A; 1 x USB 2.0 Micro-AB
	Audio	1 x line-out
	SPDIF	-
	Serial Port	1 x 4-wire RS-232
	CAN	-
	GPIO	12 x GPIO (6 x DO, 6 x DI), 5V level
	I²C	-
	System Bus	-
	Touch	-
	I/R	-
	LED	1 x Power LED
	Button	1 x Reset Button, 1 x Recovery Button
	Camera	2 x 802.3af (PSE Power Max 15.4W Out)
Power	Power Supply Voltage	19V
	Power Type	DC-in
	Power Consumption	TBD
Environment	Operational Temperature	-20 ~ 60 °C
	Operating Humidity	5% ~ 95%
Mechanical	Dimensions (W x D)	204 x 138 x 67 mm
Operating System		Ubuntu
Certifications		CCC/CE/FCC Class B

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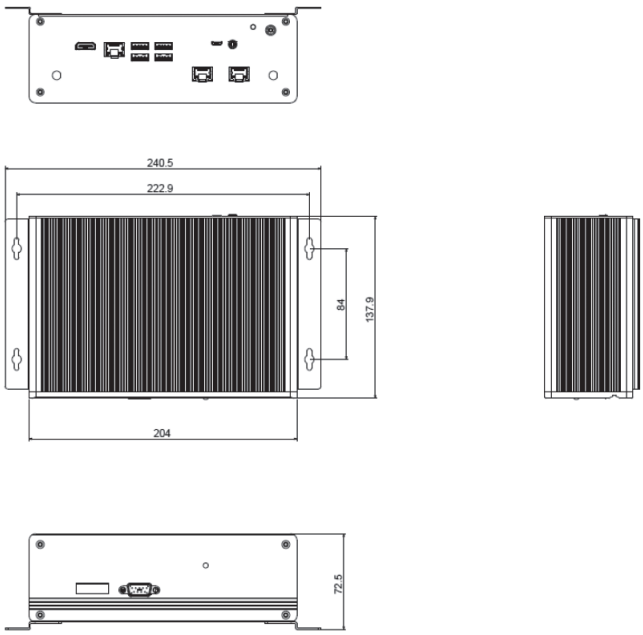
Dimensions

Unit: mm



Ordering Information

Part Number	CPU	Memory	Storage	HDMI	LAN	Software	Operating Temperature
EPC-R7000IQ-SUA1E	NVIDIA Jetson Tegra X2	8GB LPDDR4	32GB eMMC	1	1	Ubuntu OS with AIM-Linux/Edge AI Software Package	-20 ~ 60 °C

Packing List

Part Number	Description
EPC-R7000	EPC-R7000 Edge AI Inference Box Computer

Optional Accessories

Port Number	Description
170203183C	Power Cord 3P Europe (WS-010+WS-083) 183 cm
170203180A	Power Cord 3P UK 2.5A/3A 250V 183 cm
1700019146	Power Cord CCC 3P 10A 250V 183 cm
1700008921	Power Cord 3P PSE 183 cm
TBD	Half PoE Camera 180°
TBD	Bullet PoE Camera 78°

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