
Radxa E24C Product Brief

A Network Computer with 4K and 4 Gigabit Ports

Revision 1.1

2025-04-25



Radxa Computer



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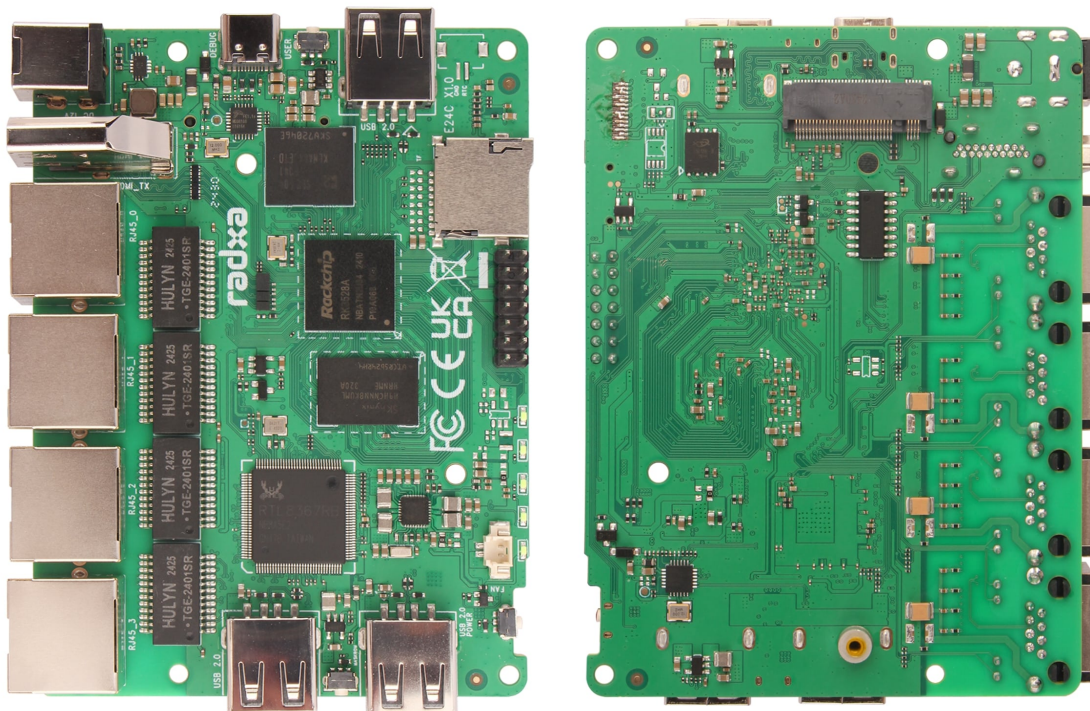
1 Revision Control Table

Version	Date	Changes from previous version
1.0	2025/04/22	First version
1.1	2025/04/25	Change PDF fonts to avoid CJK characters

2 Introduction

The Radxa E24C is a compact, high-performance network computer powered by the Rockchip RK3528A SoC. Specifically designed for routing, edge networking, and industrial applications, it combines four gigabit Ethernet ports, 4K HDMI output, and NVMe storage expansion to deliver an optimal balance of performance, connectivity, and reliability.

Ideal for network engineers, developers, and system integrators, the E24C provides a robust platform for implementing firewalls, VPN gateways, custom routers, and edge computing solutions.



Note: The actual board layout or component placement may change over time, but the main connector types and locations will remain consistent.

3 Key Advantages

- **Versatile Networking:** Quad Gigabit Ethernet ports with flexible WAN/LAN configuration

- **Expandable Storage:** M.2 NVMe SSD support for high-speed storage expansion
- **Reliable Design:** Fanless aluminum enclosure ensuring silent and stable operation
- **Developer-Friendly:** USB Type-C port with dual functionality (OTG data and UART debug)
- **Software Ecosystem:** Official support for Debian Linux and OpenWrt
- **Long-Term Availability:** Guaranteed product availability through September 2034

4 Features

4.1 Hardware

- Rockchip RK3528A SoC
- Quad-core ARM Cortex-A53
- ARM Mali-450 GPU:
 - OpenGL® ES1.1, ES2.0
 - OpenVG® 1.1
- LPDDR4 RAM options:
 - 2GB
 - 4GB
 - 8GB
- Onboard eMMC options:
 - 8GB
 - 16GB
 - 32GB
- Advanced video capabilities:
 - H.264, H.265, and AVS2 decoder supporting 4Kx2K@60fps
 - H.264 and H.265 encoder supporting 1920x1080@60fps
- Aluminum alloy case for efficient heat dissipation

4.2 Interfaces

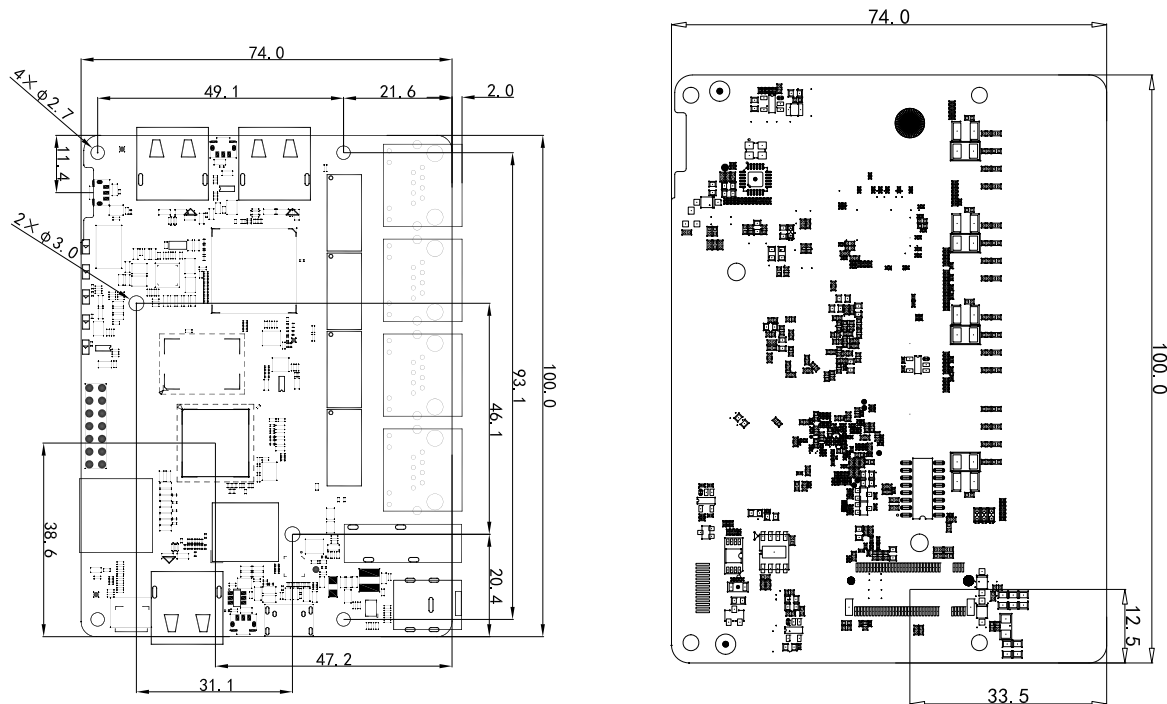
- **Networking:**
 - 4x Gigabit Ethernet Ports (10/100/1000 Mbps)
- **Display & Storage:**

- 1x HDMI 2.1 supporting up to 4K resolution
 - 1x M.2 M Key Connector with PCIe 2.1 1-lane for NVMe SSD
 - 1x microSD Card Slot
- **USB Connectivity:**
 - 1x USB 2.0 OTG Type-C Port (data and debug functions)
 - 3x USB 2.0 HOST Type-A Ports
- **Power & Control:**
 - 1x 12V DC Jack (5525 connector)
 - 1x Power Button
 - 1x Maskrom Button
 - 1x User Button
 - 1x 2-Pin 1.25mm Fan Header
 - 1x 2-Pin 1.25mm RTC Battery Connector
- **Status Indicators:**
 - 4x Network Status Indicator Lights
 - 1x Power Status Indicator Light
- **Expansion:**
 - 14-Pin 0.1" (2.54mm) header supporting:
 - * 1x UART
 - * 1x SPI
 - * 1x I2C
 - * 1x 5V Power Out
 - * 1x 3.3V Power Out

4.3 Software

- ARMv8 Instruction Set
- Multiple operating system support:
 - Debian Linux
 - OpenWrt
 - iStoreOS
- Comprehensive hardware access/control libraries for Linux

5 Mechanical Specifications



6 Electrical Specifications

6.1 Power Requirements

The Radxa E24C is powered through a DC Jack (5525 connector) with 12V input. For optimal performance with all peripherals connected, a 12V/2A power supply is recommended.

7 Key Components

7.1 Storage Expansion

The Radxa E24C features an M.2 M Key connector with PCIe Gen2 1-lane interface and standard M.2 2280 mounting holes, supporting M.2 2280 NVMe SSDs for high-speed

storage expansion. Note that M.2 SATA SSDs are not compatible with this connector.

7.2 USB Connectivity

The device includes three USB 2.0 HOST Type-A ports and one USB 2.0 OTG Type-C port. The Type-C port serves dual functions:

- Data transmission
- UART serial debugging

This design allows developers to perform device communication, system updates, and console access without disassembling the case, enhancing convenience for development and maintenance.

7.3 Networking Capabilities

The Radxa E24C comes equipped with four 10/100/1000 Mbps RJ45 Ethernet ports, providing robust network connectivity for demanding applications. These interfaces support:

- High-bandwidth operations (file transfers, media streaming, IoT deployments)
- Flexible configuration as WAN or LAN ports in OpenWrt
- Network redundancy and load balancing for enhanced reliability
- Customizable networking solutions for various deployment scenarios

8 Availability

Radxa guarantees availability of the Radxa E24C until at least September 2034.

9 Support

For technical support and documentation, please visit:

- [Radxa E24C Product Page](#)
- [Radxa Community Forum](#)

Join our active developer community to access the latest updates, technical tips, and innovative project ideas.

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