Radxa E52C Product Brief

A Compact and Powerful Network Computer

Revision 1.0

2024-10-22

Radxa Computer

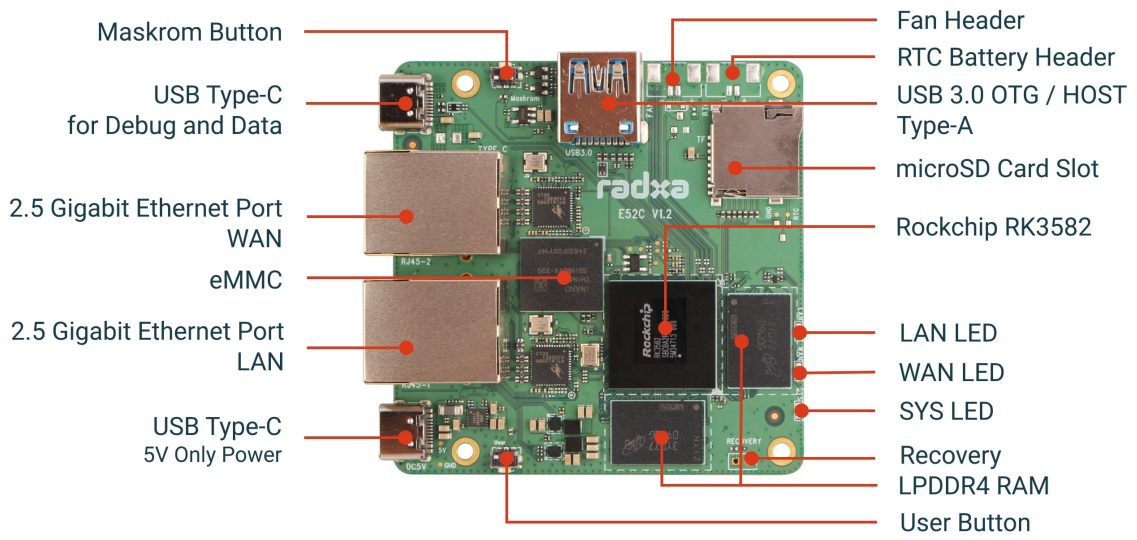
Contents

1 Revision Control Table

Version	Date	Changes from previous version
1.0	2024/10/22	First Version

2 Introduction

The Radxa E52C is a compact network computer that offers a wide range of networking capabilities and powerful computing performance. The Radxa E52C is based on the Rockchip RK3582 processor, featuring dual-core Cortex-A76 and quad-core Cortex-A55 CPUs, delivering exceptional performance and efficiency. With dual onboard 2.5G Ethernet interfaces, it ensures high-speed network connectivity, suitable for high-bandwidth network applications. The Radxa E52C provides developers, IoT enthusiasts, DIY PC enthusiasts, and other users with a reliable and highly capable platform to turn their ideas into reality.



3 Features

3.1 Hardware

- Rockchip RK3582 SoC
- Dual-core ARM Cortex-A76 and Quad-core ARM Cortex-A55
- NPU supporting INT4 / INT8 / INT16 / FP16 / BF16 and TF32 acceleration computing power is up to 5TOPs
- LPDDR4 RAM options:
  - 2GB
  - 4GB
  - 8GB
- Onboard eMMC options:
  - 16GB
  - 32GB
  - 64GB
- Aluminum Alloy Case for Efficient Heat Dissipation

3.2 Interface

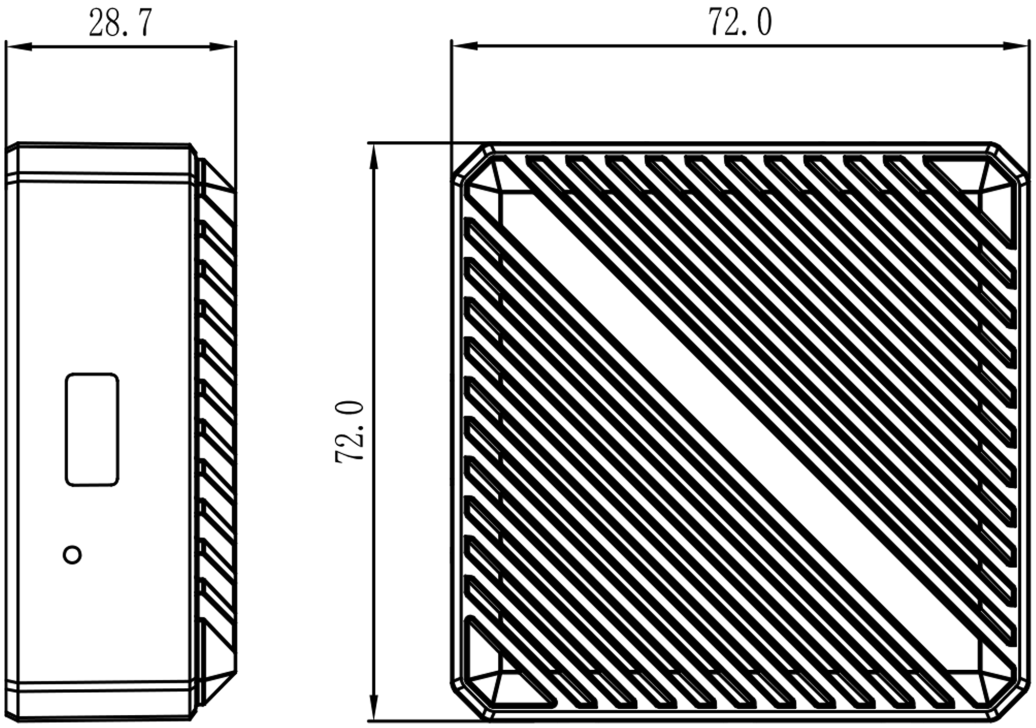
- 1x microSD Card Slot

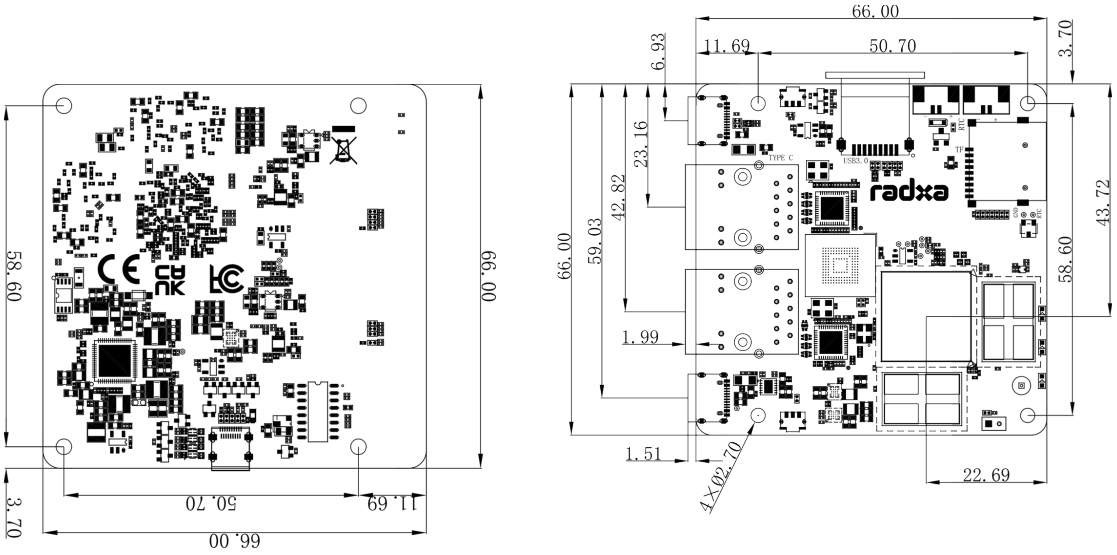
- 1x USB 3.0 Type-A HOST ports
- 1x USB Type-C for Debug
- 2x 2.5 Gigabit Ethernet ports
- 1x Maskrom Button
- 1x User Button

3.3 Software

- ARMv8 Instruction Set
- Debian Linux support
- OpenWrt support
- iStore OS support
- Hardware access/control library for Linux

4 Mechanical Specification





5 Electrical Specification

5.1 Power Requirements

The Radxa E52C supports power from USB Type-C with 5V voltage, the suggested power source capability is 5V/3A with all the perpherials connected.

6 Peripherals

6.1 eMMC

Radxa E52C offers an internal high speed eMMC for OS and data storage.

6.2 USB

The Radxa E52C has 1x USB 3.0 HOST Type-A Port and 1x USB Type-C for Debug. The USB Type-C port supports UART debugging, providing users with convenient options for various tasks such as device debugging.

6.3 Network

The Radxa E52C offers two 10/100/1000/2500 Mbps RJ45 connectors for wired networking, providing high-speed network connectivity essential for demanding network applications. These interfaces ensure efficient data transfer rates, supporting high-bandwidth activities such as large file transfers, media streaming, and complex IoT deployments. Under the OpenWrt system, these two interfaces can be flexibly configured as WAN (Wide Area Network) or LAN (Local Area Network) ports, offering users a highly customized network solution. The dual ports also offer redundancy and load balancing capabilities, enhancing network reliability and performance.

7 Availability

Radxa guarantee availability Radxa E52C until at least September 2034.

8 Support

For support please see the hardware documentation section of the Radxa Website and post questions to the Radxa forum.