

## Luckfox Pico Mini B RV1103 Linux Micro Development Board



The **Luckfox Pico Mini B RV1103** is a compact and powerful Linux micro development board designed for developers, engineers, hobbyists, and makers seeking a versatile platform for embedded applications, IoT projects, and AI solutions. With its small form factor, efficient processing, and a rich set of features, this board allows users to create advanced projects without compromising performance or stability.

### Powerful Processing and AI Capabilities

At the heart of the Pico Mini B is the **Rockchip RV1103 System on Chip (SoC)**, which features a single-core ARM Cortex-A7 processor capable of running at 1.2GHz. This processor provides sufficient computational power to handle everyday development tasks, from running Linux-

based applications to managing IoT devices. Additionally, the board integrates a **Neural Processing Unit (NPU)** capable of 0.5 TOPS, allowing for efficient AI computations, including image recognition, object detection, and other machine learning tasks. The combination of CPU and NPU ensures smooth performance while keeping power consumption minimal.

### **Advanced Imaging and Multimedia Support**

The Pico Mini B includes a **third-generation Image Signal Processor (ISP)**, capable of supporting up to 4MP input at 30 frames per second. This ISP provides advanced features such as high dynamic range (HDR), wide dynamic range (WDR), and multi-level noise reduction, making it ideal for projects that involve image processing, camera modules, and video streaming. The board also supports HDMI output, allowing for multimedia applications, small displays, or interactive interfaces.

### **Memory and Storage**

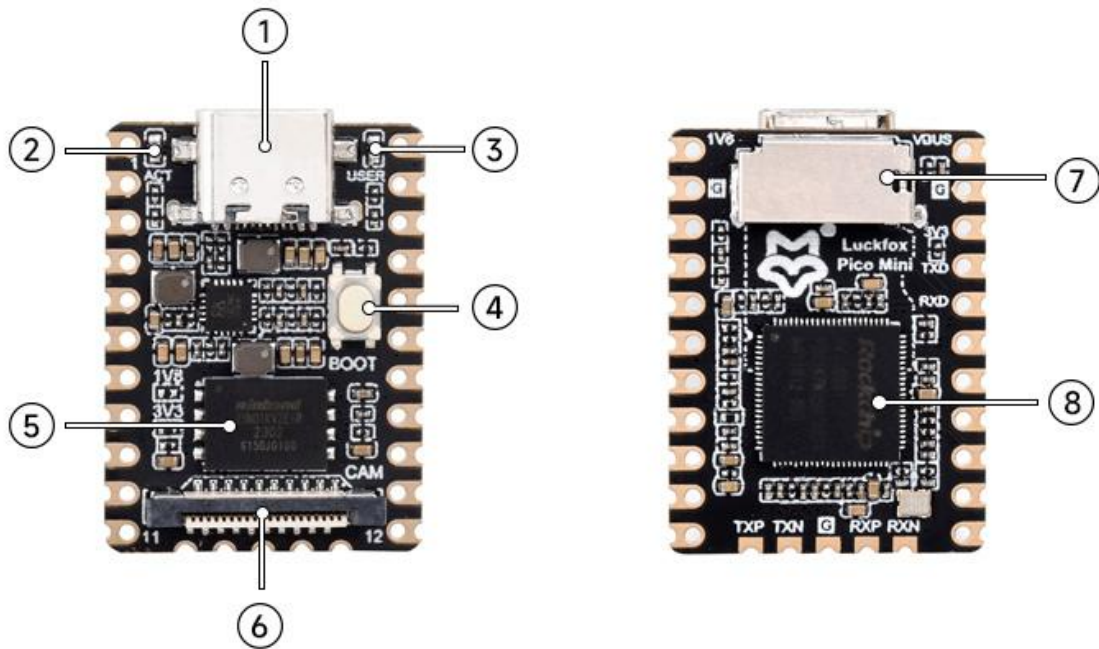
This development board comes with **64MB DDR2 RAM** and **128MB SPI NAND Flash storage** in the Mini B variant. This combination ensures smooth multitasking, fast data access, and reliable storage for embedded Linux systems. Users can easily expand storage or connect external devices via USB ports to accommodate larger projects.

### **Connectivity and Expansion**

The board is equipped with multiple connectivity options, including **USB 2.0 Type-C** for both power and data transfer, a **MIPI CSI 2-lane camera interface**, and **17 GPIO pins** for hardware expansion. These GPIO pins allow for seamless integration with sensors, actuators, and other peripheral devices. The compact form factor makes it suitable for small-scale embedded systems or portable devices without sacrificing connectivity.

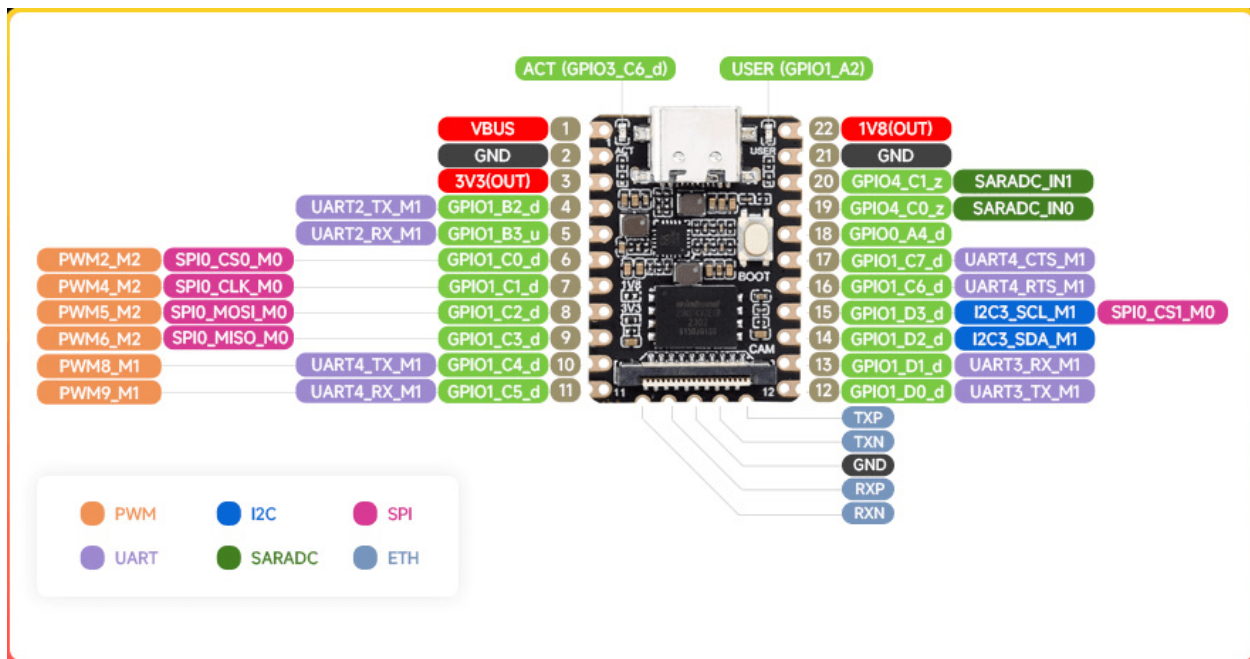
### **Linux-Based Flexibility**

The Pico Mini B is fully compatible with Linux-based operating systems, providing developers with a flexible and open-source environment to experiment with software and hardware integration. Users can install standard Linux distributions, run scripts, deploy AI models, and develop complex applications on a compact platform.



#### 🔍 What's on the board:

1. USB Type-C connector for power supply and program burning
2. ACT-LED system operation status indicator (in the default system)
3. USER-LED
4. BOOT button Press it when powering on to enter download mode
5. SLC NAND FLASH Only available on the B version, and reserved pads for A version
6. CSI camera interface MIPI CSI 2-lane
7. TF card slot
8. RV1106 Vision processor SoC with built-in ARM Cortex-A7 core



## Ideal Applications

This board is perfect for a wide range of applications:

- **AI and Edge Computing:** Leverage the onboard NPU to run AI models locally without relying on cloud processing.
- **IoT Projects:** Build smart home devices, sensors, and controllers with minimal footprint.
- **Embedded Systems Development:** Create specialized embedded solutions for industrial, educational, or hobbyist purposes.
- **Educational Projects:** Learn Linux-based development, AI concepts, and embedded system design in a hands-on environment.

## User-Friendly Design

The board's layout and pre-soldered headers simplify prototyping and integration. Its compact size makes it easy to fit into enclosures, robotics projects, or portable devices. The USB Type-C interface provides a straightforward way to power the board or transfer data, reducing cable clutter and simplifying development workflows.

## Package Contents

- 1x Luckfox Pico Mini B RV1103 Development Board
- 1x USB Type-C Cable for power and data
- 1x Quick Start Guide for setup and initial configuration

## Conclusion

The **Luckfox Pico Mini B RV1103 Linux Micro Development Board** is a small but powerful platform that combines processing performance, AI capabilities, and flexible connectivity in a compact form factor. It is ideal for developers, hobbyists, and educators who want a versatile and reliable board for AI, IoT, and embedded projects. With its combination of Linux support, GPIO expandability, and efficient NPU, the Pico Mini B provides a complete development solution in one tiny board, helping users bring their creative ideas to life efficiently and effectively.