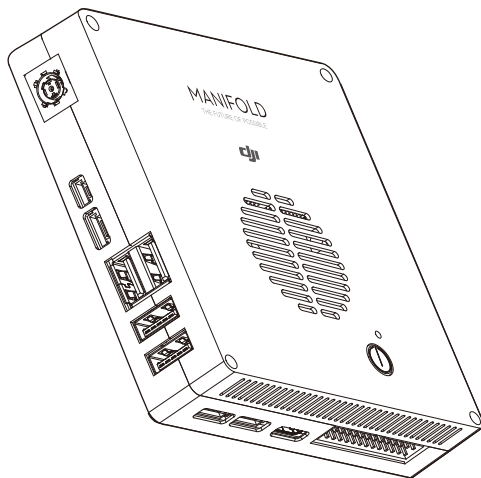


# MANIFOLD

## Quick Start Guide

V1.0



# Introduction

The Manifold is an embedded-Linux computer that is ideal for DJI SDK based software and application development on DJI flight platforms including the DJI Matrice 100. Featuring an NVIDIA Tegra K1 SOC (CPU+GPU+ISP in a single chip) with both standard and extended connectors and interfaces, the Manifold development board provides high flexibility and extensibility for developers.

Visit <https://dev.dji.com> for access to software updates and the DJI SDK package which includes supporting documentation and code samples to help you get started.

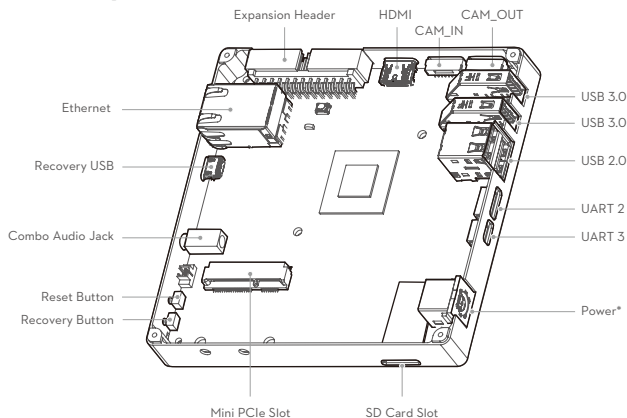
## Development Support

The Manifold development board is supported through the DJI developer community at <https://developer.dji.com>.



- Ubuntu operating system is pre-installed on the Manifold development board on its delivery. Contact DJI support for more information on available software.

## Connector Layout



\* Only use with the included AC power adapter and power cord.

# Getting Started

It is recommended to start with the basic configuration (as shipped) to ensure system operation prior to any further development.

## • Powering Up

1. Connect the supplied AC adapter to the power port of the device.
2. Connect the AC adapter to a power source.
3. Press the power button on the device.

## • Login Credentials

Use the following credential to login:  
Username: *ubuntu*  
Password: *ubuntu*



- Ensure that all external peripheral devices be connected to the Manifold development board before powering it on. Failure to do so may damage the Manifold development board or external devices.

## • Recovery Mode

Enter Recovery Mode to update system software on the Manifold development board. The system software can be updated by modifying the boot loader, Boot Configuration Table (BCT) and the partition configuration on the Manifold development board in Recovery Mode.

## • How to Enter Recovery Mode

1. Switch off the Manifold development board and remove the AC adapter from the power port.
2. Connect the Recovery USB to an available USB port on the Host PC with the supplied Micro USB cable.
3. Connect the power adapter to the Manifold development board.
4. Use a pin to press and hold the RECOVERY button, then press the POWER button once to turn on the Manifold development board. Release the RECOVERY button to enter Recovery Mode.



- The Manifold development board will not boot up when it is in Recovery Mode (nothing appears on display or serial port).

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## Additional Information

### • Recommended Operating Conditions

The Manifold development board should be used under the following operating conditions:  
Ambient Operating Temperature: Min. 14 °F (-10 °C), Max. 113 °F (45 °C)

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## In the Box

- |                              |                              |                                |
|------------------------------|------------------------------|--------------------------------|
| • Manifold development board | • XT30 adapter power cable   | • UART cable                   |
| • AC adapter                 | • Gimbal cable               | • Quick start guide            |
| • Power cord                 | • USB Micro-B to USB A cable | • Mounting Kit for Matrice 100 |

# Specifications

- **Processors**

Quad-core, 4-Plus-1™ ARM®  
Low-power NVIDIA Kepler™-based GeForce® graphics processor  
Image-signal processor  
Ultra low-power audio processor  
Dynamic voltage and frequency scaling  
Multiple clock and power domains

- **Memory**

2 GB DDR3L system RAM  
16 GB eMMC 4.51 storage

- **Audio**

Combo audio jack (mic/headphone)

- **USB**

USB Type-A Host 3.0 speed x2  
USB Type-A Host 2.0 speed x2  
Micro-B USB connector (Recovery USB): supports Recovery mode and Host mode  
Extended USB connector for DJI M-series multicopter (CAM\_IN, CAM\_OUT)

- **Network**

10/100/1000 BASE-T Ethernet

- **I/O**

Half mini-PCIe expansion slot  
Mini Display HDMI connector  
UART connector  
Micro SD card slot  
I/O expansion header

- **Buttons**

Power  
Reset  
Recovery

- **Power Options**

External 14–26 V AC adapter

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## FCC Information

This device complies with part 15 of the FCC Rules.  
Operation is subject to the following two conditions:  
(1) This device may not cause harmful interference, and  
(2) this device must accept any interference received, including interference that may cause undesired operation.

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Download the user documents for more information:

<https://developer.dji.com/manifold/download>

※ This Quick Start Guide is subject to change without prior notice.