



# **LIME2-SERVER**

## **User Manual**

**Document revision 1.2 May 2020**

**[www.olimex.com](http://www.olimex.com)**

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# What is LIME2-SERVER

LIME2-SERVER is a development kit that can be used to set-up a low power ARM-based server with option for storage and cloud service. It has everything required to run 24/7.

You can run [OpenElec-KODI](#) image, [Debian](#) or [Ubuntu](#) Linux distribution with latest mainline kernel and on top of them you can run services like [NextCloud](#), [TOR](#) server, [Home Assistant](#), [Yunohost](#) thus being independent from cloud service suppliers and keeping your content in your hands.

The power consumption of LIME2-SERVER depends on the load, it varies from 2W to 5W.

LIME2-SERVER comes pre-assembled and can be ordered along with either 500GB, 1000GB, or 2000GB hard disk drive, or with a 512GB solid state disk.

LIME2-SERVER has a build-in UPS (Uninterruptible Power Supply) that is a Lithium Ion Battery and will continue to work for hours even if the external power supply is interrupted for some reason.

# LIME2-SERVER package content

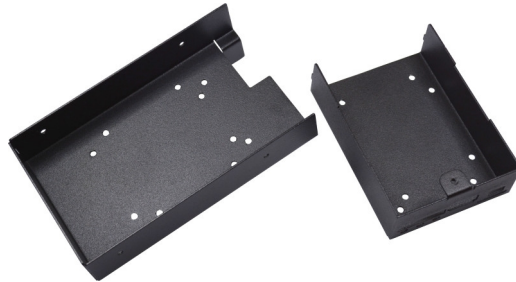
The LIME2-SERVER contains:

- A20-OLinuXino-LIME2 OSHW single-board Linux computer
- BATTERY-LIPO1400mAh for power backup even when there is no external power supply
- 32GB micro SD card
- 500GB/1000GB/2000GB HDD or 512GB SSD connected to SATA interface (selected board variants)
- BOX-LIME-BLACK metal enclosure
- BAY-HDD/SSD metal enclosure with LIME2 SATA bridge board
- 1000MB Ethernet cable 1.2 meters
- 5V 2A Power adapter

# LIME2-SERVER and BAY-HDD/SDD assembly guide

LIME2-SERVER comes assembled and tested, these instructions serve purely informational purposes.

First step is to assemble the top of BAY-HDD/SDD box with bottom part of BOX-LIME-BLACK:



For this purpose four M3x4 screws and M3x6 hex nuts are used:



Then the A20-OLinuXino-LIME2 board is placed and fixed with 4 pieces of M3x4 screws:



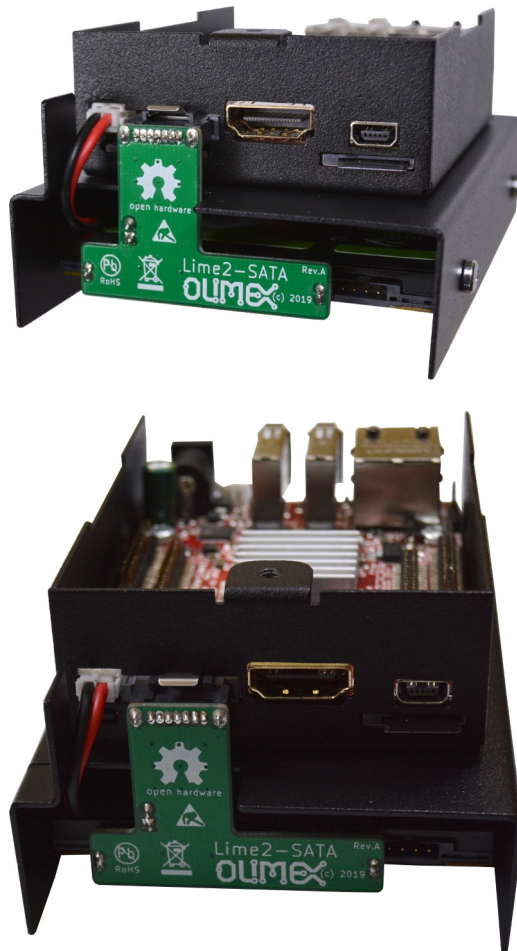
For the next step you need the HDD/SSD drive and the LIME2-SATA PCB which are part of LIME2-SERVER kit:



Attach the drive with four M3x4 mm screws at the sides:



Then snap the Lime2-SATA PCB and connect the power cable to JST2.0 connector:



At this point close the bottom metal cover and use HDD mount holes to attach with M3x10 screws:





Finally place the OLinuXino sticker on top:



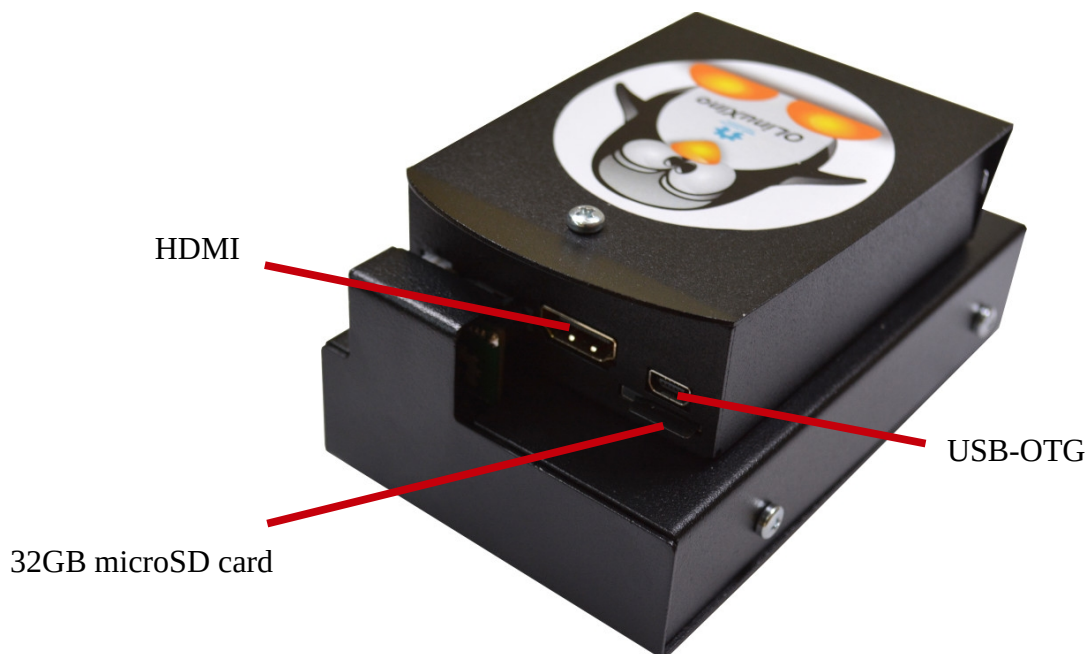
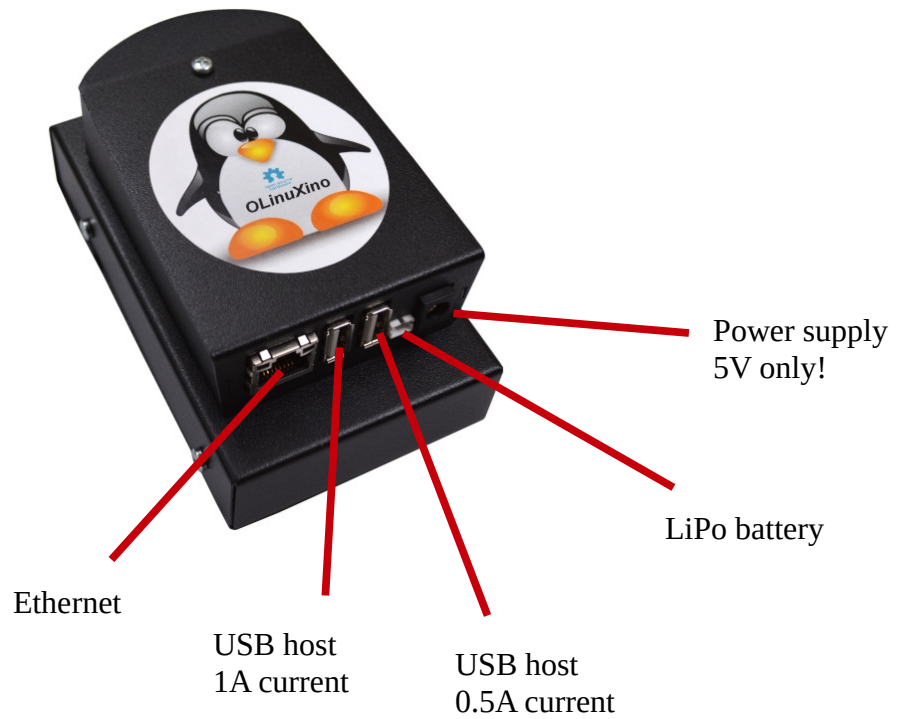


## **LIME2-SERVER variants**

There are several variants with or without HDD or SSD:

- LIME2-SERVER-NO-HDD if you have your own 2.5" HDD or SSD
- LIME2-SERVER-500GB-HDD with mechanical 2.5" 500GB drive
- LIME2-SERVER-1000GB-HDD with mechanical 2.5" 1000GB drive
- LIME2-SERVER-2000GB-HDD with mechanical 2.5" 2000GB drive
- LIME2-SERVER-512GB-SSD with solid state 2.5" 512GB drive

## LIME2-SERVER connectors description



## LIME2-SERVER battery installation

When you receive your LIME2-SERVER the LiPo battery will not be connected. Unscrew the upper cover and connect the battery as shown on the picture below then re-attach the cover:



# LIME2-SERVER software installation

## Installing Ubuntu or Debian

> Where to get the images?

You can download our latest images from our [ftp repository](#).

Ubuntu 18.04 LTS Bionic and Debian 10 Buster are what we have.

Then you need [balenaEtcher](#) to write the image to micro SD card class 10. Download it and run. Point the source of the image and the SD card.

Insert the card in LIME2-SERVER and apply power supply.

You can login with HDMI/keyboard or SSH via USB-OTG.

Either connect USB keyboard and HDMI monitor either use USB cable to connect to USB-OTG connector and connect to the board.

Check which serial port is created with:

```
ls /dev/tty*
```

the port must be ttyACMx

connect to the board via this serial port

```
cu -l /dev/ttyACM0
```

Initial login is root 1234 after which you will be forced to change your password.

# Installing KODI

Download the KODI image from our [ftp server](#)

Use [balenaEtcher](#) to write the image to micro SD card class 10.

Insert the SD card and boot.

# Installing NextCloud

Download [Armbian 5.92.4 Olinuxino-a20 Ubuntu bionic next 5.2.21 desktop.7z](#) and write it with [balenaEtcher](#) to blank micro-SD card.

Insert the card and boot.

Use Ethernet cable or WiFi dongle to connect to Internet.

Use USB cable to connect to USB-OTG connector and connect to the board.

Check which serial port is created with:

```
ls /dev/tty*
```

the port must be ttyACMx

connect to the board via this serial port

```
cu -l /dev/ttyACM0
```

Initial login is root 1234 after which you will be forced to change your password.

Get the install script from our ftp with:

```
wget ftp://staging.olimex.com/Allwinner_Images/A20-OLinuxino/5.NextCloud/install_NextCloud.sh
```

then run the script:

```
chmod +x install_NextCloud.sh
```

```
./install_NextCloud.sh
```

at the end the scrip will run NextCloud server and will display the IP of the server.

# Installing Yunohost

work in progress

# Installing Home assistant

work in progress



# Installing TOR

work in progress

## LIME2-SERVER power consumption

A20-OLinuXino-LIME2 typically consumes between 0.3A and 0.5A at 5V (1.5W-2.5W).

If devices are connected to the USB ports this consumption should be taken into consideration. If you do not know power consumption of USB devices you can measure with [USB-POWER-METER](#)

Note that USB1 host can source up to 1A, while USB2 host is restricted to 0.5A only. If you power devices like [MOD-USB3G](#) you should use USB1.

The different HDD/SSD can use up to 1A current in active state.

LIME2-SERVER comes with 5V / 2A power adapter which is sufficient for running the server with the HDD.

# Revision History

Revision 1.0 March 2020

Revision 1.1 April 2020

Revision 1.2 May 2020