# orange PI 3 LTS Single Board Computer User Manual

Contents



## Orange Pi 3 LTS

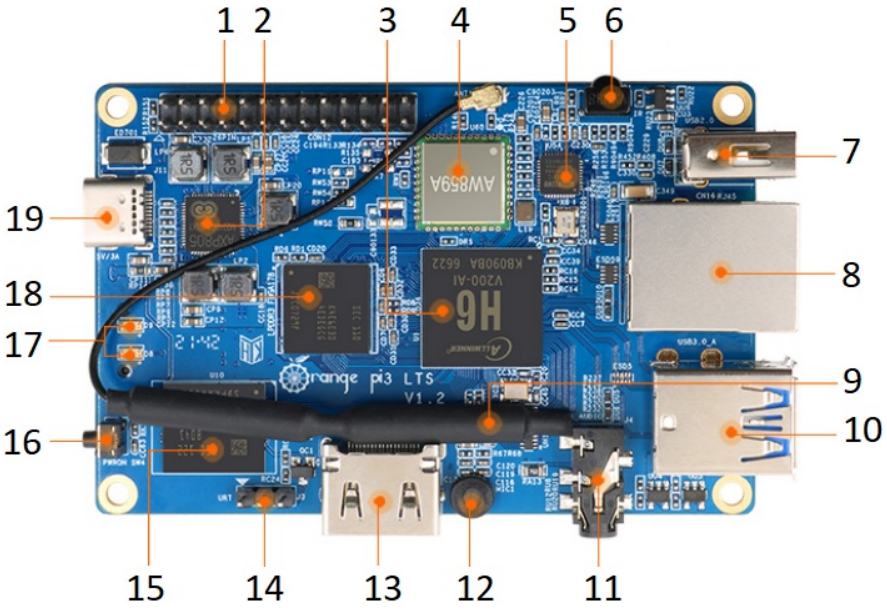
Official website data download:
http://www.orangepi.org/downloadresources/

### Product description

#### What's Orange Pi 3 LTS?

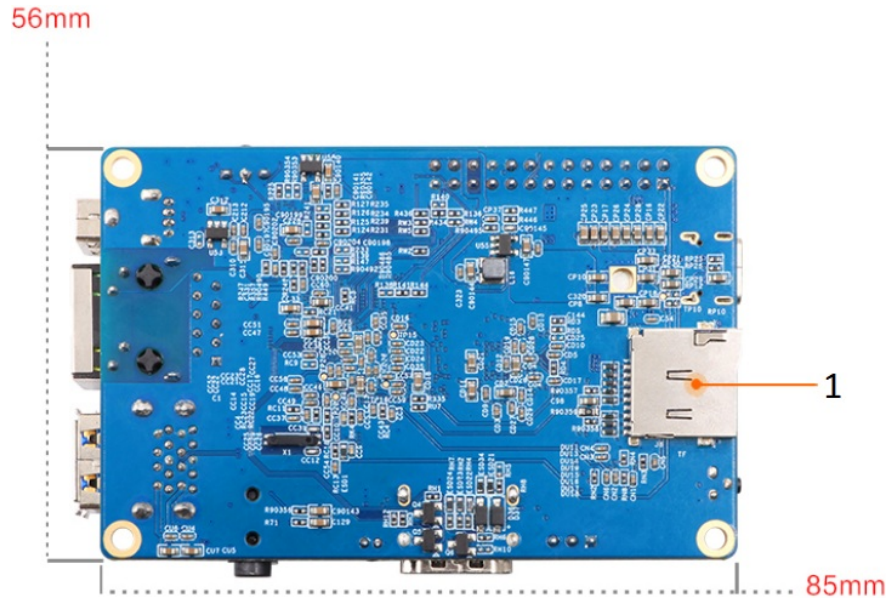
It' s an open-source single board computer. It can run Android 9, Ubuntu, Debian. It uses the Allwinner H6 SoC, and has 2GB LPDDR3 SDRAM.

## Top view



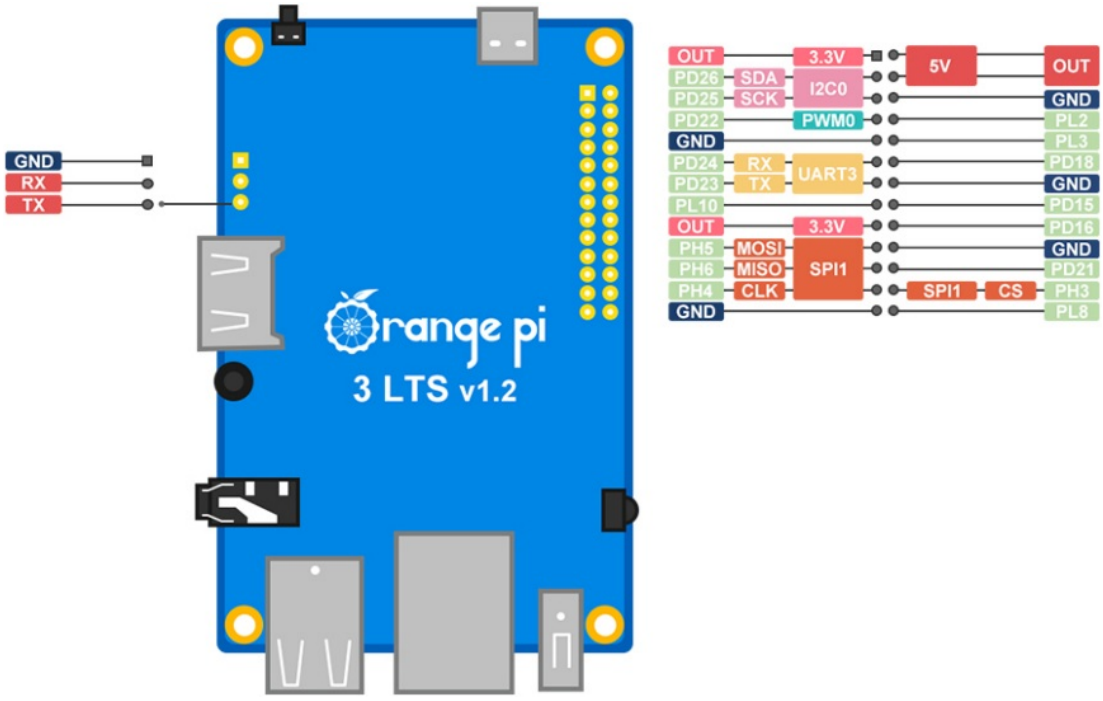

1. 26 Pin headers
2. PMU
3. Allwinner H6
   (ARM® Cortex -A53 Quad-core 1.8GHZ ) 64 bit
4. WiFi + BT
5. Ethernet chip
6. IR Receiver
7. USB2.0
8. Gigabit Ethernet
9. WiFi Antenna
10. USB3.0+USB2.0
11. Audio output and AV
12. MIC
13. HDMI
14. Debug TTL UART
15. 8GB EMMC Flash
16. Power switch
17. LED
18. 2GB LPDDR3
19. USB Type-C power interface

**Bottom view**




1. TF card slot

**Orange Pi 3 LTS v1.2 pinout diagram**




**Who's it for?**

Orange Pi 3 LTS is for anyone who wants to start creating with technology – not just consuming it. It's a simple, fun, useful tool that you can use to start taking control of the world around you.

**What can I do with Orange Pi 3 LTS?**

### You can use it to build……

- A computer
- A wireless server
- Games

- Music and sounds
- HD video
- A speaker
- Android
- Scratch

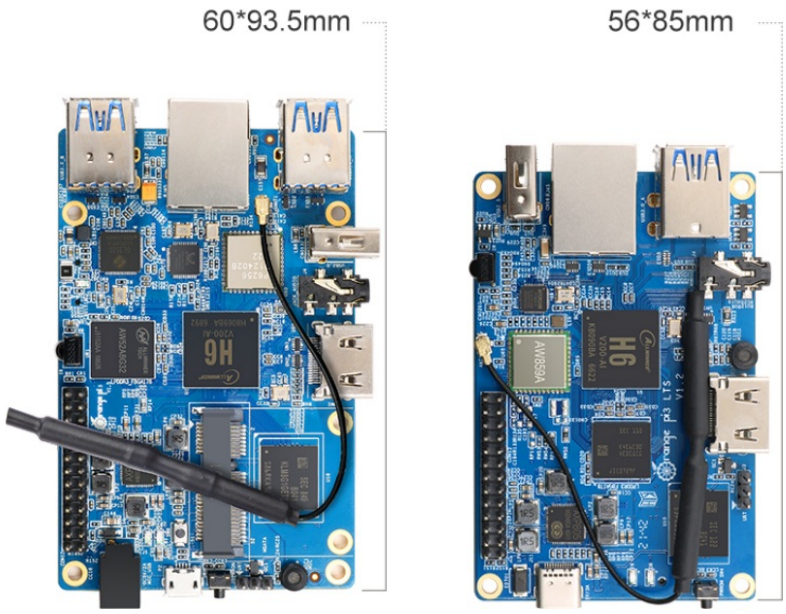
Pretty much anything else, because Orange Pi 3 LTS is open source.

**Orange Pi 3 VS Orange Pi 3 LTS**

| Model | Orange Pi 3 | Orange Pi 3 LTS |
|---|---|---|
| **Hardware features** | | |
| SOC | Allwinner H6 64bit | Allwinner H6 64bit |
| CPU Architecture | Cortex™-A53 | Cortex™-A53 |
| CPU Frequency | 1.8GHz | 1.8GHz |
| Onboard Storage | •MicrosD Card •8GB EMMC Flash/EMMC(Default Empty) | •MicrosD Card •8GB EMMC Flash |
| Core Number | 4 | 4 |
| Memory Bus | LPDDR3 | LPDDR3 |
| Memory | 1GB/2GB | 2GB |
| WiFi+BT5.0 | AP6256 | AW859A |
| Network | 10M/100M/1000M Ethernet | 10M/100M/1000M Ethernet |
| USB | 1*USB2.0+4*USB3.0 | 2*USB2.0+1*USB3.0 |
| PCB Size | 60×93.5mm | 56x85mm |

| | | |
|---|---|---|
| Power Interface | DC Input, MicroUSB (OTG) | 5V3A Type-C |
| PMU | Yes | Yes |
| PCIE | Yes | – |
| **Software features** | | |
| OS | Android7.0,Ubuntu,Debian | Android9.0,Ubuntu,Debian |

**Orange Pi 3, Orange Pi 3 LTS Dimension**




Orange Pi 3 Orange Pi 3 LTS

**Hardware specification:**

| | |
|---|---|
| CPU | Allwinner H6 Quad-Core 64-Bit 1.8GHz High-Performance Cortex-A53 Processor |
| GPU | • High-performance multi-core GPU Mali T720<br>• OpenGL ES3.1/3.0/2.0/1.1<br>• Microsoft DirectX 11 FL9_3<br>• ASTC(Adaptive Scalable Texture Compression)<br>• Floating point operation greater than 70 GFLOPS |

| | |
|---|---|
| RAM | 2GB LPDDR3 (Shared with GPU) |
| Onboard Storage | • Micro SD Card Slot<br>• 8GB EMMC Flash |
| Onboard Ethernet | • YT8531C Chip<br>• Support 10/100M/1000M Ethernet |
| Onboard WIFI+Bluetooth | • AW859A Chip<br>• Support IEEE 802.11 a/b/g/n/ac<br>• Support BT5.0 |
| Video Output | • HDMI 2.0a<br>• TV CVBS Output |
| Audio Output | • HDMI Output<br>• 3.5mm Audio Port |
| Power Supply | 5V3A Type-C |
| Power Management Chip | AXP805 |
| USB Port | 1* USB 3.0 HOST, 2* USB 2.0 HOST |
| Low-Level Peripherals | • 26Pin Connector With 1*I2C, 1*SPI, 1*UART & Multiple GPIO Ports |
| Debug Serial Port | UART-TX, UART-RX & GND |
| LED | Power LED & Status LED |
| IR Receiver | Support IR Remote Control |
| Button | Power Button (SW4) |

| | |
|---|---|
| Supported OS | Android 9.0, Ubuntu, Debian |

**Appearance specification introduction:**

| | |
|---|---|
| Dimension | 56mm x 85mm |
| weight | 45g |

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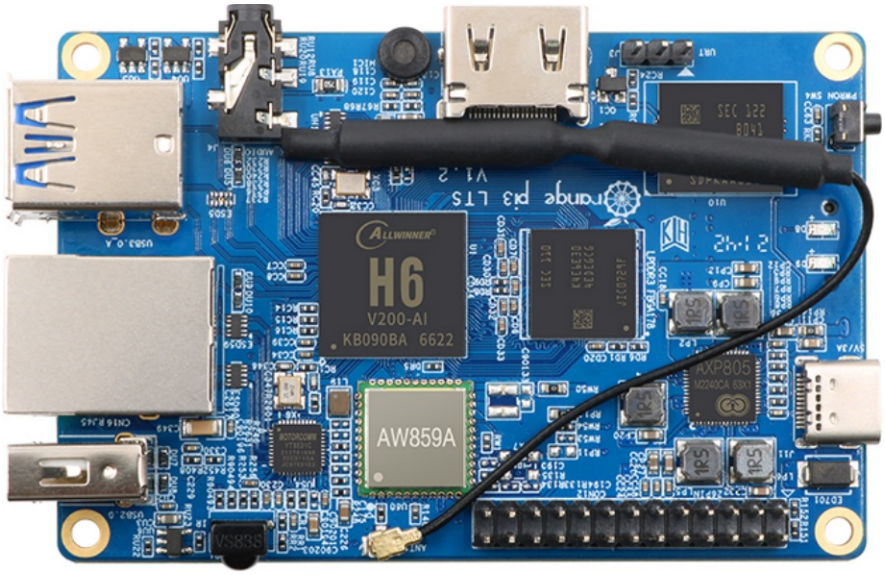
**Completely open source maker artifact**


Orange Pi 3 LTS runs Android

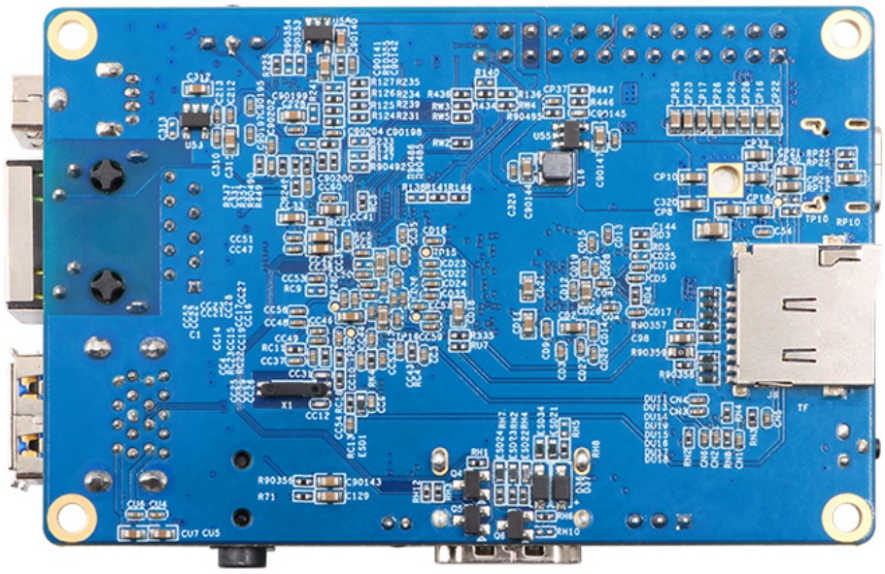

Orange Pi 3 LTS runs Ubuntu / Debian

**Product display**

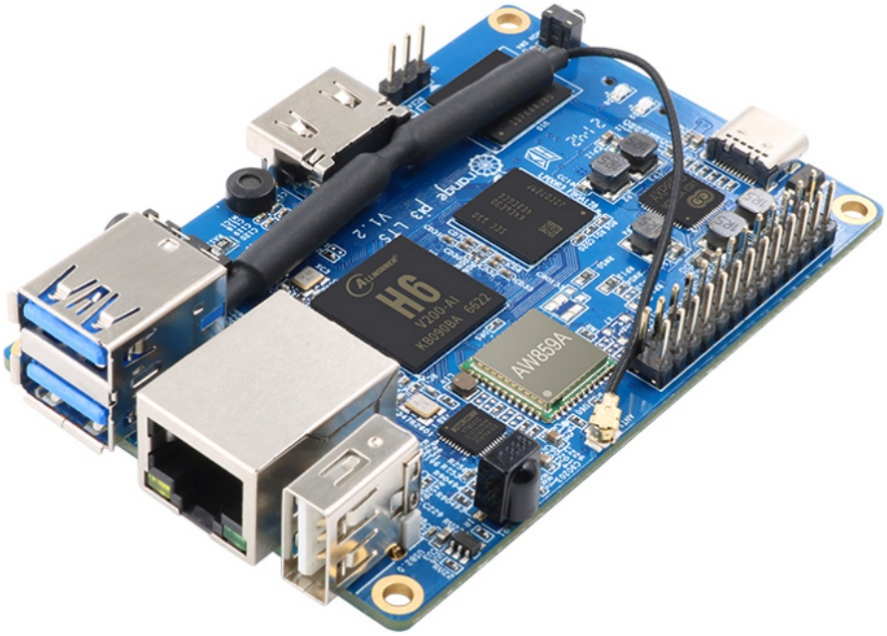
Front



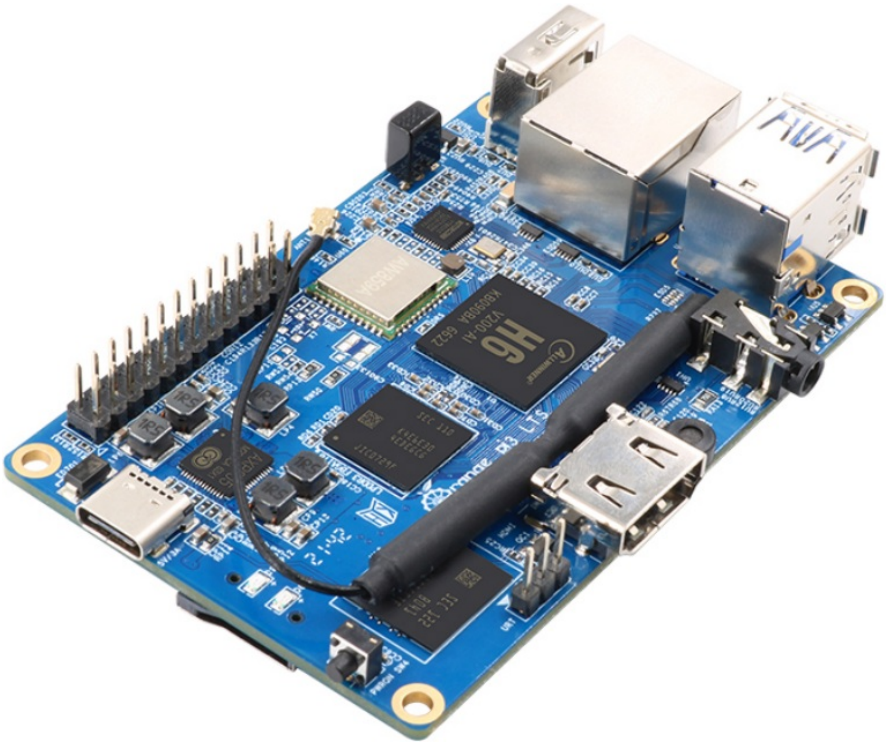

Back



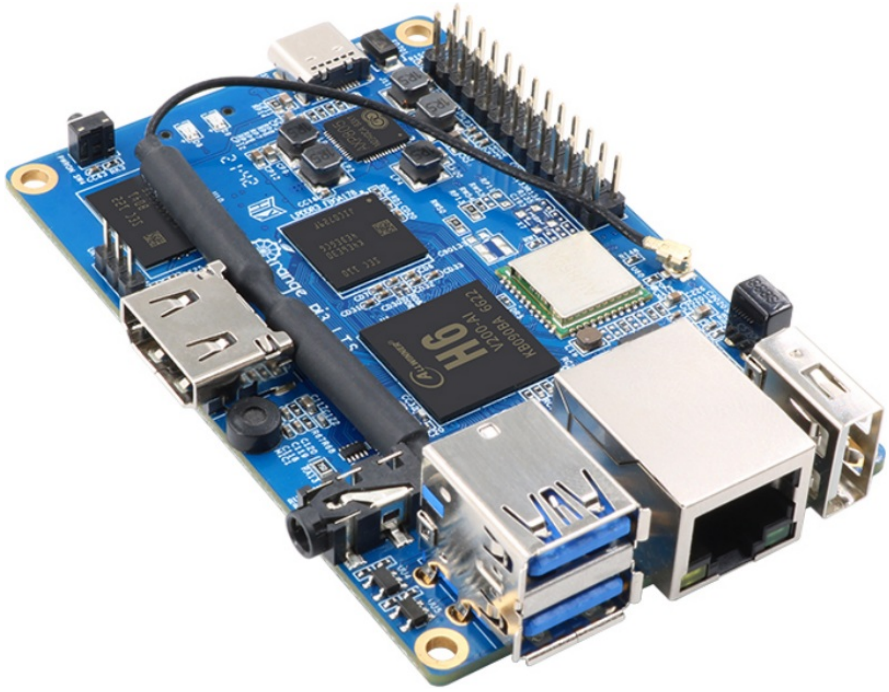
45° angle




45° angle

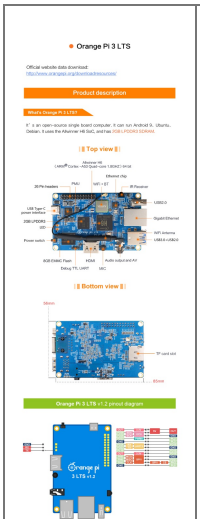



45° angle



FCC WARNING
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.
Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
— Reorient or relocate the receiving antenna.
— Increase the separation between the equipment and receiver.
— Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
— Consult the dealer or an experienced radio/TV technician for help.
To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum distance between 20cm the radiator your body: Use only the supplied antenna.

## Documents / Resources



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3 LTS Single Board Computer, 3 LTS, Single Board Computer, Board Computer, Computer