

These are the perfect single bo (SBC) tablets to replace Raspberry Pi

Not only is there a Raspberry Pi, there are other names you can use for smart home or other automation projects.

If you are a fan of the single tablet SBC, it certainly is no stranger to the Raspberry Pi, the most famous name in the world of these small computers. But it's not just Raspberry Pi, there are other names that you can use for smart home or other automation projects.

LattePanda Alpha 864

LattePanda Alpha 864 is 'beasts' about both price (\$ 358) and performance. It runs Intel Core 7 processor (like on MacBooks and other laptops), LPDDR3 RAM 8GB, 32GB / 64GB EMMC memory, Intel HD 615 graphics, can run Windows 10 Pro comfortably.

Specifications of LattePanda Alpha 864

1. Intel's 7th generation CPU m3-7y30
2. Intel HD Graphics 615
3. 8GB LPDDR3 1866MHz Dual-Channel RAM
4. 64GB eMMC 3x
5. USB 3.0 Type-A 1x
6. USB-C port supporting Power Delivery
7. Dual M.2 port

Highlights

1. Use processors like laptops
2. Dual M.2 port
3. USB-C port
4. Can run Windows 10 Pro

NanoPi Neo 4

This is the cheapest SBC 6 core machine, for \$ 45 it is not too bad. The only minus point is that it only has 1GB of RAM.

Specifications of NanoPi Neo4

1. RK3399 SoC processor, A72 dual-core ARM and A53 quad core

2. GPU Mali T-864
3. DDR3-1866 RAM 1GB
4. Integrated WiFi and Gigabit Ethernet
5. PCIe interface x2

Highlights

1. Strong processor
2. RAM faster than Raspberry Pi 3B +
3. Supports 4K output

Libre Computer AML-S905X-CC (Le Potato)

This machine is almost a copy of the Raspberry Pi 3, has a similar form factor and features. The highlight is that it supports HDMI 2.0 and 4K output.

The specifications of Le Potato

1. Quad core 2Ghz A53 S905X
2. Mali-450 MP2 GPU
3. DDR3 2GB RAM
4. EMMC memory is from 8GB to 64GB

Highlights

1. 4K HDMI output
2. There are source code for many platforms like Ubuntu, Linux 4.14 LTS, Buildroot with Linux 4.9 and Android up to version 8.0

NanoPC-T3 Plus

NanoPC-T3 Plus is the big brother of NanoPi 2 Fire, has an 8-core processor, strong enough for businesses to use.

Specifications of NanoPC-T3 Plus

1. The eight ARM core of Samsung S5P6818 Cortex-A53 is up to 1.4GHz
2. DDR3 2GB RAM
3. 8 / 32GB flash memory
4. Gigabit Ethernet
5. 2 camera interface
6. HDMI
7. USB 2.0

Highlights

1. Processor of high segment
2. Ideal for use in industrial projects

VoCore2

This is a coin-sized, completely open source Linux machine (both hardware and software), priced at \$ 20, small, low cost, ideal for IoT projects or self-built routers.

Technical parameters of VoCore2

1. MT7628AN, 580MHz, MIPS 24K
2. 28MB, DDR2, 166MHz
3. 16M NOR right on the circuit board, supports SDXC up to 2TB
4. 802.11n, 2T2R, speeds up to 300Mbps
5. 1 port / 5 ports, up to 100Mbps
6. Support USB 2.0, up to 480MBit / s
7. VoCore2 Ultimate package is now only \$ 44

Highlights

1. Open source
2. Cheap
3. Small form factor

Raspberry Pi Zero W

It is true that Zero W is a member of the Raspberry Pi family but this machine is too great. Not only because it costs 10USD but also because of the impressive features.

The specifications of the Raspberry Pi Zero W

1. 1GH single core CPU
2. 512MB RAM
3. Mini-HDMI port
4. Micro-USB port On-The-Go
5. Micro-USB
6. HAT-compatible 40-pin header
7. Composite video and reset headers
8. CSI camera connector
9. 802.11n LAN wireless network
10. Bluetooth 4

Highlights

1. Cheap but many features
2. Ideal for low cost projects

ODROID-XU4

This is a new generation of powerful, more efficient computing devices, a smaller form factor, costing only \$ 59, with open source support, running on many Linux versions, including the latest versions like Ubuntu 16.04, Android. KitKat 4.4, Lollipop 5.0 or Nougat 7.1.

Specifications of ODROID-XU4

1. Samsung Exynos 5422 Cortex-A15 2GHz processor and Cortex-A7 Octa core
2. Mali-T628 MP6 (OpenGL ES 3.1 / 2.0 / 1.1 and OpenCL 1.2 Full profile)
3. 2 GB LPDDR3 RAM PoP stacked
4. eMMC5.0 HS400 Flash Storage
5. 2 x USB 3.0 Host, 1 x USB 2.0 Host
6. Gigabit Ethernet port
7. HDMI 1.4a
8. Approximate size: 83 x 58 x 20 mm. (not including the cooler)
9. Linux Kernel 4.9 LTS

Highlights

1. Small form factor
2. Linux support

NanoPi Neo

Quad core computers cost only \$ 12, suitable for those who love, play for fun.

Technical specifications of NanoPi Neo

1. Allwinner H3 quad-core ARM Cortex-A7 up to 1.2GHz
2. RAM 256MB / 512MB
3. 10/100 Ethernet USB 2.0

Highlights

1. Cheap

Parallella

This is a high-performance computer, just as big as a credit card, using the Epiphany multi-core chip from Adapteva. For \$ 99, you can use Parallella as a private computer, embedded device or a component in a parallel server group.

Parallella specifications

1. Epiphany RISC SOC 16 cores
2. Zynq SOC (FPGA + ARM A9)
3. Gigabit Ethernet
4. 1GB SDRAM

5. Micro-SD card
6. Up to 48 GPIO batteries
7. Open source design file
8. HDMI, USB (optional)
9. Power consumption of 5W

Highlights

1. Strong processor

NanoPi M4

If you find a single tablet with multiple USB ports, this is the choice for you. Besides 6-core processor, 2GB DDDDDR3 RAM, 4K display support and hardware acceleration for 4K playback, NanoPi M4 also has 4 USB 3.0 ports and USB Type-C port, interface supports 13 megapixel camera.

Specifications of NanoPi M4

1. 6-core processor, Cortex-A72 2GHz 64-bit dual-core and Cortex-A53 1.5GHz quad-core
2. Mali-T864 GPU
3. 4GB LPDDR3-1866
4. 4-port USB 3.0 Type-A Ethernet and 1 USB Type-C port

Highlights

1. Very strong
2. USB-C port and many USB-A ports

MinnowBoard Quad-Core Turbot Dual

This is a 4-core SBC computer with 2GB RAM, 8MB SPI flash memory and 2 Ethernet ports. Another highlight is that it has an M.2B slot for the WAB card and also the SIM slot, which offers flexibility but also its price. For \$ 199, it also has many advanced features.

Highlights

1. High-class ingredients
2. M.2B slot
3. SIM slot

NanoPi NEO Plus2

This device is just a small, half-empty circuit board with Raspberry Pi but also has good performance and storage capacity.

Specifications of NanoPi NEO Plus2

1. Cortex H5 quad core processor A53 ARM

2. 1GB RAM 8GB
3. EMMC memory
4. 2 USB ports
5. Gigabit ethernet
6. There are two options: 512MB RAM and 8GB eMMC for \$ 32, or 1GB and 8GB eMMC RAM for \$ 44.

Highlights

1. Small form factor
2. Cheap

UDOO X86 ULTRA

This is a very powerful x86 board, compatible with the Arduino 101 platform, resulting in a more powerful Raspberry Pi 3 to 10 times.

Specifications of UDOO X86 ULTRA

1. Quad core Intel chips up to 2.00 GHz
2. 2 GB RAM
3. An HDMI port
4. Two miniDP ++ ports
5. eMMC 8 GB

Highlights

1. Strong processor

HiKey 970

This is an Android-powered PC, LPDDR4X 1866MHz memory, 64GB UFS 2.1 memory, Bluetooth, WiFi and GPS, this board is aimed at developers, especially those who want to optimize AI capabilities with multiple circuit boards Other no. \$ 299 is not cheap but this machine can do everything you want.

HiKey 970 specifications

1. ARM Cortex-A73 chip
2. ARM GPU Mali G72 MP12
3. RAM 6GB LPDDR4X 1866MHz
4. 64GB UFS 2.1 flash memory, with Micro SD slot
5. Bluetooth / WIFI / GPS

Highlights

1. Very strong
2. Large storage
3. Large RAM

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