

FriendlyELEC NanoPC T6 Dual-2.5G ETH 16G RAM / 64GB eMMC Combo with Case

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NanoPC-T6 LTS (as "T6") is a one-for-all high performance open source platform for edge computing, designed and developed by the FriendlyElec team.

It has two 2.5G Ethernet ports. It is based on Rockchip's RK3588, and has 4GB/8GB/16G LPDDR4x RAM and an optional 32GB/64GB/256/0GB eMMC flash. It works with systems including OpenMediaVault, FriendlyWrt, Android, Android TV, Debian, Ubuntu etc. It supports GPU and VPU acceleration.

T6 is a compact board of 110 x 80 mm with rich hardware resources and an optional CNC metal case. It has 2 HDMI output ports and 1 HDMI IN port. T6 can play video streams including 8K60p H.265/VP9 , 8K30p H264 etc and record video streams including 4K60p H.265. T6 has one M.2 B-Key slot that supports an M.2 NVME SSD disc, one M.2 E-Key that supports an M.2 2230 WiFi module.

In addition, T6 has one USB 3.0 and two USB 2.0 ports, and one full-featured USB-C port that is powered by DC-12V.

In summary, T6 is well suited for enterprise customers to develop mini machine vision systems with multiple Ethernet ports and for embedded system hobbyists to explore and implement prototype designs.

2 Hardware Spec

- SoC: Rockchip RK3588
 - CPU: Quad-core ARM Cortex-A76(up to 2.4GHz) and quad-core Cortex-A55 CPU (up to 1.8GHz)
 - GPU: Mali-G610 MP4, compatible with OpenGL ES 1.1, 2.0, and 3.2, OpenCL up to 2.2 and Vulkan1.2
 - VPU: 8K@60fps H.265 and VP9 decoder, 8K@30fps H.264 decoder, 4K@60fps AV1 decoder, 8K@30fps H.264 and H.265 encoder

- NPU: 6TOPs, supports INT4/INT8/INT16/FP16
- RAM: 64-bit 4GB/8GB/16GB LPDDR4X at 2133MHz
- eMMC Flash: 32GB/64GB/256GB eMMC, at HS400 mode
- Nor Flash: 32MB SPI Nor Flash
- microSD: support up to SDR104 mode
- Ethernet: 2 x PCIe 2.5G Ethernet
- 1 x USB 3.0 Type-A,
- 1 x Full function USB Type-C™ port, support DP display up to 4Kp60, USB 3.0
- 2 x USB 2.0 Type-A
- Video input:
 - 1 x standard HDMI input port, up to 4Kp60
 - 2 x 4-lane MIPI-CSI, compatible with MIPI V1.2
- Video output:
 - 2 x standard HDMI output ports
 - compatible with HDMI2.1, HDMI2.0, and HDMI1.4 operation
 - one support displays up to 7680x4320@60Hz, another one support up to 4Kp60
 - Support RGB/YUV(up to 10bit) format
 - 2 x 4-lane MIPI-DSI, compatible with MIPI DPHY 2.0 or CPHY 1.1
- Audio:
 - 1 x 3.5mm jack for stereo headphone output
 - 1 x 2.0mm PH-2A connector for analogue microphone input
- GPIO:
 - 40-pin 2.54mm header connector
 - up to 2 x SPIs, 6 x UARTs, 1 x I2Cs, 8 x PWMs, 2 x I2Ss, 28 x GPIOs
- M.2 connectors
 - one M.2 M-Key connector with PCIe 3.0 x4 for NVMe SSDs up to 2,500 MB/s
 - one M.2 E-key connector with PCIe 2.1 x1 and USB2.0 Host
- others:
 - 10 Pin 2.54mm header connector including Debug UART(3.3V TTL) and 2 x USB 2.0 Host
 - 2 Pin 1.27/1.25mm RTC battery input connector for low power RTC IC HYM8563TS
 - one 38Khz IR receiver
 - MASK button for eMMC update, reset button, and Power button
 - one 5V fan connector
 - USB-C to Debug UART
 - 2 x GPIO Controlled LED (SYS, LED1)
- Power supply: 5.5*2.1mm DC Jack & 2-pin 3.5mm pitch connector, 12VDC input.
- PCB: 8 layers, 110x80x1.6mm
- Ambient Operating Temperature: 0? to 70?

Further information can be found here: [LINK ext. website](#)