

Tibbo LTTP3 Linux-based TPS



Raspberry PI 3 model B



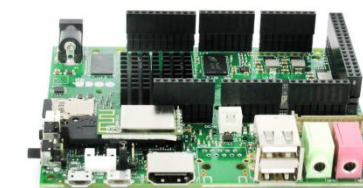
BeagleBone Black



Intel Galileo GEN2



UDOO DUAL



Onion Omega



Modular design	YES	NO	NO	NO	NO	YES
Box enclosure	YES	NO	NO	NO	NO	NO
Operating system	Tibbo Linux (Red Hat family)	Linux, Android, Windows 10 IoT	Debian, Ubuntu, Android	Arduino Linux Distribution for Galileo	UDOOubuntu and other Linux	OpenWRT Linux
CPU	TI 1GHz Cortex-A8 Sitara	4x ARM Cortex-A53, 1.2GHz	AM335x 1GHz ARM® Cortex-A8 + 2x PRU 32-bit microcontrollers	Intel® Quark™ SoC X1000 400MHz	Freescall i.MX 6 ARM Cortex-A9 Dual core 1GHz + Atmel SAM3X8E ARM Cortex-M3 CPU	Atheros AR9331 400MHZ MIPS 24K
RAM	512MB	1GB	1GB	256MB	1GB	64MB
On-board FLASH storage	512MB	NO	4GB	512KB	NO	16MB
I/O	51 I/O lines on 7 tiles (14 x module+ 14 x connector sockets)	40 lines GPIO header	2x 46 lines GPIO header	14 digital I/O pins, 6 analog inputs	76 lines GPIO: 62 digital + 14 digital/analog	18 lines GPIO header
Ethernet	10/100 Base-T Ethernet	10/100 Base-T Ethernet	10/100 Base-T Ethernet	10/100 Base-T Ethernet	10/100/1000 Base-T Ethernet	10/100 Base-T Ethernet
WIFI	802.11b/g	802.11n	NO	NO	802.11b/g	802.11b/g/n
GSM/GPRS capability	YES	NO	NO	NO	NO	NO
Video capability	NO	HDMI + 3.5mm analogue audio-video jack	HDMI	NO	HDMI	NO
Power requirements	Direct 5V DC jack / 12V to 48V input / PoE	5V	5V via USB / DC jack	7V to 15V DC jack or 12V POE	6V to 15V DC jack	3.3V
Onboard RTC	YES	NO	NO	YES	NO	NO
USB	NO	4x USB 2.0	1x USB 2.0	1x USB 2.0	2x microUSB 2.0 + 2x USB type A 2.0	1x USB 2.0
Bluetooth support	NO	YES	NO	NO	NO	YES
Analog Audio	YES	YES	Only via HDMI	NO	YES	NO
Onboard Buzzer	YES	NO	NO	NO	NO	NO
Serial interfaces	4 UARTs support serial, Wiegand, and clock/data streams RS232/485/422 ports 1-Wire support	1x UART	4x UARTs	2x UART	5x UARTs	NO
Analog interfaces	DAC, ADC, Opto isolated inputs, Mechanical relays, solid state relays, open collector, PWM	NO	6x ADC	6x ADC, 6x PWM	14x ADC, PWM support on some lines	NO
microSD card slot	YES	YES	YES	YES	YES	NO
CAN bus	YES (2 ports)	NO	YES	NO	YES (2 ports)	NO
Special features	<ul style="list-style-type: none"> - Unlimited combinations of interfaces due to modular design (Mainboard + Tibbits) <ul style="list-style-type: none"> - DIN rail mount - Sensors (Humidity, pressure, acceleration, temperature) <ul style="list-style-type: none"> - High voltage AC relays <ul style="list-style-type: none"> - IR transceiver - 2KB EEPROM - GPIO with interrupt capabilities 	<ul style="list-style-type: none"> - Camera Serial Interface (CSI) - Display Serial Interface (DSI) - GPU: Broadcom VideoCore IV 	<ul style="list-style-type: none"> - 3D graphics accelerator - NEON floating-point accelerator - 2x PRU 32-bit microcontrollers - Onboard 20pin CTI JTAG header 	<ul style="list-style-type: none"> - Arduino compatible <ul style="list-style-type: none"> - 1x miniPCI-E - 11KB EEPROM - x86 Architecture - 512KB onboard SRAM - ICSP 	<ul style="list-style-type: none"> - Arduino R3 compatible <ul style="list-style-type: none"> - GPU Vivante GC 880 + Vivante GC 320 <ul style="list-style-type: none"> - LVDS + Touch - Camera Serial Interface (CSI) - SATA connector with power header - System JTAG Controller (SJC) <ul style="list-style-type: none"> - GPIO with interrupt capabilities 	<ul style="list-style-type: none"> - Miniature design - Docks & Expansions for extra interfaces: (Bluetooth, GPS, Relay, Proto, servo (PWM), OLED display)