TeddyBearPI Datasheet

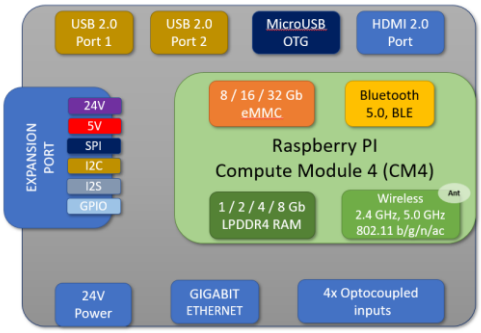
Version 1.00 – 22nd February 2021

TeddyBearPI is modular, easy to use hardware platform for well-known Raspberry PI CM4 compute module, designed to help individuals, professionals and companies in the development of various market products.
Various expansion modules enable rapid software development for home, IoT or industrial installations.

FEATURES

- Compatible with Raspberry PI CM4 compute modules (except Lite models)
- Full-size HDMI 2.0 connector
- Gigabit Ethernet
- Two USB 2.0 ports & Micro-USB port
- Four Dry-contact inputs
- Tactile button for Wake-up
- DIP-switch selector for enabling/disabling features (Wi-Fi, BT, USB Boot, EEPROM write protection)
- Connector for easy-plug expansion modules (Relay, IO, communication, audio and other boards)
- Large heatsink with optional fan

BLOCK DIAGRAM



TECHNICAL SPECIFICATION

PHYSICAL SPECIFICATION

Enclosure dimensions (HxWxD mm)	106 x 90 x 58 mm
Enclosure material	UL94-V0 flame retardant polycarbonate
Color	Light grey
Mount type	35mm DIN-Rail or Wall/Desk mounting
Weight	120g
IP protection	IP20
Working Temperature	-20℃ to 55℃
Power supply	DC 24V/2A -10%/+10% Reverse polarity protection
Max. power consumption	2A (with 4 relay modules attached)

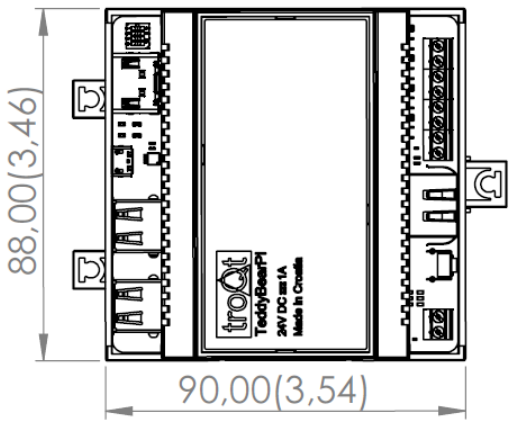
TECHNICAL SPECIFICATION

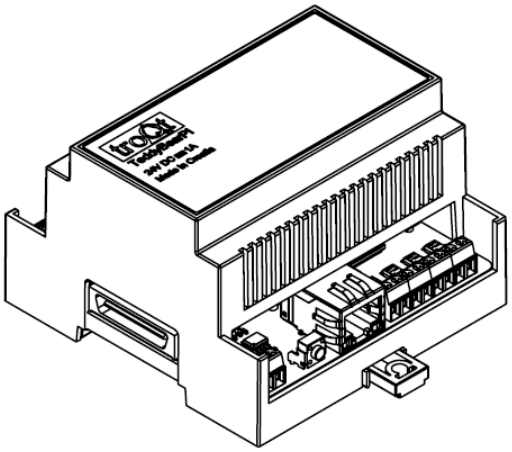
Processor	ARM Cortex-A72 64-bit processor
Processor frequency (core)	1,5Ghz Quad-core
Processor cooling	Passive heat sink + Optional active fan (temperature controllable)
RAM	1GB, 2GB, 4GB or 8GB LPDDR4-3200 SDRAM
Flash memory	8GB, 16GB or 32GB eMMC Flash storage
Video output	HDMI with resolutions up to 4K
	VideoCore VI graphics, supporting OpenGL ES 3.x
	4Kp60 hardware decode of H.265 (HEVC) video
	1080p60 hardware decode
	1080p30 hardware encode of H.264 (AVC) video

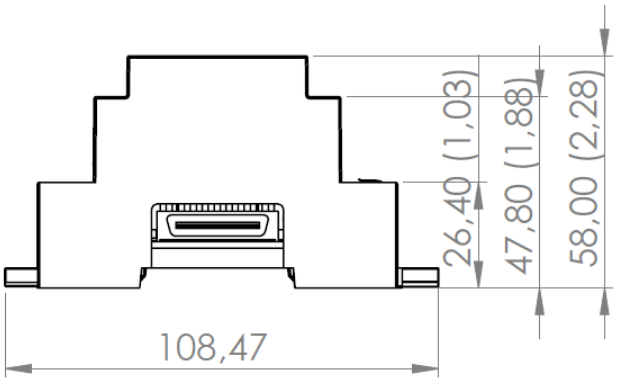
CONNECTORS / INTERFACES

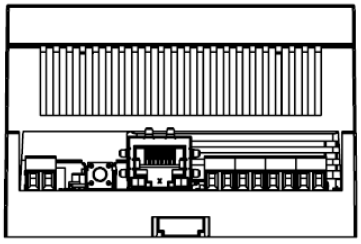
Power supply input	24V DC Power - Screw terminals
Dry contact inputs	Four (4) Dry contact inputs – screw terminals
Ethernet	Gigabit Ethernet PHY with IEEE 1588 support
USB	Two USB A ports (max.500mA)
LAN	Gigabit Ethernet PHY with IEEE 1588 support
Wi-Fi	Optional 2.4GHz and 5GHz IEEE 802.11b/g/n/ac wireless
Bluetooth	Optional Bluetooth 5.0 support
Expansion interface	32-pin expansion connector for Easy-Plug-Link

MECHANICAL









MODELS

Marking of the TeddyBearPI model marking is following pattern:

TBPI – XX YY H P – F Q

XX – RAM memory size (1GB - 01, 2Gb – 02, 8Gb - 08)
YY – eMMC size (8GB – 08, 16Gb – 16, 32Gb – 32)
H – Heatsink included
P – Wireless / Bluetooth module included (0 – Not included, W- Included)
F – Fan included
TeddyBearPI unit is available in following models:

TBPI-0108H0-V	1GB RAM - 8GB eMMC - Heatsink – Vented enclosure
TBPI-0108H0-FS	1GB RAM - 8GB eMMC - Heatsink – Fan – Standard cover
TBPI-0108H0-FL	1GB RAM - 8GB eMMC - Heatsink – Fan – Logo cover
TBPI-0216H0-V	2GB RAM - 16GB eMMC - Heatsink – Vented enclosure
TBPI-0216H0-FS	2GB RAM - 16GB eMMC - Heatsink – Fan – Standard cover
TBPI-0216H0-FL	2GB RAM - 16GB eMMC - Heatsink – Fan – Logo cover
TBPI-0208HW-V	2GB RAM - 8GB eMMC - WiFi/BT - Heatsink – Vented enclosure
TBPI-0208HW-FS	2GB RAM - 8GB eMMC - WiFi/BT - Heatsink – Fan – Standard cover
TBPI-0208HW-FL	2GB RAM - 8GB eMMC - WiFi/BT - Heatsink – Fan – Logo cover
TBPI-0216HW-V	2GB RAM - 16GB eMMC - WiFi/BT - Heatsink – Vented enclosure
TBPI-0216HW-FS	2GB RAM - 16GB eMMC - WiFi/BT - Heatsink – Fan – Standard cover
TBPI-0216HW-FL	2GB RAM - 16GB eMMC - WiFi/BT - Heatsink – Fan – Logo cover
TBPI-0832HW-V	8GB RAM - 32GB eMMC - WiFi/BT - Heatsink – Vented enclosure
TBPI-0832HW-FS	8GB RAM - 32GB eMMC - WiFi/BT - Heatsink – Fan – Standard cover
TBPI-0832HW-FL	8GB RAM - 32GB eMMC - WiFi/BT - Heatsink – Fan – Logo cover