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AutoPi TMU CM4 FD

Automotive edge computer built on Raspberry Pi CM4

Bluetooth

Raspberry Pi Compute Module 4

Security Element

HDMI Port

USB Ports

Voice Speaker

Accelerometer/ Gyroscope

2x Dedicated CAN-FD

GPS/GLONASS

4G/3G LTE Cat 4 Modem

WiFi

Native Real-time Clock

Key Benefits

4G/LTE with global coverage
The integrated modem with worldwide coverage.

Built in 2x CAN-FD interface
Automotive connection with dual CAN-FD.

Factory integrated unit or aftermarket add-on
Use as a factory integrated OEM device or aftermarket add-on.

Integrated power-safe functionality
Proven and experienced power fail-safe functionality integrated.

Runs full Linux OS
Boost a well proved and tested OS, with guarantee for stability.

Can be extended to almost any usage
Allows extension to both business and personal use cases.

Upgradeable CPU/RAM
Upgrade the device with additional CPU/RAM

Automotive certified (CE/FCC)
Certified to automotive standards for global usage.

Security element
Secure and encrypt your data

Upgraded automotive interface
The device comes with a 2x CAN-FD interface and can be further expanded with additional CAN interfaces. Support for Diagnostics over IP (DoIP)

Runs LINUX OS
AutoPi Core is based on a full LINUX OS (Raspberry Pi OS), with endless possibilities for extensions and integrations. Well proven and tested OS, with high endurance.

Open source-software
The device runs on an open source-software, which allows users to build a custom code on top of that. All drivers and implementations in AutoPi Core is available from our GitHub repository.

Computing Power
Broadcom BCM2711 Quad-core Cortex-A72 (ARM v8) 64-bit SoC @ 1.5GHz provides incredible speed and functionality. 1GB LPDDR4 RAM and an integrated GPU. Upgradeable to even more memory

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Technical Specifications

Processor	Broadcom BCM2711 Quad-core Cortex-A72 (ARM v8) 64-bit SoC @ 1.5GHz
Memory	1GB LPDDR4 SDRAM **Upgrade:** 2GB, 4GB or 8GB LPDDR4 SDRAM (depending on model)
Storage	8GB on board eMMC **Upgrade:** 16GB and 32GB (depending on model)
Modem	Integrated 4G/LTE Cat 4 connection (3G/EDGE fallback) 150Mbit DL / 50Mbit UL Worldwide support in a single device **4G LTE Bands (Global):** B1 / B2 / B3 / B4 / B5 / B7 / B8 / B12 / B13 / B18 / B19 / B20 / B25 / B26 / B28 / B38 / B39 / B40 / B41 **3G Fallback (WCDMA):** B1 / B2 / B4 / B5 / B6 / B8 / B19 **EDGE Fallback:** B2 / B3 / B5 / B8 / Quad-band
Certifications	EN 301 489-1 v2.2.0, EN55025:2008, EN 50498 and Directive 2004/104/EC, ISO 7637-2:2011, EN 301 489-3 V2.1.1, FCC 47 CFR Part 15, Class A:10–1–17 Edition
Security Element	- Hardware Based Secure Key Management - Public Key Algorithms: RSA and ECC asymmetric, AES and DES symmetric cryptography algorithms. HMAC, CMAC, SHA-1, SHA-224/256/384/512 operations - Crypto Curves: ECC NIST, Brainpool, Twisted Edwards Ed2551, Montgomery Curve25519, Koblitz, Barreto-Naehrig Curve, Montgomery Curve448 - Secure Storage of Keys, Certificates and Data - Unique Serial Number - Intrusion Detection
GPS	Integrated GPS + A-GPS. **Supports:** GPS/GLONASS/BeiDou/Galileo/QZSS
Power	**Line Voltage:** 12.5V AC (Car battery power). Up to 35V (Trucks). Support for trucks with up to 35V Built-in Power Management system to prevent the vehicle's battery from being drained
Expansion (NEW)	**2 X USB:** USB 2.0 (Max. theoretical power 2.1A divided between the two ports) **Ethernet:** Built in Gigabit Ethernet **GPIO:** UART/I2C/SPI
Wireless	Built on Cypress CYW43455 Chipset **WiFi:** 2.4GHz and 5GHz IEEE 802.11.b/g/n/ac wireless LAN **Bluetooth:** Bluetooth 5.0 + Bluetooth Low Energy (BLE)
Accelerometer	Built in 3-axis accelerometer
Gyroscope	Built in 3-axis gyroscope
Automotive Interface (NEW)	**2 X CAN-FD:** CAN-FD interface with up to 5Mbps Data rate with integrated CAN data filter **DoIP:** Upgradeable to allow support for DoIP
Input slots	**SIM Card:** Nano SIM – *Not Included*
Audio	Built-in speakers
Video Out	HDMI @ 1080P60 Video Output
Absolute Maximum Operating Environment	**Operating Temperature:** -20° TO 70° C (-4° TO 158° F) **Relative Humidity:** 0% TO 75% Noncondensing
Operating System	Raspbian OS with preconfigured AutoPi Core

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