AutoPi TMU CM4 FD

Automotive edge computer built on Raspberry Pi CM4





Compute Module 4

























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

Technical Specifications

- Hardware Based Secure Key Management		
Storage Side on board of MMC Upgrade: 20E, 40E or 80E LPDDR4 SDRAM (elepending on model)	Processor	Broadcom BCM2711 Quad-core Cortex-A72 (ARM v8) 64-bit SoC @ 1.5GHz
Storage Modern Storage Modern Storage Modern Storage Modern Storage Storage Modern Storage	.,	1GB LPDDR4 SDRAM
Modern Management (AGB and 326B (depending on model)	Memory	Upgrade: 2GB, 4GB or 8GB LPDDR4 SDRAM (depending on model)
Integrated 4G/LTE Cart 4 connection (3G/EDEE fallback) 15/Mohit DL / 500Hbit DL 15/Mohit	C	8GB on board eMMC
Modem Solidate Italy Soli	Storage	Upgrade: 16GB and 32GB (depending on model)
Modem Worldwide support in a single device. 4 (ET Bands (Globbi. B) N. BY (B) S. J. BA.	Modem	Integrated 4G/LTE Cat 4 connection (3G/EDGE fallback)
46 LTE Bands (Global): B1 / R2 / R3 / R4 / R5 / 7 / R6 / R3		
AGE Tablack (WCDMA): 11 / 26 / 14 / 12 / 18 / 18 / 18 / 18 / 18 / 18 / 18		
Certifications EN 301 489-1 v2.2.0, ENS5025.2008, EN 50498 and Directive 2004/104/EC, ISO 7637-2.2011, EN 301 489-3 v2.1.1, ECC 47 CFR Part 1S, Class At-10-1-17 Editor Security Element -Hardware Based Secure Key Management Public Key Algorithms RNA and IECC asymmetric, AES and DES symmetric cryptography algorithms. HMAC, CMAC, SHA-1, SHA-224/256/384/512 operation of Cypto Curse ECK (ENTS, Baripnot, Instead Edwards Ed2551, Montgomery Curve25519, Koblizs, Barreto-Naehrig Curve, Montgomery Curve448 screen introduced in Institution Detection GPS Interprated GPS - A-GPS. Supports: GPS/GLONASS/BelDou/Gallieo/QZSS Power Line Voltage: 12 SV DC (Car battery power). Up to 35V (Trucks). Support for trucks with up to 35V Bull-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: Bult in Gigabit Ethernet Bult in Gigabit Ethernet Bult in Gigabit Ethernet GPIO: UART/IZC/SPI Mirreless WiFE 2.4GFs and SCHI IEE 802.11 Ib/g/n/ac wireless LAN Bluetooth: Bluetooth 5.0 + Bluetooth Low Energy (BLE) Accelerometer Bult in 3-axis accelerometer Gyroscope Built in 3-axis gyroscope Automotive Interface 2 X CAN-FD: CAN-FD interface with up to 5Mbps Data rate with integrated CAN data filter OxIP Upgradeable to allow support for DolP Input slots SIM Card: Nano SIM - Not Included Automotive Interface Bult: in speakers Video		
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Security Element	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
Security Element Secure Storage of Keys, Certificates and Data - Unique Serial Number - Intrusion Detection GPS Integrated GPS + A-GPS. Supports: GPS/GLONASS/BeiDou/Gailleo/QZSS Power Line Voltage: 12.5V DC (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 Wiffs: 2.4GFtz and 5GFtz IEEE 802.11.br/g/n/ac wireless LAN Bluetooth: Bluetooth: Bluetooth 5.0 + Bluetooth Low Energy (BLE) Accelerometer Built in 3-axis accelerometer Gyroscope Built in 3-axis gyroscope Automotive Interface 2 X CAN-FD: CAN-FD interface with up to SMbps Data rate with integrated CAN data filter DolP: Upgradeable to allow support for DolP Input slots SIM Card: Nano SIM – Not Included Audio Built-in speakers Video Out HDMI @ 1080P60 Video Output Absolute Maximum Operating Environment Relative Humidity: 0% TO 75% Noncondensing		- Public Key Algorithms: RSA and ECC asymmetric, AES and DES symmetric cryptography algorithms. HMAC, CMAC, SHA-1, SHA-224/256/384/512 operations
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Operating Environment Relative Humidity: 0% TO 75% Noncondensing	Absolute Maximum	Operating Temperature: -20° TO 70° C (-4° TO 158° F)
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