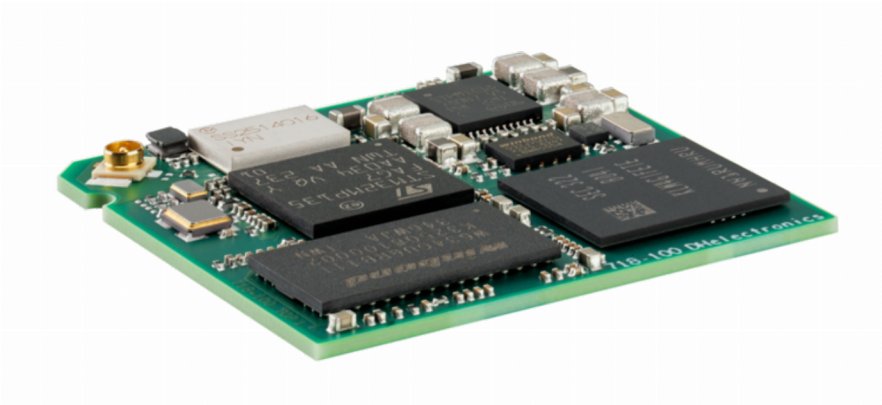
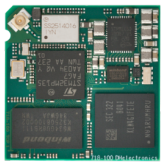
DHCOR STM32MP13







Basierend auf STM32MP13x

- Lötbares SOM mit nur 29 x 29 x 3,2 mm
- Highlights: DDR3L, eMMC, SPI boot flash, WiFi/BT, Dual GB Ethernet, Dual CAN-FD
- Erweiterte Sicherheitsfeatures (Secure Boot)
- Alle SoC Features sind auf Mainboard verfügbar
- STPMIC1 unterstützt Low Power Modi
- Mainline Linux Support
- Garantierte Langzeitverfügbarkeit von 10+ Jahren

Technische Daten

Board type	Solderable SOM
5-Cent Cooling available	✕
CPU details	1x ARM Cortex-A7 up to 1 GHz
CPU vendor	ST
CPU type	Cortex-A7
Co-processor available	✕

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Number of cores	1
GPU available	✕
PMIC	STPMIC1D
Security	Crypto Engine, Secure Boot | 3072-bit fuses including 96-bit unique ID, up to 1280 bits available for user and 256-bit HUK to protect AES 256 keys | Hardware acceleration: AES 128, 192, 256 DES/TDES | AES 128, 256 with DPA protection | PKA ECC/RSA with DPA protection | AES 128 on-the-fly DRAM encryption and decryption | HASH (SHA-1, SHA-224, SHA-256, SHA-384, SHA-512, SHA-3), HMAC | 1 x true random number generator (6 triple oscillators) | 1 x CRC calculation unit
DDR3L DRAM	128 / 256 / 512 / 1024 MB
eMMC flash	4 / 8 / 16 GB
SPI NOR flash	4 MB
EEProm	4 kB
Bluetooth available	✓
Bluetooth version	Bluetooth® v5.2
WiFi available	✓
WiFi version	Single band 802.11b/g/n
BSP	Linux Yocto (Debian on request)
Power supply	5.0 VDC
Typ. power consumption	1.0 W
Operating temperature	-40 to +85 °C
Storage temperature	-40 to +85 °C
Dimensions	29.0 x 29.0 x 3.2 mm

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Available interfaces for LGA (271 pins)

Bus interface	8 / 16 Bit
Ethernet	2x Gbit, IEEE 1588v2, MII/RMII/RGMII
MMC/SD	2x SDMMC up to 8 bits (SD/eMMC™/SDIO)
NAND	8 / 16 Bit interface Raw MLC / SLC, 8 Bit ECC
Quad SPI	Dual Quad SPI
CAN	2x FDCAN / 1x TTCAN
UART	4x UART, 4x USART up to 12.5 Mbit/s
SPI	5x up to 50 Mbit/s
I2C	5x up to 1 Mbit/s
USB host	1x USB 2.0 High-speed Host
USB OTG	1x USB 2.0 High-speed OTG
Embedded USB PHYs	2 × HS shared between Host and OTG
CSI (parallel camera)	8- to 16-bit camera interface, 3 Mpix @30 fps or 5Mpix @15 fps in color or monochrome with pixel clock @120 MHz (max freq)
Display RGB	24 Bit | up to WXGA (1366 × 768) @60 fps or up to Full HD (1920 x 1080) @ 30 fps | pixel clock up to 90 MHz Bit
ADC	2 × ADCs with 12-bit max. resolution up to 5 Msps | 1 x digital filter for sigma-delta modulator (DFSDM) with 4 channels and 2 filters | Internal or external ADC reference VREF+
SPDIF	2x Tx, 4x Rx
Temperature sensor	1x
I2S / SAI	2x

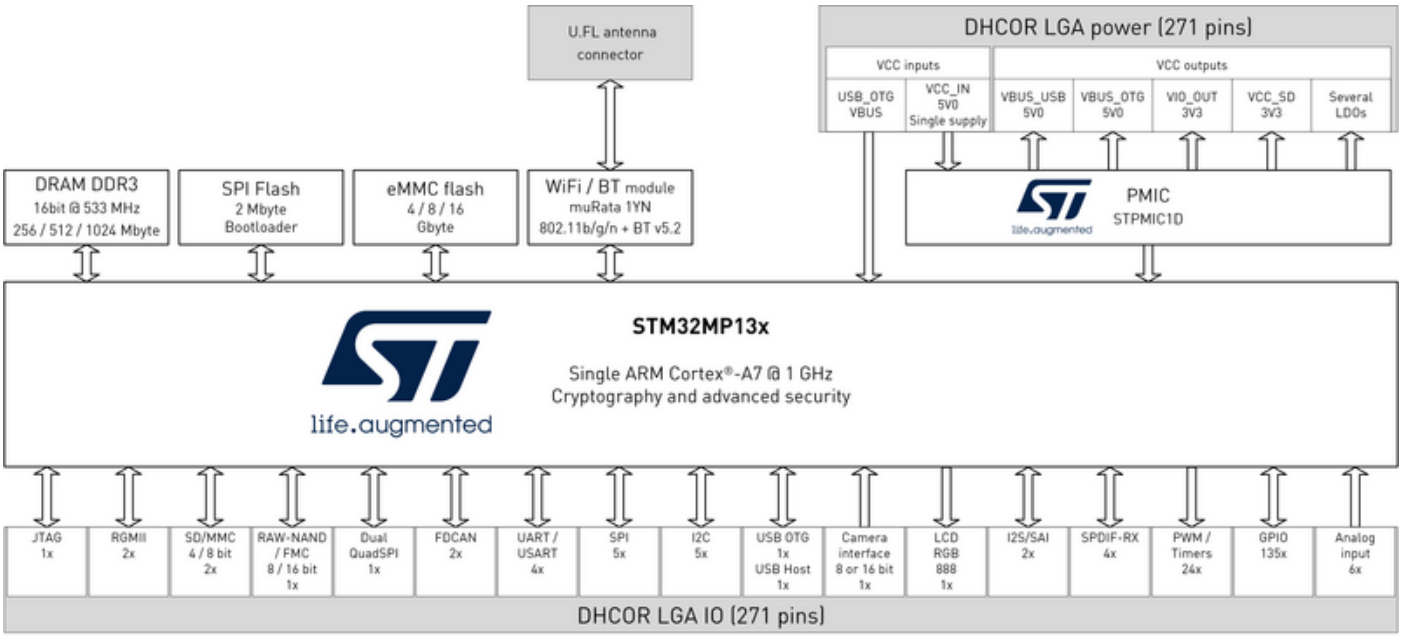
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Number of GPIOs	135
PWM / Timer	Up to 24 timers, 2 watchdogs and PWM | 2 × 32-bit timers with up to 4 IC/OC/PWM or pulse counter and quadrature (incremental) encoder input | 2 × 16-bit advanced timers | 10 × 16-bit general-purpose timers (including 2 basic timers without PWM) | 5 × 16-bit low-power timers | Secure RTC with sub-second accuracy and hardware calendar | 4 Cortex®-A7 system timers (secure, non-secure, virtual, hypervisor) | 2 × independent watchdogs
Debug interface	JTAG interface

Blockdiagramme



Konfigurationen

Artikelnummer	Modell	Produktbeschreibung

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DHCOR STM32MP13

HS00033	DHCR-STM32MP135F-C100-R051-EE-F0409-SPI4-WBT-RTC-I-01LG	DHCOR STM32MP135F, 1 GHz, 512 MByte RAM, 256 kbit EEPROM, 4096 Mbyte eMMC, 2 MB SPI boot flash, WiFi and Bluetooth® via Murata 1YN module with U.FL connector, temp. compensated Real Time Clock, -40 to +85 °C, DHCOR revision, LGA connection
HS00036	DHCR-STM32MP135F-C100-R051-EE-F0409-SPI4-RTC-I-01LG	DHCOR STM32MP135F, 1 GHz, 512 MByte RAM, 256 kbit EEPROM, 4096 Mbyte eMMC, 2 MB SPI boot flash, temp. compensated Real Time Clock, -40 to +85 °C, DHCOR revision, LGA connection
HS00037	DHCR-STM32MP131C-C065-R025-EE-F0409-SPI4-I-01LG	DHCOR STM32MP131C, 650 MHz, 256 MByte RAM, 256 kbit EEPROM, 4096 Mbyte eMMC, 2 MB SPI boot flash, -40 to +85 °C, DHCOR revision, LGA connection

* Andere Konfigurationen auf Anfrage

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DHCOR STM32MP13

Wie setzt sich die Modellnummer für die Bestellung zusammen?

DHCR-CPU-Cxxx-Rxxx-EE[-Fxxxx][-SPI][-RTC][-WBT]-X-01LG

CPU	STM32MP135F: Single Cortex®-A7 with 1 GHz, HW Crypto, Display + Camera, FDCAN, 2x Ethernet, 2x ADC STM32MP135C: Single Cortex®-A7 with 650 MHz, HW Crypto, Display + Camera, FDCAN, 2x Ethernet, 2x ADC STM32MP131C: Single Cortex®-A7 with 650 MHz, HW Crypto, 1x Ethernet, 1x ADC (Please contact us for other options like STM32MP133)
Cxxx	650 MHz: C065, 1 GHz: C100
Rxxx	128 Mbyte: R012, 256 Mbyte: R025, 512 Mbyte: R051, 1024 Mbyte: R102
EE	256 kbit EEPROM
X	Commercial temperature range (0 °C - 70 °C): C, Industrial temperature range (-40 °C - 85 °C): I (only -30 - 70 °C with option WBT) Note: Industrial temp. range for eMMC version is -25 °C - 85 °C. Please contact us for -40 °C - 85 °C version.
01LG	DHCOR Revision, LGA connection
Options	
[-Fxxxx]	4096 Mbyte eMMC: F0409, 8192 Mbyte eMMC: F0819, 16384 Mbyte eMMC: F1638
[-SPI4]	4 Mbyte SPI boot flash
[-RTC]	Low power temperature compensated real time clock (instead of CPU internal RTC)
[-WBT]	WiFi and Bluetooth® via Murata 1YN module with U.FL connector: WBT

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