



## Referenzdesign für sichere industrielle IoT-Geräte basierend auf STM32MP13x

- ▶ Single Board Computer auf Basis des lötbaren DHCOR STM32MP13
- ▶ Kompatibel mit Zubehör aus der Raspberry Pi® Community
- ▶ Highlights: Bluetooth / WiFi, Dual GB Ethernet, Secure Boot, OP-TEE Unterstützung
- ▶ Trusted Platform Module 2.0 auf Anfrage erhältlich
- ▶ Mainline Linux-Support und aktive Software-Wartung
- ▶ Industrielles Produktdesign mit CE-Zertifizierung
- ▶ Garantierte Langzeitverfügbarkeit von 10+ Jahren

## Technische Daten

Board type	Single Board Computer
CPU details	STM32MP135F 1x ARM® Cortex-A7 up to 1 GHz
CPU vendor	STM
CPU type	Cortex-A7
Co-processor available	✘

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	512 MB
eMMC flash	4 GB
SPI NOR flash	4 MB
EEPROM	4 kB
Additional RTC	Temp. compensated RTC RV-3032-C7
Bluetooth available	✓
Bluetooth version	Bluetooth® v5.2
WiFi available	✓
WiFi version	Single band 802.11b/g/n
Ethernet	2x 1 Gbit/s
USB	USB host: 1x USB 2.0 high-speed USB device: 1x USB 2.0 Type-C high-speed
UART (serial console)	1x TTL
TPM (Trusted Platform Module)	TPM 2.0 device ST33TPHF2XSPI

Battery socket	CR1216, CR1220, CR1225
Buttons	1x power, 1x reset
Boot mode	3 bit boot mode switch
Debug interface	JTAG
BSP	Linux Yocto (Debian on request)
Power supply	5 VDC, USB Type-C power supply port
Operating temperature	-25 to 70 °C
Storage temperature	-25 to 70 °C
Dimensions	85 x 56 x 18 mm

## Raspberry Pi 40-pin Expansion

I2C	1x
UART	2x
SPI	1x
I2S/SAI	1x
PWM	2x
CAN	2x
GPIO	up to 28x