



Basierend auf STM32MP25x

- ▶ NEU: pin-kompatibler Familienstandard für Lötmodule von DH
- ▶ Highlights: LPDDR4 RAM, SPI boot flash, eMMC flash, GBit Ethernet, WiFi/BT
- ▶ Dual Cortex-A35 @1.2 GHz und Cortex-M33 @400 MHz
- ▶ Multimedia support mit 3D GPU, Display, Video, Kamera
- ▶ STPMIC1 unterstützt Low Power Modi
- ▶ Mainline Linux Support (auch für Vivante GPU)
- ▶ Platzsparend mit nur 30 x 40 mm
- ▶ Garantierte Langzeitverfügbarkeit von 10+ Jahren

Technische Daten

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|--------------------------|--|
| Board type | Solderable SOM |
| 5-Cent Cooling available | ✘ |
| CPU details | 2x ARM Cortex-A35 up to 1.5 GHz 1x ARM Cortex-M33 up to 400 MHz 1x ARM Cortex-M0+ up to 200 MHz" |
| CPU vendor | ST |

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|------------------------|--|
| CPU type | Cortex-A35 Cortex-M33 Cortex-M0+ |
| Co-processor available | ✓ |
| Number of cores | 4, 2 |
| GPU available | ✓ |
| GPU type | 3D GPU: VeriSilicon® - Up to 150 Mtriangle/s, 900 Mpixel/s with OpenGL® ES 3.1 - Vulkan 1.3 and OpenCL™ 3.0, OpenVX™ 1.3 support |
| PMIC | STPMIC25APQR |
| Features | Neuronal Processing Unit (NPU) VeriSilicon® with up to 900 MHz and 1.35 TOPS Video decode / encode H264 up to 1080p60 |
| Security | "Secure boot TrustZone® peripherals active tamper environmental monitors display secure layers hardware accelerators Complete resource isolation framework "On-the-fly" DDR encryption/decryption (AES-128)" |
| LPDDR4 DRAM | 1 / 2 / 4 GB |
| DRAM details | LPDDR4-2400 32-bit |
| eMMC flash | 4 / 8 / 16 GB |
| eMMC details | 8-bit eMMC with HS200 support |
| SPI NOR flash | 4 MB |
| E2Prom | 4 kB |
| microSD available | ✗ |
| External RTC available | ✓ |
| Bluetooth available | ✓ |

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|------------------------|--------------------------|
| WiFi available | ✓ |
| BSP | Linux (Yocto) |
| Debug interface | JTAG interface on module |
| Power supply | 5.0 VDC |
| Typ. power consumption | 1.5 to 3.5 W |
| Operating temperature | -40 to +85 °C |
| Storage temperature | -40 to +85 °C |
| Dimensions | 40.0 x 30.0 x 3.2 mm |

Available interfaces for DHCOS M-Size LGA (370 pins)

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| Dual Ethernet available | ✓ |
| Ethernet 0 - 1 | 2x Gbit Ethernet, TSN, IEEE 1588v2 hardware, MII/RMII/RGMII |
| SDIO 0 | 1x 4 bit mode, SDIO 4.0 / SD 3.01 / eMMC 5.1, 1V8 voltage transition for UHS-1 modes of SD card supported |
| SDIO 1 | 1x 4 bit mode, SDIO 4.0 / SD 3.01 / eMMC 5.1 |
| CAN 0 - 1 | 2x FDCAN / TTCAN |
| UART 0 | 1x Rx / Tx for Linux and bootloader console connection |
| UART 1 - 3 | 3x Rx / Tx / Rts / Cts, up to 10.0 Mbit/s |
| SPI | 1x 50 Mbit/s |
| QuadSPI | 1x Single, dual and quad communication |
| I2C 0 - 1 | 2x Up to 1 Mbit/s |
| USB 0 | 1x USB 3.0 with 5Gbps Operation mode USB 3.2 Gen 1x1 Interfaces: USB-A, USB-C and microUSB |
| USB 1 | 1x USB 2.0 Host |

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| MIPI-CSI2 | 1x 2-lanes up to 2.5 Gbit/s 5 Mpixels @30 fps |
| Display RGB | 1x 18-bit RGB666 up to FHD (1920 × 1080) @60 fps |
| MIPI-DSI | 1x 4-lanes up to 2.5 Gbit/s Up to QXGA (2048 × 1536) @60 fps |
| LVDS | 1x Dual Link, 2x 4-lane LVDS Up to 1.1 Gbit/s per lane Up to QXGA (2048 × 1536) @60 fps" |
| PCIe | 1x 1-lane PCI Express Gen2 up to 5 Gbit/s |
| PWM | 2x PWM out, 16 Bit |
| Analog | 2x 12 Bit ADC with internal or external voltage reference |
| I2S | 1x |
| Number of GPIOs | 15x |
| Boot mode | 4x, UART/USB, Serial NOR, eMMC, SD-Card, Development boot |
| Supervisor signals | Reset_in, Reset_out, Power_good, Power_button, Interrupt_highest_priority |
| Power inputs | 4x VCC_IN, VRTC, VBAT, ADC_VREF |
| Power outputs | 5x VRGMII, VOUT, VSDIO0, VSDIO1, VRGB |

SoC special features

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|---------------------|---|
| USB CC | 1x USB Type-C® Power Delivery control with two CC lines PHY |
| RTC EVI | 1x Real Time Clock event input |
| WiFi / BT host wake | 2x WiFi and Bluetooth Host wake inputs |
| Ethernet 2 | 1x Optionally Gbit Ethernet switch providing third external PHY interface |

Konfigurationen

| Artikelnummer | Modell | Produktbeschreibung |
|---------------|--|---|
| HS00046 | DHCS-STM32MP255C-C120-R102-EE-F0819-SPI4-USB3-I-01LG | DHCOS STM32MP255C, 1.2 GHz, 1024 MByte LPDDR4 RAM, 256 kbit EEPROM, 8192 MByte eMMC flash, 4 MByte SPI boot flash, USB3, Industrial temp. -25 to +85 °C, DHCOS revision, LGA connection |
| HS00045 | DHCS-STM32MP255C-C120-R204-EE-F0819-SPI4-RTC-USB3-I-01LG | DHCOS STM32MP255C, 1.2 GHz, 2048 MByte LPDDR4 RAM, 256 kbit EEPROM, 8192 MByte eMMC flash, 4 MByte SPI boot flash, temp. compensated RTC (instead of CPU internal RTC), USB3, Industrial temp. -25 to +85 °C, DHCOS revision, LGA connection |
| HS00044 | DHCS-STM32MP255C-C120-R204-EE-F0819-SPI4-RTC-WBT-USB3-I-01LG | DHCOS STM32MP255C, 1.2 GHz, 2048 MByte LPDDR4 RAM, 256 kbit EEPROM, 8192 MByte eMMC flash, 4 MByte SPI boot flash, temp. compensated RTC (instead of CPU internal RTC), WiFi/BT via Murata 2FY, USB3, Industrial temp. -25 to +85 °C, DHCOS revision, LGA connection |
| HS00043 | DHCS-STM32MP255C-C120-R409-EE-F1638-SPI4-RTC-WBT-USB3-I-01LG | DHCOS STM32MP255C, 1.2 GHz, 4096 MByte LPDDR4 RAM, 256 kbit EEPROM, 16384 MByte eMMC flash, 4 MByte SPI boot flash, temp. compensated RTC (instead of CPU internal RTC), WiFi/BT via Murata 2FY, USB3, Industrial temp. -25 to +85 °C, DHCOS revision, LGA connection |

* Andere Konfigurationen auf Anfrage