

STM32MP1 in the 800 MHz variant for even more performance.

- ▶ Dual Core ARM Cortex-A7 CPU with Cortex-M4 subsystem
- ▶ MPU from the famous STM32MP1 series by STMicroelectronics
- ▶ Mainline open source Linux with Etnaviv GPU driver support
- ▶ Advanced hardware encryption and Secure Boot
- ▶ Dual Band WiFi and Dual Mode Bluetooth 5
- ▶ Compatible with other modules from the DHCOM family (SODIMM-200 socket)
- ▶ Guaranteed long-term availability of 10+ years

Technical Data

Board type	Pluggable SOM
5-Cent Cooling available	✘
CPU details	2x ARM Cortex-A7 up to 800 MHz 1x ARM Cortex-M4 up to 209 MHz
CPU vendor	ST
CPU type	Cortex-A7 Cortex-M4

Co-processor available	✓
Number of cores	1 2
GPU available	✓
DDR3 DRAM	256 / 512 / 1024 MB
SPI NOR flash	2 MB
E2Prom	256 Byte
microSD available	✓
External RTC available	✓
Bluetooth available	✓
Bluetooth version	Bluetooth® v5.0 (BR/EDR/BLE), PCB and U.FL antenna connector
WiFi available	✓
WiFi version	WiFi IEEE 802.11b/g/n, 802.11j (hosted mode) with dual band
BSP	Linux (Debian, Yocto)
Debug interface	JTAG interface on module
Power supply	3.3 or 5 VDC
Typ. power consumption	1.0 to 1.5 W
Operating temperature	-40 to +85 °C
Storage temperature	-40 to +85 °C
Dimensions	67.6 x 36.7 x 6.5 mm

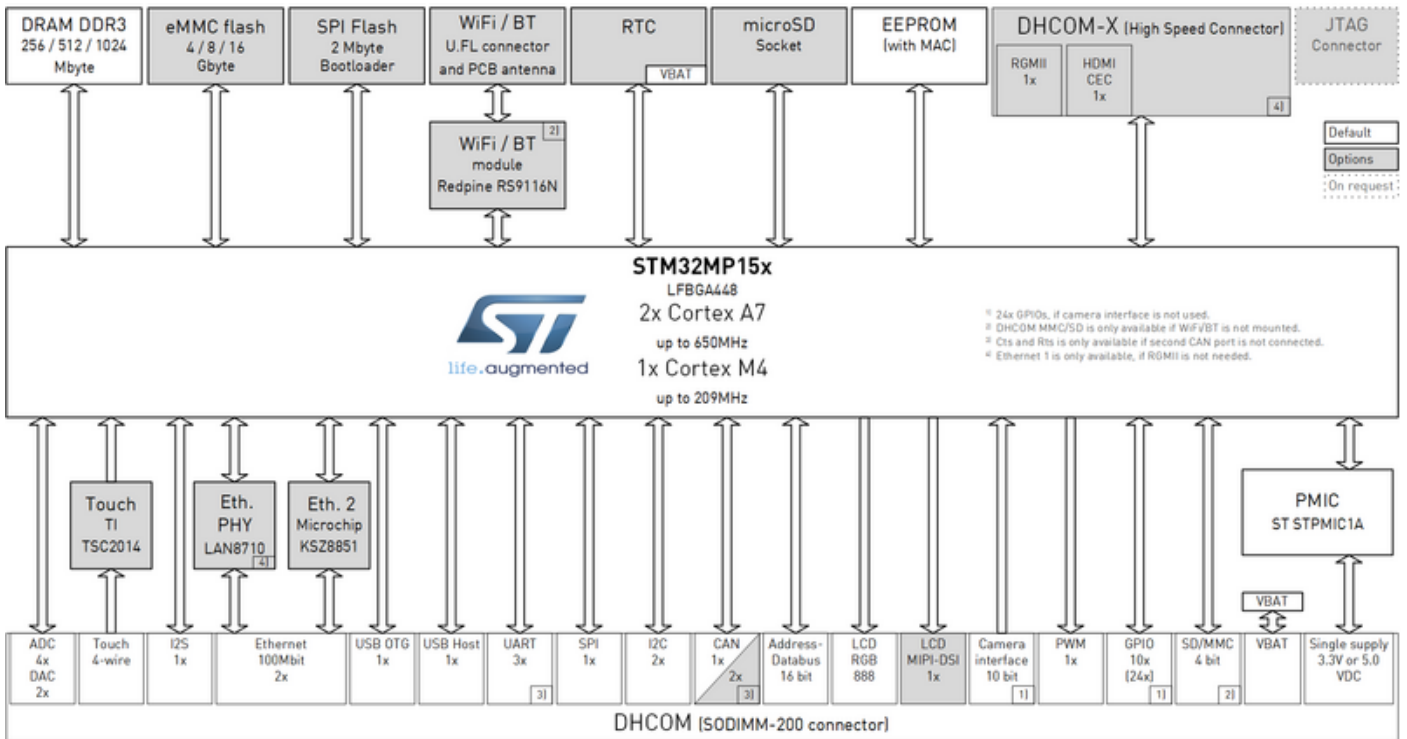
SODIMM-200 socket

Bus interface	16 Bit
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Dual Ethernet available	✓
Ethernet 1	10 / 100 Mbit/s
Ethernet 2	10 / 100 Mbit/s
MMC/SD	4 Bit mode
CAN 1	1 V2.0B and CAN FD V1.0, TTCAN (time triggered)
CAN 2	V2.0B and CAN FD V1.0
UART 1	Rx / Tx / Rts / Cts, up to 12.5 Mbit/s
UART 2	Rx / Tx / Rts / Cts, up to 12.5 Mbit/s
UART 3	Rx / Tx, up to 12.5 Mbit/s
SPI 1	50 Mbit/s
SPI 2	-
I2C 1	1 Mbit/s
I2C 2	1 Mbit/s
USB host 1	High-speed
USB host 2	-
USB OTG	High-speed
CSI (parallel camera)	10 Bit
Display RGB	24 Bit
MIPI-DSI	MIPI®-DSI 2 data lanes up to 1 GHz each
Touch	4-wire
I2S	1
Number of GPIOs	24
PWM output	1 PWM out, 16 Bit

Analog inputs	4x 16 Bit ADC and 2x 12 Bit DAC
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Block Diagrams



Configurations

Item Number	Model (other configurations on request)	Product description
HS00014	DHCM-STM32MP157C-C065-R102-F0819-SPI-E2-CAN2-SD-RTC-WBT-T-DSI-I-01D2	DHCOM STM32MP157C, 650 MHz, 1024 MByte DRAM, 8192 MByte eMMC flash, 2 MByte SPI boot flash, 2x100 Mbit ethernet, second CAN port, microSD socket, RTC, WiFi and BT module, resistive touch, MIPI-DSI interface connected to LVDS, -25 to +85 °C, DHCOM revision, SODIMM200 socket

Item Number	Model (other configurations onrequest)	Product description
HS00015	DHCM-STM32MP157C-C065-R102-F0819-SPI-E-CAN2-SD-RTC-T-DSI-I-01D2	DHCOM STM32MP157C, 650 MHz, 1024 MByte DRAM, 8192 MByte eMMC flash, 2 MByte SPI boot flash, 2x100 Mbit ethernet, second CAN port, microSD socket, RTC, resistive touch, MIPI-DSI interface connected to LVDS, -25 to +85 °C, DHCOM revision, SODIMM200 socket
HS00016	DHCM-STM32MP153C-C065-R102-F0819-SPI-E2-CAN2-RTC-I-01D2	DHCOM STM32MP153C, 650 MHz, 1024 MByte DRAM, 8192 MByte eMMC flash, 2 MByte SPI boot flash, 2x100 Mbit ethernet, second CAN port, RTC, -25 to +85 °C, DHCOM revision, SODIMM200 socket
HS00017	DHCM-STM32MP153C-C065-R051-F0819-SPI-E-CAN2-I-01D2	DHCOM STM32MP153C, 650 MHz, 512 MByte DRAM, 8192 MByte eMMC flash, 2 MByte SPI boot flash, 1x100 Mbit ethernet, second CAN port, -25 to +85 °C, DHCOM revision, SODIMM200 socket
FD00065	Premium Development Kit DHCOM STM32MP15	FD00034 DHCOM Premium Developer Kit 2 FD00029 DHCOM PDK Cablekit HS00014 DHCM-STM32MP157C-C065-R102-F0819-SPI-E2-CAN2-SDR104-RTC-WBT-T-DSI-I-01D2 SD00025 32 GByte microSD card FD00035 DHCOM-7" Display (cap. Touch) with adapter VW00038 Suitcase Premium Developer Kit

* Other configurations on request

What is the model number for ordering?

DHCM-CPU-Cxxx-Rxxx[-Fxxxx][-SPI][-E/E2][-CAN2][-SD/SDR104][-RTC][-WBT][-T][-DSI] [-HS]-X-01D2

CPU	STM32MP157C: Dual Cortex®-A7, HW Crypto, 3D GPU, FDCAN, MIPI®-DSI STM32MP157A: Dual Cortex®-A7, 3D GPU, FDCAN, MIPI®-DSI STM32MP153C: Dual Cortex®-A7, HW Crypto, FDCAN STM32MP153A: Dual Cortex®-A7, FDCAN STM32MP151C: Single Cortex®-A7, HW Crypto STM32MP151A: Single Cortex®-A7
Cxxx	650 MHz: C065
Rxxx	256 Mbyte: R025, 512 Mbyte: R051, 1024 Mbyte: R102
X	Commercial temperature range (0 to +70 °C): C, Industrial temperature range (-40 to +85 °C): I Industrial temp. range is -25 to +85 °C for eMMC. Please contact us for -40 to +85 °C version. Industrial temp. range is -20 to +85 °C for 800 MHz version.
01D2	DHCOM Revision, SODIMM200 socket
Options	
[-Fxxxx]	4096 Mbyte eMMC: F0409, 8192 Mbyte eMMC: F0819, 16384 Mbyte eMMC: F1638
[-SPI]	2 Mbyte SPI boot flash
[-E] or [-E2]	1x 100 Mbit Ethernet: E 2x 100 Mbit Ethernet: E2
[-CAN2]	Second CAN port available
[-SD]	microSD socket with high speed connection: SD
[-RTC]	Low power temperature compensated real time clock (instead of CPU internal RTC)
[-WBT]	WiFi and Bluetooth® via Redpine RS9116N module with U.FL connector and PCB antenna: WBT
[-T]	Resistive touch controller
[-DSI]	MIPI-DSI interface connected to LVDS SODIMM-200 connections
RGMII and CEC	on request