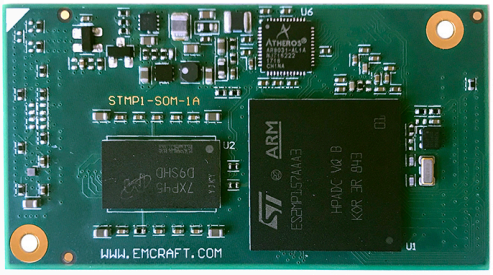
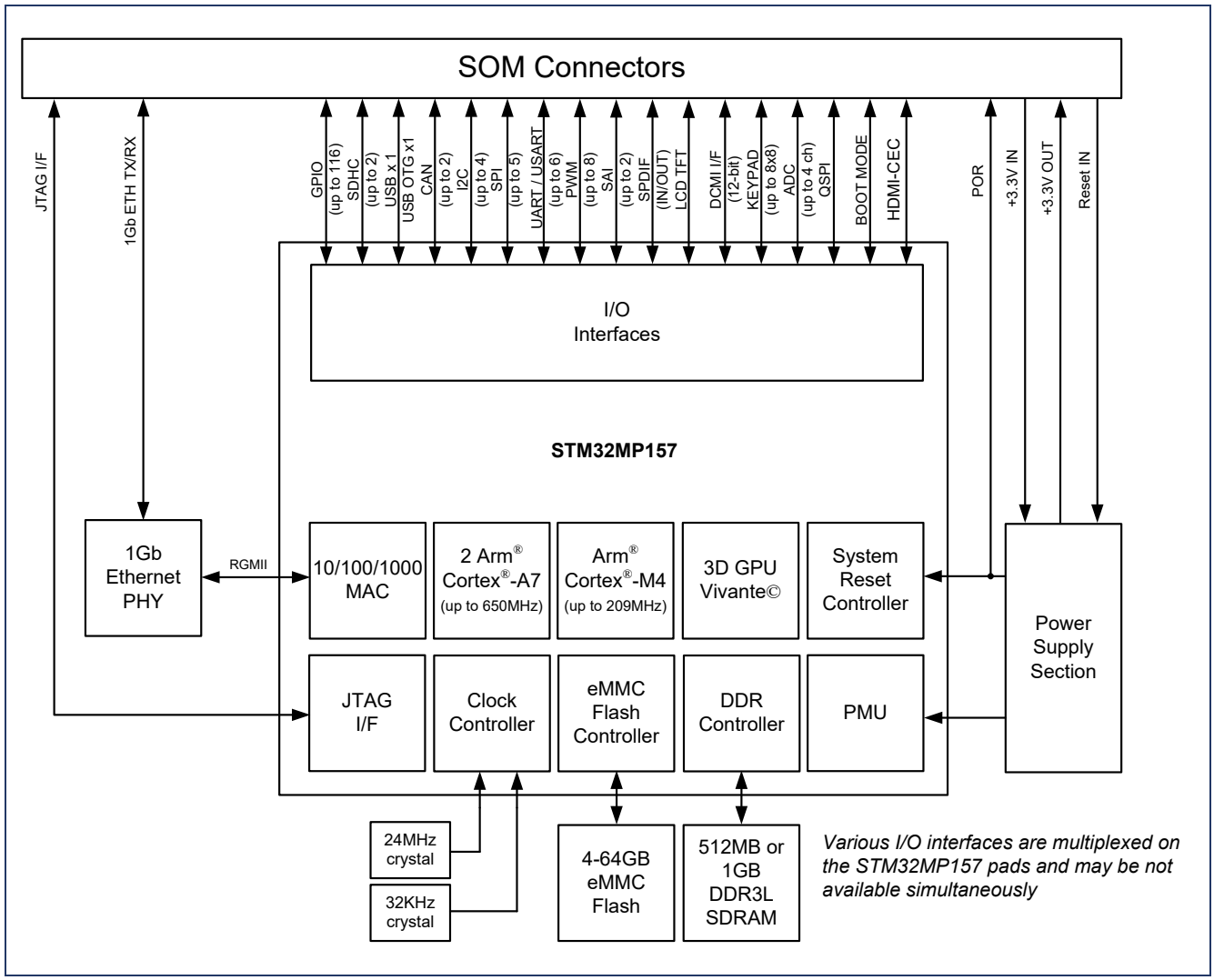
STM32MP1 System-On-Module

The Emcraft STM32MP1 System-On-Module (SOM-STM32MP1) is a miniature module (32mm x 59mm) that combines the STMicroelectronics STM32MP157 multi-core application processor with up to 1GB DDR3L, up to 64GB eMMC and a 1Gb Ethernet PHY module on a single board. The STM32MP157 features two Arm® Cortex®-A7 cores at 650MHz and an Arm® Cortex®-M4 core at 209MHz. The STM32MP1 SOM I/O interfaces are available for a carrier board on the two 100-pin board-to-board connectors.



High-Level Block Diagram

The following is the block diagram of the SOM-STM32MP1:



SOM Features

Core

- 32-bit dual-core Arm Cortex-A7 at 650MHz
- Arm Neon and Arm TrustZone
- L1 32KB I / 32KB D for each core
- 256KB L2 cache
- Arm Cortex-M4 at 209MHz with MPU/FPU
- LFBGA448

Memory

- 16-bit 512MB or 32-bit 1GB DDR3L
- 4-64GB eMMC

Networking

- On-module 1Gb Ethernet PHY

Display and GPU

- 3D GPU: Vivante© – OpenGL ES 2.0
- 24-bit RGB LCD-TFT up to WXGA (1366 x 768) @60fps
- MIPI DSI 2 lanes @ 1Gbps

I/O Peripherals

- 2 USB 2.0 High-Speed ports
- 2 SDMMC
- QSPI
- Multiple UART, I2C, SPI, CAN, GPIO
- Camera, SAI, SPDIF
- Analog peripherals
- WDT, RTC, timers

Power

- 3.3V

Software

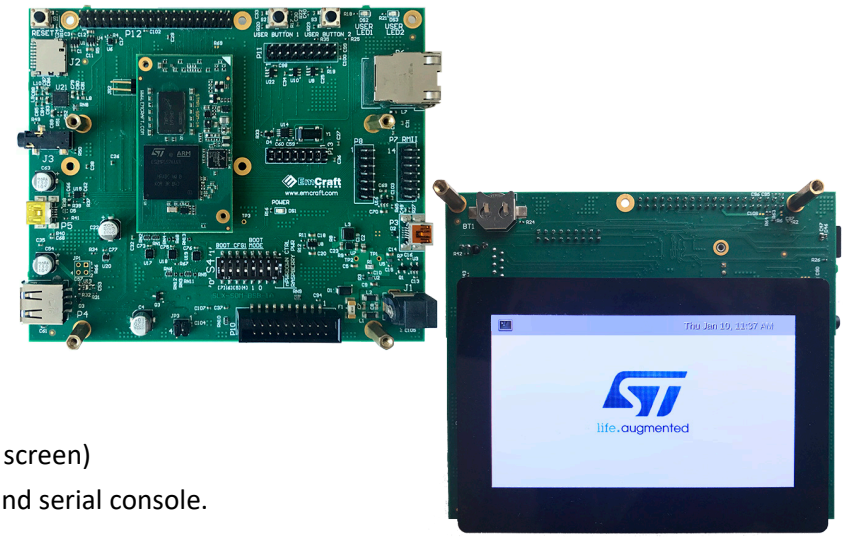
- Linux
- Yocto

OpenSTLinux Distribution

Starter Kit

The KIT-STM32MP1-SOM Starter Kit provides a hardware platform enabling development of STM32MP1 applications using the Emcraft STM32MP1 SOM.
The kit includes the following items:

- STM32MP1 module (SOM-STM32MP1, 1GB DDR3L)
- Development baseboard (SOM-BSB)
- LCD add-on board with LCD panel (4.3" 480x272 LCD with capacitive touch screen)
- Mini-USB Y-cable for USB-based power and serial console.



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