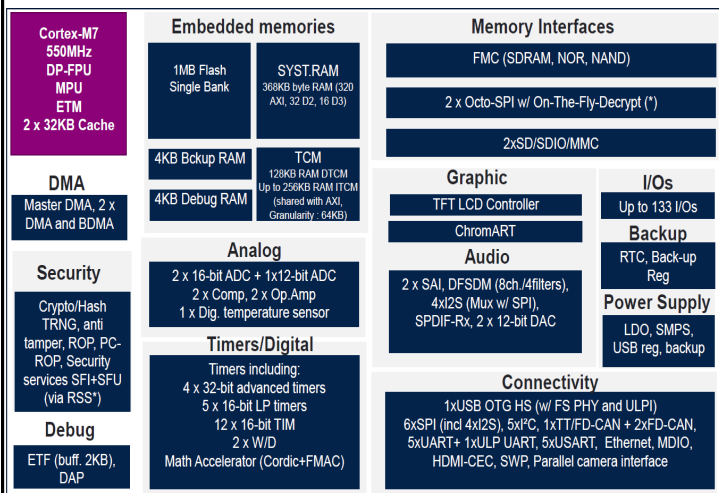


Xynergy^{XS2} combines STMicroelectronics' STM32H725 controller, based on ARM® Cortex™-M7, with a Xilinx Artix-7 FPGA XC7A50. The controller's FSMC interface is used for parallel 16-bit connection to the FPGA ensuring high-speed data transfer between the two devices. The STM32H725 core can be clocked at up to 550 MHz and has up to 1 MB on-chip flash and 564 kB on-chip SRAM. In addition, the 1Gb (64M x 16) DDR-3 memory, which is connected to the FPGA, can be made transparent via the FSMC bus, allowing the controller to use it like external memory.

The micro-controller of the **Xynergy^{XS2}** provides numerous communication interfaces, including 10/100 Ethernet with PHY, USB-OTG, CAN, SPI, COM-Ports (USART/UART), I²C, SDIO ports, ADC channels, DAC channels and general purpose I/O lines. All interface signals available at the 200-pin SO-DIMM edge connector are shown in the block diagram.



(*) : on STM32H735 CPN (Crypto) (**) : CPN in "3" (Ex STM32H725ZGT3)

STM32F725 Block Diagram

The FPGA expands I/O capabilities of the **Xynergy^{XS2}** by delivering up to 35 differential (LVDS) I/O lines, useful for connecting FMC compliant expansion boards, and eight single-ended general purpose I/O lines.

For the pinout of the SO-DIMM connector, please contact DSP Systeme GmbH

A break-out board with all pins accessible at 100mil header plus JTAG headers is also available.

More information on this product and other products of DSP Systeme GmbH can be found at <https://dsp-sys.de>



Specifications:

Power consumption: 3 Watts*) @ 3.3V (alternate V_{ccIO} for FPGA Bank 15)

Micro-Controller: STM32H725 (H735 optional)

FPGA: Artix-7 XC7A50

External Memory: 128 MBytes DDR3, 64 Mbit SPI flash

I/O: Up to 130 general purpose I/O pins, supporting different I/O standards and protocols (see text)

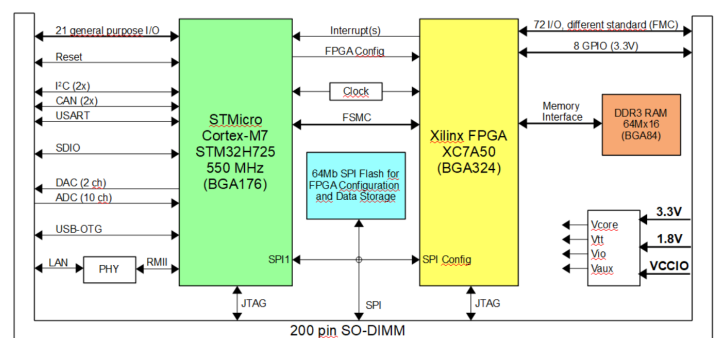
Physical Dimensions: 67.6 x 30.0 x 6mm (SO-DIMM200)

Weight: approx. 6grams

Matching Socket: e.g., TE Connectivity 1473005-4

Bottom/Top Component Height: 2.0/2.0mm (max.)

*) depending on the application



Simplified Xynergy^{XS2} Block Diagram

Typical applications:

Point of Sale (PoS), Industrial Control, Industrial Imaging, Motion Control, M2M Communication etc.

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