Inflexion™ Zynq 7020 SOM-LV

Dual core ARM® Cortex-A9 processing system running up to 766 MHz with Artix™-7 FPGA programmable logic (PL) fabric
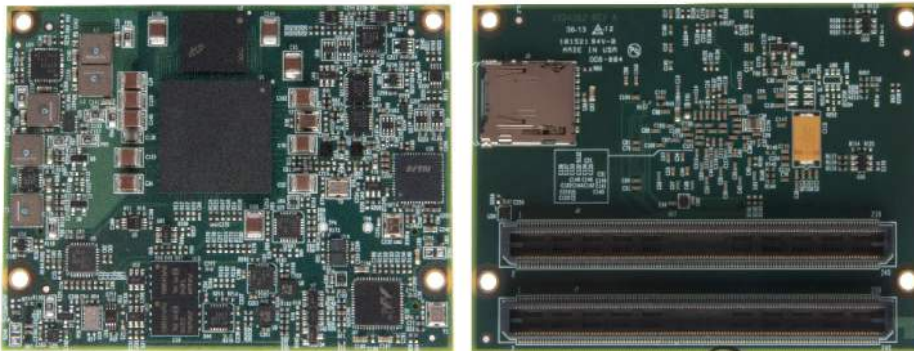
Today's smart systems provide increasing amounts of information to make more intelligent decisions for efficiency, security, cost, quality, and productivity. The vast amount of data these smart systems transfer requires a combination of software-based control with real-time processing capability and optimized system interfaces.

Beacon Embeddedworks' Inflexion™ System on Module (SOM), based on Xilinx's Zynq™ Z-7020 System on Chip (SoC), is an ideal off-the-shelf solution for today's smart systems. The Zynq Z-7020 SoC platform's combination of a high performance application microprocessor with a Field Programmable Gate Array (FPGA) in a single chip provides a best-in-class platform that balances both performance and power. By utilizing the Zynq Z-7020 SoC, Beacon EmbeddedWorks' Inflexion SOM is a perfect solution for applications that require high processing power, a high level of security and reliability, the ability to optimize system interfaces, and perform real-time analytics and control.

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HIGHLIGHTS

- Product-ready System on Module with a Xilinx Zynq Z-7020 All Programmable SoC featuring dual core ARM® Cortex™-A9 processing system running up to 766 MHz with Artix™ -7 FPGA programmable logic (PL) fabric
- Network connectivity: 10/100/1000M triple-speed Gigabit Ethernet controller IEEE 802.3 Ethernet
- Industrial temp (-40°C to 85°C)
- Compact SOM-LV Type 1 form factor (59.1 x 76.2 x 7.9 mm)
- Same connectors as i.MX31 SOM-LV
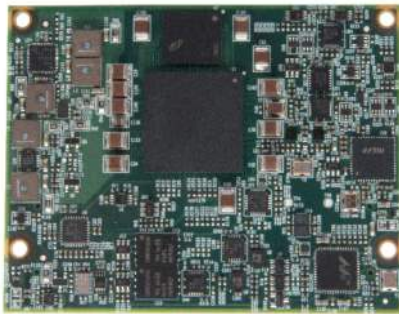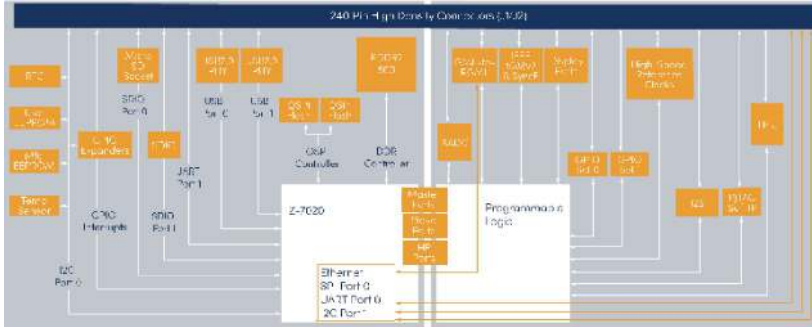- Long product lifecycle
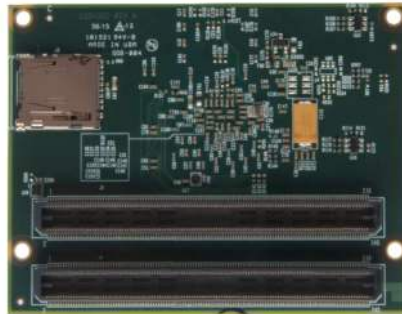

Inflexion™ Zynq 7020 SOM-LV
Enlarged to show detail

The Inflexion SOM can help you realize a faster time to market, reduce design risk, increase product quality, decrease development costs, and address resource constraints resulting in a lower total lifecycle product cost. Additionally, Beacon EmbeddedWorks has the experience and knowledge to help you integrate the Inflexion SOM into your product design, select the right Zynq-7000 platform, and develop a customized Inflexion SOM to meet the needs of your application.

Inflexion™ Zynq 7020 SOM-LV Block Diagram

Top View

Bottom View

PRODUCT FEATURES

Processor
- Xilinx Zynq™ Z-7020 All Programmable SoC featuring dual-core ARM® Cortex™-A9 processing system running up to 766 MHz with Artix™ -7 FPGA programmable logic fabric

Embedded Memory
- 32-bit wide LPDDR2-800, 512 MB
- QSPI Flash, 32 MB

Network Connectivity
- 10/100/1000M triple-speed Gigabit Ethernet controller
- IEEE 802.3 Ethernet
- IEEE 1588v2 and IEEE 802.3az support
- Synchronous Ethernet (SyncE) with PTP support

Display
- Programmable color LCD controller supports 18-bit TFT display (optional)
- Migration path to support LVDS display interface

Touchscreen
- Integrated 4-wire touchscreen controller (optional)

Audio
- I2S compliant audio codec
- Stereo headphone output, stereo line out, and stereo microphone input

Removable Storage
- MicroSD card support on SOM
- SDIO host interface support

USB
- Two USB 2.0 high-speed On-the-Go/Host/ Device interfaces

Serial I/O
- 2xUARTs, 1xSPI, 2xI2C

GPIO
- Programmable I/O
- Two banks with independently adjustable VCCIO
- Up to 140 single-ended PL I/O
- Up to 34 LVDS pairs
- 3 differential clock inputs from host
- I2C 8-port GPIO and interrupt expander for PS

XADC
- Dedicated differential ADC lines
- Additional auxiliary differential ADC lines
- On-SOM +1.25V reference with +/-0.2% accuracy (optional)
- On-chip thermal and voltage supply monitors

Debug
- JTAG support
- TPIU support for ARM trace buffer access up to 32-bits wide, 250 MHz
- +Simultaneous access to Xilinx TAP controller and ARM DAP controller

RoHS Compliant