

TySOM™ Embedded Development Kit

High-Performance Embedded Development

The TySOM™ Embedded Development Kit is for embedded designers who need a high-performance RTL simulator/debugger to do the HW/SW co-verification for their Zynq-based embedded applications such as IoT, Automotive, Factory automation, UAV and Robotics. The kit includes Riviera-PRO™ Advanced Verification Platform and a TySOM Zynq™ development/prototyping board that contains single Zynq chip (FPGA + Dual ARM® Cortex™-A9), memories, and various communication and multimedia interfaces. In addition, reference designs for application such as IoT, ADAS and Robotics. Also, a complete reference design, which contains the SW (Linux) and all the hardware blocks required to support the peripherals on the board, is provided.



TySOM-1-7Z030



TySOM-2-7Z045



TySOM-2A-7Z030

Top Benefits

- **High-Performance RTL Simulator** for developing complex Zynq-based systems
- **Vivado Suite Design, HLx edition, and SDSoC**
- **Advanced RTL Debugging:** HW/SW co-verification for Zynq device, Dataflow, PostSimulation Debug, Xtrac and Code Coverage
- **Zynq Development Board (FPGA + dual ARM® Cortex-A9 core) with FMC or Digilent® Pmod™ expansions**
- **Pre-Validated** Ubuntu Embedded Host Reference Design
- **Complete reference design for IoT, Automotive, SDR and Robotics application**

High-Performance RTL Simulation

Riviera-PRO™ incorporates industry-leading simulation optimization algorithms to achieve the highest performance in mixed-language simulations for VHDL/Verilog. Having the HW/SW co-verification solution for Zynq device, Riviera-PRO enables Zynq users to verify the complex Zynq-based systems before any synthesis and prototyping. Integrated multi-language debug environment enables automating time-consuming design analysis tasks in order to fix bugs quickly.

Advanced Debugging

Advanced debugging features include HW/SW co-verification solution for Zynq SoC, Post-Simulation Debug, Advanced Dataflow, Code Coverage and Xtrac supporting all standard languages and provides intuitive ways to visualize and analyze key objects in the design.

TySOM™ | Embedded Development Kit



TySOM-1 EDK



TySOM-2 EDK



TySOM-2A EDK

Package Content	Riviera-PRO Installation DVD, Vivado Design Suite edition uSD card pre-loaded with Ubuntu, USB drive pre-loaded with reference designs and technical documentations, LAN and HDMI cables Power Adaptor with International Adapters	Riviera-PRO Installation DVD, Vivado Design Suite edition Design Suite edition uSD card pre-loaded with Ubuntu, USB drive pre-loaded with reference designs and technical documentation, miniUSB UART, LAN, HDMI cables, Power supply and power cable	Riviera-PRO Installation DVD, Vivado Design Suite, HLx edition, uSD card pre-loaded with Ubuntu, USB drive pre-loaded with reference designs and technical documentation, miniUSB UART, LAN, HDMI cables, Power supply and power cable
Zynq SoC Device	Zynq XC7Z030-1FBG484C SoC	Zynq XC7Z045/XC7Z100-FFG900 SoC	Zynq XC7Z030-1FBG484C SoC
Memory	512 MB DDR3 Memory 128 MB SPI Flash Memory 64 KB EEPROM uSD Card Socket	1GB DDR3 Memory 128 MB SPI Flash Memory 64 KB EEPROM uSD Card Socket	1GB DDR3 Memory 128 MB SPI Flash Memory 64 KB EEPROM uSD Card Socket
Interfaces	Ethernet 10/100/1000 2x USB 3.0 & 2x USB 2.0 2x UART miniPCI-Express HDMI Audio IN/OUT CMOS camera/Touch panel LCD connector 2x Pmod JTAG PS/PL Header	2x FMC HPC Ethernet 10/100/1000 HDMI 4x USB 2.0 USB to UART Bridge JTAG PL Header	1x FMC HPC Ethernet 10/100/1000 Ethernet 10/100/1000 (IEEE 1588) HDMI 4x USB 2.0 USB to UART Bridge JTAG PL Header Wi-Fi and Bluetooth
Miscellaneous	8x User Dip Switch 8x User LED PL, PS Reset Pushbuttons Real Time Clock/Calendar 1 GTX (MMCX Connectors) XADC Accelerometer Temperature Sensor 4x Clock Oscillators	8x User Dip Switch 4x User LED PL and PS Reset -Pushbuttons Real Time Clock/Calendar 6x GPIO XADC Accelerometer Temperature Sensor	8x User Dip Switch 4x User LED PL and PS Reset Pushbuttons XADC Real Time Clock/Calendar Accelerometer Temperature Sensor