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 either Zynq® 7000 or Zynq® UltraScale+™ MPSoC device (FPGA + Multi 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.
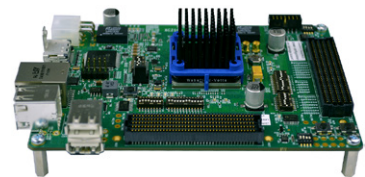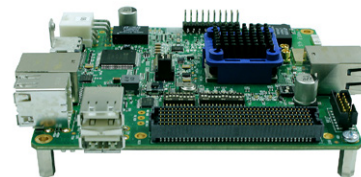
TySOM-3A-ZU19EG

TySOM-3-ZU7EV

TySOM-2-7Z100

TySOM-2A-7Z030

TySOM-1-7Z030

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, Xtrace and Code Coverage

- **Zynq® 7000 and Zynq® UltraScale+™ MPSoC Development Board (FPGA + Multi ARM® Cortex-A9 core) with FMC connector**

- **Pre-Validated** Ubuntu Embedded Host Reference Design

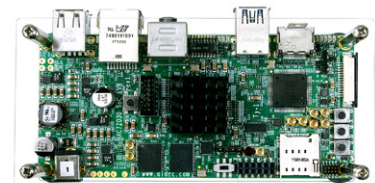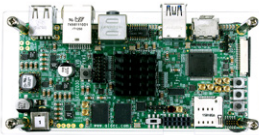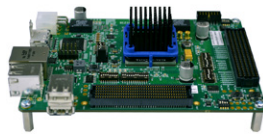- **Complete reference design for IoT, Automotive, SDR and Robotics application**

High-Performance RTL Simulation

Riviera-PROTM 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. It also contains advanced debugging features such as Post-Simulation Debug, Advanced Dataflow, Code Coverage and Xtrace.

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	TySOM-1 EDK	**TySOM-2 EDK**	**TySOM-2A EDK**	**TySOM-3 EDK**	**TySOM-3A 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 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	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	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 XC7Z100-FFG900 SoC	Zynq XC7Z030-1FBG484C SoC	Zynq UltraScale+ ZU7EV-FFVC1156 MPSoC	Zynq UltraScale+ ZU19EG-FFVB1517 MPSoC
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	4Gb RAM – DDR4 for PL DDR4 SODIMM Memory for PS Micro-SD 256Mb QSPI Flash Memory 64 Kb EEPROM	8 Gb RAM – DDR4 for PL DDR4 SODIMM Memory for PS Micro-SD 512Mb QSPI Flash Memory 64 Kb EEPROM
Interfaces	Ethernet 10/100/1000 2× USB 3.0 & 2x USB 2.0 2× UART miniPCI-Express HDMI Audio IN/OUT CMOS camera/ Touch panel LCD connector 2× Pmod JTAG PS/PL Header	2× FMC HPC Ethernet 10/100/1000 HDMI 4× USB 2.0 USB to UART Bridge JTAG PL Header	1× FMC HPC Ethernet 10/100/1000 Ethernet 10/100/1000 (IEEE 1588) HDMI 4× USB 2.0 USB to UART Bridge JTAG PL Header Wi-Fi and Bluetooth	2× Gigabit Ethernet Wi-Fi/Bluetooth module 4x USB 3.0 ports SATA CAN QSFP+ HDMI IN/Out DisplayPort Pmod connector USB to UART Xilinx JTAG Connector	2x Gigabit Ethernet Wi-Fi/Bluetooth 4x USB 3.0 ports 1x USB 2.0 OTG SATA, CAN QSFP+ HDMI IN/OUT Display Port Pmod Connector USB to UART PCIe x1 GEN3/4 Connector Xilinx JTAG Connector
Miscellaneous	8× User Dip Switch 8× User LED PL, PS Reset Pushbuttons Real Time Clock/Calendar 1 GTX (MMCX Connectors) XADC Accelerometer Temperature Sensor 4× Clock Oscillators	8× User Dip Switch 4× User LED PL and PS Reset Pushbuttons Real Time Clock/Calendar 6× GPIO XADC Accelerometer Temperature Sensor	8× User Dip Switch 4× User LED PL and PS Reset Pushbuttons XADC Real Time Clock/Calendar Accelerometer Temperature Sensor	6x User Dip Switches 6x User LEDs PL and PS Reset Pushbuttons Accelerometer Temperature Sensor SYSMON Current monitor	4x User Dip Switches 5x User LEDS PL and PS Reset Pushbuttons Accelerometer Temperature Sensor SYSMON Current monitor

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