VERSATILE EMBEDDED SYSTEM DESIGN PLATFORM WITH FULL-FEATURED, POWER-EFFICIENT 28NM FPGA
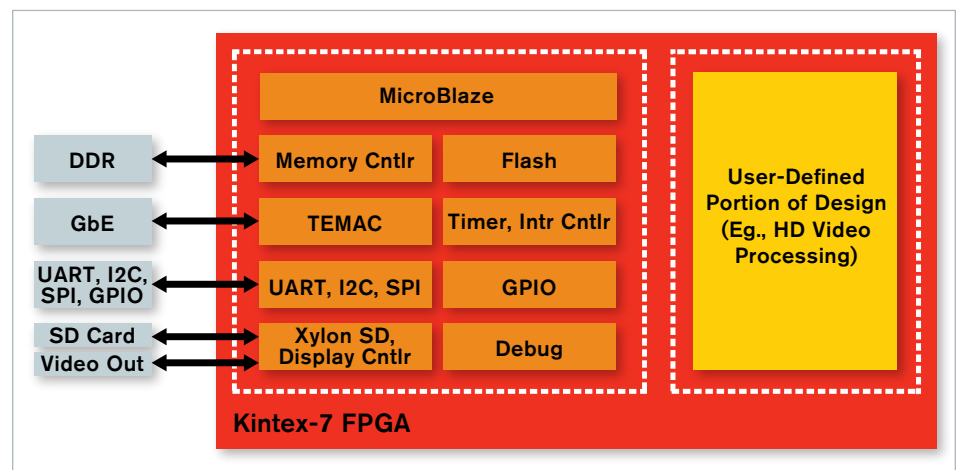
KINTEX-7 FPGA EMBEDDED KIT: SIMPLIFIED DESIGN OF PROGRAMMABLE, HIGH-PERFORMANCE EMBEDDED SYSTEMS

⟫ Xilinx Embedded Systems Design Solutions

- Integrated kit boosts developer productivity with a combination of silicon, tools, IP, and reference design

- Foundation for simpler, smarter development of customizable system-on-chip (SoC) solutions

- Embedded reference design reduces development time by including most commonly used building blocks (processor, memory and I/O interfaces), freeing designers to focus on customization

- Out-of-box ready, with advanced tools for both software and hardware designers

- Scalable optimized architecture streamlines derivative products and migration for maximum design reuse across devices

Embedded processing has become a mainstay for addressing rapidly changing product requirements and building highly differentiated products. With the additional power of programmable logic, embedded systems can drive up integration levels to reduce total system cost, weight, area, and power. Continuing its 28nm market leadership, Xilinx offers embedded systems developers the power, performance, and productivity advantages of its 7 series FPGAs with the highly flexible Kintex™-7 FPGA Embedded Kit. Designers in aerospace, defense, broadcast, medical, and wireless markets who require a control processor combined with advanced FPGA features can shorten development time with the kit's tools and reference design.

MICROBLAZE PROCESSOR SUBSYSTEM (PSS)

The MicroBlaze™ processor subsystem offers software programmability for high-performance FPGA designs.

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What's Inside the Kintex-7 FPGA Embedded Kit

- KC705 base board with the Kintex-7 XC7K325T-2FFG900CES FPGA

- Embedded Targeted Reference Design (TRD) including MicroBlaze soft processor

- Full-seat ISE® Design Suite Embedded Edition, device-locked for the Kintex-7 325T FPGA

- USB, Ethernet, HDMI, and power cables

- Power supply

- Agile Mixed Signal (AMS) evaluation card

Other Designs and Documentation

- BIST Board Diagnostic Test Design

- IBERT XCVR Test Design

- Reference Designs including Multi-Boot, DDR3, PCIe x4 Gen2 PIO, AMS, and the base TRD with integrated DDR3, PCIe, and AXI)

- Getting Started Guide; design data sheet; hardware and software tutorials
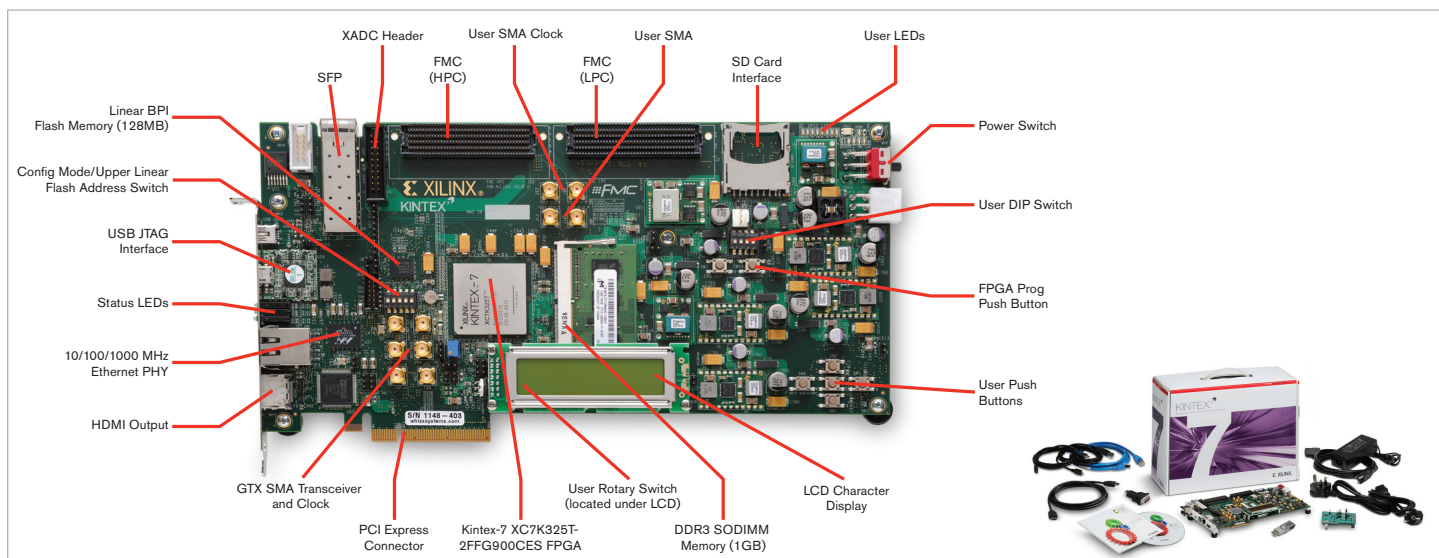
Hardware Tools: Xilinx Platform Studio

- Wizards: Base System Builder (BSB), Create IP, Debug Configuration

- Graphical interface for connecting industry-standard (AXI4) IP

- Catalog of 100+ parameterizable IP cores

- Netlist and bitstream generation

- Exporting to Software Development Kit (SDK)

Software Development: Eclipse-based SDK

- Code development (edit, compile, link, build; automatic OS/RTOS BSP creation)

- Debugging (run, step, break; examine watch-points, registers, memory; program flash)

- Profiling (examine critical code sections)

BOARD FEATURES

XADC Header · User SMA Clock · User SMA · User LEDs · SFP · FMC (HPC) · FMC (LPC) · SD Card Interface · Linear BPI Flash Memory (128MB) · Power Switch · Config Mode/Upper Linear Flash Address Switch · User DIP Switch · USB JTAG Interface · FPGA Prog Push Button · Status LEDs · 10/100/1000 MHz Ethernet PHY · User Push Buttons · HDMI Output · GTX SMA Transceiver and Clock · User Rotary Switch (located under LCD) · LCD Character Display · PCI Express Connector · Kintex-7 XC7K325T-2FFG900CES FPGA · DDR3 SODIMM Memory (1GB)

Take the NEXT STEP

For more information, support, documents, and reference designs, or to purchase, please visit: **www.xilinx.com/k7embkit**

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