



*First-Time Success. By Design.*

## **Your Go-to Design Partner for Turnkey Embedded Solutions**

### **Who We Are**

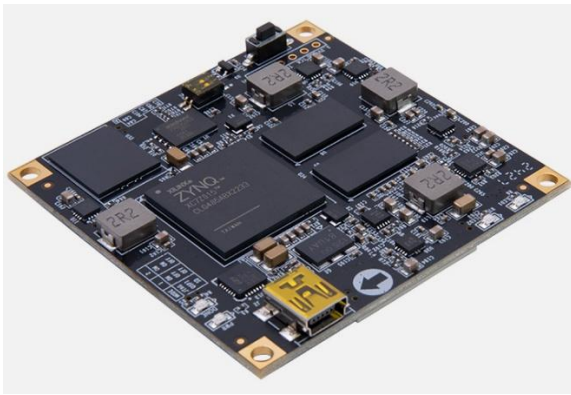
- Founded in 2001 in Carlsbad, CA
- Focus on hardware and software development for embedded systems
- Turnkey solutions from concept to production
- Stable team developers with senior engineers averaging 20+ years of experience
- Long-term customer relationships ensuring retained knowledge

### **Our Expertise**

- **Hardware Design/Development:** Board-level hardware, FPGA/ASIC (Verilog, VHDL, UVM), RF/Analog, Signal Integrity, Timing Analysis, EMC Compliance
- **Software Design/Development:** Embedded/Application Software, Embedded Linux, RTOS (ThreadX/MS Azure, Nucleus), Communication Protocols (MAC/L1/Application layers)
- **System Design & Integration:** Communications Systems, HW/SW Partitioning, Processor/OS Selection, Standards Compliance/Certification
- **Mechanical Design:** Modeling, Thermal/Vibration/Shock Analysis, Prototype Manufacturing

### **Technologies & IP**

- **Wireless/RF:** LTE, WiMAX, CDMA, Bluetooth, GPS, Wi-Fi, GSM/GPRS, PHS, DECT, Zigbee
- **Wired:** HomePlug, G.hn, 40GbE/10GbE/1GbE (Copper/Fiber)
- **High-Speed Serial/Digital:** PCIe, USB/ULPI, SerDes (28G/10G), FPGA/DSP/Micro, DDR4/DDR3/QDR
- **Video:** HDR, H264, MPEG4/2, NTSC/PAL
- **Power & Analog:** Conversion and Design
- **Programming:** C, C++, Assembly
- **Embedded Linux**
- **RTOS:** Thread X (MS Azure), Nucleus
- **FPGA Development Board (Virtex 7 Based):** 980k logic cells, PCIe Gen2 x4, DDR3 1Gbit, Advanced Clocking, Dual DDS (1G sample 14-bit DAC, low phase noise), Dual ADC (16-bit, 250MSPs, JESD204B)



## FPGA Development Boards

### Target Market Segments

- **Aerospace & Defense:** Mission-critical, ruggedized solutions for avionics, communications, and defense systems
- **Advanced Camera & Sensor Technology:** Precision imaging/sensing with high-speed data acquisition, low-noise analog, FPGA/DSP processing, ISP algorithms
- **Medical Devices:** MCU/MPU systems with sensors and software meeting regulatory standards for monitoring, diagnostics, and therapeutics
- **Industrial Equipment:** Durable systems for automation, robotics, and machinery with advanced controls, interfaces, and firmware for harsh environments
- **Enterprise:** Hyperscalers, Servers, and Data Centers

### Our Technology Partners



## From Concept to Prototype – Partner with Us Today!

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*Serrano Systems, Inc. – Engineering Excellence for Embedded Innovation*