

VeriTiger®-E4000T

VeriTiger®-E4000T is the most deployed prototyping system from HyperSilicon, using Xilinx Virtex UltraScale XCVU440 FPGA, which is the industry's only high-end FPGA at the 20nm process node. VeriTiger-E4000T delivers high performance, fast running speed and flexible scalability to accelerate software development, system verification and validation. Through the Protowizard® software to manage prototyping runtime resource and Semu® software to deliver highest debug productivity, VeriTiger-E4000T can dramatically reduce the time-to-tapeout (TTT) pressure of digital IC design.



Hardware

FPGA Information

- ▣ Xilinx Virtex UltraScale XCVU440 FPGA
- ▣ 26 Million Estimated ASIC Gates
- ▣ 5541K System Logic Cells
- ▣ 88.6Mb Total Block RAM
- ▣ 2880 DSP Slices

Clock Resources

- ▣ 10 Programmable Differential Clocks
- ▣ 1 Clock at 20MHz, 1 Clock at 27MHz
- ▣ 8 QTH Differential Clock Inputs, 8 QTH Differential Clock Outputs
- ▣ 8 Programmable Differential Clock Outputs on Front Panel
- ▣ 2 Dedicated Switchable MGT Clocks
- ▣ 1 Multi-FPGA Shared and Global Programmable Differential ZCLK Clocks
- ▣ 2 Global Programmable and Direct Connect-to FPGA Differential Clocks Offered By 2 Pairs of MMCX

Connector Resources

- ▣ 4 HSPI2-MGT Connectors, Offering 32 Lanes GTH Channel
- ▣ 2 QSFP Interfaces, Offering 8 Lanes GTH Channel
- ▣ 8 HSPI2-DQS Connectors
- ▣ 2 HSPI2-CAC Connectors
- ▣ 10 HSPI2-LVDS Connectors, Offering 238 LVDS Differential Pairs
- ▣ 1028 High-performance I/Os in total in HSPI2 Connectors
- ▣ 2 QTH-MGT Connectors, Offering 4 Lanes GTH Channel and 24 Single-ended I/Os
- ▣ 1 DDR4 SO-DIMM on top panel, supporting ECC, providing up to 16GB of memory, and running at 2,133Mbps most
- ▣ 1 DDR3 SO-DIMM on top panel, providing up to 16GB of memory, and running at 1,866Mbps most
- ▣ 4 Independent Buttons, 2 Four-digit DIP Switches, 8 User-defined LED Lights

Platform Parameters

- ▣ Dimensions: L223mm, W340mm, H91mm
- ▣ Weight: 3.0 Kg
- ▣ Max Power Consumption: 150W

Software

System Monitoring

- Monitor Voltage and Current
- Monitor System Running States
- Monitor FPGA Temperature
- Monitor Daughter Cards States
- Auto Power Off on Overvoltage or Overcurrent
- Auto Fan Speed Adjustment and Support Mute Mode

Deep Debug

- Support Virtual Pins for Debug Signal Capturing
- Support the Reset of the Daughter Cards
- Support Deep Debug, Waveform Trigger and Display
- Support EDIF Partition and System-level Timing Analysis
- Semu® Software to Deliver Highest Debug Productivity

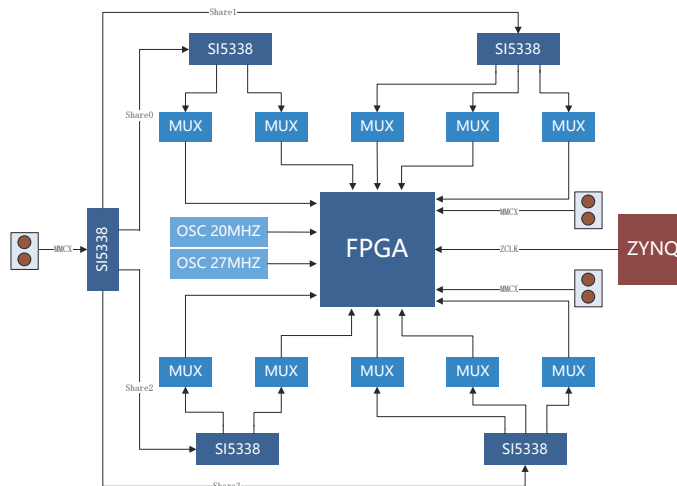
Support Multiple Loading Modes

- USB-JTAG Mode
- USB-Selected Map Mode
- Ethernet-JTAG Mode
- Ethernet-Selected Map Mode
- SDCard Configuration

Resources Management

- ProtoWizard® software for Multi-design and Multi-user
- Support Multi-VeriTiger-V19P Systems Management
- Administrator Permission
- Support Suit and Communication Encryption
- Support Online Firmware Update
- Support Hardware Self-test
- HyperDman Software for Daughter Cards Management

Clock Architecture



I/O Architecture

