VeriTiger®-DE4000T



VeriTiger®-DE4000T 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-DE4000T 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-DE4000T can dramatically reduce the time-to-tapeout (TTT) pressure of digital IC design.



Hardware

FPGA Information

- 2 Xilinx Virtex UltraScale XCVU440 FPGAs
- 52 Million Estimated ASIC Gates
- 11082K System Logic Cells
- 177.2Mb Total Block RAM
- 5760 DSP Slices

Clock Resources

- 20 Programmable Differential Clocks
- 2 Clocks at 20MHz, 2 Clocks at 27MHz
- 16 QTH Differential Clock Inputs, 16 QTH Differential Clock Outputs
- 8 Programmable Differential Clock Outputs on Front Panel
- 4 Dedicated Switchable MGT Clocks
- 2 Multi-FPGA Shared and Global Programmable Differential ZCLK Clocks
- 4 Global Programmable and Direct Connect-to FPGA Differential Clocks Offered By 4 Pairs of MMCX Connectors

Connector Resources

- 8 HSPI2-MGT Connectors , Offering 64 Lanes GTH Channel
- 2 QSFP Interfaces, Offering 8 Lanes GTH Channel
- 16 HSPI2-DQS Connectors
- 4 HSPI2-CAC Connectors
- 20 HSPI2-LVDS Connectors, Offering 476 LVDS Differential Pairs
- 2056 High-performance I/Os in total in HSPI2 Connectors
- 4 QTH-MGT Connectors, Offering 8 Lanes GTH Channel and 48 Single-ended I/Os
- 2 DDR4 SO-DIMM on top panel, supporting ECC, providing up to 32GB of memory, and running at 2,133Mbps most
- 2 DDR3 SO-DIMM on top panel, providing up to 32GB of memory, and running at 1,866Mbps most
- 8 Independent Buttons, 4 Four-digit DIP Switches, 16 User-defined LED Lights

Platform Parameters

- Dimensions: L447mm, W340mm, H95mm
- Weight: 7.0 Kg
- Max Power Consumption: 300W

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-lever Timing Analysis
- Semu® Software to Deliver Highest Debug Productivity

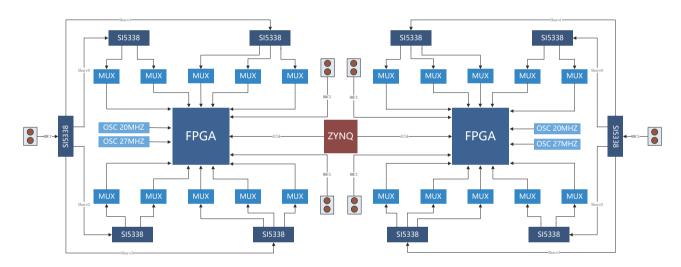
Support Multiple Loading Modes

- USB-JTAG Mode
- USB-Selected Map Mode
- Ethernet-ITAG 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

