

VeriTiger<sup>®</sup>-V19P is the latest generation of prototyping system from HyperSilicon, using Xilinx Virtex UltraScale+ XCVU19P FPGA which provides the highest logic density and I/O count on a single device ever built by Xilinx. VeriTiger-V19P delivers higher performance, faster running speed and more flexible scalability to accelerate software development, system verification and validation. Through the Protowizard<sup>®</sup> software to manage prototyping runtime resource and Semu<sup>®</sup> software to deliver highest debug productivity, VeriTiger-V19P can dramatically reduce the time-to-tapeout (TTT) pressure of digital IC design.



## Hardware

### FPGA Information

- ▣ Xilinx Virtex UltraScale+ XCVU19P FPGA
- ▣ 49 Million Estimated ASIC Gates
- ▣ 8938K System Logic Cells
- ▣ FPGA Memory 165.9Mb (Block RAM 75.9Mb+Ultra RAM 90Mb)
- ▣ 3840 DSP Slices

### Clock Resources

- ▣ 10 Programmable Differential Clocks
- ▣ 4 MGT Differential Clocks at 100MHz
- ▣ 1 Single-ended Clock at 20MHz, 1 Single-ended Clock at 27MHz
- ▣ 8 Programmable Differential Clock Outputs on Front Panel
- ▣ 2 Global Programmable Differential ZCLK Clocks
- ▣ 2 Programmable Global Control SCLK Clocks

### Connector Resources

- ▣ 4 HSPI2-MGT Connectors, Offering 32 Lanes GTY Channel
- ▣ 2 QSFP Interfaces, Offering 8 Lanes GTY Channel
- ▣ 4 HSPI2-DQS Connectors
- ▣ 4 HSPI2-CAC Connectors
- ▣ 24 HSPI2-LVDS Connectors, Offering 574 LVDS Differential Pairs
- ▣ 1644 High-performance I/Os in total in HSPI2 Connectors
- ▣ 2 QTH-MGT Connectors, Offering 4 Lanes GTY Channel and 24 Single-ended I/Os
- ▣ 2 DDR4 SO-DIMMs on top panel, supporting 72bit ECC, providing up to 32GB of memory, and running at 2,400Mbps most
- ▣ 4 Independent Buttons, 2 Four-digit DIP Switches, 8 User-defined LED Lights

### Platform Parameters

- ▣ Dimensions: L223mm, W340mm, H95mm
- ▣ Weight: 3.5 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

## Support Multiple Loading Modes

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

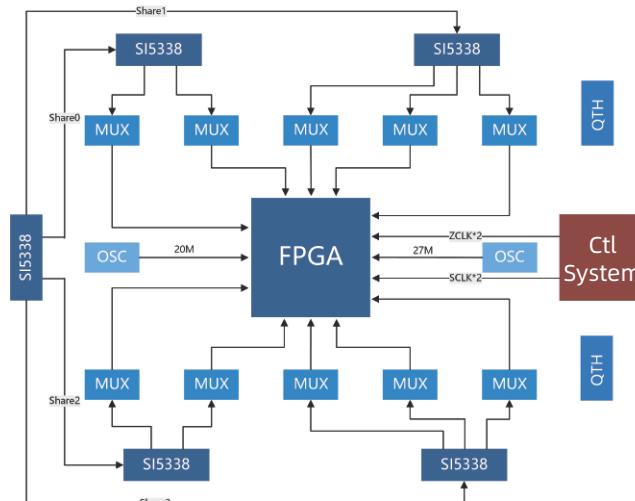
## Deep Debug

- 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

## 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

# I/O Architecture



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