Product Outline

Ideal for defense, video, and comms developments

Featuring
- Xilinx® Kintex® UltraScale™ XCKU115-2FFVA1517
- Xilinx® Zynq® XC7Z010-2CLG225I

FPGA Subsystem
- Four (4) FMC interfaces (see table)
- 16.375Gbps transceivers (see table)
- Memory
  - 4 GB DDR4 SDRAM on board
  - 2 controllers, 64-bit bus-width
  - Maximum theoretical throughput: 215 Gbps
- Clocking, onboard
  - Si5338 programmable clock generator
  - Si5347 quad PLL (jitter filter and re-transmission)
  - 156.25MHz SFP+ oscillator
  - 200MHz DDR4 clock
  - SMA’s, including, CLKin, CLKout, SyncIn, SyncOut
- SFP+ interface
- UART-over-USB support
- Miscellaneous, general purpose
  - 8 DIP Switches, 4 push-button switches
  - 8 User Selectable Header Inputs
  - 8 LEDs (4 red, 4 green)
- JTAG over USB, JTAG header, Dual Quad SPI Flash

Zynq ARM®-based Subsystem
- CLI, Micro USB (UART-over-USB)
- JTAG, DAP 14-pin header
- uSD interface
- 8 general purpose LEDs (3 red, 5 green)
- 4 general purpose DIP switches

Features
- Kintex UltraScale XCKU115-2FFVA1517
- Four (4) FMC Interfaces
- 4 GB DDR4 SDRAM
- Flexible clocking architecture, featuring
  - Multiple clocks
  - Programmable clock generator, Quad PLL
- Onboard Zynq for system management and processing
- SFP+ interface
- General purpose LEDs and switches
- Proven operation with inrevium HDMI4K, 12G-SDI, DP1.2, V-by-One®, MIPI, and Zynq FMCs
- Compatible with FMC Specification (VITA 57.1)

Power
- External 12VDC power supply (included)

Board Dimensions
- 280mm x 200mm (approx. 11” x 8”)

Kintex® UltraScale® “Quattro” Development Platform
Part Number: TB-KU-115-QUATTRO
FMC Slot Capabilities

<table>
<thead>
<tr>
<th>FMC</th>
<th>GTH</th>
<th>LA</th>
<th>HA</th>
<th>VADJ (V)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FMC0</td>
<td>DP[9:0]_M2C, DP[9:0]_C2M</td>
<td>LA[33:0], HA[4:0]</td>
<td>1.8, 2.5, 3.3</td>
<td></td>
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<tr>
<td>FMC1</td>
<td>DP[9:0]_M2C, DP[9:0]_C2M</td>
<td>LA[33:0], N/A</td>
<td>1.5, 1.8 (common VADJ)</td>
<td></td>
</tr>
<tr>
<td>FMC2</td>
<td>DP[9:0]_M2C, DP[9:0]_C2M</td>
<td>LA[18:0], LA[23:19]</td>
<td>N/A</td>
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<tr>
<td>FMC3</td>
<td>DP[9:0]_M2C, DP[9:0]_C2M</td>
<td>LA[33:0], N/A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Verify your target FMC with us prior to ordering
2. Single ended support only
3. Due to the SLR split, 10 GTHs are available but only 8 can be grouped

Available References

- Included IP
  - DDR4 Memory Controller
  - Chip2Chip Interface Block

- Design Package (available under license)
  - Schematics, PCB Layout, Artwork, Bill of Materials
  - FPGA Reference Designs
    - Downloadable .bit file examples
    - Licensable source (some blocks netlist encrypted)

Sales - Ordering Enquiries

For additional information, questions or request for quotation visit: [www.fidus.com](http://www.fidus.com)

Customize your TB-KU-115-QUATTRO

Speak with our Design Services Group on how to accelerate your custom design: [design@fidus.com](mailto:design@fidus.com)

About Fidus

Fidus Systems, founded in 2001, specializes in leading-edge electronic product development with offices in Ottawa and Waterloo Ontario, and San Jose, California. Our hardware, software, FPGA and signal integrity teams architect, design and deliver next-generation products for clients in emerging technology markets. We build long-term relationships by consistently exceeding expectations.

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Figure 1: Block Diagram