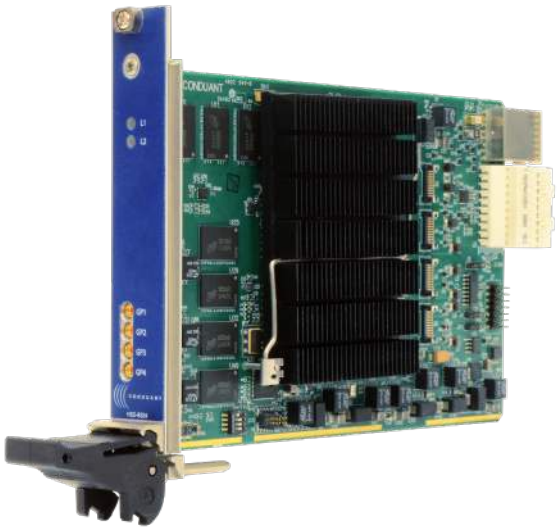
CONDUANT

PXIE-8300 FPGA BOARD

Product Features

- AMD Kintex Ultrascale FPGA XCKU095
- PXI Express single slot form factor
- 24 High-Speed Serial lanes (Samtec Firefly)
- 8-lane PCI Express Gen 3.0 (max 8 GB/s)
- 8 GB DDR3 SDRAM
- 8 MB QDR SRAM
- Fractional divide clock synthesis
- 4X MMCX Faceplate connectors



Advanced Capabilities

The Conduant PXIE-8300 FPGA board is a powerful platform for a wide variety of applications and provides the user with hardware that is able to sustain full-duplex high-bandwidth transfers through its 8-lane Gen3 PXI Express (PXIe) interface with a maximum throughput of 8 GB/s. The board also includes 24 lanes of high speed serial (HSS) with lane rates up to 16.3 Gbps.

At the center of the design is an AMD Kintex Ultrascale (XCKU095-FFVB1760-2-E) FPGA which interconnects all ports and other devices while supplying the additional resources within the FPGA. The board includes both 8 GB of high-speed DDR3 SDRAM and 8 MB of QDR II+ SRAM.

With up to 24 channels of high speed serial IO available on Samtec Firefly connectors, the board can be customized with a front panel connecter to adapt to applications that require high speed data connectivity. This includes optical or copper cabling options. Each lane can operate independently or be combined to create a higher speed interface. Dual embedded Interlaken cores are available in the FPGA which can be used to create high speed connectivity to other devices. Other protocols (i.e. Serial FPDP, AMD Aurora, etc.) can also be used on these HSS lanes.

The FPGA is quickly configured with the user program using an SPI x4 serial flash memory device. This provides the fast wake-up required for PCI Express. The user content can also be encrypted using a key that is either permanently programmed in a non-volatile manner into the FPGA (eFUSE) or can be preserved in a volatile manner with an on-board battery. This is attractive for applications in which protecting the FPGA intellectual property from cloning or reverse engineering is required.

The board includes a microcontroller (uC) for power sequencing and an on-board I2C interface connecting the uC, FPGA, and optical transceivers is inlcuded.

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PXIE-8300 PXI EXPRESS FPGA BOARD

Specifications

FPGA	AMD Kintex Ultrascale XCKU095-FFVB1760-2-E
Encryption	AMD eFuse or battery-backed 256-bit AES bitstream
PXI Express Revision	1.0 ECN 1
PXIe Backplane	PCIe Gen3 x8 (8 GB/s) PXI signals (triggers, clocks, etc.)
Form Factor	PXI Express hybrid, peripheral or timing slot
High Speed Serial (HSS)	24 lanes with line rates up to 16.3 Gbps each
HSS Connectors	4x Samtec Firefly board connectors
Additional External Connectors	4x MMCX 50 Ω for clock, trigger, or other signal IO JTAG for AMD programinng or debug
Clock Generation	Skyworks clock generator with integer and fractional divide
Dimensions	6.1875” (D) x 0.787” (W) x 5.0” (H)
Weight	< 1 lb (0.5 kg)
DRAM	8 GiB DDR3 SDRAM 2x512Mx64b @ 932 MHz
SRAM	8 MiB QDR II+ Extreme SRAM 4Mx18b @ 632 MHz
IO Interface	UART Interface (3 wire, RS232 compatible)
User programmable LEDs	Dual front panel, 8 internal (back of board)
Flash memory	Micron 1 GiB configuration flash (SPI 4 bits)

Warranty & Customer Support

Conduant hardware products are backed by a limited one-year warranty. All software includes a 90 day warranty. Maintenance and priority support is available on a yearly subscription basis. Please contact your Conduant sales representative for more details.

Customer support is provided through a comprehensive web portal at www.conduant.com/support. Private logins and trouble ticket management are provided along with technical downloads, knowledge base, and other support tools.

Options

FPGA options | *contact Conduant for availability*
High speed serial | *Copper or optical fiber; 12 and 24 lane*
Battery backup for encrypted FPGA configuration support
Extended temperature
Custom software | *Contact your Conduant sales representative for custom software availability*

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