Integrated FPGA Platforms

Deployable Integrated FPGA Platforms for PCIe and VPX Systems

- PCIe, VPX, and MicroTCA based systems
- BittWare Arria 10, Arria V, Stratix V, and Stratix IV FPGA-based boards
- Application-ready systems available for financial, high-performance computing, electronic warfare, radar, and industrial applications
- Complete, tested and configured system
- Full software support with BittWorks II Development Tools

BittWare offers PCIe and VPX FPGA Platforms, which provide completely standalone setups for deploying and developing FPGA-based applications. Each system is tested and configured before shipping and includes the chassis, BittWare hardware, and complete software tools – speeding up the development process for time-critical applications. Various options for I/O boards, application-specific IP, single board computer, and hard drive are available, depending on the system.

FPGA Platform Options

The following FPGA platforms are available:

- PCIe Financial Acceleration Platform [PRDP-FN]: IBM-based PCIe server platform specifically designed for Financial Acceleration and High Frequency Trading (HFT) applications
- PCIe Industrial Platform [PRDP-IN]: Application-ready PCIe server platform specifically designed for industrial applications
- Terabox High Performance Reconfigurable Computing Platform: Multi-FPGA PCIe system for Tera Class high performance computing and network processing
- 6U VPX Channelizer Platform [VRDP-CH]: 6U VPX FPGA platform for time-critical commercial and military applications
- 6U VPX FPGA Platform [VRDP-6U]: 6U VPX FPGA platform with 2U or 6U rackmount or desktop enclosure
- 3U VPX FPGA Platform [VRDP-3U]: 3U VPX FPGA platform with 4U rackmount enclosure

BittWare Arria 10, Arria V, and Stratix V FPGA Boards

The FPGA platforms are available with BittWare’s PCIe, 6U VPX, or 3U VPX boards. PCIe board options include BittWare’s full-length, 3/4-length, half-length, or low-profile boards featuring the Arria 10, Arria V, or Stratix V FPGAs. VPX board options feature the Stratix V and Stratix IV GX FPGAs.

Development Tools

BittWare offers complete software support for its FPGA platforms with the BittWorks II software tools. The BittWorks II Toolkit is a collection of libraries and applications for BittWare’s FPGA-based boards. It provides complete hardware and FPGA interfaces, allowing customers to focus on application coding. The Toolkit supports 32-bit, and 64-bit Windows and Linux platforms. Additional development tools available include BittWare’s FPGA Development Kit: a library of FPGA components that includes preconfigured physical interfaces, infrastructure, and examples for BittWare’s Altera FPGA-based COTS boards.

BittWare’s FPGA-based boards are proven hardware that work out-of-the-box, with validation, verification, and control software in place. Complete software support – including BittWare’s FPGA Development Kit providing proven, hardware-specific IP – significantly reduces time-to-market and development risk.
**PCle Platforms**

- **TeraBox**
  - 24 TeraFLOPS processing: up to 16 Arria 10 or Stratix V FPGAs
  - 1.28 Terabits/sec I/O: 128x 10GigE, 32x 40GigE, or 32x QDR Infiniband
  - 6.5 Terabits/sec memory bandwidth: 64 banks DDR3-1600 (512 GBytes)
  - 4U or 5U Rackmount PCIe system (server, industrial, or expansion)

- **FPGA Platform for Financial Applications* (PRDP-FN)**
  - Up to 16 BittWare Arria 10, Arria V, or Stratix V PCIe boards
  - 2U, 4U, or 5U rackmount PCIe system (server or expansion)
  - Optional financial application IP available

- **FPGA Platform for Industrial Applications (PRDP-IN)**
  - Up to 16 BittWare Arria 10, Arria V, or Stratix V PCIe boards
  - 4U or 5U rackmount PCIe system (server, industrial, or expansion)
  - Dual- or quad-core Intel® Xeon® processor SBC

* BittWare is an IBM certified Industry Solutions Reseller (ISR) and an HP Business Partner

**VPX Platforms**

- **6U VPX Channelizer Platform [VRDP-CH]**
  - 2U rackmount enclosure
  - BittWare Stratix V 6U VPX board
  - ADC: 1, 2, or 4 channels 8-bit, up to 5 GSPS
  - BittWare 6U VPX rear transition module

- **6U VPX FPGA Platform [VRDP-6U]**
  - 2U rackmount or 6U desktop/rackmount enclosure
  - Up to 5 BittWare Stratix V 6U VPX boards
  - Intel® Core™ i7 processor SBC (optional)
  - BittWare 6U VPX rear transition module
  - Hard drive (optional)
  - DVD R/W drive (optional)

- **3U VPX FPGA Platform [VRDP-3U]**
  - 4U rackmount enclosure
  - Up to 5 BittWare Stratix V or IV 3U VPX boards
  - Intel® Core™ 2 Duo SBC (optional)
  - Hard drive (optional)
  - DVD R/W drive (optional)

**Ordering Options**

**Contact BittWare**