



## **Unprecedented FPGA Processing Power via BittWare Dual Altera Stratix IV AdvancedMC COTS Board**

**BittWare's newest FPGA card provides 1,350K Logic Elements (LEs) making it the densest AdvancedMC on the market in terms of FPGA processing power**

**CONCORD, NH** - February 18, 2011 - BittWare, a leading supplier of high-end COTS signal processing solutions for military/aerospace, communications, and instrumentation markets, announced today the release of their newest AdvancedMC which provides two Altera Stratix IV FPGAs making it the densest AdvancedMC on the market in terms of FPGA processing power. Ideal for those applications requiring high-speed communications coupled with high-density reconfigurable processing, the D4-AMC (D4AM) combines an Altera Stratix IV E (Enhanced) FPGA, with an Altera Stratix IV GX FPGA optimized for serial I/O-based applications. A VITA 57 FMC site is provided for I/O and processing expansion with options available for high-speed data conversion enabling designers to adapt the D4AM to their complex and changing requirements.

"This board really packs a punch while still maintaining a small form-factor solution. You have the processing power of not one but two Stratix IV FPGAs on a single COTS AMC board! This translates into 1,350K logic elements on a single COTS AMC card... the most available on a single AMC to date," stated Ron Huizen, VP of Technology at BittWare. "If you need reconfigurable signal processing and lots of it, the D4AM is the perfect solution."

"The D4AM really takes full advantage of the density and transceiver performance in our Stratix IV FPGAs," stated Amr El-Ashmawi, strategic business development manager at Altera. "With the D4AM, BittWare continues to provide our mutual customers multiple different form factors targeting many types of applications requiring high-performance COTS platforms."

### **About the D4-AMC**

Featuring the processing power of two Altera Stratix IV FPGAs, the D4AM is a mid- or full-size, single wide AdvancedMC that can be attached to AdvancedTCA carriers or other cards equipped with AMC bays, and used in MicroTCA systems. A Stratix IV GX FPGA paired with a Stratix IV E FPGA makes the D4AM an extremely high-density, flexible board. The FPGAs are connected by two full-duplex 2 GByte/sec lanes of parallel I/O for data sharing. Each FPGA supports BittWare's ATLANTiS FrameWork to greatly simplify application development and integration. Providing enhanced flexibility is a VITA 57-compliant FMC site, which connects directly to the Stratix IV E FPGA for LVDS and to the Stratix IV GX FPGA with SerDes.

The board also provides an IPMI system management interface and a configurable 18-port AMC SerDes interface supporting a variety of protocols. On-board memory includes up to 1 GByte of DDR3 and 128 MBytes of Flash, and Ethernet is available via the AMC front and rear panels.

BittWare's ATLANTiS FrameWork (AFW) provides both of the Stratix IV FPGAs on the D4AM with fully validated board-level physical interfaces for I/O, communications, and memory, along with DMA engines and resource arbitration. AFW frees users of the D4AM from having to reinvent low-level IP for the FPGA, and allows them to focus on the development of their applications unique processing and I/O requirements.

BittWare's FINE III Host/Control Bridge implements a complete control plane interface for the D4AM, facilitating separate control and data planes, and greatly simplifying the development of data plane I/O and processing.

## Complete Development Support

The D4AM is supported by BittWare's BittWorks Tool Suite which provides everything necessary for host and embedded development and consists of:

- **Host Interface Library (HIL)**, a full featured, mature application programming interface (API) which provides a C callable interface to BittWare boards from the host system (connected or remote) to read and write to memory, provide board and processor control, and control interrupts
- **BittWare Utilities** that includes access control to BittWare devices, a scan for BittWare devices on the network, access control from remote clients, automated host and DSP-based (if applicable) diagnostic tests, low-level debugging, loader for the ATLANTiS FPGA, and a graphing utility for exploring board memory
- **BWIO Library** which provides a common interface for all supported components, easily supporting new features without API changes, and contains ATLANTiS/DSP/board component drivers, and POSIX-Based I/O (Open, Read, Write, ioctl, Close)

Complementing the BittWorks Tool Suite is Altera's Quartus® II software for application/code development.

BittWare also offers a MicroTCA Rapid Development Platform which combines the benefits of MicroTCA with the processing power of up to six Stratix-based FPGA boards in an integrated solution using a MicroBlade MicroBox 1U chassis, a N.A.T. MicroTCA carrier hub module, and an optional Concurrent Technologies processor AMC module. The development platform is a stand-alone setup allowing users to efficiently design and test their AMC and MicroTCA systems, significantly speeding up the development process.

## Availability and Price

The D4AM is available today priced at under \$7,000 in OEM quantities.