Annapolis Micro Systems

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Clock Distribution Board

The Four Channel Clock Distribution Board distributes a common clock and synchronized control signal triggers to multiple cards in the system. This 6U VME64X/VXS board provides four high speed, ultra low jitter, ultra-low skew differential bulkhead mounted clock outputs, two ultra-low skew differential vertical SMA on-board clock outputs, and four ultra-low skew and clock synchronized singled ended bulkhead mounted control signal triggers.

A jumper set at board installation time or via optional P2 Serial Port determines which one of the 2 installed clock sources is active. Manufacturing options for Clock Source 0 are Single Ended or Differential External Clock, a PLL ranging from 700 MHz - 3 GHz with an On-Board Reference Oscillator, or a PLL ranging from 700 MHz - 3 GHz with a 10 MHz External Reference. Manufacturing options for Clock Source 1 are a PLL ranging from 700 MHz - 3 GHz with an On-Board Reference Oscillator, a PLL ranging from 700 MHz - 3 GHz with a 10 MHz External Reference or an On-Board Low Frequency Oscillator ranging up to 800 MHz.

The four control trigger outputs can originate from a high precision external source via front panel SMA, from a manual pushbutton on the front panel, or from software via an optional Backplane P2 Connector Serial Port. These trigger outputs are synchronized to the distributed clock to provide precise output timing relationships.

Annapolis Micro Systems is a world leader in high-performance, COTS FPGA-based boards and processing for radar, sonar, SIGINT, ELINT, DSP, FFTs, communications, Software-Defined Radio, encryption, image processing, prototyping, text processing, and other processing intensive applications.

Annapolis is famous for the high quality of our products and for our unparalleled dedication to ensuring that the customer's applications succeed. We offer training and exceptional special application development support, as well as more conventional support.
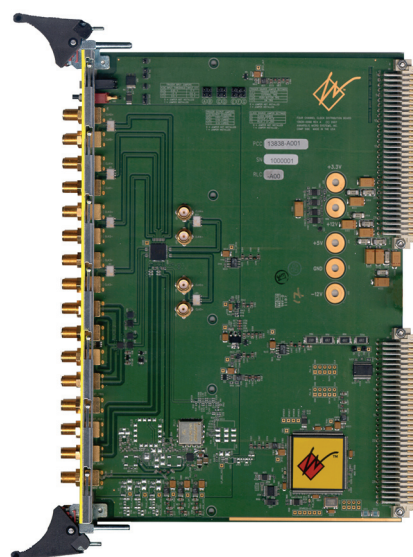
FEATURES:

→ 4 Synchronized Differential Front Panel Clock Outputs up to 3 GHz with Typical Skew of 5 ps

→ Ultra-low Clock Jitter and Phase Noise – 275fs with 1280 MHz PLL and external 10 MHz Reference

→ On-board PLL's Manufacturing Options provide Fixed Frequencies of 700 MHz - 3 GHz, Locked to Internal or External Reference

→ On-board Low Frequency Oscillator provides Fixed Frequencies up to approximately 800 MHz

→ Four Synchronized Trigger Outputs, always Synchronized with the Output Clock, with Typical Skew of 5 ps

→ Jumper Selectable Trigger Output Levels of 3.3V PECL, 2.5V PECL, or 1.65V PECL

→ Source Trigger from Front Panel SMA, Pushbutton, or Optional P2 Serial Port

→ Cascade boards to provide up to 16 sets of outputs

→ Compatible with standard VME64X and VXS 6U backplanes

→ Universal clock input supports wide range of signal options, including signal generator sine wave

→ Differential clock input permits multiple standards including: LVDS, 3.3V PECL, 2.5V PECL, and 1.65V PECL

→ Clock and Trigger Outputs Compatible with all Annapolis Micro Systems, Inc. Wildstar™ 2 PRO I/O Cards and Wildstar™ 4 / 5 Mezzanine Cards