Products

MIL-STD-1553 and ARINC 429 on Multiple Form Factors

MIL-STD-1553 and ARINC 429 interfaces remain popular technologies in a variety of avionics and defense systems. Data Device Corporation (DDC) has introduced a new line of rugged 1553/429 embedded and test cards designed around its next-generation AceXtreme 1553 core, adding Multi-RT capability to DDC's field-proven and reliable data bus technology. The cards feature a common API that can be used for test cards, embedded card, and components to simplify application code development, shorten software development time and eliminate risk, while the unique I/O mix and high channel count of the hardware reduces space, power, weight and cost. The new line of cards includes PMC, PCI, cPCI and PC/104-Plus versions.

AceXtreme cards are designed to function in extreme environments, and a wide variety of form factors makes them an ideal choice for test/lab environments as well. AceXtreme cards are available in conduction-cooled or air-cooled versions, in the following form factors: PC/104-Plus, PCI-104, PMC, PCI and cPCI. The cards are ideal for systems with limited space yet high I/O requirements, featuring a wide combination and mix of MIL-STD-1553, ARINC 429, Digital Discrete I/O, Avionics Discrete I/O, RS-232/422/485 Serial I/O and IRIG-B input/output on a single rugged, space-saving card. Advanced features include IRIG-106 Chapter 10 onboard formatting, user-selectable BC disable / TX inhibit for safety-critical applications, and an onboard DMA engine for increased data throughput and low host CPU/PCI utilization.

The cards feature a common test/embedded API that minimizes software development time by allowing programmers to use the same software across products, platforms and applications. For further savings, the optional BusTrACEr 1553 Monitor/Generator software package provides programmers with an easy-to-use interface and one-click automated source code generation, to quickly and easily create custom application code. DDC also offers the dataSIMS Bus Analysis and Simulation software package for those users wanting to create a complete environment of simulation, acquisition, display and storage of real-time data. dataSIMS simulates and concurrently monitors multiple mixed MIL-STD-1553, ARINC 429 and user I/O multiplex channels, performing real-time conversions of raw data to engineering-units, resulting in accurate, fast and extensive numerical and graphical views of communications data. A LabVIEW support package is also available, providing intuitive, high-level virtual instruments and samples.

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