

Product showcase

Coaxial connectors

ITT's VEAM CIR Series connectors can function as electrical, optical, or pneumatic connectors and come in high-voltage, twin or triaxial, hermetic, and EMC versions. The design is based on MIL-C-5015; however, the units' positive lock and quick disconnect coupling surpasses this specification's environmental requirements. Fiber styles are available with single- or multiple-fiber termini. Devices can include a range of insert/grommet materials to provide enhanced resistance to fuel oils, solvents, and elevated temperatures; alternatively, they can be supplied with glass-to-metal hermetic seals.



PMC modules

Acromag's PMC-LX and PMC-SX modules support various AXM plug-in I/O extension modules to interface different signal types to a user-configurable Xilinx Virtex-4 FPGA (field programmable gate array). The FPGA can process user-defined algorithms and custom logic routines on RS-485 differential, complementary metal oxide semiconductor, or LVDS (low voltage differential signaling) digital I/O signals depending on the AXM I/O module inserted. The PMC base card has 32 LVDS I/O channels available via P4 for rear connection I/O and conduction cooled applications. PMC-LX models are optimized for high-performance logic with a choice of LX40 or LX60 Virtex-4 FPGAs, while the PMC-SX model uses the SX35 FPGA designed for high-speed digital signal processing. Typical uses include sonar/radar, military servers, hardware simulators, communication processing, and automated test equipment.



Optical coatings

IsoSphere antireflection-coated ball lenses from Deposition Sciences are durable thin-film optical coatings that are available in various glass indexes and in new, larger sizes. The lenses provide low insertion loss and come with antireflection coatings with transmission values of greater than 99.5% in refractive indexes of up to 2.0 at 550 nm. The scratch-resistant lenses come in diameters of 200 μm to 10.0 mm. The products can be used in fiber-to-fiber, diode-to-fiber, and/or fiber-to-detector coupling tasks and are suited for aircraft and aerospace applications.



Data conversion

Interchangeable Virtual Instrument (IVI) drivers from Acqiris provide a set of standard commands for a given class of instruments that simplify programming and instrument swapping among data conversion products.

Developed mainly for the automatic test equipment market, the drivers comply with IviScope Class specifications, which are designed to support typical oscilloscopes as well as common extended functionalities found in more complex data-acquisition instruments such as synthetic instrumentation. The drivers support all major test platforms supported by the company, including PCI, PXI, CompactPCI, and VXI.



High-bit-rate recorders

Heim Data Systems' new version of the D5000 Series targets applications requiring compatibility with the IRIG 106 Chapter 10 standard, which defines the data formatting, control interfaces, and media directories of airborne data-acquisition systems such as flight-test recorders. The single-box system is compact, lightweight, and rugged. It can be used for PCM telemetry, avionics bus, and sensor data acquisition. With modular signal interfacing and interchangeable media cartridges, the series provides flexible commercial-off-the-shelf solutions. It features up to 256 Mbit/s total system data rate, comes with hard drive or solid state media, and has front-mounted IEEE-1394b interfaces.



Performance additives

3M says the use of its iM30K in injection-molded parts can reduce the weight of aircraft parts made from engineered thermoplastics. Applications include components such as passenger service units, tray tables, armrests, air vents, galley surfaces, electrical connectors, and extruded plastic materials such as carpet backing, composite structures, and potting compounds. The additives are an alternative to conventional fillers such as glass fiber, calcium carbonate, and talc. They can also replace combustible materials with a non-halogenated inert material to decrease heat release rates. The additives are composed of 18- μm median size hollow glass microspheres capable of withstanding injection molding and extrusion pressures of 30,000 psi.

