

Product showcase

Air data test sets

DAC International distributes various models of RVSM (reduced vertical separation minimum)-compliant and domestic RVSM-compliant air data test sets (ADTS) and systems for aircraft pitot-static certification, troubleshooting, and leak testing. Developed by **DMA-Aero**, all the MPSXX series (± 3 ft accuracy) are digitally controlled through a keyboard; use precise pressure sensors to reach high accuracy; are engineered to minimize power consumption; have a self-contained battery; and can be supplied with internal multiple isolators and output ports. All flightline/ramp ADTS are portable and can also be used in the laboratory with ADTSWIN PC software.



Micro-abrasive blasting

The MB1002 MicroBlaster from **Comco** offers micro-abrasive blasting for aerospace industry applications. This technology uses micro-sized particles of high-grade abrasives that are propelled out of a small nozzle tip at high velocity to clean, cut, deburr, and texture a variety of surfaces such as the orifices of turbine blades. Additional aerospace applications include removing the magnesium oxide insulator from thermocouple harnesses, selectively removing corrosion on airframe and engine components, and engraving optical lenses and instrumentation.



Shortwave IR camera

The SU640SDWH-1.7RT from **Sensors Unlimited, Goodrich** is a high-frame-rate, high-resolution, shortwave IR (SWIR) camera. The high-speed indium gallium arsenide camera has regions of interest (ROI) windowing capabilities with high sensitivity SWIR spectral response in the 900 to 1700 nm wavelength range. The new 640 x 512 pixel focal plane array on a 25-micron pitch captures full-size images at 109 frames per second or can image smaller ROI at more than 15,000 frames per second with 100% fill factor. Applications include machine vision, pulsed laser beam profiling, and thermal imaging of combustion or rocket plumes.



Polyimide material

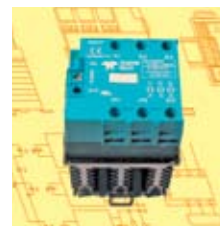
Saint-Gobain Performance Plastics' Meldin 7021 compounded material is available in stock shapes or engineered custom-molded parts. These materials exhibit extremely high geometric stability at elevated temperatures and can be formed into com-

plex parts using an automated molding process called direct forming. Meldin 7021 parts are used for aerospace applications such as the valves that supply air to the aircraft cabin. The seal rings and bushings, which are made from the compounded material, provide self-lubricated bearing surfaces and resistance to high temperatures, making them suitable for this type of engine environment.



Relays with heatsink

Teledyne Relays' Series DR3P family of power solid-state relays provides three-phase output to 50 A, 520 V ac for applications such as heating control, motor control, and industrial process control. The relays offer both ac and dc control with a zero-cross turn-on thyristor output. The units are rated for up to 400 Hz and offer a low leakage current. A tight zero-cross window reduces stress on motor loads and minimizes noise. The devices include an integrated heat sink, output transient suppression, and LEDs that serve as status indicators for diagnostics.



Film adhesives

YLA develops and manufactures a selection of film adhesives tailored for use with the company's unidirectional tape and woven prepreps. Available for use in the satellite, aerospace, defense, and commercial aircraft markets, YLA film adhesives are qualified for applications that operate from cryogenic to over 600°F. Several resin bases are available ranging from low-temperature cure epoxy and cyanate esters to 350°F curing cyanate esters and high-temperature cyanate ester, bismaleimide and polyimide systems. The cyanate ester film adhesives feature a very high degree of compatibility with cyanate ester prepreg matrix resins.



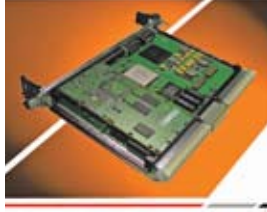
Miniature solenoid valve

A compact, lightweight three-way high-flow miniature piloting solenoid valve is available from **The Lee Company** in a single-coil configuration. With a mass of 4 oz, the valve uses 7.8 W at 28 V dc and operates at 3000 psi. The plunger design and materials in the magnetic circuit result in a miniature, low-power-consumption solenoid with an efficient force/stroke relationship. Lee multi-seal technology enables the hydraulic portion of the valve to be extremely small and compact, eliminating conventional O-rings and backup rings and simplifying port layout.



Multilayer switch/router card

Curtiss-Wright Controls Embedded Computing offers the embedded military and defense industry's densest 6U VME64x SVME/DMV-682 FireBlade Gigabit Ethernet multilayer switch. Used to architect secure high-performance IPv4/v6 Intra-Platform Networks, the SVME/DVM-682 FireBlade can also be used to transform legacy bus-based VME systems into high-performance network-ready switched system. It provides wirespeed performance, delivering 24x1 and 2x10 Gigabit ethernet ports in a single VME slot. Alternatively, the FireBlade can be scaled down to provide lower port count combinations for smaller systems.



Flame-retardant adhesive

Devcon's 10 Minute Epoxy FR (flame retardant) is suitable for OEM assemblies that require a self-extinguishing structural adhesive. It fills gaps and bonds metals, fabrics, glass, wood, and concrete in all combinations. Its flexibility, impact resistance, and du-



ability are useful for securing honeycombed floor and ceiling panels in commercial airplanes. When mixed as dispensed, 10 Minute Epoxy FR has a viscosity of 80,000 centipoise, a working time of 10 min, a fixture time of 20 min, and a functional cure time of 3 h at 72°F. It has bonds that pass the federal 60 s vertical burn test.

Textiles and non-woven resin

Ultem polyetherimide resin from **GE Plastics** provides inherent flame retardance in fiber technologies. When converted into fibers for textiles and nonwovens in aircraft interior applications, GE's Ultem resin offers aircraft industry suppliers and OEMs new solutions for issues such as compliance with stricter flame, smoke, and toxicity regulations, system cost reduction, and greater design flexibility without the use of additives. It also provides UV resistance. Ultem's intrinsic flame retardance offers protection for aircraft cabin fabrics and carpet, unlike traditional textiles and nonwovens that are surface-treated and can wash off over time.



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