

Product showcase

Power amplifier

Unholtz-Dickie's SA Series Power Amplifiers extend the life of existing shaker systems by replacing the original amplifiers. These 100% air-cooled units are more than 90% efficient, and take up less than half the floor space as the original water-cooled amplifiers. They typically provide at least 10% more random vibration performance and 50% more shock performance than a comparable linear amplifier. Standard features include extensive electromagnetic interference shielding, three-phase line filtering, a full-featured control panel, and safety interlocks. Output ratings from 15 to 480 kVA are available to drive shakers made by a variety of manufacturers.

For more information, circle 100



OPOC engine

FEV engineers have developed a concept diesel opposed-piston, opposed-cylinder (OPOC) engine that can use diesel fuel or JP8, a military jet fuel. The engine uses an electrically assisted turbocharger supplied by **Advanced Propulsion Technologies** and combines the features of an opposed-piston, two-crankshaft diesel aircraft engine and an opposed-cylinder boxer engine. Typical components such as the cylinder head, valves, and camshafts are eliminated in the OPOC design for enhanced scalability. The engine is configured such that all forces act on the crankshaft and not on the main bearings of the crankcase. Because of fewer components, the 275-lb engine is likely to have a lower production cost than a conventional internal-combustion engine. Applications include unmanned aerial vehicles and unmanned ground vehicles.

For more information, circle 101



VMEbus carrier card

The AVME9668 from **Acromag** is a non-intelligent slave board that interfaces industry pack (IP) modules to the VMEbus. The full-height (6U) board holds four IP modules. All field I/O connections are made through the board's front panel via secure, screw-down or spring latch connections. Support for 8-MHz and 32-MHz clocks allows data processing at high speeds. The board provides full data access to the IP module's I/O, ID, and memory spaces. Each IP module can have up to 8 MB of memory space. Users have full access to programmable registers to configure and control IP module operation from the VMEbus.

For more information, circle 102



PC instrument

SideHAND battery-powered PC instruments from **Dewetron** run indefinitely from internal hot-swappable batteries. The control system manages automated battery-level checking and recharging when the system is connected to external ac or dc power. Combined with two or three lightweight, high-yield lithium-ion batteries, this power subsystem allows a high-power computer and peripheral to be operated for two to four hours, depending on the workload. The instruments have a 15-in 1024 x 768 thin-film transistor touchscreen, with brightness of 450 cd/m². This makes the system usable with any software, and in a wide variety of lighting conditions.

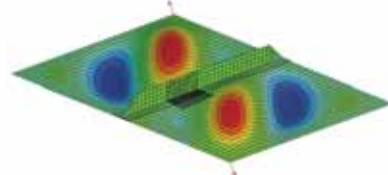
For more information, circle 103



Virtual crack closure

ABAQUS has added the virtual crack closure technique (VCCT) to its ABAQUS finite-element-analysis software suite. The software is an implementation of the VCCT technology that **Boeing** developed for predicting fracture and failure in laminated composite materials. It helps engineers predict failure in composite parts so they can create designs that are more damage-tolerant. The tool allows engineers to identify the overall load at which a crack initiates and to predict the behavior of the structure as the crack spreads. It also helps users understand the stability and load-carrying capacity of the composite structure after failure.

For more information, circle 104



Fuel analysis

The FZP 5G2s automated freezing point analyzer from **ISL** provides accurate freezing point determinations down to -120°C, helping to assure low-temperature flow performance of aviation fuel. The unit detects all types of crystallization in all types of jet fuels. It combines a built-in cooling system and a detection cell into a portable instrument. The device automatically controls test progress and delivers precise results in less than 15 minutes.

For more information, circle 105

