

Product showcase

Spiral drive fasteners

Fasteners from **SPS Technologies** feature the MORTORQ Spiral Drive System developed by **Phillips Screw Co.** The fasteners provide full contact of the driver to the entire recess in the screw or bolt, resulting in high torque capability while minimizing the risk of damage to the fastener. The shallow counterbore required with the lower-profile head can reduce material thickness, and thus weight, in many joint designs. Depth of the fastener recess is reduced, allowing increased tensile strength in 100° and 130° flush head fasteners, as well as other MORTORQ driven bolts and screws. The system's larger driver cross-sections and curved surfaces provide extended tool life and resistance to fatigue fracture when used with automated equipment. Acoustic and radar return is minimized by the recess profile.

For more information, circle 100



Slow-motion video imager

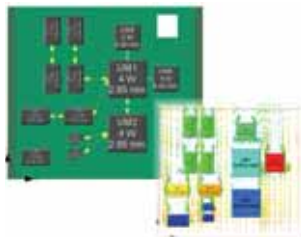
Photron's APX-RS slow-motion video imager can capture 3000 frames/s at 1024 x 1024 pixel resolution, and up to 10,000 frames/s at 512 x 512 pixel resolution with 250,000 frames/s at reduced resolution. The complementary metal oxide semiconductor sensor features true 10-bit monochrome (30-bit color) fidelity and good anti-blooming properties with variable aspect ratios (square or rectangular). The rugged, single-piece housing is designed to operate reliably in hostile environments up to 100 g/s.

For more information, circle 101



Electromechanical design of PCBs

FLO/PCB v2.2 from **Flomerics** features more than 25 improvements and enhancements that improve usability and tighten integration between electrical and mechanical design of printed circuit boards. An automatic "Manhattan distance" calculation and constraint management feature enables first-order signal integrity requirements to be introduced early in the design process where component placement and thermal performance scenarios are studied as part of functional definition. The software includes full integration with Flopack for on-the-fly integrated circuit model generation based on standard package outlines. Interconnects can be displayed according to signal speed and quantity. Other features include support of IDF-defined



placement keep-out regions, annotation auto-sizing, and a conceptual design process that integrates electrical and mechanical design for printed circuit boards.

For more information, circle 102

LED status indicator

L-3 ElectroDynamics' ML2030E

Series LED indicators are used to indicate status in applications such as aircraft avionics systems, communications systems, test equipment, and other electronics systems exposed to severe environments. The system provides a solid-front housing that ensures a watertight panel seal. The indicator is packaged in a clear chromate finished body and has a black, anodized front bezel. An EMI screen is a standard feature. Standard display colors are red, yellow, and green with the option of a diffused or non-diffused output. Other colors include bi-color LEDs, and NVIS-compatible, sunlight-readable, and IR-secure filtering to meet aerospace and military specifications.

For more information, circle 103



Solenoid valves

South Bend Controls' instant-acting solenoid valve has a typical response time of less than 30 ms—ten times faster than the blink of an eye. The rapid response allows nearly instantaneous correction of payload position or rotation through thrust vectoring. The valve is the latest evolution of the firm's devices for launch vehicle attitude control systems. Its compact and lightweight design uses a pressure-balanced, dual-seat, split-flow poppet for bubble-tight sealing at pressures up to 575 psig.

For more information, circle 104



Rugged vibration testing

Unholtz-Dickie's shakers in the 15,000 to 50,000 lb range use the Induct-A-Ring armature, part of an advanced shaker design. This solid metal, cooled armature requires no fragile electrical or water connections, and provides electrical simplicity and mechanical durability not available with traditional wound driver coils. The system provides test levels to 200 g peak sine, 175 g RMS random, and 2000 g SRS shock, and it enables high-frequency operation. T2000, T4000, and T5000 shakers perform well for demanding vibration/shock test specifications required for satellites, launch vehicles, aircraft, ground vehicles, and related military hardware.

For more information, circle 105

