

Commercial Military Avionics

Computers • ATR/ MCU • Displays • Databus • Data Conversion • Networking • Power • Heat Exchangers • Cabling

AIRBORNE COMPUTING & DISPLAYS



High-Performance, Rugged Computing Solutions

- > HPEC, DSP and multiprocessor single-board computers— OpenVPX and VME
- > Rugged graphic and video systems for sensor and image processing
- > Network interface cards, military rated routers and Ethernet switches



Display & Mission Computer



Safety Certifiable Mission Computers

- > COTS RTCA DO-160, DO-178 and DO-254B certified boards and systems
- > Certified up to Design Assurance Level A (DAL A); in-house safety team
- > Single board computers, I/O and systems for VME, VPX and VNX



DAL-A Flight Unit



Airborne Rated, High-Performance Servers

- > Lightweight 1U airborne server at 13.5 lbs., workstations and storage
- > Qualified 50G shock, MIL-STD 810F/G, 901D, 461, 167-1
- > Meets airborne noise standards — MIL-STD-1474D, MIL-STD-740-2



3U Airborne Server



Military and Airborne Displays

- > Qualified CDU, MFD and Handheld Control Display Units
- > Rugged flat panel displays, standard and custom, from 3.5" to 24.0" diagonals
- > Optical bonding, outdoor brightness, touch screen and front panel options



Multi-Function Display



Solid State Drives (SSD) and Memory

- > SLC NAND with extreme ruggedization, fast boot times and write protection
- > Data elimination – Secure Erase and Purge functions
- > Large TB capacities in SATA, PATA, ATAPI and SCSI interfaces



Flight Recorder SSD



Embedded, Airborne Computers and Subsystems

- > Cabin management, inflight entertainment, bulkhead displays and servers
- > RTCA DO-160, DO-178, DO-254 certification and DAL A through E
- > AS9100:2009 manufacturing facility and FAA repair station and manufacturing



4K Video Server



Highly-Reliable Computers and Servers

- > DO-160 qualified servers, embedded computers and storage systems
- > NVIDIA GPU powered high-performance servers with military qualifications
- > Rugged flat panel computers and displays



DO-160F Qualified Computer



High-Performance Video and Graphics

- > Frame grabbers and GPU boards with H.264 Compression and AES Encryption
- > SFF, VPX, PMC/XMC, MXC, MXM and PCIe conduction cooled form factors
- > Meets MIL-STD-810 and avionics requirements



Tegra K-1, 325 GFLOPs

RUGGEDIZED & MIL-STD-704 RATED POWER



Power Connectors and Cables

- > MIL-DTL-22992, MIL-DTL-38999, 5015, QWLD / Class L style connectors
- > High-quality cable assemblies for military and airborne power applications
- > Mobile power distribution systems with intelligent management, military rated



QWLD Class L



Rugged Power Supplies and Converters

- > High density, outstanding reliability with high MTBF, built in EMI filter
- > DC/DC, AC/DC converters and DC/AC inverters and VPX power supplies
- > MIL-STD-704, 461, 810G, 1275 and 1399 compliant



Miniature DC / DC Converter



Rugged Uninterruptible Power Supplies (UPS)

- > Extremely reliable, on-line / double conversion UPS systems
- > Frequency converters, power converters and inverters, power conditioners
- > Power Distribution Units (PDU), military rated



1200 Watts / 1500 VA UPS

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AVIONICS & COMMUNICATIONS



Avionics Databus Interfaces

- > MIL-STD-1553, ARINC-429, 629, 708, 717, 664 and CDSB interfaces
- > Aircraft Interface Devices (AID) and Electronic Flight Bag (EFB) devices
- > CoPilot GUI software for bus analysis, recording and software development



MIL-STD-1553 Interfaces



Advanced Interface Technologies

- > Innovative touch, sensing, control and human interface systems
- > Application-specific input devices and control panels
- > Military tough displays, rugged keyboards, military handhelds with keypads



MRAP Switch Panel



High-Speed Interconnect Solutions

- > Hercules high-speed 10Gbps in circular MIL-DTL-38999 connectors
- > VPX+ backplane cabling systems to expand I/O
- > Multi-signal anti-vibration military / aerospace cable assemblies



D38999 10Gbps Connector



Highly-Reliable Networking

- > Rugged FPGA based Fibre Channel, Ethernet and custom PCIe, AMC, XMC cards
- > Real-time streaming, cyber security monitoring, record and playback systems
- > Fibre Channel ASM and HSDN IP cores



Conduction Cooled FC-ASM



Airborne Media Converters and Transceivers

- > Ethernet switches and converters in D38999, TFOCA II and M28876 packaging
- > Optical transceivers, fiber optic converters, video media converter and adapters
- > Panel mount, PCB, jam nut, bulkhead or wall mount configurations



Video Media Converter



Rugged Communications

- > Sital Technologies Mil-Std-1553 bus testers, IP cores and interface boards
- > Synchronous serial adapter cables for tactical radios
- > Tough, extended temperature embedded computers and COM Express modules



Army Laptop Docking Station



Avionics Interface Systems

- > ARINC and Mil-Std-1553 data converters
- > Airdata computers for real-time flight information and fuel flow management
- > Altitude management, alert systems, synchro and engine trend monitors



Avionics Databus Converter



Military and Airborne Ethernet Switches

- > Cisco certified routers and switches for military and mobile communications
- > Radio Aware routing, QoS, mobile ad hoc networking, dynamic Layer 3



Cisco Mobile Router

FLIGHT ENCLOSURES & COOLING



Electronic Enclosures and ATR Chassis

- > CompactPCI, MicroTCA, VMEbus, VPX and custom enclosures and backplanes
- > Military and airborne chassis and systems, thermal modeling and testing
- > Application ready platforms, mobile routers, switches and system integration



ATR Chassis



Heat Transfer Solutions

- > Lightweight brazed electronics enclosures with air or liquid cooling
- > Aircraft oil/fuel coolers, condensers, evaporators and heat exchangers
- > FAA and AS9100/ISO9001 certified manufacturing facilities



Custom Heat Exchangers

Representing top tier manufacturers for the Rocky Mountain States. Contact your local Sierra Sales office:

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