

Ground Products & Systems

FLIGHT TEST SOLUTIONS

Flight Test Solutions

- Aircraft & helicopter flight test
- Weapons test and development
- Laboratory and avionics test

Space Solutions

- Integration and test
- Launch vehicle test and monitoring

Data Acquisition Systems

- Launch system checkout and test
- Jet/rocket engine and wind tunnel testing
- Satellite chamber testing

Boards & Instruments

- Telemetry boards and software
- Avionics boards and software
- Bit synchronizers



SPACE SOLUTIONS



DATA ACQUISITION SYSTEMS



BOARDS & INSTRUMENTS



communications

Telemetry-West

Excellence You Can Measure

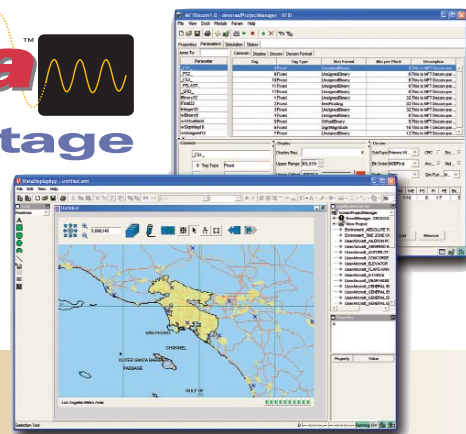
Vista™ Enterprise Telemetry Software

Vista™ is the latest enterprise software solution from L-3 Telemetry-West for the full spectrum of telemetry applications — providing a complete operating environment for configuring, controlling, and monitoring the Vista VTS™, Vista 350P™, Vista Avalon™, and Vista 550™ family of ground station products. Vista also supports L-3's airborne equipment, creating a unified software platform for flight and ground system configuration, management, and visualization. Vista software additionally can be run standalone — without any hardware — acquiring data off a network for “desktop” telemetry processing.

Vista comes with a powerful, multiplatform, intuitive graphical user interface (GUI) for manual operation and a robust application programming interface (API) for the integration of other software and embedded applications. Vista can control hardware locally or remotely, and a distributed, network-oriented architecture allows functions to be split across different computers on a network providing flexibility to adapt to a variety of ground system designs.

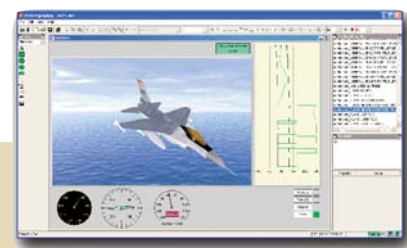
Vista is ideally suited to perform the role of enterprise software for large telemetry applications. The software can be used as the foundation for the entire system, controlling not only L-3 TW products, but other equipment, such as antennas, receivers, recorders, and other telemetry components. The API Module Framework supports the integration of external hardware and software modules, while the Application Framework supports the integration of custom or third-party software applications.

The Vista™ Advantage



Features

- Common software foundation supports multiple L-3 products
- Platform for enterprise-level solutions
- Intuitive, easy-to-use GUI
- Robust API for embedded applications
- Distributed, network-oriented architecture
- PC, UNIX, and Linux multi-platform support
- Modern Java-based object-oriented software
- Supports external software, hardware, and applications
- Industry-standard SQL-compliant databases
- Local or remote operation
- Integrated user environment for airborne/space and ground systems
- XML import/export and database connections for archiving/versioning



Functions

- Ground system operation
- Airborne/space equipment configuration
- Project/mission database setup and management
- Real-time data processing
- Event and alarm monitoring
- Real-time data display and visualization
- Telemetry decommutation
- Real-time embedded or remote archiving

SCALEABLE HARDWARE PLATFORMS

Vista 550™

Vista 550 is the industry leader in high-performance, real-time distributed architecture systems for high-speed data acquisition, processing, storage, and display. Built on industry standards and L-3's high-speed MUXbus™, the Vista 550 is a modular, scalable open system supporting multiple front ends, workstations, and other network computing resources. The system is available in either rackmount, portable, or ruggedized configurations to accommodate a host of applications, including telemetry flight test, weapons test and development,

satellite command and control, and avionics bus test and integration. Real-time inputs and outputs include PCM telemetry, IRIG time, MIL-STD-1553, ARINC 429, CCSDS, SGLS, analog, digital, serial, reflective memory, and LAN data. With over 60 application I/O modules and up to 64 PMC slots, Vista 550 is the most flexible and expandable system available today to meet your evolving needs.



Vista Avalon™

Vista Avalon, L-3's latest high-performance, real-time I/O computing platform, offers System 550 performance in a space-efficient chassis supporting up to 20 PMC input/output modules. This asymmetric multi-processing platform hosts the MUXbus for real-time determinism, in an affordable price range. Automatic data merging, low latencies and true hardware-controlled data determinism, are all guaranteed. The system is modular and scalable for single- or multiple telemetry/avionics input streams in a small-footprint, standard rackmount chassis.



Uses include telemetry processing, satellite commanding, avionics acquisition, simulation and processing. L-3 offers a comprehensive tool set that includes a rich library of standard algorithms, custom algorithm development, high-speed data storage and playback, real-time alarms, 2D-3D data displays, and a powerful Applications Programming Interface (API) development kit.

Vista 350P™

L-3, the leader in real-time telemetry and avionics processing systems, proudly introduces the Vista 350P real-time PC-based ground telemetry station. This breakthrough architecture performs true data driven time-deterministic processing by implementing L-3's high-speed MUXbus™ using off-the-shelf commercial PC hardware! A standard PC equipped with L-3's ground breaking PCI



Mezzanine Carrier and standard PMC input/output modules, Vista 350P supports everything from basic 1- and 2-stream applications using our widely popular Multifunction PCI Telemetry Board to complex multi-stream missions involving mixed I/O and multiple linked PC and VME chassis. Vista 350P runs under Vista enterprise telemetry software and is available in desktop and rackmount configurations with single and dual processors. Standard and industrial PC chassis and a full range of PMC and PCI modules will meet the most demanding telemetry applications.

Vista VTS™

Vista VTS is L-3's entry-level, Windows-based member of the Vista software controlled family of ground stations. Its core architecture is based on high-performance PCI hardware I/O while providing customers reduced start-up and sparing costs by minimizing the number of different boards required. Vista VTS supports extremely rigorous telemetry, avionics bus test, and data acquisition

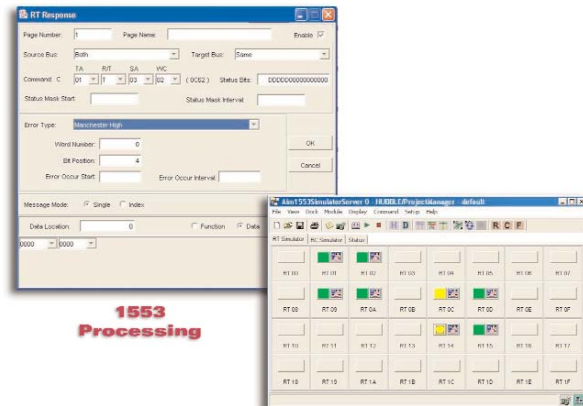


requirements. The system supports PCM telemetry, including bit synchronization and decommutation, as well as MIL-STD-1553 monitoring and simulation, analog and digital I/O, and IRIG time-tagging — all running under the Vista software environment. Vista VTS comes standard with a reconfigurable multifunction PCI telemetry module — bit sync, decomm, simulator, and IRIG time code generator. Desktop, rackmount, industrial and rugged versions are available in standard configurations along with support for hundreds of COTS peripherals.

BOARDS & INSTRUMENTS

Avionics Bus Test

At numerous locations worldwide, Telemetry-West's avionics products are being used in support of critical development and testing applications. Initial capabilities were developed to provide a replacement for L-3's venerable Serial Bus Analyzer (SBA) MIL-STD-1553 bus tester. Since then, our product family has expanded to include support for ARINC, Fiber Channel, NTDS, and custom IP packet based formats. We offer both complete turnkey PC and VME systems and integration support for our PCI, PMC, and VME boards.



Solutions can be scaled from the need to test, debug and verify a single 1553 or ARINC bus on a "hot bench" or in a vehicle to the International Space Station Integration Systems Laboratory's need to validate over 110 MIL-STD-1553 buses, in real-time, concurrently, at full rates, without any data loss.

Standalone Boards

L-3 Telemetry & Instrumentation offers a selection of telemetry and avionics bus boards that can easily be integrated into your test systems. These boards are derived from our system products and provide unmatched capabilities and flexibility at a competitive price.

PC

- Multifunction board – *Dual-channel multifunction telemetry card to 20 Mbps (with bit sync, decom, IRIG time code generator, and simulator capabilities all on one board)*
- Decommutator/simulator – 20 Mbps
- Bit synchronizer – 20 Mbps with optional Viterbi decoder
- Decommutator/simulator – 20 Mbps
- Analog & digital ports interface
- MIL-STD-1553 monitor/simulator

VME

- Multifunction board – *Dual-channel multifunction telemetry card to 20 Mbps (with bit sync, decom, IRIG time code generator, and simulator capabilities all on one board)*
- Bit synchronizer – 30 Mbps with optional Viterbi decoder
- Bit synchronizer/PCM simulator – 20 Mbps with optional Viterbi decoder



EMR 832 and MBS 720 Bit Synchronizers

These seventh-generation digital bit synchronizers range from 10 bps to 30 Mbps and house one to four bit synchronizers in a single chassis. They perform input signal conditioning, bit synchronization, data reconstruction, code conversion, clock generation, and output conditioning to provide clean synchronous serial data and clock signals. Each bit sync is available with Viterbi decoding options.



DATA ACQUISITION SYSTEMS

ADAS 5000™ — Automated Data Acquisition System

The ADAS 5000 is an advanced turnkey VME-based data acquisition system that boosts performance and lowers costs by automating traditional data acquisition and signal conditioning tasks.

L-3's ADAS 5000 introduces a self-configuring feature available for the first time with our revolutionary Universal Signal Conditioning Amplifier (USCA). USCA's can be programmed to match virtually any transducer's characteristics and immediately start processing data. Now you can save hours in selecting and matching transducers and signal conditioners during installation, reconfiguration, or calibration.



Features

- Completely automated turnkey system
 - Signal conditioning
 - A/D conversion
 - Processing
 - Display
 - Archiving
- Up to 48 kHz sample rate per channel
- Continuous self-calibrating electronics provide accuracy to 0.01% typical; 0.05% at high gains
- Automatic self-configuration for all types of transducers
- 16-bit A/D conversion per channel
- Up to 64,000 measurements
- 8M samples/sec continuous storage to disk
- Continuous self-test
- System aggregate throughput rate up to 16M samples/sec

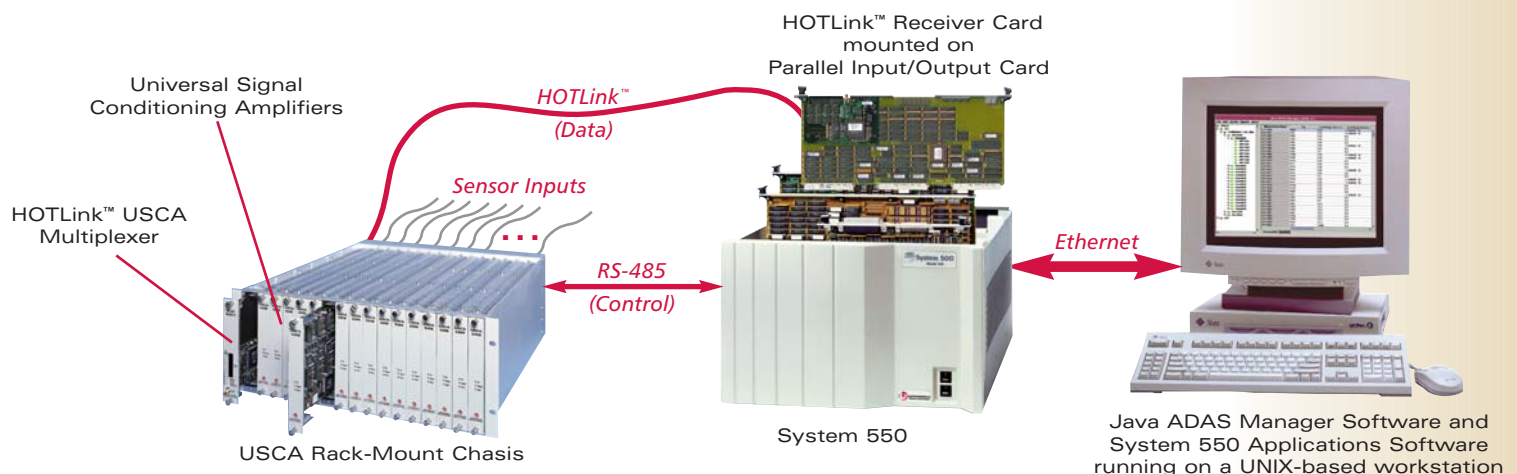
In addition to universal signal conditioning, the ADAS 5000 provides independent transducer excitation, high common mode immunity, and wide data bandwidths--all with negligible crosstalk. It comes with both hardware and software for system setup, control, calibration, processing, recording, and display. And it features a modular design that allows quick field modifications and system reconfiguration.

What's more, the ADAS 5000 is designed, built, and tested as a complete system, with end-to-end performance specifications that take the uncertainty out of system error analysis.

Benefits

- Up to 75% savings in operations and maintenance costs
- High-speed real-time processing

ADAS 5000 System Components



SYSTEM SOLUTIONS

L-3 Telemetry-West integrates the capabilities of many L-3 Communications division to provide turnkey system solutions. These solutions are based on commercial-off-the-shelf products coupled with software and design capabilities. Our end-to-end system capabilities include satellite systems for both the space and ground segments that provide data reception and recovery, launch vehicles support, satellite monitoring, frequency monitoring, network infrastructures, and complex telecommunications infrastructures. We'll design and deliver a complete electronics system solution tailored to your needs.

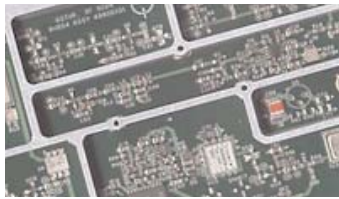
Example Systems

- Turnkey test sites
 - Aircraft, missile, and UAV test and training ranges
 - Remotely controlled test ranges
 - Flight termination and telecommand systems
- Shipborne, mobile, and transportable ground stations
- Airborne / spaceborne components and overall air / space / ground integration capabilities
- Airborne flying test beds



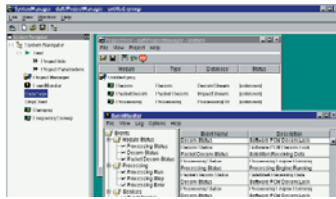
UNMATCHED CAPABILITIES

We offer the broadest range of technologies available to make ground systems for real-time telemetry, data acquisition, avionics and communications systems easier to build and integrate. By reducing development time and costs, we give you something of tangible value: a competitive edge in a competitive environment.



Hardware Development

- PWB design
- VME, PC, PCI, PMC, SCSI
- FPGA and DSP designs
- RF design
- Mechanical engineering
- Environmental engineering



Software Development

- Unix, Windows and Linux
- VxWorks real-time software
- Embedded software
- Device drivers
- Java, C, and C++ development
- Object-oriented programming
- GUI development
- Communication protocols
- Internet protocols



Manufacturing

- PWB assembly
- Hardware assembly
- Quality control
- Supplier management and relations



Systems Integration

- Requirements definition
- Third-party integration
- Custom software and hardware engineering
- Factory acceptance testing



Program Management

- Project management
- Scheduling
- Design reviews
- Custom documentation
- Configuration management
- Acceptance test planning



Customer Support

- Installation
- Training
- Maintenance
- On-site support
- Applications engineering

Excellence You Can Measure

L-3 Telemetry West's has over 50 years of heritage, bringing performance and value to virtually every major defense and aerospace organization in the World. We're joined in that legacy by over seventy L-3 divisions, each a leader in it's area of expertise - from microwave components, antennas and telemetry instrumentation to satellite communications and secure communications systems. Our breadth of capability in the telemetry, avionics integration and data acquisition arenas continues to grow with full spectrum solutions that include ground-based and airborne telemetry components and systems as well as complete systems engineering and integration services.

Turnkey solutions from a single source - delivered on time and with complete after market support. That's what L-3 Communications is all about. With over 9 billion dollars in revenue and one of the highest ratios of engineering staff to total employees, we have what it takes to give you the competitive edge.

Find out more! Call Sales toll free in the U.S. at 800.351.8483

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