DTS
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TECH NOTES FROM DTS THE LEADER IN DATA ACQUISITION SYSTEMS & SENSORS FOR PRODUCT TESTING

DataPoint

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SAFETY FIRST.

this issue

PRODUCTS

DTS designs & manufactures data acquisition systems and sensors for testing professionals.

SERVICES

24/7 Worldwide Tech Support
ISO 17025 (A2LA) Calibration
Calibration & Repair Services
Application Support
Software Integration
OEM/Embedded Applications

TECH CENTERS

Seal Beach, California USA
Novi, Michigan USA
Sydney, Australia
Shanghai, China
Zorge, Germany
Tokyo, Japan

SAFER SKIES - DTS Helps Make it a Reality

According to data from the National Transportation Safety Board (NTSB), U.S. commercial airlines did not have a single fatality last year. It was the third time in the past four years that there were no deaths, continuing a dramatic trend toward safer skies. Statistics show the average number of deaths fell from about 86 a year in the 1990s to 46 a year since 2000, a 46% drop. Last year, U.S. carriers flew more than 10 million flights and hauled more than 700 million passengers, but only 14 people suffered serious injuries. There were also no major accidents, the most serious category under the NTSB's definitions.[1]

Safety analysts and the Federal Aviation Administration (FAA) credit the improving safety record to scores of initiatives that have gone into place in recent decades. Some of the most critical enhancements include technology that has nearly eliminated collisions with the ground and other aircraft, improved training, and data collection that identifies hazards before they cause accidents. [1]

Over the years, DTS data acquisition systems have played a part in that critical data collection that has been key to improving safety. Customers including the FAA, NASA, IPECO and Raytheon use DTS systems for a variety of applications in aircraft, egress, and in-flight safety testing.

DTS data recorders and sensors are used in a variety of aircraft testing applications including:

- Airframe & spacecraft structural integrity
- Drop tower
- Ejection seat
- Helicopter hard landing
- Injury analysis
- Passenger and crew safety
- Parachute performance
- Seat and restraint testing

DTS has also had a long alliance with the SAFE Association, a non-profit professional organization that is *"Dedicated to ensuring personal safety and protection in Land, Sea, Air and Space environments."*

SAFE provides test professionals the opportunity to share knowledge, resources and experience – with the ultimate goal and focus always being the preservation of human life. SAFE has chapters throughout the U.S., as well as Canada, Europe, Japan and the Pacific Rim. For more information visit www.safeassociation.org.

[1]Source: USA Today

DTS customers including Wright Patterson AFB (top) and the Federal Aviation Administration (FAA) (bottom) use DTS data acquisition systems to perform a variety of regulation safety tests. Testing on passenger and crew seating, safety restraints and ejection seats have all aided in the trend of improved safety statistics.

DTS

TECH NOTE

Q: What channel count increments does DTS offer?

A: DTS offers five different DAS systems and each features a different channel configuration. All systems offer rack or daisy chain options to create test set-ups to accommodate up to thousands of channels.

Channel count is only one factor in selecting the right DAS. Sampling rate, size, duration, g rating and memory are other key factors. A DTS sales engineer can help you determine the best system for your application.

SLICE
3 Channel Increments

TDAS PRO
8 Channel Increments

TDAS PRO LAB
8 Channel Increments

TDAS PRO TOM
4 Squib Channels
8 Digital Outs

TDAS G5
32 Channel Increments

TECH UPDATE

DTS is now using BOX.net for all large file sharing and technical support assistance. The DTS FTP site previously used is no longer active. If you need assistance or have application questions, please contact our technical support team for help 24/7.

support@dtsweb.com

DTS Offers ISO 17025 Calibration Services

In May 2010, DTS Michigan was accredited to perform calibration services that conform to ISO 17025. Many test labs worldwide follow ISO 17025, which are the official international standards for 'General Requirements for the Competence of Testing and Calibration Laboratories.'

ISO/IEC 17025, initially published by the International Organization for Standardization (ISO) in 1999, takes the quality management systems from ISO 9001 and adds requirements specific to test laboratories. This includes many technical requirements such as uncertainty and best measurement capability, and accreditation and regular audits by a certified agency. There are several accreditation agencies worldwide. DTS Michigan has been accredited by A2LA, a leading U.S. agency and member of ILAC.

DTS offers ISO 17025 (A2LA accredited) calibrations for TDAS PRO, TDAS G5 and ARS. Calibrations of SLICE and TSR are coming soon. Services can be performed at the DTS Michigan office or at your site.

The ISO 17025 calibration and reporting process is much more detailed and complex than standard calibration services as it lists every measurement, "As Received" and "As Returned". For example, the ISO 17025 calibration report for the TDAS G5 DAS module is now 25+ pages, compared with the 4 page standard report.

ISO 17025 requires an accreditation from an outside agency that certifies equipment and technicians are following and documenting a very detailed process that is traceable to international standards.

Each industry has different standards to follow and many DTS automotive customers require that measurement and reference equipment (such as sensors or DAS) need to be calibrated by an ISO 17025 accredited lab to ensure standardized quality management practices and traceability. As part of the process, DTS requires our reference equipment to be calibrated by an ISO 17025 accredited lab.

If you would like more information or a quote for offsite and onsite ISO 17025 accredited calibrations, please contact sales@dtsweb.com or call +1 562 493-0158.

PROJECT SPOTLIGHT

The Perfect Wave. The Perfect Board. The Ideal Data Acquisition System.

Recently, a SLICE NANO miniature data recorder was used to capture surfboard dynamics in a real-world environment. The goal is to be able to collect and analyze enough data to be able to match the perfect surfboard and rider for every type of surf condition.

DTS worked with Benjamin Thompson, a PhD student At UC San Diego, on a unique application: measuring surfboard deformations dynamically in the ocean, with the goal of determining the optimal structural properties of a surfboard for a given surfer and wave properties.

Thompson originally deployed a team of UCSD mechanical engineers to prototype the test instruments and procedure. But to meet the ultimate goal of collecting 24 channels of data, they soon realized that adding more channels wasn't an option without significantly altering the mass of the board and dynamics of the ride.

After more research and a call to DTS, the team found that SLICE NANO was the ideal data recorder to meet the requirements of fitting in the small waterproof enclosure, the increased channel count and the wireless capabilities. An initial small-scale test successfully collected 4 channels of data during the inaugural test run using SLICE. The next step: more testing, more channels and an enclosure that will be embedded into the surfboard.

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