

## APPLICATIONS

- Aerospace analysis
- Automotive safety
- Biomechanics
- Blast testing
- Helicopter & aircraft
- Impact testing
- Parachute deployment
- Ride & handling
- Sports & safety equipment
- Vibration testing
- Vehicle black box

## TSR 6DXC

### Rugged Data Logger, Acceleration & Angular Velocity, CAN Bus or USB Interface



The rugged TSR 6DXC data logger features mil-standard connectors and is ideal for unattended monitoring of acceleration in blast and multi-event impacts.

The TSR 6DXC high performance data logger is designed to collect shock and vibration data in harsh test environments. Compact and self-powered, the TSR 6DXC features built-in triaxial accelerometer and triaxial angular rate sensors. An advanced sleep mode “wakes” for an event trigger, collects data which is stored in 1 GB flash memory and then automatically re-arms and returns to ready-mode to capture the next event. Multiple TSR 6DXC modules can be daisy-chained, plus it offers communication via CAN Bus or USB interface.

Modules can be daisy-chained for synchronized communication status, trigger and more.

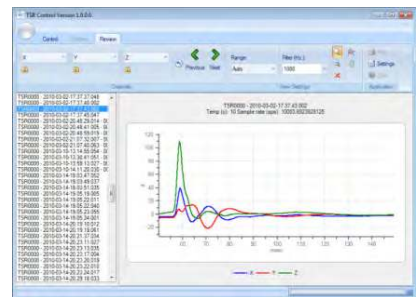


## Features

- Compact size, easily mounts to test article or can be discretely embedded inside a test device
- Built-in triaxial accelerometer and triaxial angular rate sensors
- Data writes directly to 1 GB flash memory, up to 2,000 events
- High sampling rates and bandwidth
- Logs temperature, date and time for each event  
Synchronizes time sequence for event reporting
- USB-rechargeable Lithium battery operates up to 6 months or external power (6-36 VDC)
- CAN Bus or USB communications interface
- Modules can be daisy-chained for power, communication and trigger synchronization
- Simple, intuitive software for arming, downloading and viewing data. Simple data files can be viewed in Excel.

## Software

TSR Control software provides fast, easy-to-use tools for controlling the recorder and viewing the stored events. With a focus on speed and simplicity, TSR Control provides the tools to configure the recorder, view real-time sensor output and review your time-history data.



## PRODUCTS

Diversified Technical Systems designs and manufactures data acquisition systems and sensors for the experienced testing professional.

## SERVICES

24/7 Worldwide Tech Support  
ISO 17025 (A2LA) Calibration  
Onsite Calibration & Training  
Application Consulting  
Software Integration  
OEM/Embedded Applications

## WORLDWIDE SUPPORT

HELP CENTER (24/7/365 Access)  
DTS Technical Centers  
Global Sales Partners

## HEADQUARTERS

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## Specifications

MODEL	TSR 6DXC
Internal Accelerometer	± 6000 g full scale Piezo-Electric Triaxial
Internal Angular Rate Sensor	±18000 deg/sec Triaxial
Frequency Response	Accel: 0.3 Hz – 5 kHz ARS: 0-300 Hz Pressure: NA
Sampling Rate	Accel: 75000 samples/sec/channel ARS: 5000 samples/sec/channel Pressure: NA 12-bit ADC
Battery*	Lithium Rechargeable (900 mAh) Active/Record Mode ~24 hours typical Low Power/Sleep Mode ~6 months typical
	*NOTE: Battery life will vary based on type, application, duty-cycle and sampling rate. Contact a DTS sales engineer to determine the best product and estimated battery life for your specific application.  See TSR Battery Life article available on DTS Help Center.

### PHYSICAL

Size: 83 x 83 x 32 mm (3.25 x 3.25 x 1.25")  
Weight: 420 g (15 oz.)  
Model: TSR 6DXC

### ENVIRONMENTAL

Operating Temp.: -30 to 60°C (-22 to 140°F)  
Humidity: 20 to 95%  
Shock: 10000 g survivable  
IP Rating: IP67

### INPUT CHANNELS

Acceleration: 3 channels, internal accelerometer  
Angular Rate: 3 channels, internal angular rate sensor  
Additional Features: Logs temperature and time stamp per event

### DATA CONVERSION

Resolution: 12-bit ADC  
Memory Capacity: 1 GB flash  
Sleep: Advanced motion detection for power savings  
Trigger: When armed in low power mode, data collection starts <100 µsec after trigger  
  
Data Collection Modes:  
Active: Loops in memory waiting for trigger  
Low power: No pre-trigger data

### COMMUNICATIONS

Communication: USB or CAN Bus

### CONNECTORS

Mil-Std 38999: Dual, chainable for power, CAN Bus, trigger and status

### TRIGGERING

Software Trigger: Programmable level trigger from acceleration

### POWER

Internal Battery: USB-rechargeable lithium polymer

### SOFTWARE

Product Name: TSR Control  
Data Management: Date/Time/Temp recorded for each event  
Post-Processing: SAE Filters, View multiple channels/tests, HIC Head Injury Criteria  
  
Operating Systems: Windows® 7/8/10 (32- and 64-bit)  
Communication: USB or CAN Bus

Additional DTS data logger models are available with a variety of sensor options, shock ratings, sampling rates and more.



Specifications subject to change without notice.  
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