PRODUCT DATASHEET

Global NCAP
IN-DUMMY DAS
THOR, WorldSID
Hybrid III, Q-Series

SLICE6

Ultra-Small Data Acquisition System for Embedded Solutions

APPLICATIONS

- In-dummy
- Automotive safety
- Biomechanics
- Embedded monitoring
- Helicopter & aircraft
- Impact testing
- Parachute deployment
- Pedestrian head & leg form
- Ride & handling
- Sound measurement
- Sports & safety equipment
- Vibration testing

NOTE: See SLICE6 HB datasheet for in-dummy DAS solutions for the U.S. Army WIAMan underbody blast manikin.

PRODUCTS

Diversified Technical Systems designs and manufactures data acquisition systems and sensors for experienced test professionals.

SLICE6 is an ultra-small, 6-channel data acquisition system. Originally designed to be integrated into crash and blast test ATDs, SLICE6 is ideal for applications with tight space constraints. SLICE6 offers direct-mount sensor solutions and supports a variety of sensor types including accelerometers, load cells, pressure sensors, IR-Tracc and potentiometers.

SLICE6 standalone DAS is designed for test applications where size and reliability are key requirements. The ultra-small form factor allows placement of SLICE6 directly at the sensor, minimizing cabling and connector size. SLICE6 features programmable signal conditioning and advanced diagnostic features that meet SAE J211 and ISO 6487 requirements, including Butterworth anti-alias filters and 16-bit ADC written directly to flash memory. SLICE6 supports the standard DTS Ethernet/power/status bus, plus is compatible with SLICE and TDAS systems.

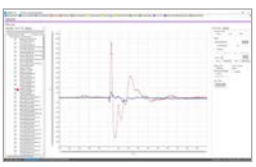
Modules can be daisy-chained to support hundreds of channels per test set-up. The distributed SLICE6 solution significantly reduces in-dummy cabling and connectors.

Features

- SLICE6 is a 6-channel DAS module that can be networked to configure the exact features and channel count needed with reduced cabling requirements
- Ultra-small and lightweight (10 x 24 x 30 mm and 28 grams)
- Variable sampling rates
  Maximum 100k sps/ch (simultaneously sampled on all ch)
  Records >200 minutes of data sampled at 100k sps
- One per channel, 16-bit ADC direct write to 16 GB flash memory
- 4 pole active Butterworth anti-alias filters
- Supports a variety of sensors, including full and half-bridge sensors, strain gauges, voltage input, thermocouples
- Two data recording modes: recorder and circular buffer
- Low power, less than 2.5 W with full sensor load
- Complies with ISO 6487 and SAE J211 recommended practices, as well as NHTSA and FAA requirements
- Ideal for integration in ATDs, including THOR 5th and 50th

Software

DTS offers a powerful software option for SLICE6. DataPRO provides fast, easy tools for storing sensor information, performing data collection, viewing and exporting data. DataPRO is a fully-featured software with a comprehensive database and user interface for tracking sensor information, creating test objects and test setups, performing diagnostic routines, and conducting tests. Both software packages offer the most advanced self-diagnostics, plus support for EQX, ISO MME and many other data exchange file formats.



DTS
www.dtsweb.com

Specifications

PHYSICAL	
Size:	24 x 30 x 10 mm (0.94 x 1.18 x 0.39")
Mass:	28 g (0.99 oz)
Connectors:	Nano-Strip for 6 sensor inputs, NanoD for chain

ENVIRONMENTAL	
Operating Temp:	0° to 60°C (32° to 140°F)
Humidity:	95% RH non-condensing
Shock:	500 g, 3 msec half sine

DATA RECORDING	
Modes:	Recorder and circular buffer
Memory:	16 GB non-volatile flash
Max Sample Rate:	100k sps programmable
Recording Time:	>200 minutes at max sample rate
Pre-Trigger Data	Any part of memory can be used for pre or post trigger data

BRIDGE OR VOLTAGE SIGNAL CONDITIONING	
Input Range:	-2.4 V to +2.5 V (2.5 V center)
Bandwidth:	DC to 4 kHz
Gain Range:	1.0-1,280, software programmable
Auto Offset Range:	100% of effective input range at gain >2
Shunt Check:	Yes
Sensor ID:	Maxim Integrated (Dallas) silicon serial number
Linearity (typical):	0.1% (gain 1 to 320), ≤0.5% (gain ≥640)
Accuracy:	0.2% including reference uncertainty

POWER	
Supply Voltage:	9-15 VDC
Current (Maximum):	< 2.5 W with full sensor load
Protection:	Reverse current, ESD

EXCITATION	
Type:	Independent regulator for each channel
Level:	5.0 V regulated, up to 20 mA per channel
Recovery:	Short circuit safe, recovers <1 msec

ANTI-ALIAS FILTER	
Fixed Low Pass:	4-pole Butterworth, standard knee frequency at 3 kHz.
Custom Options:	Contact DTS for other filter options or any special requirements
Overall Response:	System response complies with SAE J211/ ISO 6487 recommended practices

ANALOG-TO-DIGITAL CONVERSION	
Type:	16-bit SAR (Successive Approximation Register) ADC, one per channel, simultaneous sampling of all channels

TRIGGERING	
Hardware Trigger:	Contact closure & TTL logic-level (active low)
Level Trigger:	Positive and/or negative level on any active sensor channel (first level crossing of any programmed sensor triggers system)

SOFTWARE	
Control:	DataPRO, API
Operating Systems:	Windows® 7/8/10 (32- and 64-bit)
Communication:	100M bps Ethernet (unit-to-unit)

CALIBRATION	
Calibration Supplied:	NIST traceable
ISO 17025:	ISO 17025 (A2LA Accredited)
Service Options:	Standard, On-site & Service Contracts available

ACCESSORIES
See website for full line of accessories

SERVICES

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

WORLDWIDE SUPPORT

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

HEADQUARTERS

Seal Beach, California USA

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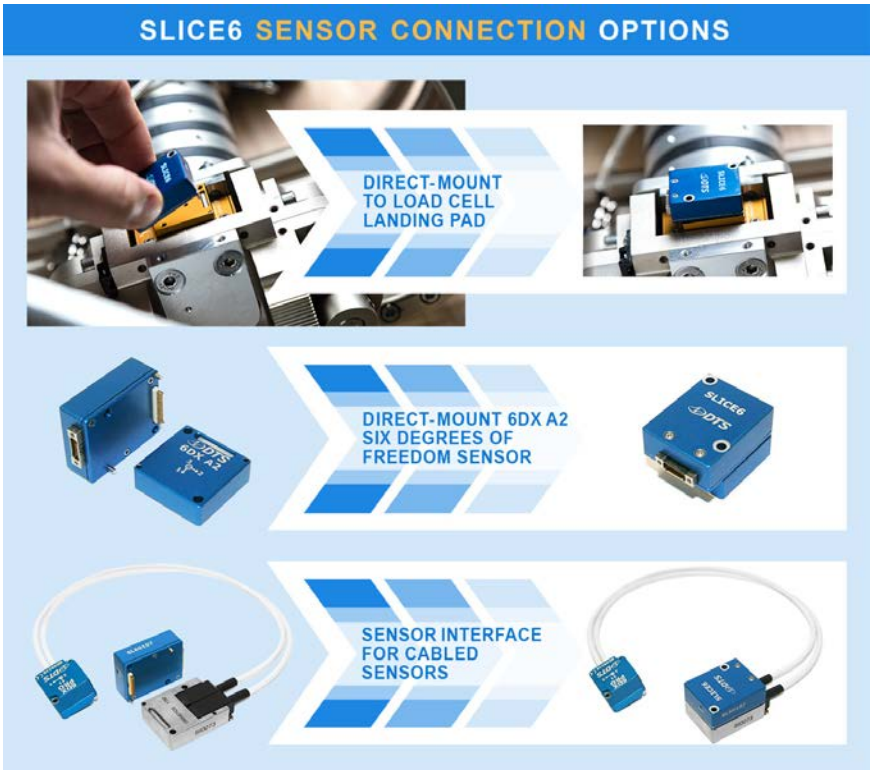
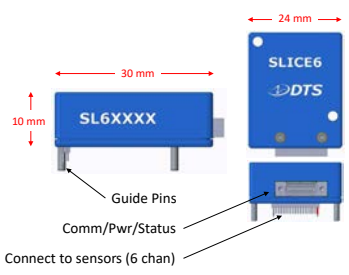
Sensor Connections

SLICE6 offers cable-free, direct-mount sensor options, plus supports a wide variety of traditional external cabled sensors.





DTS
www.dtsweb.com

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