

## APPLICATIONS

- Acoustic studies
- Aerospace analysis
- Automotive safety
- Biomechanics
- Blast dynamics
- Ballistics Research
- Helicopter & aircraft
- Parachute deployment
- Pyrotechnic shock
- Ride & handling
- Sound measurement
- Sports & safety equipment
- Vibration testing
- Wind Tunnel

## PRODUCTS

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

# SLICE PRO

## Modular, High-Speed, Rugged Data Acquisition System



SLICE PRO is a complete modular data acquisition system that supports sensor inputs, airbag squib fire, trigger distribution, digital inputs & more. Designed for extreme test environments, data writes directly to flash memory.

## Features

- Modular solution, easily configures to create the exact features and channel count needed. Daisy-chain up to hundreds of channels per test.
- Easy and intuitive software, users enter sensor and sampling parameters and the software automatically sets-up the hardware.
- User-selectable sampling rates up to 1M sps/channel
- Data writes directly to 16 GB non-volatile flash memory
- High bandwidth options up to 200 kHz
- Supports a variety of external sensors, including full and half-bridge sensors, strain gages, IEPE, voltage input, thermocouples, etc.
- Compatible with TDAS G5 and TDAS PRO hardware
- Complies with ISO 6487 and SAE J211 recommended practices, as well as NHTSA and FAA requirements

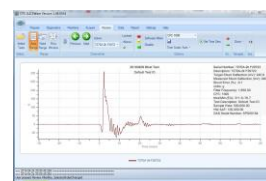
SLICE PRO is a shock-hardened, mega-sample data acquisition system with unmatched flexibility, accuracy and reliability. Modular and configurable, SLICE PRO makes it easy to build test set-ups with different channel counts and features. SLICE PRO is a complete standalone system with signal conditioning, filtering and multiple bandwidth options. SLICE PRO writes data directly to non-volatile flash memory, making it ideal for a variety of critical applications including automotive safety and blast testing.



The SLICE PRO SIM is available with either 9 or 18 (as shown) fully-programmable sensor input channels that provide power and signal conditioning to support a variety of external sensors.

## Software

DTS offers two powerful software options for SLICE PRO. SLICEWare provides fast, easy tools for storing sensor information, performing data collection, viewing and exporting data. DataPRO is a fully-featured software package 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.



[www.dtsweb.com](http://www.dtsweb.com)

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## COMPATABILITY

Using DataPRO Software, SLICE PRO is compatible with both TDAS PRO and TDAS G5 hardware, making it easy to expand system features and channel counts.

## 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

## CONTACT US

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## Specifications

### SLICE PRO SIM (Sensor Input Module)

Description:	Data acquisition module 9 or 18 channels
Size:	52 x 90 x 80 mm
Mass:	726 g (26 oz)
Sensor Connectors:	LEMO 1B or Tajimi rectangular Insertion and removal tool available



### SLICE PRO Ethernet Controller

Description:	Interface for start, status, event, power and 10/100 Ethernet communication signals
System Capability:	Each Controller supports up to 72 channels and provides interconnection compatibility with additional SLICE PRO systems, TDAS PRO & TDAS G5 systems. Hundreds of channels can be combined in one setup.
Start/Trigger Input:	Start: 5 V active high Trigger: Fully isolated contact closure with nominal 20 V open circuit voltage
Size:	26 x 90 x 80 mm
Mass:	305 g (15 oz)
Connectors:	COM: LEMO 2B 19-pin, Power: LEMO 2B 4-pin Note: Ethernet Controller "COM" ports are compatible with TDAS PRO and G5 COM ports



### SLICE PRO USB Controller

Description:	Simple connections for start, status, event, power and USB 2.0 communication signals.
System Capability:	Supports up to 72 channels
Start/Trigger Input:	Contact closure, also compatible with 5-volt logic signals, active low.
Size:	52 x 90 x 80 mm
Mass:	454 g (16 oz)
Connectors:	COM: USB B-Type, Power: LEMO 2B 4-pin



### INTERNAL BATTERIES (ALL MODULES)

Type:	Lithium Polymer with built-in charger.
Run Time:	One hour fully armed, all channels in use with 5 V excitation (40 min. with 10 V excitation)
Recharge Time:	3-4 hours

### POWER

Supply Voltage (SIM):	9-15 VDC; Note: 12-15 VDC required for charging internal battery
Power (Maximum):	15 W per 18-channel unit with 350 ohm loads and battery charging
Power Control:	Push button, not impact critical
Protection:	Reverse current, ESD

### START & TRIGGER OPTIONS

Level Trigger:	Positive or negative level on any active sensor channel (first level crossing of any programmed sensor triggers system)
Software Trigger:	Data collection may be started or triggered via software

### ENVIRONMENTAL

Operating Temp:	0 to 60°C (32 to 140°F) Contact DTS re: extended temperature ranges
Humidity:	95% RH non-condensing
Shock:	100 g, 12 msec half sine

### BRIDGE or VOLTAGE SENSOR INTERFACE

Type:	Differential Instrumentation Amplifier
Common Mode Range:	-2.5 to +6.0 volts
Differential Input Range:	±2.45 volts
Bandwidth:	DC to 200 kHz (see options in AAF section)
Gain Range:	1 to 12,000
Noise (SNR typical):	75-80 dB (100 kHz BW, typical gain)
Gain Check:	Automatic voltage Insertion
Linearity (typical):	0.1% (gain 1 to 400), ≤0.5% (gain ≥640)
Accuracy:	0.2% including reference uncertainty
Auto Offset Range:	2X effective input range at gain ≥2 (typical)
Excitation Voltage:	Off, 2.0, 5.0, 7.5 and 10.0 V selected in software
Excitation Current:	40 mA via independent current-limited source
Bridge Support:	3k ohm half-bridge completion. 120 or 350 ohm 3/4 bridge completion for strain gages, etc.
Shunt Check:	Emulation method, automatically calculated
Sensor ID:	Maxim Integrated (Dallas) "1-wire" silicon serial number

### IEPE SENSOR INTERFACE (if so equipped)

Input Range:	0.5 to 23.5 V
Excitation:	10.0 mA constant current with 25 V source. Contact DTS for other options if needed.
Sensor ID:	Works with EID or "TEDS" equipped sensors

### ANTI-ALIAS FILTERS (AAF)

Fixed Low Pass:	8-pole fixed Butterworth with factory configured maximum bandwidth. Options: 4.0 kHz, 100 kHz, 200 kHz
Adjustable Low Pass:	5-pole Butterworth set under software control: 50 to 35 kHz (bypassed for maximum bandwidth)
Custom Options:	Contact DTS for 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 sample of all channels
Acquisition Time:	80 ns (min)
Conversion Time:	420 ns (max)

### DATA RECORDING

Modes:	Recorder, circular buffer and multiple test modes available
Memory:	16 GB non-volatile flash per module
Sample Rate:	User-programmable from 100 sps to 1M sps Maximum 1M sps/ch with 9 channels used or 500k sps/ch with 18 channels used per SIM

### CALIBRATION

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

### SOFTWARE

Control:	SLICEWare, DataPRO, API NOTE: Timed Output Module (TOM) requires DataPRO software
Operating Systems:	Windows® 7/8/10 (32- and 64-bit)
Communication:	USB and Ethernet 10/100M

### ACCESSORIES

See website for full line of SLICE PRO accessories, including:



SLICE PRO Base Plate  
Aluminum mounting plate, available in multiple sizes to support a variety of configurations

Additional SLICE PRO modules also available – see website for details.



SLICE PRO TOM  
Timed Output Module



SLICE PRO TDM  
Trigger Distributor Module



SLICE PRO DIM  
Digital Input Module



SLICE PRO LAB  
Non-Rugged System

  
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Specifications subject to change without notice.  
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