

SLICE PRO LAB Stationary, Laboratory Data Acquisition System

APPLICATIONS

- Aerospace analysis
- Automotive safety
- Biomechanics
- Component testing
- Dummy calibration
- Static bench top testing
- Vibration testing



SLICE PRO LAB SIM (left) is a modular, standalone data recorder with 9 or 18 fully-programmable sensor input channels.

SLICE PRO LAB TOM (right) is a modular, standalone airbag timer with 4 independent squib fire channels and 8 digital output channels.

Features

- A complete solution with programmable sensor interface, adjustable filters, 16-bit ADC and Ethernet communication
- Two intuitive DTS software options: SLICEWare and DataPRO
- SLICE PRO LAB SIM includes 9 or 18 fully-programmable sensor input channels with isolated excitation
- SLICE PRO LAB TOM includes 4 isolated squib fire channels and 8 separate digital outputs for controlling other systems requiring timed outputs—0.1 msec resolution
- User-selectable sampling rates up to 1M sps/channel
- Data bandwidth options up to 200 kHz
- Record from milliseconds to hours. Data stored directly to 16 GB non-volatile flash memory.
- Supports a variety of external sensors, including full and half-bridge sensors, strain gages, IEPE, voltage input, thermocouples, etc.
- Meets NHTSA, FAA, ISO 6487 and SAE J211 data acquisition requirements

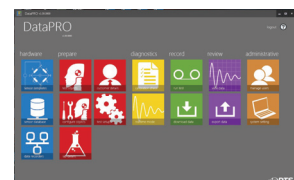
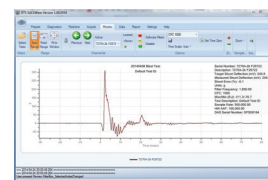
The SLICE PRO LAB system from DTS features the same electronics and flexibility as the crash-hardened SLICE PRO modules, but in laboratory enclosures. Ideal for a variety of static tests, modules can be configured into any combination in the SLICE PRO LAB Rack. Each rack holds up to four modules and includes an Ethernet Controller, plus the system is compatible with other DTS hardware.



The SLICE PRO LAB Rack is a standard 19-inch x 3U and holds up to 4 modules. Racks can be daisy-chained to support high channel count tests.

Software

DTS offers two great software options for all SLICE products that allow users to simply enter sensor information and sampling parameters and the software automatically sets-up the hardware. SLICEWare offers fast, easy tools for storing sensor information and performing data collection. DataPRO offers a full-featured database and user interface for tracking sensor information, creating test objects and test setups, performing diagnostic routines and running tests. Both software options feature the most advanced self-diagnostics available, plus support for EOX and numerous data exchange file formats.



PRODUCTS

Diversified Technical Systems designs and manufactures data acquisition systems, sensors, and software for beginning and advanced test professionals.

COMPATABILITY

Already have DTS equipment?

Did you know SLICE PRO LAB is compatible with SLICE PRO, TDAS PRO, TDAS PRO LAB and TDAS G5 hardware using DataPRO software.

SERVICES

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

TECH CENTERS

Michigan, United States
United Kingdom
France
Japan
Asia Pacific

HEADQUARTERS

Seal Beach, California USA

CONTACT US

Phone: +1 562 493 0158
Email: sales@dtsweb.com

Specifications

[Please See SLICE PRO Datasheets for Additional Details]

PHYSICAL	
Module Size:	13.2 x 9.7 x 10.9 cm (5.2 x 3.8 x 4.3")
Module Weight:	LAB SIM 0.8 kg (1.80 lb) LAB TOM 0.8 kg (1.80 lb)
Compatibility:	Fits in SLICE PRO LAB Ethernet Rack
4 Module Rack Size:	48.3 x 17.8 cm x 3U high (19" x 7" x 3U)
4 Module Rack Weight:	4.2 kg (9.3 lb) includes Ethernet Controller
POWER	
Supply Voltage (rack):	15 VDC nominal: 9-15 V range (LAB systems do not contain internal batteries)
Power (Maximum):	40 W via the SLICE PRO LAB Ethernet Rack
Power Control:	Push button, not impact critical
Protection:	Reverse current, ESD
ENVIRONMENTAL	
Operating Temp:	0-50°C (32-122°F)
SLICE PRO LAB SENSOR INPUT MODULE (SIM)	
Bridge or Voltage Sensor Interface	
No. of Channels:	9 or 18
Type:	Differential Instrumentation Amplifier
Sensor Connectors:	LEMO 1B, 2B or Tajimi rectangular
Common Mode Range:	±3.5 V, centered 2.5 V above ground
Differential Input Range:	±2.5 V, centered 2.5 V above ground
Bandwidth:	DC to 200 kHz
Gain Range:	1 to 12,000
Excitation Voltage:	Off, 2.0, 5.0, 7.5 and 10.0 V selected in software
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:	4.0 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 45 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
Start and 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
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

PC INTERFACE

SLICE PRO Ethernet Controller (included with Rack)	
Description:	Interface for start, status, event, power and 10/100 Ethernet communication signals Each Controller supports up to 72 channels and provides interconnection compatibility with additional SLICE PRO systems, TDAS PRO & TDAS G5 systems. 100s of channels can be combined in one setup.
System Capability:	COM: LEMO 2B 19-pin, Power: LEMO 2B 4-pin Note: Ethernet Controller "COM" ports are 100% compatible with TDAS PRO and G5 COM ports.
Connectors:	COM: LEMO 2B 19-pin, Power: LEMO 2B 4-pin Note: Ethernet Controller "COM" ports are 100% compatible with TDAS PRO and G5 COM ports.

SLICE PRO LAB TIMED OUTPUT MODULE (TOM)

Squib Fire Channels	
Number:	4 per module
Energy Delivery:	Capacitive discharge, constant current
Source Voltage:	17 V
Constant Current Output:	1.0-4.0 A software adjustable in 0.1 A increments.
Timing Control	
Method:	Delay for each output channel can be independently programmed via software
Delay Range:	0-99 seconds after trigger input
Squib Duration:	0.2-25.5 msec or continuous
Digital Output Duration:	0.2-1.6 msec or continuous
Resolution:	0.1 msec
Event Input	
Each Module:	Standard contact closure input, galvanically and optically isolated to 1 kV
False Trigger:	EMI, RFI and ESD protection
Multiple Modules:	Event input may be connected in parallel across several modules
Output Waveform Recording	
General:	Two measurements/ch (8 total per module): 1) current waveform 2) initiation signal/voltage waveform
Method:	16-bit SAR (Successive Approximation Register) ADC, one per channel, simultaneous sample of all channels.
Sampling Capability:	Up to 500k sps with adjustable anti-alias filter automatically set under software control
Memory Type:	16 GB non-volatile flash per module
Digital Output Channels	
General:	8 outputs available on a single connector
Output Type:	Compatible with devices requiring isolated contact closure and/or CMOS/TTL-compatible levels (0-5 V). Logic polarity is software programmable.
SOFTWARE	
Control:*	SLICEWare, DataPRO, API *NOTE: Timed Output Module (TOM) requires DataPRO software
Operating Systems:	Windows® Vista/7/8/10 (32- and 64-bit)



SLICE PRO LAB fits into a standard 19 inch rack configuration.

Sleek handles make it quick and easy to reconfigure systems.



A portable bench-top enclosure is also available for a single rack system.


www.dtsweb.com

Specifications subject to change without notice.
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