

SLICE MICRO™ & SLICE NANO™

Miniature Data Recorders

APPLICATIONS

- Aerospace analysis
- Amusement ride testing
- Automotive safety
- Biomechanics
- Blast testing
- Embedded monitoring
- Helicopter & aircraft
- Impact testing
- In-dummy
- Injury investigation
- Parachute deployment
- Package testing: truck, air, ship & rail
- Pedestrian head & leg form
- Ride & handling
- Sound measurement
- Sports & safety equipment
- Vibration testing



The ultra small SLICE features 3-channel blocks that stack to create data recorder systems with up to 24 channels per stack and up to thousands of channels per test.

Features

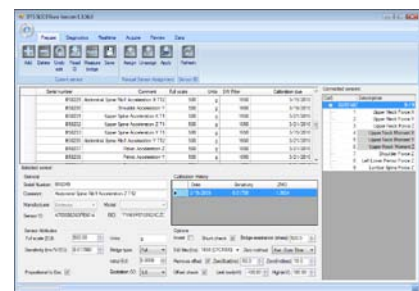
- Fast, simple, easy-to-use software
- Lightweight & extremely small
- Easily attaches or discretely embeds in test article
Ideal for in-dummy applications
- Modular: SLICE modules can be stacked or chained to create the exact feature and channel combination needed
- Records up to 120 ksps per channel
- 7 GB flash memory
- Works with a variety of external sensor interfaces: Bridge (MEMS sensors, strain & load, voltage), temperature, digital/frequency, IEPE sensors
- Two SLICE MICRO embedded sensor modules available: Triax Accelerometer & Triax Angular Rate Sensor
- Certified to NHTSA, FAA, ISO 6487 and SAE J211 data acquisition practices

SLICE MICRO and SLICE NANO miniature data recorders from DTS offer the ultimate in flexibility. The modular design allows users to create customized systems by stacking or chaining 3-channel slices together to achieve the exact feature and channel combination required—up to thousands of channels per test. The Base SLICE contains the microprocessor, memory and control circuits for managing multiple modules. SLICE is fully software-configurable for sample rate, recording time, gain, offset, triggering and anti-alias filtering.



Software

SLICEWare set-up and control software provides fast, easy-to-use tools for storing sensor information and performing data collection. Advanced features such as automatic sensor assignment, detailed channel diagnostics, and real-time data display supports successful testing and quality data every time.



PRODUCTS

DTS offers a full line of data acquisition recorders and sensors for dynamic, high shock testing.

SERVICES

24/7 Worldwide Tech Support
 Calibration & Repair Services
 Application Support
 Software Integration
 OEM/Embedded Applications

OFFICES

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

Specifications



PHYSICAL	
Size:	MICRO 42 x 42 mm footprint (1.65 x 1.65") NANO 26 x 31 mm footprint (1.02 x 1.22")
Weight:	MICRO 25 g (0.88 oz), NANO 8 g (0.28 oz)
ENVIRONMENTAL	
Operating Temp.:	0-50°C (32-122°F)
Shock:	500 g, 4 msec half sine 5000 g optional (NANO package) 50k g option available (custom package)
DATA RECORDING	
Storage:	Recorder or circular buffer modes available. Portion of memory may be for pre-trigger data.
Memory:	Non-volatile flash up to 7 GB within each SLICE module



TRIGGERING	
Hardware Trigger:	Isolated contact closure & logic-level input
Level Trigger:	Software programmable from any channel(s)
POWER	
Supply Voltage:	7-15 VDC
Maximum Power:	100 mA. Each additional module requires additional power (depends significantly on connected sensor load)
Power Control:	Remote power control input for on/off
Protection:	Reverse current protection
SOFTWARE	
Control:	SLICEWare, LabView drivers, API
Operating Systems:	Windows® XP, Vista, 7
Communication:	USB; Ethernet option available



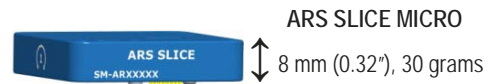
PHYSICAL	
Size:	MICRO 42 x 42 mm footprint (1.65 x 1.65") NANO 26 x 31 mm footprint (1.02 x 1.22")
Weight:	MICRO 20 g (0.71 oz), NANO 6 g (0.21 oz)
SIGNAL CONDITIONING	
Number of Channels:	3 differential, programmable
Input Range:	±2.4 V (2.5 V center)
Bandwidth:	DC to 40 kHz, programmable
Gain Range:	1.0-1280, programmable
Auto Offset Range:	100% of effective input range
Bridge Support:	Software switchable completion
Shunt Check:	Emulation method
ANALOG-TO-DIGITAL CONVERSION	
Type:	16-bit SAR, one ADC per channel
Max Sampling Rate:	120k samples/sec/channel



EXCITATION	
Method:	One 20 mA current-limited source/channel
Voltage:	5.0 V (2.5 V option available)
On/Off Control:	Shut down when not recording Opt. pulsed excitation for low sampling rates
POWER	
Supply Voltage:	7-15 VDC (supplied via Base SLICE)
Maximum Power:	110 mA with 350 ohm bridges all channels. Power will vary significantly with sensor load.
ANTI-ALIAS FILTER	
Fixed Low Pass:	4-Pole Butterworth, standard knee frequency of 40 kHz
Adjustable Low Pass:	5-Pole Butterworth set under software control, 50 Hz to 40 kHz
Overall Response:	Both filters may be used together to achieve 9-pole effective response
SAE J211:	System response exceeds SAE J211 requirements



PHYSICAL	
Size:	MICRO 42 x 42 mm footprint (1.65 x 1.65")
Weight:	30 g (1.06 oz)
Range:	3 axis, 50-2000 g options
Maximum Power:	65 mA (power supplied via Base SLICE)



PHYSICAL	
Size:	MICRO 42 x 42 mm footprint (1.65 x 1.65")
Weight:	30 g (1.06 oz)
Range:	3 axis, 300-50k deg/sec options
Maximum Power:	75 mA (power supplied via Base SLICE)

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Specifications subject to change without notice.