APPLICATIONS

- **Blast testing**
- **Fuze validation**
- **Crash testing**
- **Gun launch**
- **Drop testing**
- **Missile/Ordnance**
- **Mining/VOD**
- **Parachute deployment**

SLICE HG
Miniature 3-Channel Data Recorder
High Sampling, Shock-Rated to 20,000 g

SLICE HG is a complete standalone, data acquisition system engineered to collect precision data in high shock environments. The ultra-small, 3-channel unit is designed to embed directly in or on the test article. Shock rated to 20,000 g, SLICE is capable of sampling up to 500 ksps/channel.

SLICE HG is a miniature, rugged data recorder designed to collect critical field and survivability data. SLICE HG is easy to set-up with a PC, then the compact unit can be installed directly onboard a variety of test articles. Data direct-writes to a large flash memory and is later downloaded for analysis using DTS software.
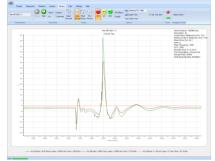
The system architecture is the Base+ SLICE that contains the microprocessor, memory and control circuits for managing the 3-channel Bridge SLICE. A simple interface provides power, trigger and communication signals for chaining multiple SLICE HG systems and connecting to a PC.

SLICE HG can also be configured with an embedded DTS ARS (angular rate sensor) or triaxial accelerometer.

Features

- Compact enclosure: 31.75 mm DIA x 42.52 mm (1.250" DIA x 1.67")

- Rugged & reliable: shock rated to 20,000 g

- Sampling rates up to 500 ksps/channel

- Supports a variety of external sensors interfaces including: 3- and 4-wire bridge, MEMS sensors, strain, load & voltage

- Options for embedded single-axis angular rate sensor or triaxial accelerometer

- 16 GB flash memory: >4 hours of data storage time at max sampling rate

- Low power: 9-12 VDC, battery back-up

- Multiple sleep and trigger options

- Daisy-chain up to 12-channels of SLICE HG for higher channel count tests

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 support successful testing and quality data every time.

PRODUCTS

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

DTS

Advanced Measurement Solutions
www.dtsweb.com

REV 01.2016

Specifications

PHYSICAL

Size:	31.75 mm DIA x 42.52 mm (1.250" DIA x 1.674")
Weight:	85 g (3.00 oz.)
Connectors:	
Comm/Power/Chain:	Omnetics, circular locking, 12-pin
Sensors:	Omnetics, circular locking; 3 single-channel 7-pin or 1 three-channel 16-pin

ENVIRONMENTAL

Operating Temp.:	0 to 60°C (32 to 140°F) Call to discuss extended temperature ranges
Humidity:	95% RH non-condensing
Shock:	20,000 g

DATA RECORDING

Modes:	Recorder or circular buffer modes available
Memory:	16 GB non-volatile flash
Sample Rate:	Up to 500 ksps/channel

TRIGGERING

Hardware Trigger:	Isolated contact closure & logic-level input
Level Trigger:	Software programmable from any channel

POWER

Supply Voltage:	9-12 VDC; >11 VDC when charging back-up super capacitor
Current (Maximum):	250 mA including excitation voltage for sensors
Power Control:	Remote power control input for on/off
Protection:	Reverse current, ESD

BACKUP SUPER CAPACITOR

Charge Status:	Backup super-cap charges when input voltage to Base SLICE is 12 VDC
Charge Time:	~1 min.
Backup Power:	~200 msec after main power lost

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

EXCITATION

Method:	One 20 mA current-limited source/channel
Voltage:	5.0 V
On/Off Control:	Shut down when not armed or recording Opt. pulsed excitation for low sampling rates

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 exceeds SAE J211 response

SOFTWARE

Control:	SLICEWare, API
Operating Systems:	Windows® XP/Vista/7/8
Communication:	USB; optional Ethernet interface

SLICE HG uses the system architecture developed by DTS for the original SLICE NANO and SLICE MICRO modular data acquisition systems.

Authorized DTS Representative:

DTS

www.dtsweb.com