PRODUCT DATASHEET

MEETS SPECIFICATIONS FOR
EU & US NCAP TESTING

SLICE Pedestrian Headform Impactor

Integrated Data Acquisition for Cable-Free Operation

APPLICATIONS

- **Pedestrian Safety Testing**
- **3.5 & 4.5 kg Headforms**

SLICE also works with:

- **FLEX Pedestrian Legforms**
- **Free Motion Headforms (FMH)**

The SLICE Pedestrian Headform Impactor is a turn-key solution that includes an integrated 3-channel SLICE data acquisition system and a triaxial accelerometer (shown with a DTS ACC3). The embedded system eliminates cables that may get tangled or cause issues with noise or data loss.

The SLICE Pedestrian Headform Impactor integrates the ultra-small SLICE NANO data acquisition system into a cable-free solution. Offering the ultimate in flexibility and reliability, the headform is designed to be armed with a PC, disconnected, then powered and launched any time – without trailing cables. The system can be triggered with a level trigger or contact closure. Data writes to flash memory and is downloaded via USB.

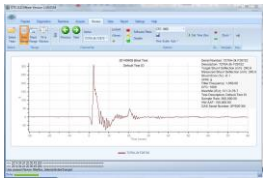
Engineered to maintain proper mass and CG, the headform is available in multiple configurations. Data direct-writes to flash memory.

Features

- Cable-free operation
- Engineered to assure proper mass, CG and moments
- Level trigger or contact closure
- Intuitive, easy-to-use software
- Embedded data recorder supports a triaxial accelerometer, data writes directly to16 GB flash memory
- Optional 3-axis angular rate sensor (ARS)
- Integrated internal battery
- Meets NHTSA, FAA, ISO 6487 and SAE J211 data acquisition practices

Software

DTS offers two powerful software options for the SLICE headform. Ideal for standalone systems, SLICEWare provides fast, easy tools for storing sensor information, performing data collection, viewing and exporting data. For labs using DataPRO, this fully-featured software offers 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 feature the most advanced self-diagnostics, plus support for EQX, ISO MME and many other data exchange file formats.



PRODUCTS

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

DTS
www.dtsweb.com

SERVICES

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

TECH CENTERS

North America
Europe
Asia-Pacific

HEADQUARTERS

Seal Beach, California USA

CONTACT US

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

Specifications

BASE+ SLICE (NANO)

One (1) required per stack – system microprocessor & memory

Size:	26 x 31 x 6.5 mm (1.02 x 1.22 x 0.26")
Weight:	14.2 g (0.50 oz)
Connectors:	Omnetics, circular locking, 12-pin

BRIDGE SLICE (NANO)

Three (3) inputs for external sensors

Size:	26 x 31 x 5.5 mm (1.02 x 1.22 x 0.22")
Weight:	13.8 g (0.49 oz)
Connectors:	Omnetics, circular locking; 3 single-channel 7-pin or 1 three-channel 16-pin

BATTERY SLICE

Designed specifically for headform

Size:	26 x 31 x 16 mm (1.65 x 1.65 x 0.63")
Weight:	27 g (0.95 oz)
Charge Status:	Backup battery charges when input voltage to BASE SLICE is greater than 11 VDC
Charge Time:	~60 min. from complete discharge to full charge (100 mA at input connector on Base)
Discharge Rate:	~15 minutes for 3 channels ~7 minutes for 6 channels

SIGNAL CONDITIONING

Number of Channels:	3 differential, programmable
Input Range:	±2.4 V (2.5 V center)
Bandwidth:	DC to 35 kHz, programmable
Gain Range:	1.0-1280, programmable
Auto Offset Range:	100% of effective input range
Bridge Support:	Software controlled half-bridge completion
Shunt Check:	Emulation method, automatically calculated
Sensor ID:	Maxim Integrated (Dallas) silicon serial number
Linearity (typical):	≤0.2% (gain 1 to 320), ≤0.5% (gain >320)
Accuracy:	0.5% including reference uncertainty

ANALOG-TO-DIGITAL CONVERSION

Type:	16-bit SAR (Successive Approximation Register) ADC, one per channel, simultaneous sample of all channels

EXCITATION

Method:	Independent regulator for each channel
Voltage:	5.0 V, up to 20 mA, short circuit safe
Power Management:	Shutdown when not armed or recording

ANTI-ALIAS FILTER

Fixed Low Pass:	4-pole Butterworth, standard knee frequency at 40 kHz
Adjustable Low Pass:	5-pole Butterworth set by software from 1 Hz to 35 kHz
Response:	Meets SAE J211/ISO6487 response corridors

SOFTWARE

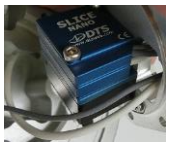
Control:	SLICEWare, DataPRO
Operating Systems:	Windows 7, 8 or 10 (32/64 bit)
Communication:	USB

Ordering Information

The DTS Pedestrian Headform Impactor kit can be customized for specific requirements – see available options below. Contact sales@dtsweb.com for more information.

Choose Headform Size	DTS Part Number	Description
	13000-40620	3.5 kg Pedestrian Headform (Skin & Skull kit)
	13000-40630	4.5 kg Pedestrian Headform (Skin & Skull kit)

Choose Backplate Kit	DTS Part Number	Description
	13000-40640	3.5 kg Pedestrian Backplate Kit
	13000-40650	4.5 kg Pedestrian Backplate Kit



Choose DAS Kit	DTS Part Number	Description (Includes 3-channel SLICE NANO Base+ and Bridge, battery, cables & mounting brackets)+
	13000-40540	DAS Kit for DTS ACC3 PRO accelerometer*
	13000-40600	DAS Kit for 7264 type accelerometers*
	13000-40610	DAS Kit for Kyowa accelerometers*

* accelerometers ordered separately
\+ requires SLICEWARE or DataPRO software
++ optional DTS ARS3 Triaxial Angular Rate Sensor available

USB Interface Kit	DTS Part Number	Description (provides power and USB com to DAS)
	13000-40660	Pedestrian Headform USB Interface Kit

DTS
www.dtsweb.com