SLICE MICRO and SLICE NANO are standalone, user-configurable data acquisition systems designed for extreme test environments. SLICE MICRO and NANO support a variety of external sensors to measure acceleration, strain, voltage, temperature and more.

SLICE is a modular data acquisition system featuring unmatched flexibility and reliability for critical test applications. Available in two ultra-small form factors, both SLICE MICRO and SLICE NANO make it easy to build systems in 3-channel increments by stacking layers with different channel and sensor input configurations. The BASE+ SLICE is the foundation of the system with the microprocessor, memory and control circuits. A simple interface provides power, trigger and communication signals for chaining multiple SLICE stacks and connecting to a PC.

SLICE MICRO and SLICE NANO are portable, rugged DAQ systems. Shown in a 6-channel IEPE configuration, SLICE MICRO and NANO include full signal conditioning and data writes directly to non-volatile flash memory.

Features
- Ultra-small SLICE modules configure to create the exact features and channel count needed. Stack up to 24 channels per base and daisy-chain up to hundreds of channels per test.
- Intuitive, easy-to-use software
- Data writes to 16 GB flash memory
- Variable sampling rates: Minimum 10 sps per channel
  Up to 200k sps on ≤24 channels per stack
  Up to 500k sps on ≤3 channels per stack
- Meets MIL-STD-810G for temperature, altitude and vibration
- Supports a variety of sensors, including full and half-bridge sensors, strain gauges, IEPE, voltage input, thermocouples
- SLICE MICRO offers built-in triaxial accelerometers, angular rate sensors, and external IEPE (piezo-electric) sensor inputs
- Complies with ISO 6487 and SAE J211 recommended practices, as well as NHTSA and FAA requirements

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

#### BASE+ SLICE (NANO & MICRO)

- **One (1) required per stack** — system microprocessor & memory
  - **Size:** MICRO 42 x 42 x 9 mm (1.65 x 1.65 x 0.35")
    - NANO 26 x 31 x 8 mm (1.02 x 1.22 x 0.32")
  - **Mass:** MICRO 30 g (1.06 oz), NANO 15.6 g (0.55 oz)
  - **Connectors:** Omnetics, circular locking, 12-pin
  - **Compatibility:** BASE+ works with all legacy NANO & MICRO

#### DATA RECORDING

- **Modes:** Recorder, circular buffer, multiple event, arm on power-up, and other modes available
- **Memory:** 16 GB non-volatile flash per SLICE stack
- **Sample Rate:** Minimum 10 SPS per channel
- **<See Chart for Max:**
  - Up to 200k SPS per channel
  - Up to 500k SPS per stack (24/7/365 Access)

#### TRIGGERING

- **Hardware Trigger:** Contact closure & TTL logic-level (active low)
- **Level Trigger:** Positive and/or negative level on any active sensor channel (first level crossing of any programmed sensor triggers system)

#### POWER

- **Supply Voltage:** 9-15 VDC, >11 VDC when using Battery SLICE (NANO)
- **Current (Maximum):** 70 mA @ 12 V plus sensor input SLICEs
- **Protection:** Remote power control input for on/off
- **<Reverse current, ESD:**

#### SOFTWARE

- **Control:** SLICEWare, DataPRO, API
- **Operating Systems:** Windows 7/8/10 (32- and 64-bit)
- **Communication:** USB; Ethernet available via SLICE Distributor

#### BRIDGE SLICE (NANO & MICRO)

- **Three (3) inputs for external sensors**
  - **Size:** MICRO 42 x 42 x 7 mm (1.65 x 1.65 x 0.35")
    - NANO 26 x 46 x 7 mm (1.02 x 1.81 x 0.28")
  - **Mass:** MICRO 28 g (0.99 oz), NANO 23 g (0.81 oz)
  - **Connectors:** 10-32 coaxial (Microdot-compatible)

#### SIGNAL CONDITIONING

- **Number of Channels:** 3
- **Input Range:** 0.5-23.5 V (12 V center)
- **Bandwidth:** DC to 35 kHz, programmable
- **Gain Options:** 1 or 0, user programmable
- **Auto Offset Range:** 100% of effective input range at gain of 1
- **Sensor ID:** Works with EID or "TEDS" equipped sensors

#### ANALOG-TO-DIGITAL CONVERSION

- **Type:** 16-bit SAR (Successive Approximation Register)
- **Current:** 8.2 mA constant current with 25 V source.
- **On/Off Control:** Shutdown when not armed or recording
- **Voltage:** Supplied via BASE SLICE
- **Current (Maximum):** 85 mA with sensors connected to all channels

#### ANTI-ALIAS FILTER

- **Fixed Low Pass:** Adjustable Low Pass: 4-pole Butterworth, standard knee frequency at 40 kHz

#### EXCITATION

- **Current/Voltage:** 2.2 mA constant current with 25 V source.
- **On/Off Control:** Shutdown when not armed or recording
- **Voltage:** Supplied via BASE SLICE
- **Current (Maximum):** 75 mA (power supplied via BASE SLICE)

#### ACCEL SLICE (MICRO only)

- **Built-in triaxial accelerometer**
  - **Size:** MICRO 42 x 42 x 7 mm (1.65 x 1.65 x 0.35")
  - **Mass:** 30 g (1.06 oz)
  - **Number of Channels:** 3 orthogonal axes
  - **Range Options:** ±300 ±1500 ±500 deg/sec
  - **Bandwidth:** 0–2000 Hz
  - **Current (Maximum):** 65 mA (power supplied via BASE SLICE)

#### BATTERY SLICE (NANO only)

- **Optional backup battery**
  - **Size:** NANO 26 x 31 x 4 mm (1.65 x 1.65 x 0.16")
  - **Mass:** 7 g (0.25 oz)
  - **Charge Status:** Backup battery charges when input voltage to BASE SLICE is >11 VDC
  - **Charge Time:** ~15 min. from complete discharge to full charge (100 mA at input connector on Base)
  - **Discharge Rate:** ~5 seconds with 18 channels (1 Base + 6 Bridges)

#### CALIBRATION

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

#### ENVIRONMENTAL

- **Military Standard:** MIL-STD-810G
- **Operating Temp:** -40°C to 60°C (-40°F to 140°F) (Method 501,502)
- **Altitude:** -40°C @ 15240 m (50000 ft) (Method 500)
- **Vibration (Random):** Exceeds 810-G vibration (Method 514)
- **Humidity:** 95% RH non-condensing
- **Shock:** 500 g, 4 msec half sine
- **Discharge Rate:** ~5 seconds with 18 channels (1 Base + 6 Bridges)

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**WORLDWIDE SUPPORT**

HELP CENTER (24/7/365 Access)
DTS Technical Centers
Global Sales Partners

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**HEADQUARTERS**

Seal Beach, California USA

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**SERVICES**

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

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