

APPLICATIONS

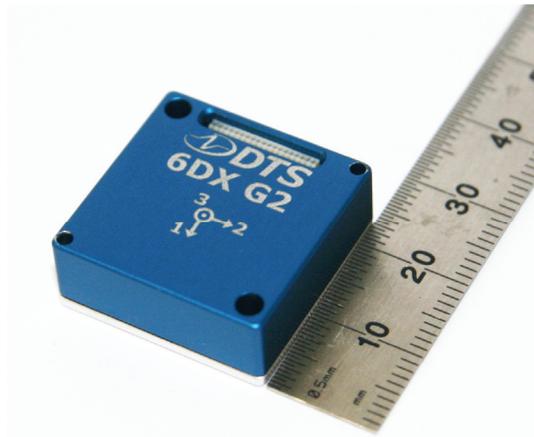
- Aerospace analysis
- Amusement ride testing
- Automotive safety
- Biomechanics
- Blast testing
- PMHS (cadaveric) testing
- Embedded monitoring
- Helicopter & aircraft
- Impact testing
- In-dummy
- Injury investigation
- Parachute deployment
- Package testing: truck, air, ship & rail
- Pedestrian head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

PRODUCTS

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

6DX G2

6 Degrees-of-Freedom Sensor Package Direct-Mount, Rugged and Cable-Free



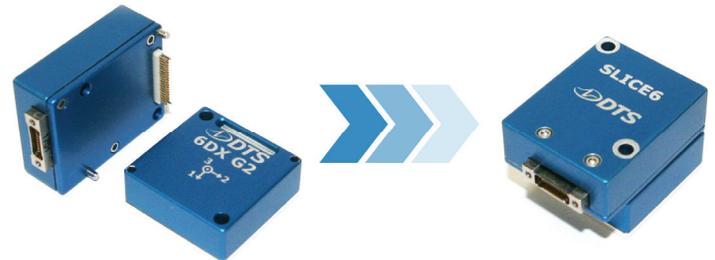
Designed as part of the DTS SLICE6 data acquisition system, the miniature 6DX G2 sensor package measures high rates of acceleration and angular velocity. Ideal for applications with limited space, the direct-mount 6DX G2 can be daisy-chained for high channel count tests.

The 6DX G2 features three linear accelerometers and three angular rate sensors conveniently packaged in a compact, high-shock enclosure. Designed for dynamic testing with tight space constraints, the 6DX G2 sensor mounts directly to the compact SLICE6 data acquisition system (DAS), completely eliminating sensor cabling. Originally developed as part of the in-dummy DAS solution for the U.S. Army WIAMan underbody blast manikin, the 6DX G2 is also ideal for PMHS testing, structural and blast testing, as well as other ATDs including THOR.

Features

- Ultra-compact and lightweight
- Ideal for high acceleration and high angular rate measurements
- DTS re-calibration services available, NIST traceable
- Complies with NHTSA, FAA, ISO 6487 and SAE J211 recommended practices
- Available in multiple range options:

6DX PRO	ACCELEROMETER RANGES	ANGULAR RATE RANGES
2K-300	±2000 g, triaxial	±300 deg/sec, triaxial
2K-1500	±2000 g, triaxial	±1500 deg/sec, triaxial
2K-8K	±2000 g, triaxial	±8000 deg/sec, triaxial
2K-18K	±2000 g, triaxial	±18000 deg/sec, triaxial



A built-in Nano-Strip connector on the SLICE6 data acquisition module features six sensor inputs which directly connect the SLICE6 DAS to the 6DX G2 sensor, eliminating all sensor cabling.

Specifications

PHYSICAL	
Size:	24 x 24 x 9.5 mm (0.98 x 0.98 x 0.39")
Mass:	14 g (0.42 oz.) without cables
Enclosure:	Anodized aluminum
Mounting Holes:	Thru-holes for two M2.5 bolts

ENVIRONMENTAL	
Operating Temp.:	-40 to +85°C (-40 to +185°F)
Humidity:	99%, non-condensing, sealed
Shock:	2000 g, any direction
IP Rating:	IP51

SENSORS: ACCELEROMETER	
Range Options:	Triaxial, ±2000 g
Bandwidth:	0-10000 Hz, DC response
Excitation Voltage:	2-10 V
Linearity:	<1% (typical)
Transverse Sensitivity:	±3% (max)
Current:	< 3 mA per axis
Packaging:	All axes intersect at one point
Sensor Type:	Full bridge piezo-resistive design
Nominal Sensitivity:	2000 g: 0.02 mV/V/g

CONNECTORS	
Type:	36 pin Nano-Strip. Connects directly to SLICE6.

CALIBRATION	
Acceleration:	NIST traceable shock, half-sine
Angular Rate:	NIST traceable rate table with stepper motor and encoder
Calibration:	Re-calibration services available

SENSORS: ANGULAR RATE	
Range Options:	Triaxial, ±300, 1500, 8K, 18K deg/sec
Bandwidth:	0-2000 Hz, DC response
Excitation Voltage:	4.9-14 V, not proportional to excitation
Linearity:	<1%
Transverse Sensitivity:	±5% (max)
Current:	6 mA nominal per axis
Full Scale Output:	±2 V nominal
Zero Output:	±200 mV

SERVICES

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

WORLDWIDE SUPPORT

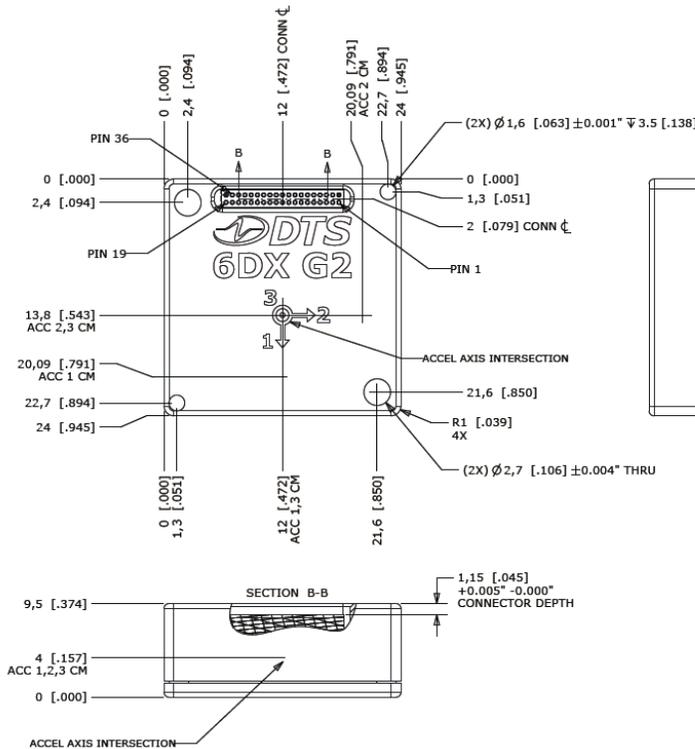
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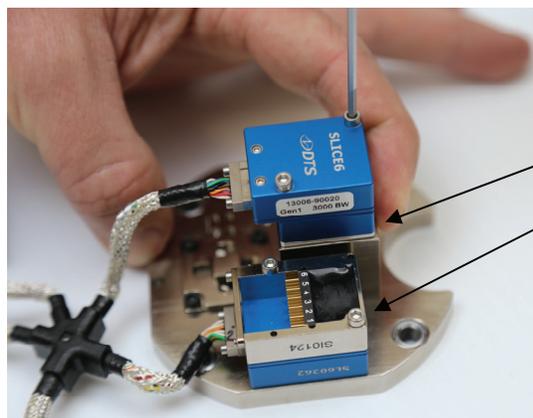


PIN ASSIGNMENTS

Pin	Signal
1	+EXCIT-ARS-1
2	+EXCIT-ARS-1
3	+SIG-ARS-1
4	-SIG-ARS-1
5	-EXCIT-ARS-1
6	+EXCIT-ACCEL-1
7	+SIG-ACCEL-1
8	-SIG-ACCEL-1
9	-EXCIT-ACCEL-1
10	+ID-ARS-1
11	-ID-ARS-1,2,3
12	+ID-ACCEL-1
13	-ID-ACCEL-1,2,3
14	+EXCIT-ARS-2
15	+SIG-ARS-2
16	-SIG-ARS-2
17	-EXCIT-ARS-2
18	+EXCIT-ACCEL-2
19	-
20	+SIG-ACCEL-2
21	-SIG-ACCEL-2
22	-EXCIT-ACCEL-2
23	+ID-ARS-2
24	+ID-ACCEL-2
25	+EXCIT-ARS-3
26	+SIG-ARS-3
27	-SIG-ARS-3
28	-EXCIT-ARS-3
29	+EXCIT-ACCEL-3
30	+SIG-ACCEL-3
31	-SIG-ACCEL-3
32	-EXCIT-ACCEL-3
33	+ID-ARS-3
34	+ID-ACCEL-3
35	TEMP-VCC
36	Earth (GND)

NOTES:

1. ACC CM = INDIVIDUAL ACCELEROMETER AXIS CENTER OF MASS
2. 6DXG2 MASS CG IS CENTER OF VOLUME
3. MOUNT USING (2X) M2.5 SCREWS
4. TORQUE TO 1.2 N-M CLEAN AND DRY
5. CONNECTOR: OMNETICS P/N A79046-001
6. MASS: 14 GRAMS ± 3 GRAMS



SLICE6 reduces in-dummy cabling and connectors by up to 75%

6DX G2 mounted directly to the SLICE6 DAS, shown as part of the THOR in-dummy DAS solution, along with the SLICE6 Sensor Interface Module for cabled sensors.



Specifications subject to change without notice.
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