ULTRASHOCK
TEMPERATURE, HUMIDITY, PRESSURE & TRI-AXIAL SHOCK DATA LOGGER

DIMELCO
La solution à votre mesure

MADGETECH
WE BUILD DATA LOGGERS

Features
- Compact size
- 3-axis shock
- Temperature, humidity, pressure
- Fully configurable measurements
- Long life rechargeable battery
- Large capacity event memory
- Programmable start time
- Real time operation
- CE compliant
- Separate low-g and high-g accelerometers

Applications
- Complete environmental shipment monitoring
- Shipping live cargo
- Aircraft turbulence measurement
- Endurance testing
- Assembly line monitoring
- Brake testing
- Laboratory drop testing
- Machinery monitoring
- Railcar coupling impacts

The UltraShock is a battery powered, stand alone temperature, pressure, humidity and 3-axis shock data logger. The UltraShock measures and records temperature, pressure and humidity at the selected reading rates, while shock is recorded as the peak acceleration levels over the same interval.

UltraShock
3-Axis Shock, Temperature, Pressure and Humidity Data Logger
SN: E00011

The UltraShock is specifically designed for documenting dynamic environments such as moving vehicles, trucks, containers, ships, etc. The device is also valuable in characterizing environments such as production and assembly lines of delicate electronics, IC fabrication, communications and computer components. This compact, portable, easy to use device will measure and record up to 3,593,358 measurements. The storage medium is non-volatile solid state memory, providing maximum data security even if the battery becomes discharged. The device can be started and stopped directly from your computer and its small size allows it to fit almost anywhere. The UltraShock makes data retrieval quick and easy. Simply plug it into an empty USB port and our user-friendly software does the rest.
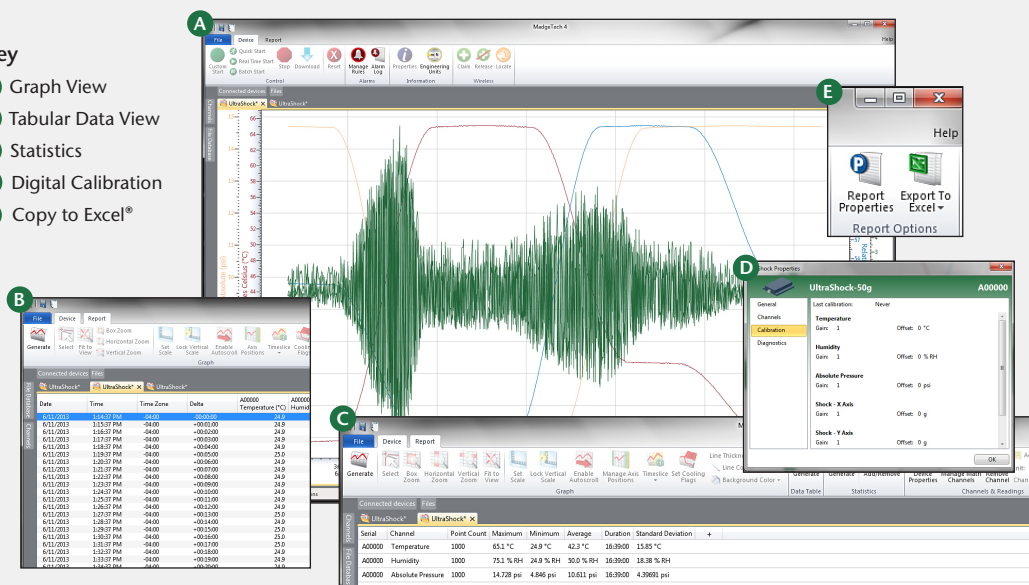
The UltraShock provides simple ordering as one model which provides three acceleration ranges. The ranges are implemented on separate low-g and high-g accelerometers for excellent resolution and accuracy.

MADGETECH DATA LOGGER SOFTWARE

Key
- **A** Graph View
- **B** Tabular Data View
- **C** Statistics
- **D** Digital Calibration
- **E** Copy to Excel®

Software Features:
- Multiple graph overlay
- Statistics
- Digital calibration
- Zoom in/ zoom out
- Lethality equations (F0, PU)
- Mean Kinetic Temperature
- Full time zone support
- Data annotation
- Min./Max./Average lines
- Data table view
- Automatic report generation
- Summary view
- Multilingual

ULTRASHOCK SPECIFICATIONS*

TEMPERATURE

Sensor:	Semiconductor
Range:	-20 °C to +60 °C
Resolution:	0.1 °C
Accuracy:	±0.5 °C (+5 °C to +60 °C)

HUMIDITY

Sensor:	Capacitive Polymer
Range:	0 %RH to 95 %RH
Resolution:	0.1 %RH
Calibrated Accuracy:	±3 %RH (±2 %RH typical at 25 °C)
Specified Accuracy Range:	+20 °C to +40 °C; 25 %RH to 75 %RH

PRESSURE

Sensor:	Semiconductor Strain Gage
Range:	100 mbar to 1300 mbar
Resolution:	0.05 mbar
Calibrated Accuracy:	±1.5 mbar at 25 °C; at 750 mbar

SHOCK

Accelerometer Type:	MEMS Semiconductor		
Acceleration Range (g):	±15 g	±100 g	±300 g
Acceleration Resolution (g):	0.02 g	0.05 g	0.2 g
Calibrated Accuracy (g):	±0.3 g	±2.0 g	±6.0 g
Sampling Rate:	1000 Hz		
Accelerometer Freq. Resp.:	>1000 Hz (15 g) >500 Hz (100 g, 300 g)		
Reading Rate:	1024 Hz to 5 minutes for shock, selectable in software. Temperature, pressure & humidity sampled approx. every 2 seconds at intervals shorter than 2 seconds. Otherwise, sampled at the reading rate.		

BATTERY WARNING: FIRE, EXPLOSION AND SEVERE BURN HAZARD. DO NOT SHORT CIRCUIT, CRUSH, PENETRATE, INCINERATE OR DISASSEMBLE. AVOID TEMPERATURES ABOVE THE MAXIMUM OPERATING TEMPERATURE OF THE PRODUCT. DISPOSE OF PROPERLY. CHARGE ONLY WITH THE PROVIDED MADGETECH CHARGER, OR FROM OTHER USB POWER SOURCE VIA THE MADGETECH PROVIDED CABLE.

Memory:	3,593,358 readings (598,893 per channel, all channels in use)
Start Modes:	Software programmable immediate start or delay start, up to 6 months in advance
Real Time Recording:	May be used with PC to monitor and record instantaneous measurements in real time
Password Protection:	An optional password may be programmed into the device to restrict access to configuration options. Data may be read out with the password.
Calibration:	Digital calibration through software
Calibration Date:	Automatically recorded within device
Battery Type:	Internal Lithium Ion pack, charger included
Battery Life:	20-90 days dependent on user settings (reading rate, trigger level, peak or instantaneous)
Data Format:	Date and time stamped gravities (g and mg), temperature (°C, °F, K, °R), humidity (%RH, mg/ml water vapor concentration), pressure (PSIA, inHg, mmHg, bar, atm, Torr, Pa, kPa, MPa)
IP Rating:	IP64
Time Accuracy:	10 seconds/month (at 0 °C to 50 °C)
Computer Interface:	USB-C cable required (included); 1MBaud
Software:	Windows XP SP3 or later
Software Compatibility:	Standard Software version 4.2.15.0 or later Secure Software version 4.2.14.0 or later
Operating Environment:	-20 °C to +60 °C, 0 %RH to 95 %RH non-condensing
Dimensions:	3.4 in x 1.7 in x 1.3 in (86 mm x 43 mm x 33 mm)
Weight:	8 oz (227 g)
Enclosure:	Anodized aluminum
Approvals:	CE compliant EMC Directive 2014/30/EU RoHS Directive 2011/65/EU

ORDERING INFORMATION

MODEL	PART NUMBER	DESCRIPTION
ULTRASHOCK	902121-00	Temperature, Humidity, Pressure and ±15 g / ±100 g / ±300 g Tri-Axial Shock Data Logger, Battery Charger and USB Type C Interface Cable

ASK ABOUT OUR OTHER DATA LOGGERS

Temperature
Humidity
Pressure
pH
Level
Shock
LCD Display
Pulse/Event/State
Current
Voltage
Wireless
Intrinsically Safe
Spectral Vibration
Motion