

## Temperature, Humidity, Pressure and Tri-Axial Shock Data Loggers Part of the NOMAD® Family

### OM-CP-ULTRASHOCK



- ✓ Built-In Accelerometers
- ✓ All Inclusive Design
- ✓ Compact
- ✓ Programmable Start Time
- ✓ High Speed Download
- ✓ Real-Time Operation
- ✓ Reusable
- ✓ User Friendly



OM-CP-ULTRASHOCK-50 data logger shown smaller than actual size.

The OM-CP-ULTRASHOCK is a battery powered, stand alone temperature, pressure, humidity and 3-axis shock recorder.

The OM-CP-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.

The OM-CP-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 174,762 measurements per channel. 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 it's small size allows it to fit almost anywhere.

The OM-CP-ULTRASHOCK makes data retrieval quick and easy. Simply plug it into an empty COM or USB port and our user-friendly software does the rest.

#### Specifications

##### TEMPERATURE

**Sensor:** Semiconductor  
**Range:** -20 to 60°C (-4 to 140°F)  
**Resolution:** 0.1°C  
**Accuracy:** ±0.5°C (0 to 50°C)

##### HUMIDITY

**Sensor:** Capacitive Polymer  
**Range:** 0 to 95% RH  
**Accuracy:** ±3% RH (±2% RH Typical at 25°C)  
**Resolution:** 0.1% RH  
**Specified Accuracy Range:** 10 to 40°C; 10 to 80% RH

##### PRESSURE

**Sensor:** Semiconductor strain gage  
**Range:** 0 to 30 psia  
**Resolution:** 0.002 psia  
**Calibrated Accuracy:** ±1.0% FSR 25°C; ±0.2% typical

##### SHOCK

**Accelerometer Type:** MEMS Semiconductor

Acceleration Range (g)	±5	±50	±100	±250
Calibrated Accuracy (g)	±0.2	±1	±2	±4
Acceleration Resolution (g)	0.01	0.05	0.1	0.2

##### Sampling Rate:

1.953 millisecond (512 Hz)

##### Acceleration Frequency

**Response:** 0 Hz to approximately 400 Hz

**Readings:** 64 readings every second to 1 every 5 minutes

**Recording Interval:** 64 Hz to 5 minutes for shock, selectable in software. Temperature, pressure and humidity sampled approximately every 2 seconds at intervals shorter than 2 seconds. Otherwise, sampled at the reading rate.

**Memory:** 174,762 readings per channel

**Start Mode:** Immediate start or delay start, up to 6 months in advance

##### Real-Time Recording:

Device can be used with PC to monitor and record instantaneous measurements in real-time

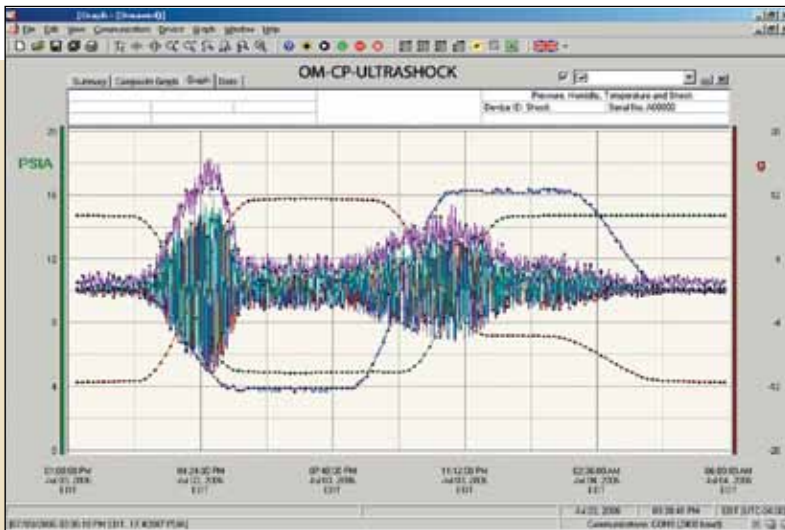
##### Password Protection:

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

**Power:** 9V lithium or alkaline (battery included); user replaceable



Reading No.	X-Axis G	Y-Axis G	Z-Axis G	Vec-Sum G	Date and Time	Annotation
1	0.07	-0.01	-0.85	0.85	May 02, 2000 12:54:41 PM	
2	0.07	-0.01	-0.85	0.85	May 02, 2000 12:54:43 PM	
3	0.04	-0.05	-0.82	0.82	May 02, 2000 12:54:45 PM	
4	0.04	-0.05	-0.82	0.82	May 02, 2000 12:54:47 PM	
5	0.10	-0.01	-0.82	0.83	May 02, 2000 12:54:49 PM	
6	0.17	-0.05	-0.82	0.84	May 02, 2000 12:54:51 PM	
7	0.04	-0.08	-0.89	0.89	May 02, 2000 12:54:53 PM	
8	0.07	-0.05	-0.82	0.82	May 02, 2000 12:54:55 PM	
9	0.04	-0.01	-0.82	0.82	May 02, 2000 12:54:57 PM	
10	0.04	-0.01	-0.82	0.82	May 02, 2000 12:54:59 PM	
11	0.17	-0.01	-0.85	0.87	May 02, 2000 12:55:01 PM	
12	0.07	-0.14	-0.89	0.89	May 02, 2000 12:55:03 PM	
13	0.04	-0.11	-0.82	0.83	May 02, 2000 12:55:05 PM	
14	0.07	-0.05	-0.85	0.85	May 02, 2000 12:55:07 PM	

OM-CP-IFC200, Windows software displays data in graphical or tabular format.

Statistics	Min	Max
Peak X	-34.40 G	19.12 G
Peak Y	-33.04 G	13.58 G
Peak Z	-42.87 G	38.63 G

### 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, mm Hg, bar,  
 atm, torr, Pa, kPa, MPa)  
**Time Accuracy:**  
 ±1 min per month at 2 to 30°C

**Battery Life:** 3 to 7 days typical  
 with lithium battery, 1 min  
 reading rate @ 25°C

**Computer Interface:**  
 PC or USB (interface cable  
 required); 115,200 baud

**Software:** XP SP3/Vista/7 and 8  
 (32-bit and 64-bit)

### Operating Environment:

-20 to 60°C (-4 to 140°F)  
 0 to 95% RH non-condensing

### Dimensions:

89 H x 111 W x 26 mm D  
 (3.5 x 4.4 x 1.0")

**Weight:** 341 g (12 oz)

**Material:** Anodized aluminum

## To Order

Model No.	Description
OM-CP-ULTRASHOCK-50	Tri-axial shock data logger, ±50 g
OM-CP-ULTRASHOCK-50-CERT	Tri-axial shock data logger, ±50 g with NIST calibration certificate
OM-CP-ULTRASHOCK-5	Tri-axial shock data logger, ±5 g
OM-CP-ULTRASHOCK-5-CERT	Tri-axial shock data logger, ±5 g with NIST calibration certificate
OM-CP-ULTRASHOCK-100	Tri-axial shock data logger, ±100 g
OM-CP-ULTRASHOCK-100-CERT	Tri-axial shock data logger, ±100 g with NIST calibration certificate
OM-CP-ULTRASHOCK-250	Tri-axial shock data logger, ±250 g
OM-CP-ULTRASHOCK-250-CERT	Tri-axial shock data logger, ±250 g with NIST calibration certificate
OM-CP-IFC200	Windows software and 1.8 m (6') USB interface cable
OM-CP-SVP-SYSTEM	FDA 21 CFR part 11 compliant IQ/OQ/PQ secure software validation workbook and software package (unlimited users, license per computer)
OM-CP-BAT103	Replacement 9V lithium battery
OM-CP-SHOCK-MAG-KIT	Magnet mount kit for data logger

Comes complete with 9V lithium battery. Operator's manual and USB interface cable are included with the OM-CP-IFC200 Windows software (required to operate the data logger and sold separately).

**Ordering Example:** OM-CP-ULTRASHOCK-50-CERT humidity, temperature, pressure and tri-axial shock data logger, OM-CP-IFC200 Windows software with USB interface cable.