

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

### OM-CP-ULTRASHOCK-EB



- ✓ All Inclusive Design
- ✓ Built-In Accelerometers
- ✓ 60 Day Battery Life
- ✓ High Speed Download
- ✓ Reusable
- ✓ Compact
- ✓ User-Friendly

The OM-CP-ULTRASHOCK-EB is a battery powered, stand alone temperature, pressure, humidity and 3-axis shock recorder which offers a battery life of up to 60 days typical.

The unit 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-EB 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 is an all-in-one compact, portable, easy to use device that will measure and record up to 174,762 measurements per channel (1,572,858 measurements, total). 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.



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

The OM-CP-ULTRASHOCK-EB 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 54°C (-4 to 129°F)  
**Resolution:** 0.1°C  
**Accuracy:** ±0.5°C (0 to 50°C)

##### HUMIDITY

**Sensor:** Capacitive Polymer  
**Range:** 5 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  
**Specified Accuracy Range:**  
 0 to 30 psia, 25°C

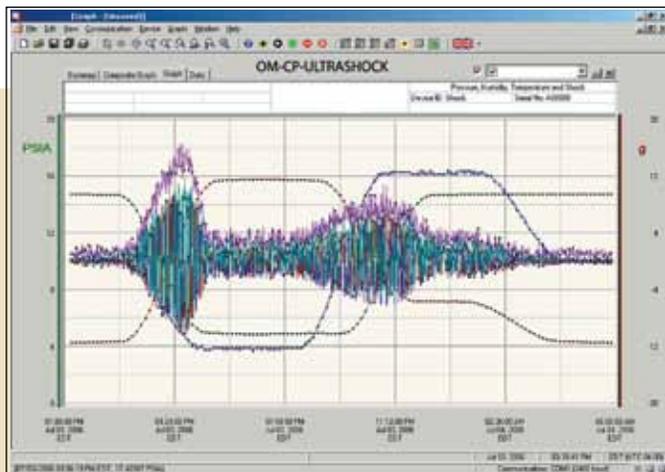
#### SHOCK

**Accelerometer Type:**  
 MEMS Semiconductor

Acceleration Range (g)	±5	±50	±100	±250
Acceleration Resolution (g)	±0.01	±0.05	±0.1	±0.2
Calibrated Accuracy (g)	±0.2	±1.0	±2.0	±4.0

**Sampling Rate:** 1.953 ms (512 Hz)  
**Acceleration Frequency Response:** 0 Hz to approximately 400 Hz

**Memory:** 174,762 per channel (1,572,858 total readings)  
**Recording Interval:** 64 Hz to 5 minutes for shock, selectable in software. Temperature, pressure and humidity sampled approximately every 2 seconds at intervals faster than 2 seconds. Otherwise, sampled at the reading rate.



Reading No.	X-axis G	Y-axis G	Z-axis G	Vec Sum G	Date and Time	Annotation
1	0.07	-0.01	-0.05	0.05	May 02, 2000 12:54:41 PM	
2	0.07	-0.01	-0.05	0.05	May 02, 2000 12:54:43 PM	
3	0.04	-0.05	-0.02	0.02	May 02, 2000 12:54:45 PM	
4	0.04	-0.05	-0.02	0.02	May 02, 2000 12:54:47 PM	
5	0.10	-0.01	-0.02	0.03	May 02, 2000 12:54:49 PM	
6	0.17	0.05	-0.02	0.04	May 02, 2000 12:54:51 PM	
7	0.04	-0.09	-0.08	0.08	May 02, 2000 12:54:53 PM	
8	0.07	-0.05	-0.02	0.02	May 02, 2000 12:54:55 PM	
9	0.04	-0.01	-0.02	0.02	May 02, 2000 12:54:57 PM	
10	0.04	-0.01	-0.02	0.02	May 02, 2000 12:54:59 PM	
11	0.17	-0.01	-0.05	0.07	May 02, 2000 12:55:01 PM	
12	0.07	-0.14	-0.08	0.09	May 02, 2000 12:55:03 PM	
13	0.04	-0.11	-0.02	0.03	May 02, 2000 12:55:05 PM	
14	0.07	-0.05	-0.05	0.05	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

**Start Mode:** Immediate start or delay start, up to 180 days from PC launch

**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:** 6 D-cell alkaline (battery included), user replaceable

**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)

**Time Accuracy:** ±1 minute per month at 20 to 30°C

**Battery Life:** 60 days typical with alkaline battery, 1 minute reading rate @ 25°C

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

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

**Operating Environment:** -20 to 54°C (-4 to 129°F)  
0 to 95% RH non-condensing

**Dimensions:** 137 H x 140 W x 80 mm D (5.4 x 5.5 x 3.2")

**Weight:** 2.3 kg (80 oz)

**Material:** Anodized aluminum

## To Order

Model No.	Description
OM-CP-ULTRASHOCK-5-EB	Tri-axial shock data logger, ±5 g, extended battery life
OM-CP-ULTRASHOCK-5-EB-CERT	Tri-axial shock data logger, ±5 g, extended battery life with NIST calibration certificate
OM-CP-ULTRASHOCK-50-EB	Tri-axial shock data logger, ±50 g, extended battery life
OM-CP-ULTRASHOCK-50-EB-CERT	Tri-axial shock data logger, ±50 g, extended battery life with NIST calibration certificate
OM-CP-ULTRASHOCK-100-EB	Tri-axial shock data logger, ±100 g, extended battery life
OM-CP-ULTRASHOCK-100-EB-CERT	Tri-axial shock data logger, ±100 g, extended battery life with NIST calibration certificate
OM-CP-ULTRASHOCK-250-EB	Tri-axial shock data logger, ±250 g, extended battery life
OM-CP-ULTRASHOCK-250-EB-CERT	Tri-axial shock data logger, ±250 g, extended battery life 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)
MN1300	Replacement 1.5V D cell alkaline battery for extended battery life
OM-CP-SHOCK-EB-MAG-KIT	Magnet mount kit for tri-axial shock data loggers with extended battery life

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-5-EB-CERT humidity, temperature, pressure and tri-axial shock data logger, OM-CP-IFC200 Windows software with USB interface cable.