

NOVECOM BLAST VIBRATION MONITOR

Integrated Blast Vibration Monitor (101352)

SPECIFICATIONS – PHYSICAL

Size (with antenna)	2.1 m (h) x 1.2 m (w) x 0.8 m (d)
Operating temperature	0 °C to 50 °C
Protection level	IP66

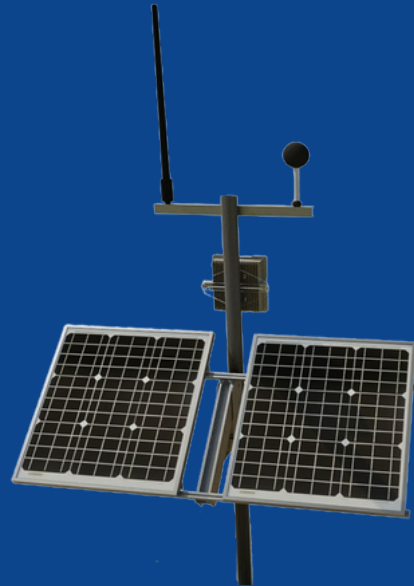
Equipment is mounted to a 60 mm pole, which is typically concreted into the ground.

SPECIFICATIONS – VIBRATION SENSING

Method	Triple-axis geophone
Bandwidth (–3 dB)	2 Hz to 400 Hz
Sampling rate	1 kHz, continuous Every event recorded, not threshold-triggered
Maximum measurable vibration	102 mm/s or 204 mm/s, depending on sensitivity mode (frequency dependent)
Lowest resolvable blast	Better than 0.1 mm/s

SPECIFICATIONS – SOUND OVERPRESSURE

Method	1/2" omni-directional microphone
Bandwidth (–3 dB)	2 Hz to 400 Hz
Sampling rate	1 kHz
Maximum measurable sound pressure	128 dBL or 131 dBL, depending on sensitivity mode



DESCRIPTION

The Integrated Blast Vibration Monitor measures ground vibration and sound overpressure, and provides alerts and measurements of blast events through Novecom's easy-to-use SynaptiX® web platform.

Deployed individually or in a group, the monitor provides near real-time awareness of vibration and sound effects to help demonstrate compliance.

The equipment is robust and intended for continuous outdoor operation. Combined with Novecom's ongoing maintenance and field support services, the monitors give mines a comprehensive, ongoing capability to monitor the effects of blasts.

The Integrated Blast Vibration Monitor is part of an ecosystem of IIoT products from Novecom. Contact us for variants that suit your application.



COMPLIANCE

Data acquisition	AS 2187.2-2006
Microphone capsule	IEC 61094-4 (1995)
Solar sizing	AS 4509.2:2010

SPECIFICATIONS – ELECTRICAL

Power supply	Internal rechargeable battery
Internal battery	86 Wh LiFePO4
Power generation (solar source)	2 x 40 W PV panels

SPECIFICATIONS – COMMUNICATIONS

Data link	LTE/5G Cat M1, antenna included
Data link bands	B28
Data link plans	Factory-installed full-size SIM
Local diagnostics	100BASE-TX Ethernet

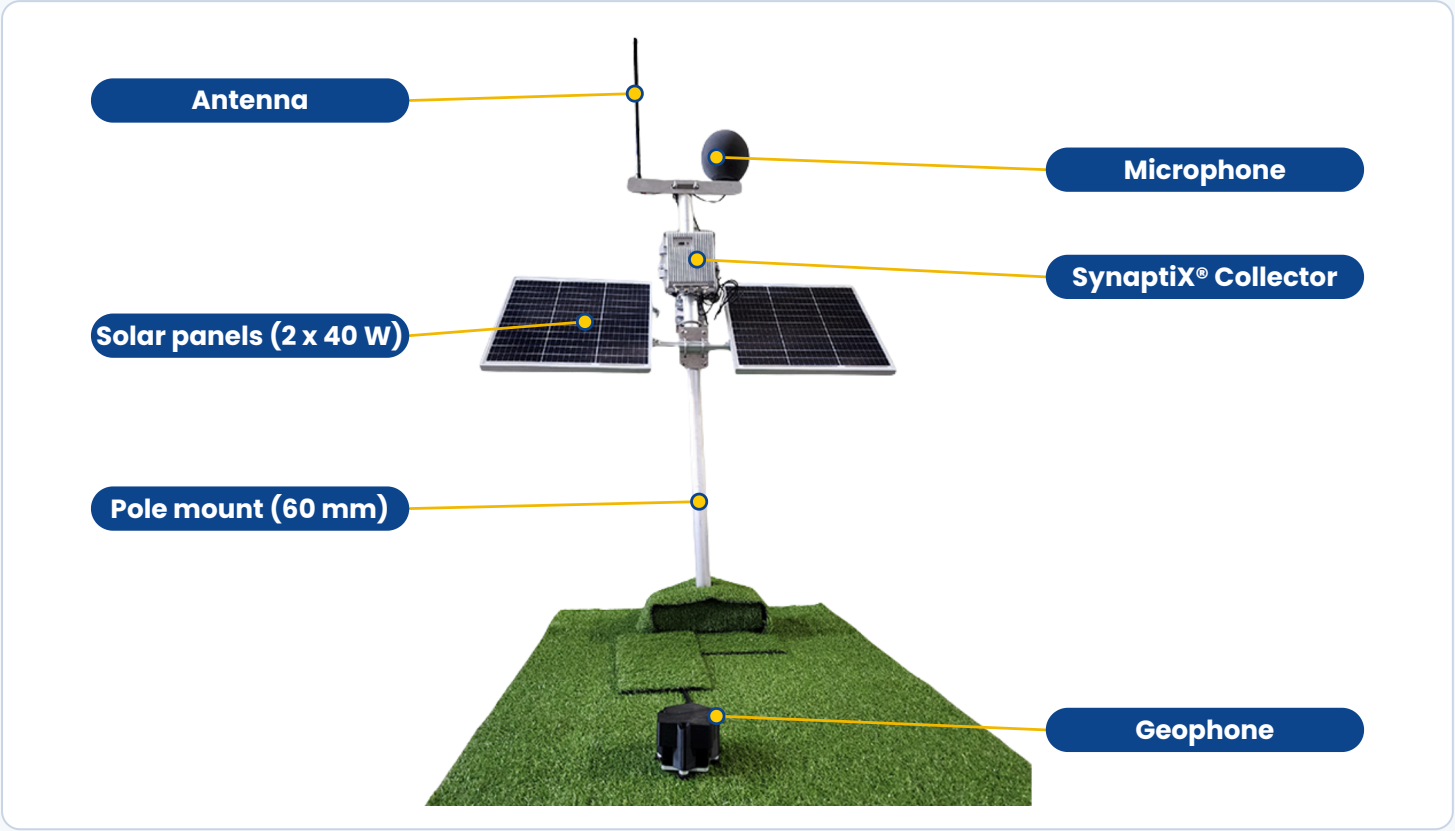
SPECIFICATIONS – COMPUTATIONAL

Storage	Factory-installed Micro-SD, 128 GB
Onboard software is configured for use with Novecom SynaptiX cloud software.	

CONNECTORS AND PINOUTS

For details of the connectors and pinouts, please refer to the datasheet for the Novecom 101873.

ANATOMY OF THE BLAST VIBRATION MONITOR



SYNAPTIX ASSET MONITORING SYSTEM

The SynaptiX Asset Monitoring System (SAMS) is part of the SynaptiX web services. It provides a cloud-based user interface for mine specialists, blast engineers, environmental managers and blast consultants to access vibration and overpressure data.

SAMS FEATURES

- Operate a blast site in cloud-based SAMS with a single monitor or multiple monitors working together.
- Multiple users can access SAMS with configurable levels of permission.
- Monitors detect blasts and data is automatically uploaded to SAMS, ready to view and download through the web as CSV data or pre-rendered charts.
- Notifications of blast events by SMS and email.
- Annotate and track the evaluation of blast reports.
- Access diagnostic data about field equipment for condition monitoring.

KEY COMPONENTS



Geophone sensor assembly
Triple-axis ground vibration sensing (101998)



Microphone and antenna
Low frequency microphone for sound overpressure (101378), with LTE antenna



SynaptiX Collector and solar
Data acquisition, telemetry and solar charging

ORDERING DETAILS – NOVECOM PARTS

PART NUMBER	DESCRIPTION
101352	Integrated Blast Vibration Monitor with Cat M1 LTE modem (complete field unit)
101360	SynaptiX Collector (IOT+LTE+ADC) (replacement part)
100537	SynaptiX Collector Ethernet Cable (3m) to RJ45 (optional part)
101998	Geophone GEO-2F Sensor Assembly (replacement part)
101378	Low Frequency Microphone (replacement part)