

Vibration Monitoring Module



Vibration Monitoring Module is a Smart IoT device based on Bluetooth Low Energy 5.0. Module is Designed to Sense the Vibration of the Specific Application to Monitor the System Health. Module has on board 3-Axis Digital Vibration Sensor with Digital Output and Vibration Data can be sent over Bluetooth to Gateway for the Remote Monitor Application. Module supports Mesh Application to Connect to Multiple Sensor Nodes.

IoT hardware,
software and
smart product
development

Key Features:

- DC Input Voltage 5V
- Arm®-based Cortex®-M4 Wireless MCU with BLE 5.0 Support.
- On Board 3-Axis Digital Vibration Sensor with Digital Output.
- User-selectable full-scale: $\pm 2/\pm 4/\pm 8/\pm 16g$ and Frequency Response 2KHz ($\pm 3dB$ Point)
- On Board SPI Flash for Vibration Data Storage.
- Chip Antenna for Effective Communication Range.



Electrical Specifications:

- Power Supply Operating Range: 5V
- Bluetooth Specification: Bluetooth® 5.0 with Configurable Output Power
- On Board Chip Antenna for Long Range.
- It is a two board PCB, Controller PCB & Sensor PCB

Controller PCB carries: Power Supply, wireless MCU, SPI Flash and SWD Interface.

Sensor PCB carries: 3-Axis Digital Vibration Sensor and EEPROM.

Mechanical specifications:

- Two Magnetic Mounting Provision as to suit Flat and Curved Surface.
- Magnetic Mount with 11Kg Pullout force capacity.
- Module Dimensions: $\varnothing 31mm \times 65mm$ Length (Excluding Magnet).
- Magnet Dimension: $\varnothing 20mm \times 10mm$ (Minimum) – Flat Surface
- Magnet Dimension: $\varnothing 32mm \times 10mm$ (Minimum) with Legs – Curved Surface
- Sealed Enclosure: IP-68
- Weight: ~100 gram

Measurement data:

- Peak & RMS Acceleration
- Peak & RMS Velocity
- Peak & RMS Displacement
- Monitor the specific damage Frequency window
- Configurable Three different damage frequency window

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