

TREON

INDUSTRIAL NODE 6

Treon Industrial Node 6 is a battery-operated wireless vibration and temperature sensor. It is a highly robust device designed for difficult industrial environments.

Abnormal vibrations or high temperatures give early signs of machine failure due component imbalance, misalignment, wear, or improper use of equipment. Those can be now effortlessly identified without manual measurements or expensive wired equipment to increase machine uptime and extend meantime between failures.

Treon Industrial Node 6 is a wireless condition monitoring device that measures tri-axial vibration and surface temperature of rotating equipment, such as pumps, motors, and compressors.



PRODUCT HIGHLIGHTS

Triaxial measurement over ultra-wide bandwidth

Frequency range up to 6.3kHz (+/-3dB) with 26667Hz sampling rate

Configurable data acquisition and advanced data processing

Configurable measurement sample amount, filtering and decimation

Nine pre-calculated vibration key parameters for fast assessment

Based both on velocity and acceleration
Fully configurable FFT calculation on the edge

High resolution measurement data for advanced backend diagnostics

High frequency, high resolution waveform up to over 100000 measurement samples

Configurable to meet any recurring or ad hoc monitoring need

BENEFITS

High resolution data

Getting high resolution data from wide frequency range enables a comprehensive root cause analysis for predictive maintenance.

Flexible and configurable

Advanced data and signal processing capabilities enable it to meet any customer need.

Cost-efficient

Low installation and maintenance cost, which makes this the most cost-efficient solution in the market to monitor every machine in the factory.

Scalable

Tens to many thousands of wireless sensors can work together in an intelligent mesh network to enable condition monitoring at scale.

Allows early detection of breakdown

By identifying and resolving problems before they result in costly machine failure.

Plug & Play

Fast and easy to deploy on a large scale. Mount the sensors, and just press the on button.

TO MEET ANY MEASUREMENT NEEDS

On demand measurement

Measurements can be executed immediately on command

3x timed intervals

Configurable timers to execute measurements

8x measurement settings

Configurable sets of measurement parameters

15x calculation settings

Configurable sets of calculation parameters

G-RANGE
AXIS
SAMPLE AMOUNT
SELECT CALCULATIONS

WHAT IS CALCULATED
FILTERS
FFT PARAMETERS

The sensor communicates its information over a mesh network,

a network designed to transfer data via the most optimal route to the gateway, enabling the best performance in an industrial environment.

FOR MORE INFORMATION



visit our website
[Treon.fi](https://www.treon.fi)



or contact our
sales personnel.

ADVANCED SIGNAL PROCESSING

EDGE PROCESSING

Data filtering:

Butterworth high, low and band pass

Low pass cut off:

Configurable, max. 13335Hz

High pass cut off:

Configurable, min. 0.5Hz

Decimation:

Single axis configurable from 1 to 27
Triaxial configurable from 1 to 9

EDGE CALCULATIONS FOR EFFICIENCY

KEY PERFORMANCE INDICATORS

Velocity:

RMS, PEAK, P2P

Acceleration:

RMS, PEAK, P2P, Kurtosis, Crest

FFT CALCULATION

Sample amount:

Configurable, max. 4096

Lines of resolution:

Configurable, max. 1600

Averages:

Configurable, max. 9

Overlap:

Configurable, 0-100%

Windowing:

Optional, Hanning

SURFACE TEMPERATURE

Measurement range:

-40°C to +85 °C

Resolution:

0.1°C

Accuracy:

+/- 2°C (mounting dependent)

Repeatability:

+/- 0.1°C

ULTRA WIDE BANDWIDTH

MEASUREMENT SPECIFICATION

Frequency range:

6300Hz (+/-3dB)

Measurement axis:

Triaxial or vertical

Sampling rate:

26667Hz

Effective resolution:

16bit

G-range:

Configurable full-scale
±2/±4/±8/±16g

SAMPLE AMOUNTS

Single axis:

Configurable up to 110592 samples

Triaxial

Configurable up to 36864 samples per axis