

# Good Vibrations for Machine Health Monitoring

## MicroStrain SensorCloud Solution Brief

Maximize uptime with intelligent vibration monitoring and predictive analysis

### The Challenge:

Vibration- based machine health monitoring has traditionally required access to expensive sensing hardware and software, forcing owners and operators of critical assets to make difficult ROI choices when weighing the benefits of health monitoring systems.



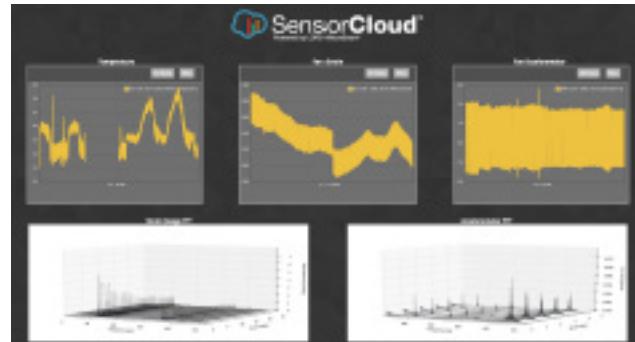
### The Solution:

Cloud computing and big data tools have greatly reduced the costs associated with processing large volumes of sensor data common to many industrial vibration applications. SensorCloud's industrial customers are leveraging these new capabilities to deploy condition based monitoring and prediction systems at a fraction of the cost and installation time of traditional systems.

**Connect:** Sensor data can be published to the SensorCloud platform with a time- stamp resolution of one nanosecond, suitable for high-speed vibration waveform acquisition from both wired and wireless accelerometers. The same API can also be used to publish and synchronize temperatures, pressure, torques, and rotational speeds.

**Monitor:** Equipment owners and operators can configure customized SMS and email alerts to notify personnel of machine conditions exceeding operational limits, or that may warrant investigation and preventive action.

**Analyze:** The flexible MathEngine ® analytics environment allows customers to deploy equipment-specific health monitoring algorithms that extract key vibration metrics (RMS and peak velocities, RMS and peak acceleration, crest factor) and generate trend reports.



### Real Time alerts and historical analysis

Using SensorCloud with its MathEngine analytics tool provides characterization metrics between machines and operating environments, throughout the equipment life cycle.



# MicroStrain SensorCloud Solution Brief

## Vibration Monitoring Benefits

- Reduce unplanned downtime for critical assets
- Prevent expensive damage to equipment by addressing problems before they escalate
- Realize quick ROI with minimal upfront expense
- Collaborate with teammates and vibration experts when diagnosing anomalous machine behavior



## Features

- Unique visualization tool scales to terabyte data sets
- Powerful MathEngine analytics environment with full access to Python, Scipy and Numpy
- Real-time SMS and email alerts for condition exceedances
- Custom buildable dashboards with embeddable widgets, full white labeling options, and integration services



Parker Hannifin Corporation  
**MicroStrain Sensing**  
459 Hurricane Lane suite 102  
Williston, VT 05495  
phone 802 862 6629  
Email: [sensing\\_sales@LORD.com](mailto:sensing_sales@LORD.com)  
[www.microstrain.com](http://www.microstrain.com)  
[www.parker.com](http://www.parker.com)



ENGINEERING YOUR SUCCESS