Wireless Asset Health Monitoring

Belgian Maintenance Association
+2000 members

**Winner BEMAS
Digital Innovation Award
2017
Wireless Vibration Sensor**

**Winner BEMAS Professional Jury
Digital Innovation Award
2021
Edge Anomaly Monitor 4.0**

**Finalist BEMAS
Digital Innovation Award
2022
Wireless Sensor Bridge**

iQunet.®

Customer Use Case

Condition Monitoring with AI

Condition Monitoring on conveyors
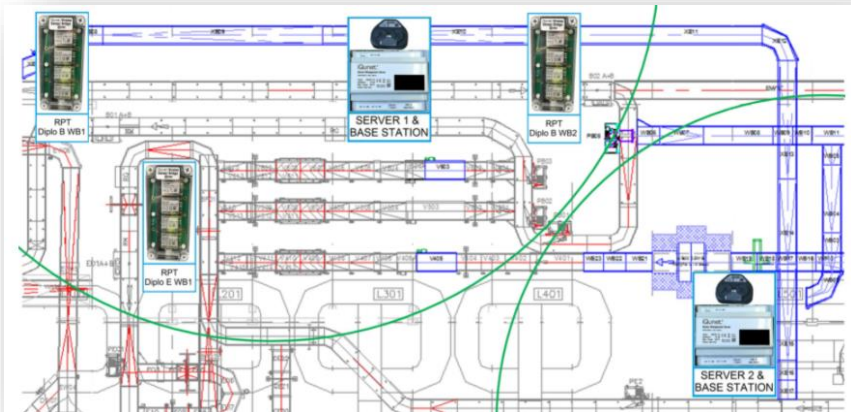
(International Airport)

- Wireless Vibration monitoring (motor + gearbox + chain)
- Wireless Current waveform monitoring – MCSA (Var. Speed Drives)
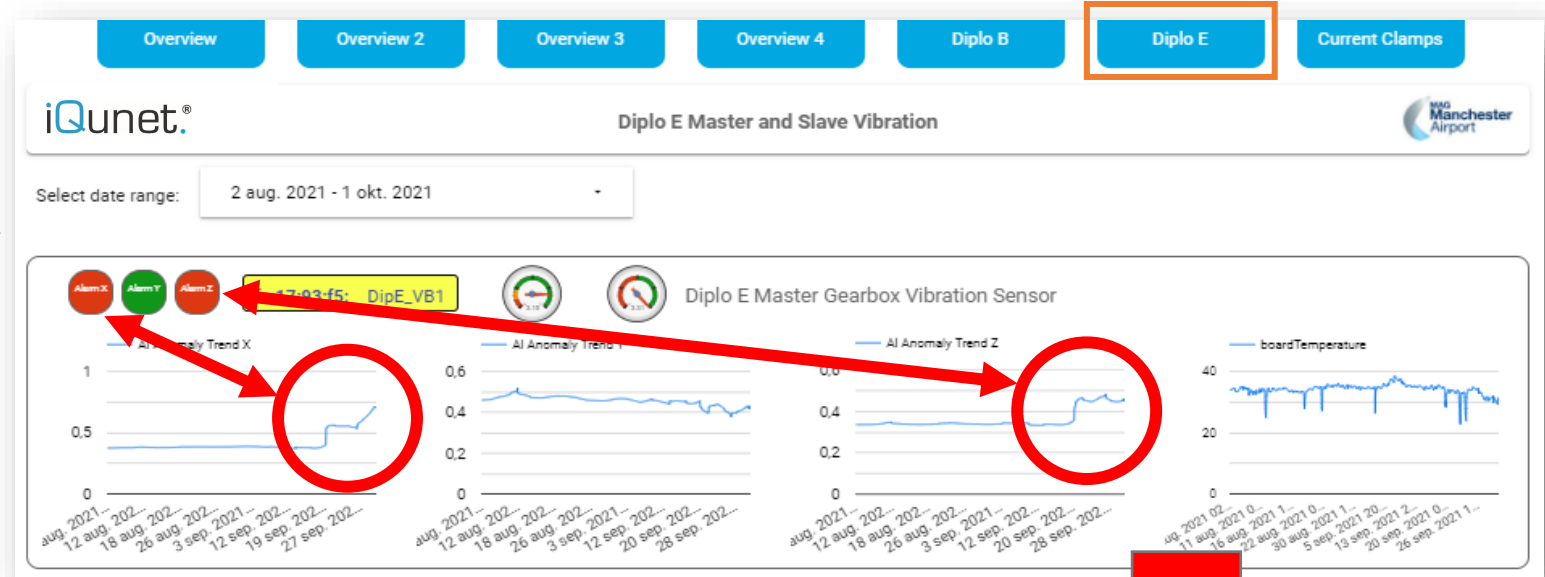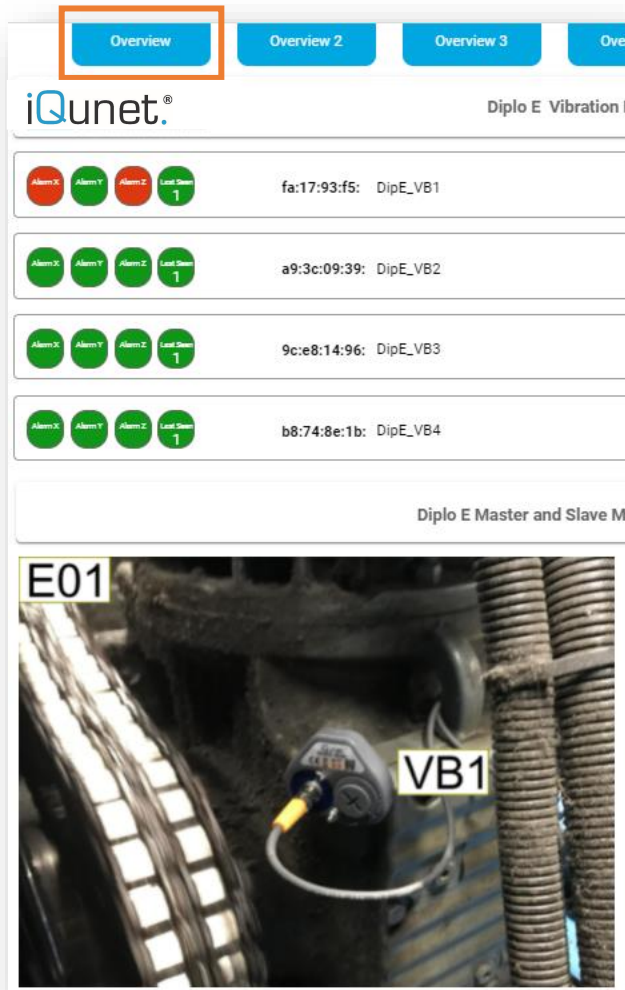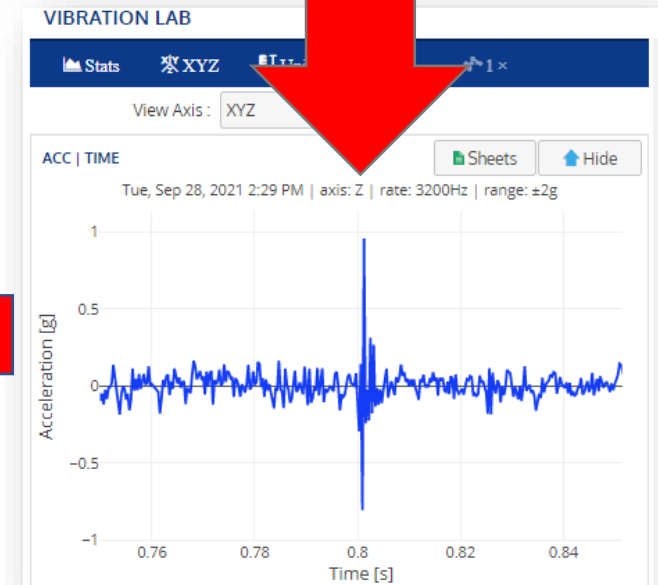
iQunet.® Wireless Setup

Sensor Base Station

Wireless Bridge (Current Clamps)

iQunet Edge Server
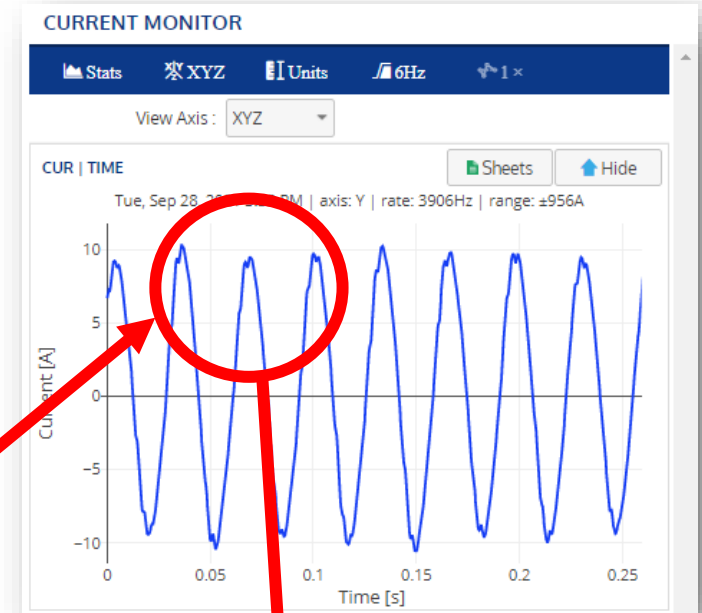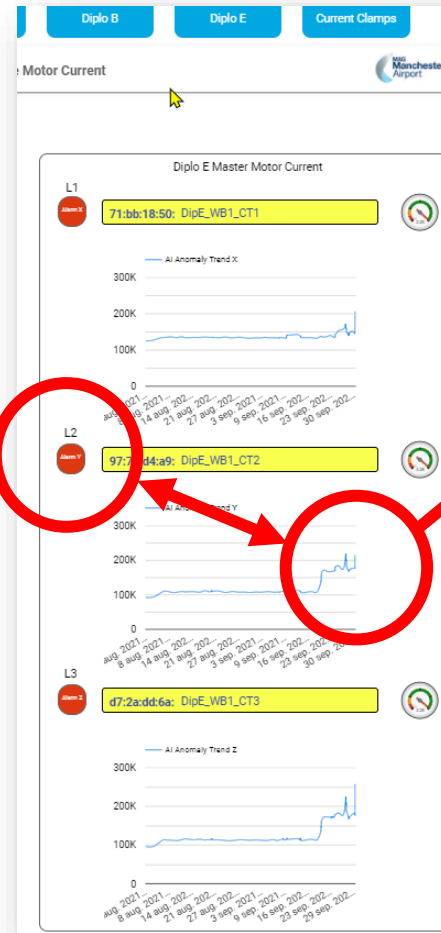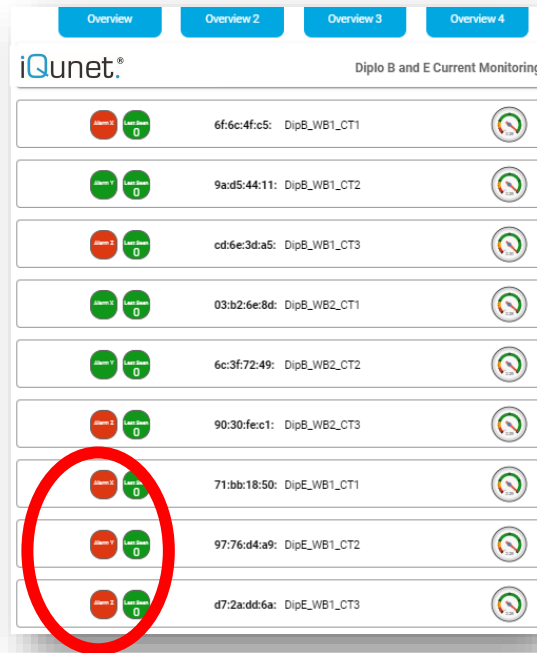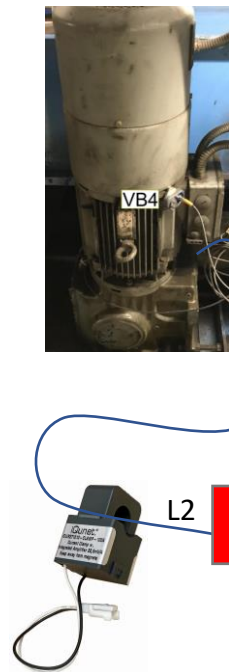
iQunet. Vibration Monitoring

Impact detected (early warning)
- Recommended actions:
    - Check chain links
    - Check sprocket teeth
    - Lubricate and check change
- Follow behaviour to exclude gearbox inside teeth damage
- Follow up anomaly trend graphs

4

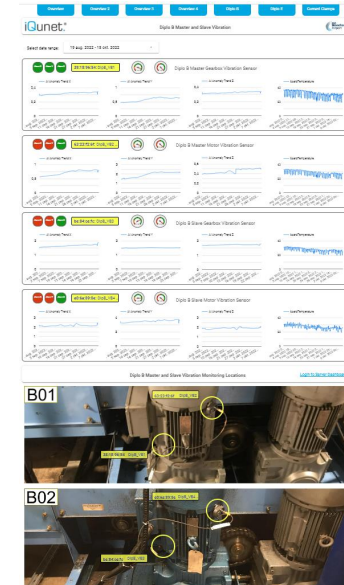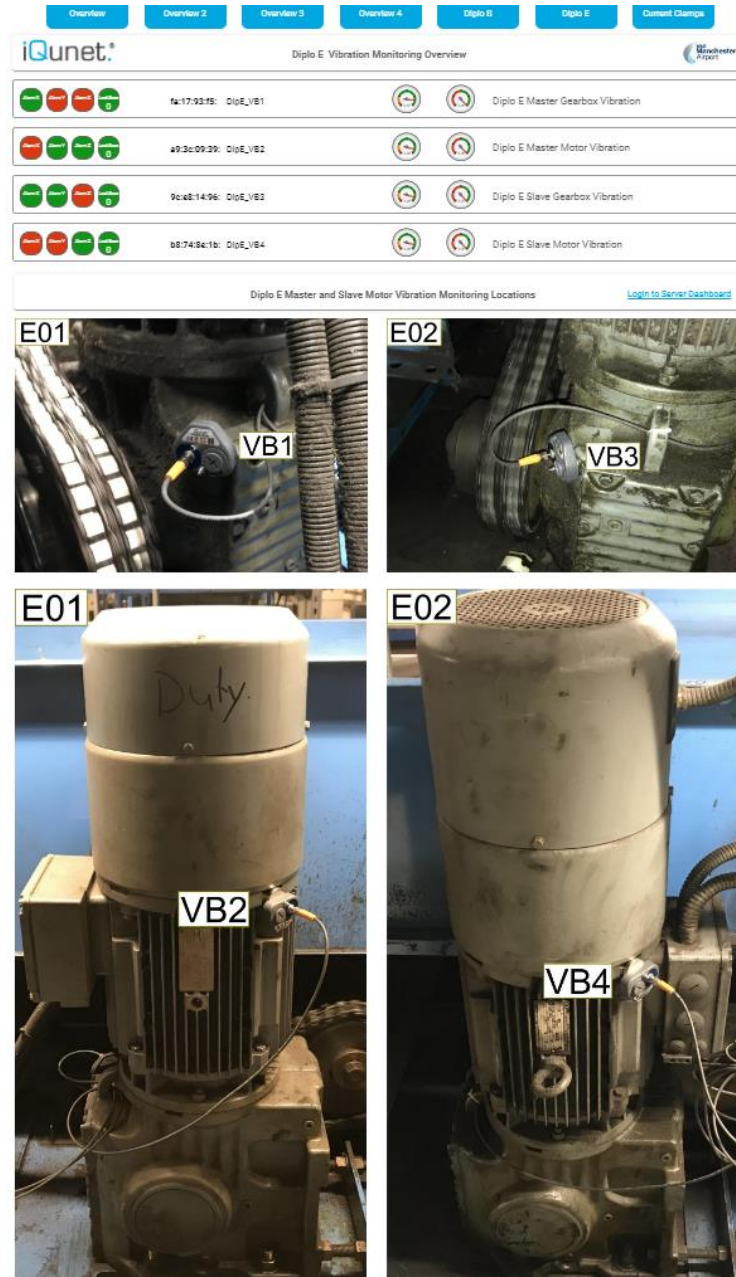# iQunet® Wireless Motor Current Monitoring
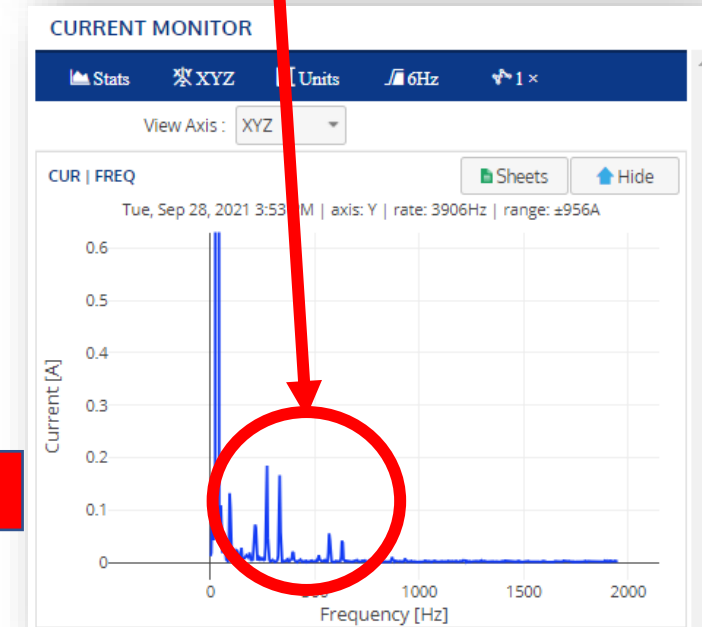
Motor Current [A] harmonics detected

- Recommended actions:
  - Follow up anomaly trend in time
  - Follow up harmonics in freq. domain
  - If quick sustainable increase, prepare for motor repair

iQunet® Dashboards

- Management Dashboards

Overview dashboards
- Anomaly Detection Alarms (red buttons)
- Battery status gauges
- Background text

Features
- Easy switch to iQunet analytics dashboards
- Fully customable solution by (granted) user
  - Change colors and layout
  - Add any pictures*

* Photographs are entered by user

Detailed dashboards
- Anomaly Detection Alarms (red buttons)
- Anomaly Detection trend graphs XYZ
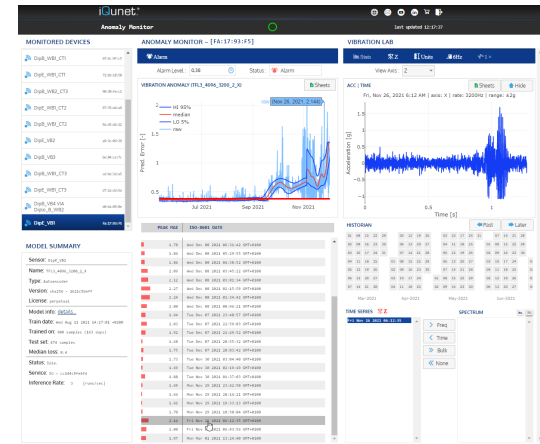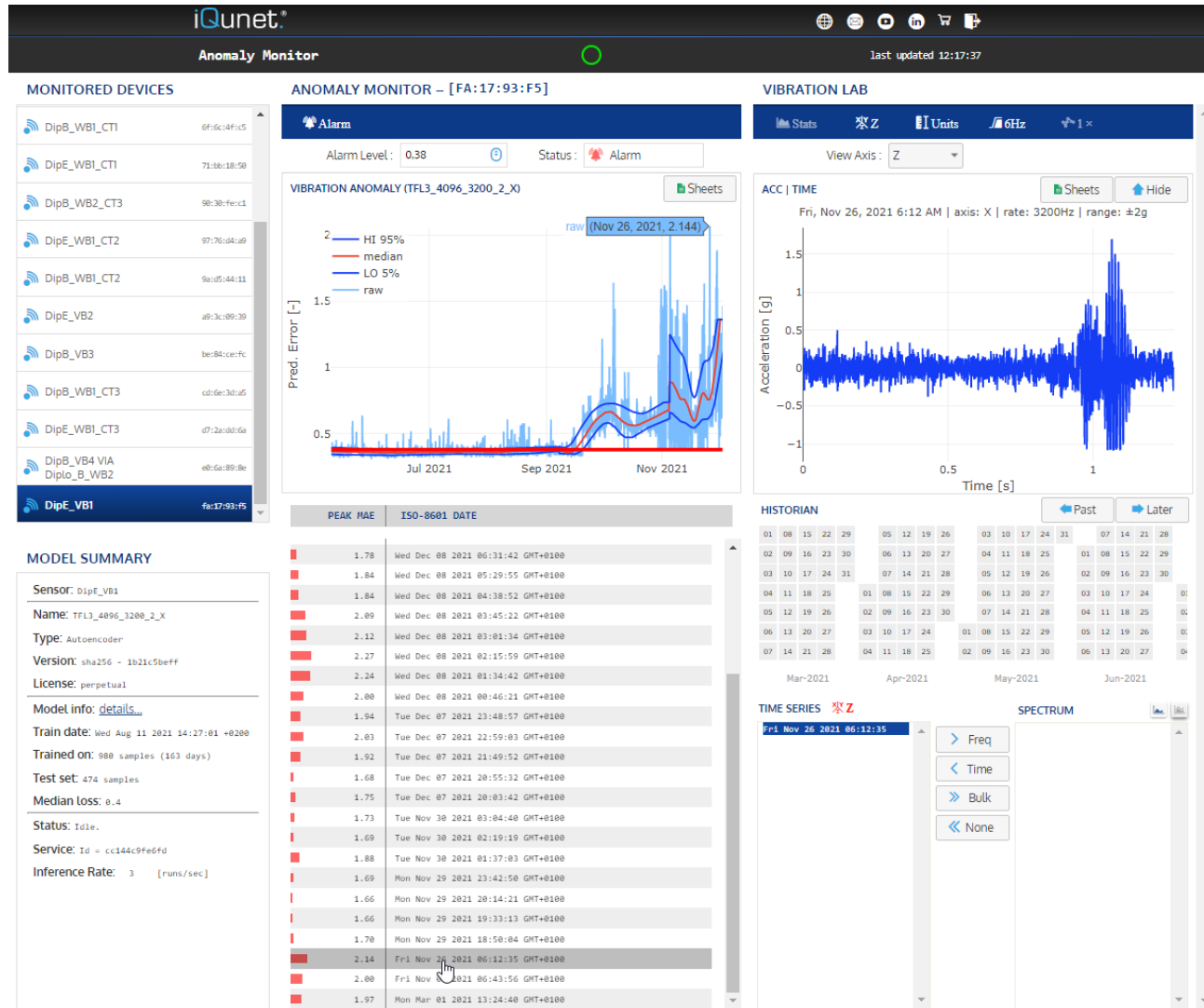- Temperature trend graph
- Battery status gauges

Features
- Selectable period
- Easy switch to iQunet analytics dashboards
- Fully customable solution by (granted) user
  - Change colors and layout
  - Add any pictures*

* Photographs are entered by user

iQunet.® Dashboards

- Analytic Dashboards

Anomaly Monitor Dashboard

- Anomaly Detection Alarms
- Anomaly Detection trend graphs XYZ
  - Raw anomalies
  - Trend lines (5%/50%/95% probability above set alarm level)
- Detailed AI model information
- Selectable list of peak anomaly values
- Immediate visualization of anomaly related
  - time series
  - FFTs
  - 3D-FFTs
- Analytical tools
  - Acceleration / velocity
  - Signal filtering & averaging options
  - Ax selection options
  - Historical data queries
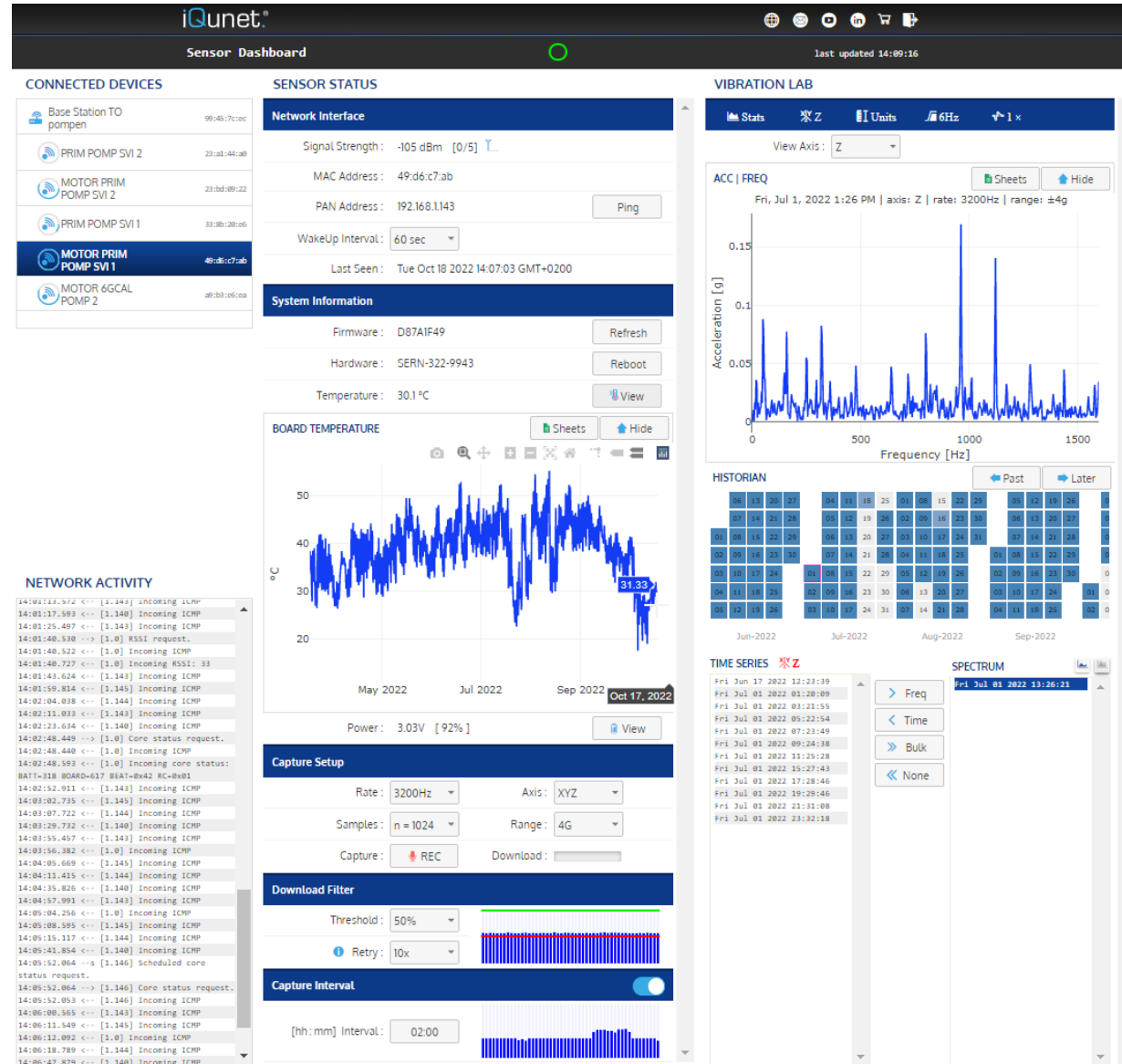
Capturing and Analytics Dashboard

- General sensor information and overview
- Sensor Status information
  - Connectivity
  - Historical temperature graph
  - Historical battery level graph
- Capture setup pane
- Capture interval setup pane
- Sensor download threshold setup pane
- Analytics pane (historical data)
  - Vibration Lab
    - velocity and acceleration selection
    - HP filter settings
    - Time series graph
    - FFT graph
    - 3D FFT plot
  - Statistics
    - velocity and acceleration selection
    - HP filter settings
    - RMS trend graph
    - Kurtosis trend graph
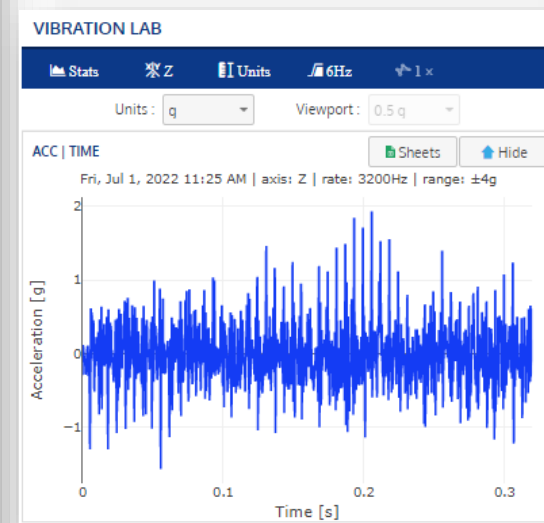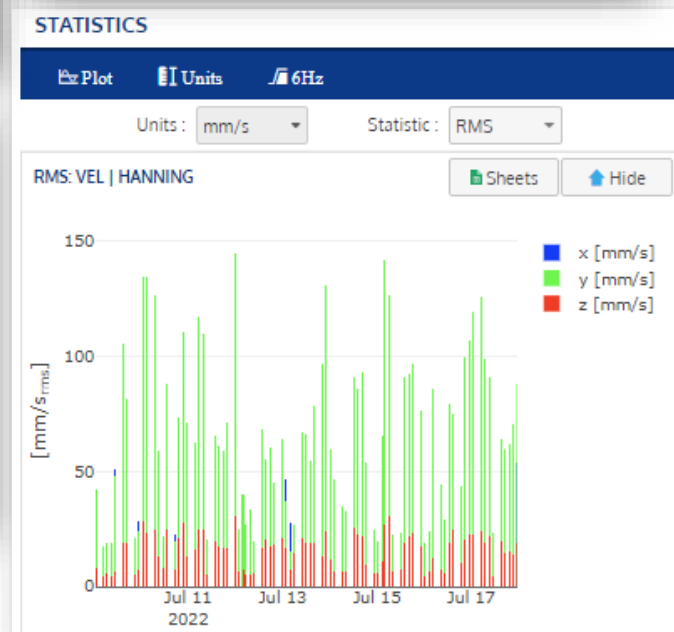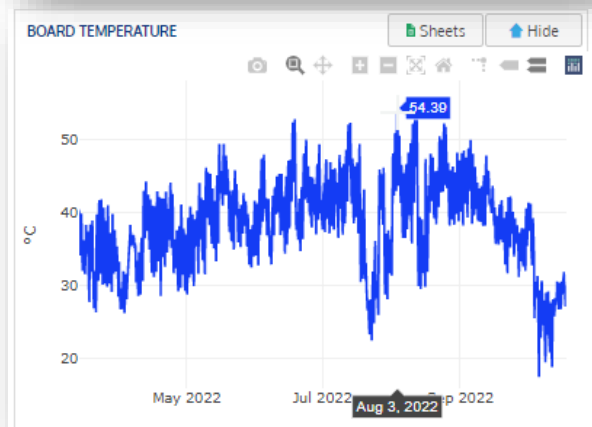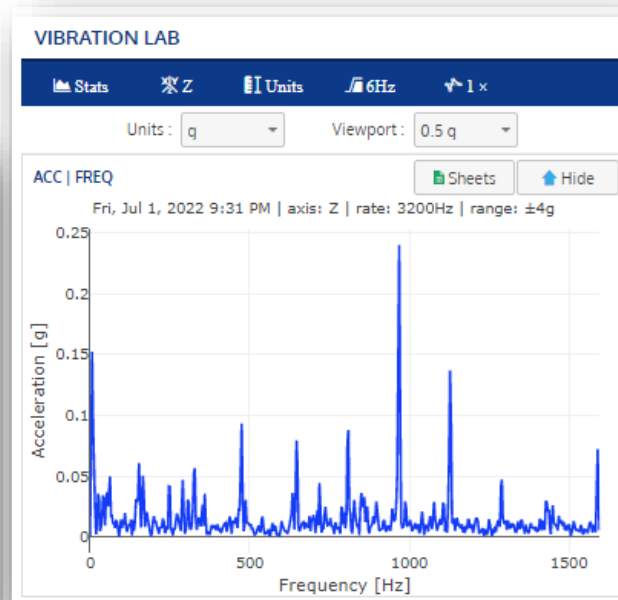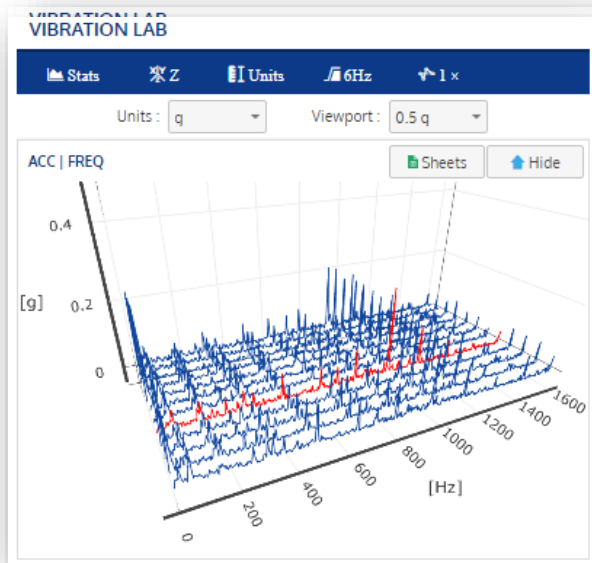
Graphs functions

- Zoom
- Pan
- Autoscale
- Data comparison tools
- Orbital rotation tools
- Camera capture
- Hoover functions
- Google Sheets Graph export function
  - attribute consolidation in one file
  - Ideal for quick reporting of events

iQunet.®

Asset Health Monitoring
Made Easy

Please contact us for a <u>live demo</u> (via online meeting)

www.iQunet.com

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