

# PCH CLOUD

IoT-ready vibration monitoring solution



# CONTACT US

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# PROTECT YOUR CRITICAL ASSETS WITH PCH CLOUD

The PCH Cloud condition monitoring solution provides you with essential, real-time vibration and process data.

At the same time, you get IoTfunctionality allowing you to store and analyse vibration data online.

PCH Cloud is a modular solution that scales with your business



# A FUTURE-PROOF MONITORING SOLUTION

PCH Cloud is a simple, cost-effective way to ensure that your machinery is ready for the competitive challenges of Industry 4.0.

IoT-ready monitors and flexible cloud storage options allow you to analyse vibration data remotely as part of your condition monitoring and predictive maintenance program.



### ACCESS REAL-TIME VIBRATION DATA ANYHWERE

The real-time vibration data collected by the monitors is stored in a cloud database of your choice.

Access and analyse data remotely or on-site from any device.

No software installation is required.





# HOW DOES PCH CLOUD WORK?

### COLLECT AND EXPORT VIBRATION DATA THROUGH LAN

The PCH vibration monitors collect vibration data from your machinery, and through the PCH EtherBridge IoT gateway the data is sent to the PCH Cloud.

#### **GET VISUAL DATA INSIGHTS**

Visualise and analyse the data online using the browser-based PCH Data Viewer software or download data to your own analytics interface.

#### LINK UP TO 20 MONITORS

You can daisy-chain 20 monitors or more to the same PCH EtherBridge through RS485, even over huge distances.

### IOT-READY PCH MONITORS



# **INSTALL PCH CLOUD**

- Create an account in the PCH Cloud portal (you will receive a link).
- Connect your IoT-ready PCH monitors to the PCH EtherBridge IoT module through RS-485.
- Connect the PCH EtherBridge IoT to the internet.
- Contact us, and we will pair your PCH EtherBridge IoT and PCH vibration monitors with your account in the PCH Cloud.





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### SAFETY FIRST — MOUNT BEHIND THE FIREWALL

#### PASSWORD

PCH EtherBridge IoT is protected by a user defined password. In larger networks, you should change the default password to your own.

#### **PROPRIETARY PROTOCOL**

We communicate on the encrypted port 443 (https) in a closed proprietary data format, which is not interpretable by third parties if intercepted on the way to the cloud.

#### **READ ONLY**

PCH EtherBridge IoT can only *read* data from the connected vibration monitors. It *cannot* actively alter settings in the vibration monitor nor stop the machine.



THE PCH IOT SETUP

### **ADVANTAGES**

- No software installation
- See data wherever you are in a web browser
- Multiple users can see the same data at the same time
- Connect to already installed PCH monitors at low installation costs
- Get started today and share data later from our open REST platform.





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# **TECHNICAL DETAILS**

#### **DATA FORMAT**

We use a standard, open REST API format, which offers an interface to access scalar values, time waveforms and FFTs.

Get the REST API documentation from iot.pch-engineering.dk

Contact our consultants for a solution customised to your data requirements.

#### INTEGRATION TO THIRD PARTY SYSTEMS

You can integrate data in third-party software using the REST API or download time waveforms in .tdms, .csv, .wav etc formats manually.

A simple script can call scalar values.

### TIME STREAM VIBRATION SIGNAL (TIME WAVEFORM)

Store the vibration time signal recording from 1 to 60 seconds as documentation of the base point for normal operations or email it to specialists for evaluation.

#### **OFFLINE FFT ANALYSIS**

Analyse the time signal data in the offline Time Waveform, FFT, and FFT Envelop Analyzer.

The Spectrum Analyzer offers cursors for main, harmonics, side bands and Orders in a resolution down to 0.1 Hz.

Other tools are available, like Waterfall, Orders and automatic averaging of FFTs.

You can create pre-filters with cut-off frequencies in the time waveform or design your own FFTs and download samples for analysis.

#### **TRENDS AND ALARMS**

The IoT-ready PCH vibration monitors offer all the local safety of traditional vibration monitors, including 4-20 mA, adjustable alarms and shut-down functionality. Trends can be stored in the PCH Cloud as well as in the PLC.

#### INDIVIDUAL CLOUD STORAGE PLAN

All the vibration and process data is available from our AWS EC2 cloud server, or your can store the data in your own database. You retain ownership of the data at all times.





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