

## BBU-NG



### Features

- ▶ Log book / Black Box
- ▶ 3D detection
- ▶ Independent of machine and controls
- ▶ Easy integration into your machine

#### ▶ Event Log

- With process-relevant data
- More than 4000 text events
- 64 graphic events (5 seconds before and after any event)
- Circular buffer ensures events of interest cannot be deleted or tampered with
- Process transparency for subsequent analysis during and after the warranty period

## WLAN BoxNG



### Features

#### ▶ Machine diagnostics

- Wear detection of machine components for preventive maintenance
- Determination of machine condition ("fingerprint" of the machine, repair status)
- Investigation of ball screw drives, guidance systems, drive controls, etc. (defects, unbalance, errors etc.)

#### ▶ Process optimization

- Cutting data & mounting situation
- Reduce cycle times and process vibrations

### Special features

- Easy installation, mobile use
- Recording of raw data
- Bandpass and RMS filter
- 3-axis vibration and frequency analysis with real-time FFT

## PulseNG Systems



### Features

#### ▶ Machine protection

- Emergency stop after crash detection
- Overload detection (vibration in 3D / current consumption / force / deformation)
- Reaction time  $\geq 1$  ms

#### ▶ Automatic machine diagnostics

- Teaching of vibration characteristics
- Detection of wear and damage to machine components of the linear axes, based on statistics / trends
- Automatic alarms

#### ▶ Process optimization

#### ▶ Event Log

### Special features

- Permanent installation with easy commissioning and integration
- Independent of machine and controls
- Can be extended to include up to 4 different (max. 8) sensors
- Integration into company / machine network

## Contact

### Headquarters

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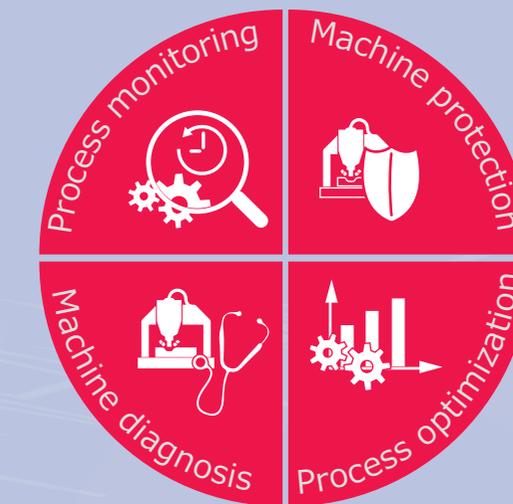


Better be safe.

Safely be better.

# Montronix GmbH

## Monitoring Solutions



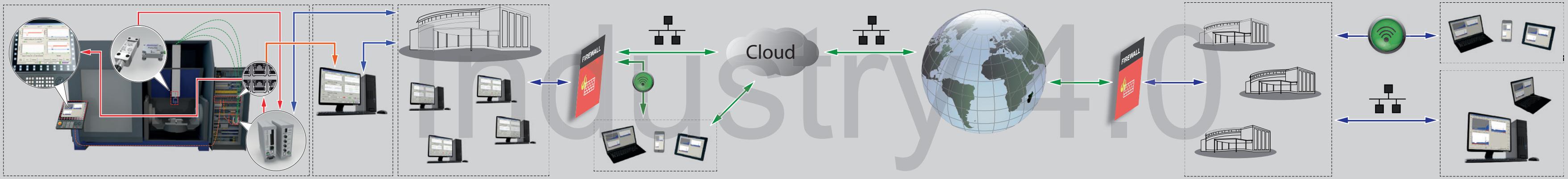
## NG Products

### Our experience

### Your security



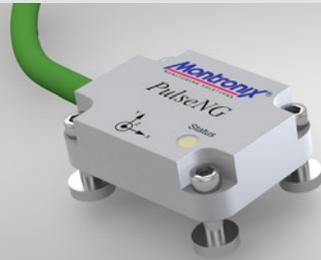
[www.montronix.com](http://www.montronix.com)



VNC Server



PulseNG sensor



PulseNG M12 sensor



StrainLink250-DA sensor



PS200-NG

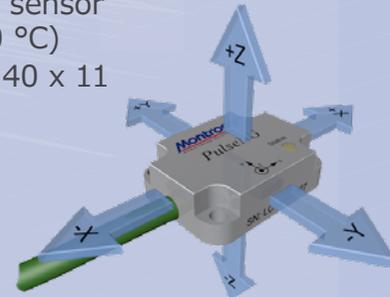


**Properties**

- ▶ e.g. for TCU (embedded HMI)
  - Embedded Linux
  - Two standard USB connectors
  - Two ethernet ports
  - HDMI port for visualization
  - Integration into existing networks

▶ **3-axes acceleration sensor**

- MEMS based tri-axial accelerometer (X, Y and Z)
- High signal sampling rate of 3248 values/s for each axis
- High resolution measured signals (acceleration of 0.01 m/s<sup>2</sup>)
- Built-in temperature sensor (measuring up to 70 °C)
- HxWxD in mm 30 x 40 x 11



- Easy installation of **PulseNG** M12 sensor in a M12 x 0.75 threaded hole
- HxWxD in mm 9 x 48 x 12

**For monitoring of**

- Machining centers
- Turning machines
- Grinding machines
- Robots
- Handling systems

**Condition Monitoring of**

- Ball screw drives
- Spindles, bearings
- Linear axes (guide rail / carriage)

▶ **Strain link sensor**

- Passive strain link sensor, membrane DMS
- Measurement range  $\pm 250 \mu\epsilon$  (1  $\mu\epsilon$  corresponds to 0.001 mm strain per m)
- Sensitivity 0.93 mV/V @ 250  $\mu\epsilon$

**For monitoring of**

- Collision (dull)
- Strain on machine parts

▶ **PS200-NG active power sensor**

- Measures electrical power drawn by spindle and axle drives with highest precision
- Usable for DC motors, 1- / 3-phase AC motors
- Various gain and filter settings, can be adjusted separately for each tool
- Independent of machine controls

**For monitoring of**

- Feed and spindle drives
- Other drives