

NeuronBox NB.6 IoT Device

Industrial grade edge computing device equipped with the audio digitalisation capabilities



The Key Product Features:

- Standalone analytical IoT unit with variable acoustics sensors
- Up to 6 channel simultaneous and synchronous recording
- Edge computing software for the audio analysis based on neural networks
- Installation directly next to machine or into DIN ledge
- Records directly interpreted, transferred to cloud or store microSD on device
- Multiple audio output file types supported (WAV, OGG, FLAC)
- LAN/Wifi/LTE connectivity and Power supply (optional)

Product Description

Sound converter:	Up to 6-channel ultrasonic analog to digital converter
Device design:	ALU chasi / stainless steel
Sensor type:	Broad range of sensors
Connectivity:	Wi-Fi , 3G/4G, Ethernet
Amplifier:	Digitally controlled gain in range from 0 to + 60dB
LED statuses:	LED signals status for each channel

Product specifications

Dimensions:	165 x 145 x 55 mm (W x D x H)
Weight:	1200g without power supply
CPU:	4×ARM Cortex, 1.2GHz
RAM:	1 GB
Storage:	64GB - 256GB (microSD card)
USB output:	2x USB output
Power supply:	12-18V DC with 2.5A load
Power consumption:	min. 660mA DC
Operating temperatures:	-25°C ... +70°C

Sensor types

Audio microphones:	All types including condenser (+48V phantom powered)
Piezo based microphones with amplifier:	Frequency range 7 Hz - 30kHz (-20°C ... +70°C)
Ultrasonic sensors:	Frequency range up-to 100 kHz (-25°C ... +70°C)
MEMs accelerometers:	Dynamic range from ±1g to ±100g (-40°C ... + 130°C)

Contact us

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We all rely on machines; but machines break. Everyone who has a car knows the situation: your car starts making some strange sound and you have no idea what it means.

What if your car could listen to itself, analyze the sounds it makes and tell you what's wrong before it breaks down?

This is exactly what Neuron soundware does for all kinds of machinery.

We listen so you can fix it before it breaks

We use sound and artificial intelligence to provide early warning about machine failures. This works for engines, turbines, planes, escalators, point machines and many others.

We are proud to work with clients like Airbus, Siemens, E.ON or Deutsche Bahn.

Our solution enables

- Predictive Maintenance
- Industry 4.0 / Smart Manufacturing
- Asset Digitalization

Benefits to Maintenance

- Early Warning of Machine Failure
- Real-time Monitoring
- Cost-efficiency

1. Industrial IoT Device



2. Audio Detection Capability



3. Machine Learning



4. Online Dashboard & Notifications

