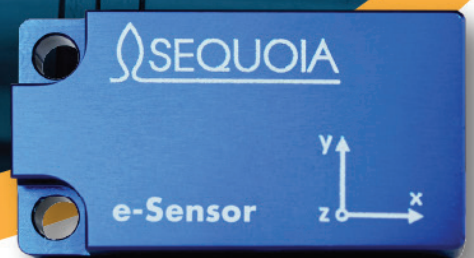


The precision that matters.

Smart sensor
with **triaxial**
Mems technology.

SEQUOIA
e-Sensor



Monitor for optimal performance.

Proactive management
ensures uncompromised
efficiency.

Minimize risks by detecting issues.

Targeted maintenance
can help **extend the
life of your machinery.**

Record, save and analyze log traces.

The e-Sensor **Black Box**
ensures accurate tracking
and data analysis.

We create valuable technology

Intelligent solutions
for dynamic monitoring.

SMART SENSORS
INTELLIGENTIA

With its powerful algorithms, it can monitor and rapidly indicate any problems that might emerge on various components (*bearings, work-pieces, tools, spindle, axis*), preventing more significant damage and unscheduled maintenance interventions. *A little investment for a superior tool at your disposal.*

ADD-ON
FREQUENCY ANALYSIS
FFT on critical frequency bands.

SPINDLE WEAR
Indicator of correct use.

BLACK BOX
Record and save log files.

ADD-ON
RESIDUAL LIFE
For warranty programs.

OUTPUT SIGNAL
ANALOG/DIGITAL
CNC integration for custom applications.

COMPATIBILITY
WITH SENSORS
Up to 4 additional sensors (Oil, pressure, etc.).

OEM & MTB

END USER

 **COLLISION DETECTION**
Stopping in case of accidental impact and consequent reduction of costs and losses.

 **UNBALANCE**
Detection and evaluation of spindle and tool imbalance.

 **ADAPTIVE CONTROL**
Self-adaptive working parameters based on detected information.

 **CHATTER DETECTION**
Identifying the "chattering" phenomenon.

 **INTERFACE MIRRORING**
Remote replication of the interface via VNC on your smartphone.

 **IMPROPER CLAMPING DETECTION**

ADD-ON
PREDICTIVE MAINTENANCE
Repair planning based on the actual condition of the components.

MACHINE HEALTH
Constant monitoring of vibration levels.

TEMPERATURE MONITORING

DETECTION
BEARING FAILURE

MAINTENANCE

PLANNING

 **ONLINE MONITORING**
Remote monitoring with event logs and graphical analysis.

 **PRODUCTION EFFICIENCY**
Effective parts and machineries production efficiency controlling.

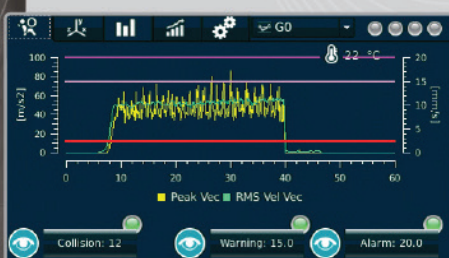
 **16 CUSTOMIZABLE TOOLS SCENARIOS**
Set threshold parameters for each tool usage scenario and machining type.

 **CHIP-CUTTING TIME WATCHDOG**
It directly informs the shop manager whether there is room to optimize cycle-time.

Process Monitoring

Residual Spindle Life

Spectral analysis

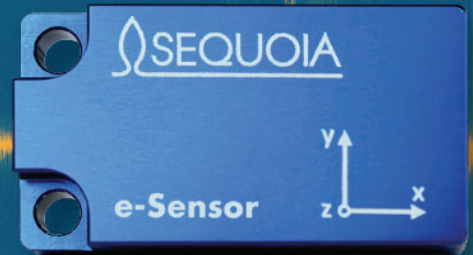


Innovation is in our DNA

Smart sensors are frequently constructed as closed loop system systems with proprietary interface software and communication protocols, and are supplied as black boxes to OEM , integrator or end-user.

We believe in developing an expanded relationship environment in which *we enjoy sharing new market trends with our customers and suppliers as a result of synergistic product creation and continual improvement.*

e-Sensor was created to provide all of the functionalities required for precise control of any type of equipment or process in a single unit.



Technical Specifications

e-Sensor – Hardware Specs

No. of axis	3
Frequency range	0-2000 Hz
Dynamic range	110 dB
Measuring range	20 g (10-40 g)
Protection level	IP67
Temperature range	-10 to +100 °C
Communication	2 wires RS485

Output Signal (Modbus)

Unfiltered acceleration signals
Acceleration vector peak detection
RMS Speed
Peak-to-peak shift
FFT

e-Interface – Spec.

2 customizable analog inputs	4-20 mA, 0-20 mA, 0-10 V, PT100
8 inputs/outputs	Custom configuration



CODE FRIENDLY

e-SENSOR it has been built for easy integration with open source and free communication protocols.



Communication Interface

DIN rail support for wiring cabinets, Modbus TCP connection to the outside.





www.intelligentia.eu

We are the ideal partner for innovative asset maintenance, utilizing cutting-edge technology.

We aim to provide a versatile solution that can be customized and integrated to meet all important application scenarios.

We collaborate with customers to generate synergies and develop new market opportunities with them.

More Intelligentia in your world



Intelligentia Smart Sensors srl

Via del Pomerio 7, 82100 Benevento (BN) - Italy

Sales & Post-Sales Via Ticino 30/G, 20064 Gorgonzola, (MI) - Italy

Member of  **GROUP
Balance
Systems**

T +39 0824 1774728

E info@intelligentia.eu

P.iva 01860490620

intelligentia 