SENSPIDER

Enables Condition-based Maintenance for Your Industrial Equipment

Fits right into control panel! Can be installed on Din Rail

SENSPIDER (SSP1000)

Edge computing device with 4 sensor interface card slots

Compact size: Width 5.9 in (150 mm)

Depth 3.3 in (85 mm)

Height 3.9 in (100 mm)

High-speed Vibration Sensor Interface (SSPC1310)	**General-purpose Sensor Interface (SSPC1320)**	**Temperature Sensor Interface (SSPC1330)**
Connects up to 2 ICP-compatible vibration sensors	Connects up to 2 current/voltage sensors	Connects up to 2 thermocouple (Type J or K), RTD or thermistor

4 Key Features of SENSPIDER

01 Flexible Sensor Deployment

- Supports up to 8 channels of analog sensors
- Choose any combination of 3 interface card types

02 High Sampling Rate (48KHz)

- Supports high-bandwidth vibration sensors
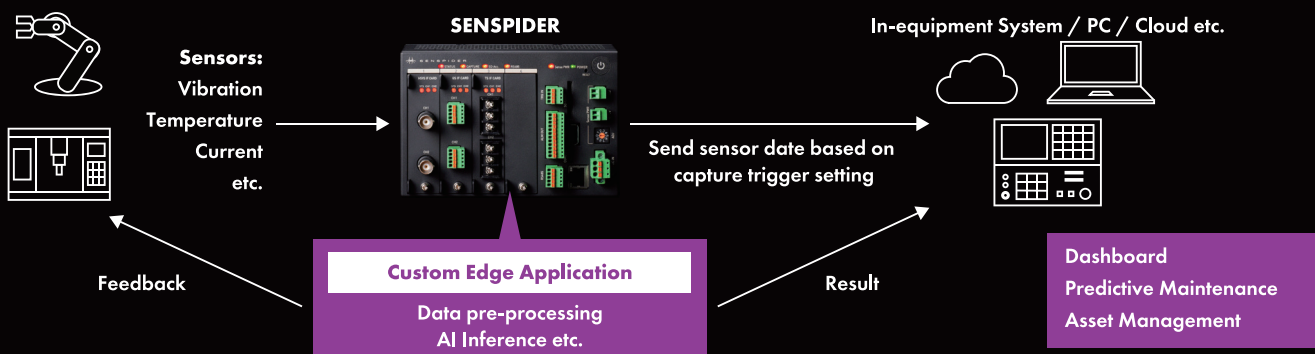- Includes power supply and amplifier for sensors

03 Capture Data When You Need It

- Signal from external equipment
- Command from external software
- Threshold
- Date & time
- Cycle

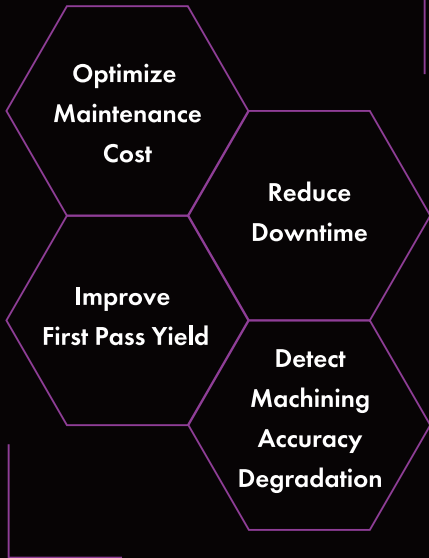Data Selection

04 Run Custom AI Model on the Edge

- Senspider edge computing enables real-time anomaly detection
- Use Python SDK to run custom AI model and/or data-processing
- Improve model training by using multiple sensor data for multivariate analysis

SENSPIDER

In-equipment System / PC / Cloud etc.

Sensors:
Vibration
Temperature
Current
etc.

Send sensor date based on
capture trigger setting

Feedback

Custom Edge Application

Data pre-processing
AI Inference etc.

Result

Dashboard
Predictive Maintenance
Asset Management

Condition-based Maintenance (CBM)

Senspider helps you transition from traditional Time-based Maintenance to new Condition-based Maintenance which monitors the health of equipment with sensors and data analysis.

Goals

- Optimize Maintenance Cost
- Reduce Downtime
- Improve First Pass Yield
- Detect Machining Accuracy Degradation

Applicable Equipment

Mission-critical assets with any rotation mechanism

e.g. machine tool, press machine, injection molding machine, semiconductor manufacturing equipment, industrial printer, large-size boiler/pump/compressor, centrifuge, cooling tower etc.
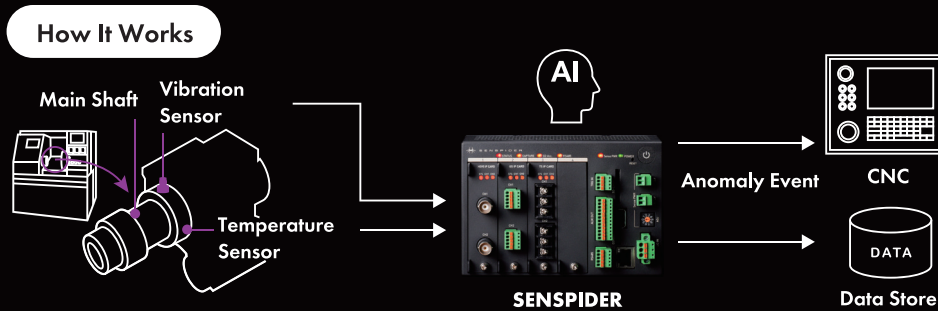
Applicable Parts and Modes

Bearing Damage/Wear   Main Shaft Anomaly   Shaft Unbalance
Ball Screw Failure   Tool Anomaly/Chatter
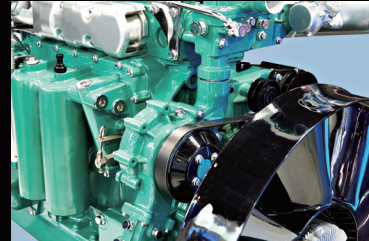
Case Study

Embedding CBM into Industrial Equipment

Added monitoring, anomaly detection and predictive maintenance features by installing sensors.
SENSPIDER allowed the customer to reduce cost and shorten development time.

How It Works

Main Shaft   Vibration Sensor   Temperature Sensor

AI

SENSPIDER

Anomaly Event   CNC

DATA   Data Store

CBM for Smart Factory / Critical Assets

Installed sensors on existing equipments and built monitoring system using the sensor data.

How It Works

Sensors:
Vibration
Temperature
Current
etc.

SENSPIDER   PC / Cloud etc.

LAN

Signal Processing Analytics