# BeanAir
## WIRELESS IIOT SENSORS

**BeanScape®**
Wilow® VERSION

## WILOW® SENSOR SERIES

## WIRELESS IOT SENSORS SUPERVISION SOFTWARE

# SUMMARY

# WIRELESS IOT SENSORS SUPERVISION SOFTWARE

## OVERVIEW AND MAIN FEATURES :

The BeanScape® Wilow® is a real time WSN supervision and control monitor. It allows the user to monitor and operate in real time BeanAir® WSN. The BeanScape® Wilow® is also equipped with a smart expert system that allows users to interpret elements such as data acquisition or alarms related to the sensor network.

BeanScape® Wilow® comes with outstanding features:
• Supervision software fully dedicated to Beanair® Wireless Sensor Networks
• Integrated MQTT Broker for a remote access to monitoring site (BeanScape® Wilow® RA)
• Fully integrated Wireless Sensor Networks maintenance tool
• User friendly and highly adaptable to user's environment
• Highly intuitive and easy to use GUI (Graphical User Interface)
• Real time integrated database
• For users working on building and ground vibration (Sensor Ref.: BeanDevice® Wilow® AX-3D ), the BeanScape® Wilow® (except Manager and Basic) provides advanced vibration analysis tools:
- Real-Time vibration and Velocity display
- Advanced vibration analysis tool: FFT, PPV (Peak Particle Velocity), Velocity
- Automatic FFT (with PPV values) and Velocity reports (meeting the DIN4150-3 standard)
- Alarm and reports notifications by email when a trigger is reached
• Highly customizable data panel board
• No hidden fees, and no additional subscription
Ths software is compatible with Wilow (IOT WIFI Sensors) series only.
Several versions are available:
• BeanScape® Wilow® Manager: free of cost, no GUI
• BeanScape® Wilow® Basic: real-time measurement display
• BeanScape® Wilow® Premium : Same features than BeanScape® Wilow® Basic, with advanced vibration analysis tools (Real-Time Velocity and FFT, PPV values);
• BeanScape® Wilow® RA: Same features than BeanScape® Wilow® Premium, with remote access to monitoring site (MQTT Architecture)

## REAL TIME AND FULLY INTEGRATED DATA BASE :

The real time database records high sampling measurement plots and WSN activities with a small memory footprint :

• No installation is needed
• Data backup (activable/disactivable functionality).
• Easily exportable data in CSV format (Access, Excel, Matlab, Labview...).

# WIRELESS IOT SENSORS SUPERVISION SOFTWARE

## SOPHISTICATED AND INTUITIVE GUI :

The BeanScape® wilow offers a complete and intuitive real time view of our Wireless Sensor Networks :

• Detailed and efficient viewset representing different alarm levels (4 different customizable alarm thresholds high/low)
• Automatic alarm diagnostics generated by BeanAir®'s expert system
• Highly customizable GUI allowing the user to name and rename components and to associate metrics (in case of sensors)
• Highly configurable data panel and multi-chart board.

## ACTIVE SUPERVISION AND MONITORING SYSTEM :

The BeanScape® Wilow® is an active monitoring system which allows a remote configuration of each and every component part of the wireless sensor network :

• Data acquisition configuration: Data acquisition mode, sampling frequency and duration, sleeping mode cycle.
• Alarm notification by email when a measurement threshold is reached
• Power supply management
• Switch to manual or automatic radio channel with «Energy Scan» functionality (automatic setting to the best available radio channel)
• Sensor calibration interface
• Radio transmission configuration
• Global or partial network maintenance
• Visualization of all the information relative to the Wilow® IOT sensor performance: radio signal quality, PER ( Packet Error Rate)
• Battery diagnosis: battery level,  battery voltage internal temperature,
• Real-Time FFT (Fast Fourier transform) and Velocity (BeanScape® Wilow® Basic)
• Automatic report : FFT, Velocity, PPV (Peak Particle Velocity)

## BEANSCAPE® WILOW® MANAGER :

## COST-FREE & ECO-FRIENDLY WSN CONFIGURATOR :

BeanScape® Wilow® Manager is suitable for users looking for configuring Beanair WSN:

• Fully integrated Wilow® IOT Sensor Networks Maintenance and Installation Tool

• User Friendly and highly adaptable to user's environment

# WIRELESS IOT SENSORS SUPERVISION SOFTWARE

• Real-time integrated Database
• MQTT configuration
• Data logging on CSV file
The BeanScape® Wilow® Manager is free of cost, and already includes 1 month of technical support.
User looking for real-time data visualization, multi-WSN supervision software, longer technical support and a full compatibility with a third-party supervision software, can migrate to the BeanScape® Wilow® Basic.

## YOUR VIBRATION ANALYSIS REPORT AT A GLANCE :

For user working on building and ground vibration, the BeanScape (except manager) provides advanced vibration analysis tools:
• Vibration analysis tools: FFT, PPV (Peak Particle Velocity), Velocity
• Automatic report meeting the DIN4150-3 standard (Excel, PDF and Word)

DIN4150-3 specifies a method of measuring and evaluating the effects of vibration on structures designed primarily for static loading. It applies to structures which do not need to be designed to specific standards or codes of practice as regards dynamic loading.
The report is generated with the following information:
• Building Type,
• Pipeline Material,
• Velocity Average,
• Sampling Rate,
• Analyze Duration,
• LTVEE: Long Term Vibration Evaluation Effect
• LTEBP: Long Term Effect on Buried Pipework
• STEBP: Short Term Effect on Buried Pipework
• STVEE: Short Term Effect Evaluation

### DIN 4150-3 REPORT

| Building Type | Commercial |
|---|---|
| Pipeline Material | Steel |
| Velocity Average (mm/s) | -2657,82710089696 |
| Sampling Rate (hz) | 200 |
| Analyze Duration( hh:mm:ss) | 00:33:06.4250000 |
| LTVEE | NOK |
| LTEBP | NOK |
| Velocity Frequency (hz) | 0,1953125 |
| Maximum Velocity (mm/s) | 127029.276017999 |
| STEBP | NOK |
| STVEE | OK |



Product specifications are subject to change without notice. Contact Beanair for latest specifications.

| KEYWORD | | MEANING |
|---|---|---|
| LTVEE | Long Term Vibration Evaluation | |
| LTEBP | Long Term Effect on Buired Pipeework | |
| STEBP | Short Term Effect on Buired Pipeework | |
| STVEE | Short Term Effect Evaluation | |

# WIRELESS IOT SENSORS SUPERVISION SOFTWARE

## SOFTWARE VERSIONS :

| | BeanScape® Wilow® MANAGER | BeanScape® Wilow® LITE | BeanScape® Wilow® BASIC | BeanScape® Wilow® PREMIUM | BeanScape® Wilow® R.A.Version |
|---|---|---|---|---|---|
| Period technical assistance | 6 months | 6 months | 1 year | 1 year | 1 year |
| Free of cost ? | ✔ | ✔ | ✘ | ✘ | ✘ |
| Number of managed Beandevice® Wilow | 35 | 5 | 35 | Unlimited | Unlimited |
| Real-time graph display | ✘ | ✔ | ✔ | ✔ | ✔ |
| Alarm notification by email:system and Data Acquisition alarms | ✘ | ✘ | ✔ | ✔ | ✔ |
| Streaming with Event Trigger (S.E.T.) mode | ✘ | ✔ | ✔ | ✔ | ✔ |
| Real-Time FFT, Real-Time Velocity | ✘ | ✘ | ✘ | ✔ | ✔ |
| Automatic reports by email (Waveform, FFT, PPV, Particle Velocity) | ✘ | ✘ | Only Waveform report | ✔ | ✔ |
| Remote access (based on MQTT Architecture) | ✘ | ✘ | ✘ | ✘ | ✔ |
| Integrated MQTT Broker | ✘ | ✘ | ✘ | ✘ | ✔ |
| MQTT full services (Diagnostics, Measurement and remote configuration) | ✔ | ✔ | ✔ | ✔ | ✔ |

## MINIMUM SYSTEM REQUIREMENTS :

• 2.33GHz or faster x86-compatible processor
• Microsoft® Windows® XP (32-bit), Windows Server® 2003 (32-bit), Windows Server 2008 (32-bit), Windows Vista® (32-bit), Windows 7 (32-bit and 64-bit), Windows 10 (32-bit and 64-bit)
• 4GB of RAM
• 10 GB of disk space
• 1 GB of graphics memory

## CONTACT US :

### Headquarter:

BeanAir GmbH
Wolfener Straße 32 - 34
12681 Berlin

### Email:

info@beanair.com

### Phone number:

+49 30 98366680

WWW.BEANAIR.COM

WWW.SPACE-WIRELESS.COM