PRODUCTS CATALOG 2020

- Structural Health Monitoring
- Ground Vibration Monitoring
- Test and Measurement
- Land Surveying
- Condition Monitoring
- Environmental Monitoring

READY FOR INDUSTRIAL INTERNET OF THINGS?

MADE IN GERMANY

WIFI AND 2.4GHZ WIRELESS IIOT SENSORS
Recent developments in sensor technology, especially when wireless technology is considered, have opened up new gates in terms of health monitoring and preemptive fault detection.

To meet these new challenges, BeanAir, a leading German company in sensing technology, designs and manufactures smart, rugged and open-standard wireless IIOT sensors.

BeanAir Wireless IIOT sensors constitute an outstanding technology for various applications: Structural Health Monitoring, Test and Measurement, Land Surveying, Condition Monitoring, Environmental Monitoring ...

Furthermore, the high level of versatility, performance, and reliability of its wireless IIOT sensors, in addition to a worldwide presence thanks to effective system integrators partners, Beanair has acquired an international outreach and continues to maintain a strong reputation with major customers in numerous sectors.
BeanAir offers the ideal solution to your needs in terms of measurement and about equipment availability.

The recent developments in sensor technology, especially when wireless technology is considered, have opened up new gates in terms of health monitoring and preemptive fault detection.

BeanAir’s wireless sensor technology offers great reliability, versatility, maintainability and easy to deploy technology.

Beanair provides a wireless IIOT sensors system perfectly adapted to any environmental need:
- Autonomous wireless sensors (ultra low battery consumption with an autonomy than can go up to 7 years)
- Various information transmission protocols
- Data acquisition and storage device
- Wireless IIOT sensors supervision and monitoring software

Monitoring and control of ground and structural vibrations provide the rational to select measures for prevention or mitigation of vibration problems.

Discover how our wireless vibration sensors can provide a great flexibility in terms of deployment and performances.

BeanAir® offers the ideal solution to your needs in terms of measurement and instrumentation to improve equipment energy efficiency and get better knowledge about equipment availability.

Surveying and land surveying is the measurement and mapping of our surrounding environment using mathematics, specialized technology and equipment.

Discover how Beanair provides field-proven and cost-effective wireless IIOT sensors for land surveying.

Offer a True Flexibility to your Testbench!

BeanAir technology offers solutions for rolling stock, naval and aeronautic manufacturer in terms of test and measurement, aiming at reducing costs related to test bench.
FINDING THE WIRELESS SENSOR FITTING YOUR APPLICATION

THIRD-PARTY WIFI ACCESS POINT

THIRD-PARTY WIFI BRIDGE

MQTT

IIOT CLOUD SOFTWARE

WIFI SENSORS

2.4 GHz

SUPERVISION SOFTWARE

WIRELESS IIOT SENSORS COORDINATOR

PROGRAMMABLE LOGIC CONTROLLER

ETHERNET LAN

MODBUS TCP

MODBUS RS232/RS485

WWW.BEANAIR.COM
<table>
<thead>
<tr>
<th>Feature</th>
<th>Willow</th>
<th>2.4GHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wireless range in Line-of-Sight (L.O.S.) and Non Line-of-Sight (NLOS)</td>
<td>200 m in L.O.S. 20-50 m in N.L.O.S. Wireless range can be extended by adding WIFI bridge/repeaters</td>
<td>500 m in L.O.S. 30-100 m in N.L.O.S. 2.4GHz wireless based on IEEE 802.15.4E</td>
</tr>
<tr>
<td>Wireless Technology</td>
<td>IEEE 802.11 b/g/n @2.4GHz</td>
<td>Proprietary Protocol</td>
</tr>
<tr>
<td>Open Standard or proprietary protocol</td>
<td>Open-Standard protocol</td>
<td>Proprietary Protocol</td>
</tr>
<tr>
<td>Need a specific Wireless Network Coordinator (Gateway) ?</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Low Power</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Aggregation capacity</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Available sensors/DAQ</td>
<td>Vibration &amp; Peak Particle Velocity, shock, Inclinometer</td>
<td>temperature, IR temperature, humidity, dew point, Vibration &amp; Peak Particle Velocity, shock, inclinometer, analog DAQ (±20mA,±20 mV, ±5V, ±10V)</td>
</tr>
<tr>
<td>IIOT Ready (MQTT protocol)</td>
<td>YES. Free source codes available in C#, Labview, Android and NodeRed</td>
<td>✗</td>
</tr>
<tr>
<td>Energy Harvesting (Solar power supply)</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>USB Link</td>
<td>USB 2.0</td>
<td>✗</td>
</tr>
<tr>
<td>USB power supply</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Easy Firmware update</td>
<td>USB and WIFI</td>
<td>✗</td>
</tr>
<tr>
<td>Store and Forward+</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Clock- synchronization</td>
<td>±30 ms</td>
<td>±2.5 ms</td>
</tr>
<tr>
<td>Encryption on Wireless Link</td>
<td>WEP, WAP, WAP2</td>
<td>✗</td>
</tr>
<tr>
<td>Wakeup function</td>
<td>Timer and Shock detection</td>
<td>Timer</td>
</tr>
</tbody>
</table>

**Notes:**
- USB Link: USB 2.0
- USB power supply: USB and WIFI
- Encryption on Wireless Link: WEP, WAP, WAP2
By connecting Wilow® sensors to existing WiFi infrastructure, users can benefit from a rapid return on investment:
- Lower total cost of ownership—works
- Large installed base and consequent broad-based familiarity with configuration, use and troubleshooting at the physical and link layers
- Easy provisioning & IT friendly: Wilow® sensors use IP-over-Ethernet networking environment

GET READY FOR INDUSTRIAL INTERNET OF THINGS (IIOT)

Ready for Industrial Internet of things (IIOT) applications, Wilow® IIOT sensors integrate natively MQTT (Message Queuing Telemetry Transport) data frame, a lightweight and open-source (OASIS & ISO/IEC 20922:2016 standards) Internet of Things protocol. MQTT is based on publish/subscribe paradigm, therefore user can easily connect, configure and manage several Wilow® sensors at the same time from a unique IIOT software platform.

Users looking for a high level of security can count on a mechanism to notify interested parties to an abnormal disconnection of a client using the Last Will and Testament feature.

No need to spend several months to develop a specific and complex supervision software, user can easily integrate Wilow® sensors in a third-party IIOT Cloud platform (Amazon web services, IBM Watson, Microsoft Azure, Facebook Messenger, Alibaba Cloud…).

Non-developer users can still use the BeanScape® Wilow® software to setup a quick and affordable WiFi sensor network.
Until now, WIFI technology was extremely energy greedy and unreliable. Users working on Structural Health Monitoring (SHM) and condition monitoring were more favorable to deploy proprietary wireless IIOT sensors offering a better reliability and a low power operation.

Thanks to more than 12 years of experience in sensing technology and wireless IIOT sensors, our research and development team worked intensively with our customers to bring out WiLow® (Wifi Low Power) technology, a new generation of WIFI IIOT sensors (vibration, inclination and shock) which is reliable, ultra-low power, open-standard and adapted to dynamic data acquisition.

Discover how WiLow® sensors revolutionize sensing technology by bringing outstanding features:

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ULP (Ultra Low Power)</td>
<td>Wifi Technology - IEEE 802.11 b/g/n (2.4 Ghz frequency band)</td>
</tr>
<tr>
<td>Embedded Data Logger</td>
<td>up to 5 million data points (with events dating)</td>
</tr>
<tr>
<td>Smart and flexible power supply</td>
<td>compatible with USB and Solar power sources.</td>
</tr>
<tr>
<td>SSD (Smart Shock Detection)</td>
<td>WiLow® sensor can wakeup on shock detection (software configurable)</td>
</tr>
<tr>
<td>Onboard SNTP (Simple Net Time Protocol)</td>
<td>Client</td>
</tr>
<tr>
<td>Over the Air Firmware Upgrade via WIFI</td>
<td></td>
</tr>
<tr>
<td>Rugged aluminum casing</td>
<td>Waterproof IP67/NEMA 6</td>
</tr>
<tr>
<td>USB 2.0 for device configuration</td>
<td>(including firmware update)</td>
</tr>
<tr>
<td>Store and Forward+:</td>
<td>Lossless data transmission with hard real-time</td>
</tr>
<tr>
<td>IIOT Ready: Integrated MQTT data exchange, lightweight</td>
<td>and open-source Industrial Internet of Things (IIOT) protocol</td>
</tr>
<tr>
<td>Precision Time Protocol over Wifi Network</td>
<td>(+30ms of precision)</td>
</tr>
<tr>
<td>Virtual Inclinometer</td>
<td></td>
</tr>
</tbody>
</table>

**THIRD-PARTY WIFI ACCESS POINT**

- BeanAir
  - MQTT
  - WiLow® sensors

**THIRD-PARTY WIFI BRIDGE**

- BeanAir
  - BeanScape
  - BeanDevice
  - WiLow® sensors

**WIFI SENSORS**

- BeanAir
  - WiLow® sensors

**WIRELESS IIOT SENSORS**

- BeanAir
  - WiLow® sensors
  - Open-standard, ultra-low power and reliable WIFI sensors

![Image of WiLow® sensors and related technologies](www.beanair.com)
Thanks to our Smart Shock Detection (SSD) technology, Wilow® IIOT sensors wakes up on a shock detection and starts immediately data acquisition and real-time wireless transmission. Unsolicited wakeup can be avoided by configuring both shock threshold (up to 16g) and a delay timer. User will spend less time to analyze data acquisition as both data recording & wireless transmission start when a shock threshold is reached. Battery life can be extended as Wilow® sensors are most of the time in sleep power mode.

The store and forward technique operates by storing the message transmitted by WiLow® IIOT sensors to a WIFI access point/ WIFI receiver. If the message is not received due to a network disruption, it will be retransmitted on the next transmission cycle. This technique allows to bring a lossless data transmission.

Wilow® IIOT sensors can be power supplied from different power sources:

- Internal rechargeable Lithium-Polymer battery (750 mAh)
- USB 5VDC power supply, compatible with any kind of USB power bank or solar energy harvesting.
The Wilow® IOT Gateway is a ruggedized outdoor (IP66) IIOT gateway designed for Structural Health Monitoring, Ground vibration monitoring and Land surveying applications. It supports both WIFI and 3G/4G/LTE wireless protocols and allows a very easy connection to our Wilow® IIOT sensors. Thanks to WDS (Wireless Distribution System) function, a wireless bridging with other WIFI Bridges/Repeaters can be configured for a better wireless network coverage. The combination of MQTT protocol and 4G connectivity enables effortless data transmission from the sensor to the cloud. The BeanScape® Wilow® RA, a supervision software dedicated to IIOT sensors with remote access feature, can display in real-time all the collected data from the monitoring site. Provided with high gain outdoor antennas (12dBi for LTE, 9dBi for WIFI), the connection will be secured from the wireless IIOT sensor to the remote supervision software. The Wilow® IOT Gateway can be powered from an external AC Power supply (90 ~ 264VAC) with UPS Battery or solar power supply. The internal Lead-acid battery provides instantaneous protection from external power supply interruptions, the wireless network activity is maintained during this time.

APPLICATIONS

The Wilow® IOT GATEWAY 4G is the right solution for different monitoring applications:
- Structural Health Monitoring.
- Land Surveying.
- Ground vibration monitoring on construction site.

Important: BeanScape® Wilow® RA is needed for Remote Access.
The BeanGateway® 2.4Ghz-4G version is a ruggedized outdoor wireless coordinator (IP66) designed for Structural Health Monitoring, Ground vibration monitoring and Land Surveying applications. Integrating both 2.4GHz and 3G/4G/LTE wireless protocols, it is used to build and manage Beanair® wireless IIOT sensors. The BeanGateway® 2.4Ghz-4G version comes with two power supply versions:

- Solar Panel (Monocrystalline Technology)
- Mains power supply (94-264VAC)

An integrated rechargeable Lead-acid battery with a capacity of 12Ah is used as an UPS battery (uninterruptible power supply). It provides instantaneous protection from external power supply interruption; the wireless IIOT sensors & 3G/4G/LTE activities are maintained during this time. Users looking for a safe deployment on a remote site will appreciate our powerful wireless IIOT sensors mapping management:

- Automatic backup on both flash memory and BeanScape® 2.4Ghz software.
- Export/Import function on others BeanGateway® 2.4Ghz

**Applications**

- Land Surveying
- Ground Vibration Monitoring
- Structural Health Monitoring

**Main Features**

- Wireless IIOT sensors Coordinator
- Ultra-Power and license-free 2.4Ghz radio technology (IEEE 802.15.4E)
- Remote access thanks to the integrated 3G/4G/LTE Router (4G Connectivity CAT4 up to 150 Mbps)
- Configuration and supervision of Wireless IIOT sensors
- Advanced Wireless IIOT sensors diagnostic tool
- Data Organization from the various Wireless IIOT sensors
- Data exchange with the BeanScape® 2.4Ghz (Wireless IIOT sensors supervision software)
- Robust, Waterproof and High Gain antennas:
  - 3G/4G/LTE antenna (2x2 MIMO) with 12dBi of Gain
  - 2.4GHz antenna with 9dBi of Gain
- Advanced UPS (Uninterruptible power supply) with lead-acid battery (capacity: 12Ah)
- Ruggedized and Waterproof IP66 casing with anti-theft protection
- Two power-supply versions: AC power supply and solar panel
**WIRELESS IIOT SENSORS**

**WHY IS THE BEANGATEWAY® 2.4GHZ ESSENTIAL?**

The BeanGateway® 2.4Ghz is used to build BeanAir® Wireless IIOT Sensors. It can manage queues for every BeanDevice® 2.4Ghz, conversion of datas, compression and IP connectivity with the network, reducing the intelligence required in these platforms and the associated cost. It controls external access through a secured authentication procedure.

**MAIN FEATURES**

- Builds and manages a Wireless IIOT Sensors designed by BeanAir®
- **Wireless protocol stack**: IEEE 802.15.4
- **Several versions**: Ethernet, Modbus TCP / IP & Modbus RS485 / RS232
- **Maximus Radio range**: 1km (LOS)
- Embedded wireless IIOT sensors diagnostic tool
- **Advanced UPS** (Uninterruptible power supply)
- Wireless IIOT Sensors mapping & context is stored on embedded flash
- **<< Plug & Play >>** installation: no knowledge regarding Wireless IIOT Sensors is necessary
- Integrated Lithium-Ion battery charger with high-precision battery monitoring
- Standard interface with our Wireless IIOT Sensors Scada supervision Software (BeanScape® 2.4GHz)

**ProcessSensor**

**BEANDEVICE® 2.4GHZ AN-mV**
Wireless IIOT Data Acquisition (DAQ)
low voltage inputs (+20mV) | built-in datalogger

**BEANDEVICE® 2.4GHZ AN-420**
Wireless IIOT Data Acquisition (DAQ) | 4-20mA (current loop) inputs | built-in datalogger

**BEANDEVICE® 2.4GHZ AN-V**
Wireless IIOT Data Acquisition (DAQ) | voltage inputs (+5V or +10V) | built-in datalogger

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**BeanGateway® 2.4Ghz**

**INDOOR**

- **DAQ Type**: ± 20 mV
- **Radio range**: 1km (L.O.S) Maximum
- **Data logger capacity**: up to 1 million data points
- **Dimensions (LxWxH)**: 155x81x57mm
- **Weight**: 660g battery included
- **IP rating**: IP 67

**Outdoor**

- **DAQ Type**: 4-20mA
- **Radio range**: 1km (L.O.S) Maximum
- **Data logger capacity**: up to 1 million data points
- **Dimensions (LxWxH)**: 155x81x57mm
- **Weight**: 660g battery included
- **IP rating**: IP 67
## WIRELESS IIOT SENSORS FOR INDUSTRIAL APPLICATIONS:

### WIRELESS COORDINATOR SELECTION GUIDE:

<table>
<thead>
<tr>
<th>PRODUCT DESCRIPTION</th>
<th>PRODUCT REF</th>
<th>ETHERNET INTERFACE</th>
<th>MODBUS ASCII/RTU OVER RS485</th>
<th>MODBUS ASCII/RTU OVER RS232</th>
<th>MODBUS IP</th>
<th>WATERPROOF IP66/IP67</th>
<th>3G/4G/LTE</th>
<th>POWER SUPPLY</th>
</tr>
</thead>
<tbody>
<tr>
<td>BeanGateway® Ethernet- Indoor casing</td>
<td>BGTW-ETH-IND</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Mains 8-28VDC</td>
</tr>
<tr>
<td>BeanGateway® Ethernet- Outdoor casing</td>
<td>BGTW-ETH-OUT</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td>Mains 8-28VDC</td>
</tr>
<tr>
<td>BeanGateway® Ethernet / ModBus TCP / IP- Indoor casing</td>
<td>BGTW-ETH-MODIP-IND</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td>Mains 8-28VDC</td>
</tr>
<tr>
<td>BeanGateway® Ethernet/ModBus TCP/IP- Outdoor casing</td>
<td>BGTW-ETH-MODIP-OUT</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td>Mains 8-28VDC</td>
</tr>
<tr>
<td>BeanGateway® Ethernet/ModBus TCP/IP &amp; Modbus over Rs485- Indoor casing</td>
<td>BGTW-ETH-MODRS485-IND</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td>Mains 8-28VDC</td>
</tr>
<tr>
<td>BeanGateway® Ethernet/ModBus TCP/IP &amp; Modbus over Rs485- Outdoor casing</td>
<td>BGTW-ETH-MODRS485-OUT</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>Mains 8-28VDC</td>
</tr>
<tr>
<td>BeanGateway® Ethernet/ModBus TCP/IP &amp; Modbus over RS232- Indoor casing</td>
<td>BGTW-ETH-MODRS232-IND</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td>Mains 8-28VDC</td>
</tr>
<tr>
<td>BeanGateway® Ethernet/ModBus TCP/IP &amp; Modbus over RS232/RS485- Indoor casing</td>
<td>BGTW-ETH-MODSERIAL-IND</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td>Mains 8-28VDC</td>
</tr>
<tr>
<td>BeanGateway® 3G/4G/LTE- Outdoor casing</td>
<td>BGTW-4G-MPWR-OUT</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td>Mains 8-28VDC</td>
</tr>
</tbody>
</table>

### AN EASY INTEGRATION INTO YOUR IT SYSTEM:

Tahank’s to ModBus TCP / IP and ModBus Rs232 / Rs485 available on BeanGateway®, seamless integration with a third-party PLC / Embedded PC is possible. ModBus registers enable data collection from the wireless sensor networks.
**Measurement range:** ±2g or ±10g  
**Radio range:** 500 m (L.O.S)  
**Data logger capacity:** up to 1 million data points  
**Dimensions:** 80 x 60 x 31 mm  
**Weight:** 175g battery included  
**IP rating:** IP67

**Measurement range:** ±15° or ±30°  
**Radio range:** 500 m (L.O.S)  
**Data logger capacity:** up to 1 million data points  
**Dimensions:** 80 x 60 x 31 mm  
**Weight:** 175g battery included  
**IP rating:** IP67

**Measurement range:** ±30° or ±90°  
**Radio range:** 500 m (L.O.S)  
**Data logger capacity:** up to 1 million data points  
**Dimensions:** 80 x 60 x 31 mm  
**Weight:** 175g battery included  
**IP rating:** IP67

**SmartSensor**

**BeanDevice® 2.4GHz AX-3DS**  
Wireless accelerometer sensor  
Shock and impact monitoring | built-in datalogger

**BeanDevice® 2.4GHz AX-3D**  
Wireless vibration sensor | built-in datalogger

**BeanDevice® 2.4GHz AX-3D XRange**  
Wireless vibration sensor | built-in datalogger  
High performance version

**BeanDevice® 2.4GHz Hi-Inc**  
Wireless inclinometer sensor | tilt / inclination / slope monitoring | built-in datalogger

**BeanDevice® 2.4GHz Hi-Inc XRange**  
Wireless inclinometer sensor | tilt / inclination / slope monitoring | built-in datalogger  
High-Performance version

**BeanDevice® 2.4GHz Inc**  
Wireless inclinometer sensor | tilt / inclination / slope monitoring | built-in datalogger  
Low-cost version
2.4GHZ WIRELESS IIOT SENSORS FOR INDUSTRIAL APPLICATIONS

**BeanDevice® 2.4GHz ONE-T**
Wireless temperature sensor
built-in datalogger

- Measurement range: -40°C to +75°C
- Radio range: 300 m (L.O.S)
- Data logger capacity: up to 1 million data points
- Dimensions(LxWxH): 119x35x35mm
- Weight: 120g (battery included)
- IP rating: IP67 polycarbonate enclosure

**BeanDevice® 2.4GHz ONE-TH**
Wireless Temperature & humidity sensors
built-in datalogger

- Measurement range: -40°C to +85°C for (Ta)
- Radio range: 300 m (L.O.S)
- Data logger capacity: up to 1 million data points
- Dimensions(LxWxH): 119x35x35mm
- Weight: 120g (battery included)
- IP rating: IP67 polycarbonate enclosure

**BeanDevice® 2.4GHz ONE-TIR**
Wireless IR (Infrared) temperature sensor | built-in datalogger

- Measurement range: -40°C to +85°C
- Radio range: 300 m (L.O.S)
- Data logger capacity: up to 1 million data points
- Dimensions(LxWxH): 119x35x35mm
- Weight: 120g (battery included)
- IP rating: IP67 polycarbonate enclosure

**Digital Sensor B-TH-01**
Digital Humidity and Temperature Sensor

- Measurement range: 0 to 100 %RH for Humidity
- Temperature range: -40°C to +85 °C
- Temperature Sensor technology: Thermistor
- Dimensions(LxWxH): 119x35x35mm
- IP rating: IP67
The BeanScape® 2.4Ghz is a real-time WSN supervision and control monitor. It allows the user to monitor and operate in real-time BeanAir® WSN. The BeanScape® 2.4Ghz 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.

### Software Versions:

<table>
<thead>
<tr>
<th>Number of managed BeanDevice® 2.4GHz</th>
<th>BeanScape® 2.4GHz Manager</th>
<th>BeanScape® 2.4GHz Basic</th>
<th>BeanScape® 2.4GHz Premium</th>
<th>BeanScape® 2.4GHz Multiview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Period technical assistance (e-mail)</td>
<td>1 MONTH</td>
<td>1 YEAR</td>
<td>1 YEAR</td>
<td>1 YEAR</td>
</tr>
<tr>
<td>OPC Server DA</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✓</td>
</tr>
<tr>
<td>Free of cost ?</td>
<td>✓</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Real time data base</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>GUI (Graphical User Interface)</td>
<td>✗</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Alarm notification by email</td>
<td>✗</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Streaming with Event-Trigger (S.E.T.) mode</td>
<td>✗</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>NTP client</td>
<td>✗</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Real-Time FFT, Real-Time Velocity</td>
<td>✗</td>
<td>✗</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Automatic Reports (Waveform, FFT, PPV, Velocity)</td>
<td>✗</td>
<td>✗</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Multi-user access</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✓</td>
</tr>
</tbody>
</table>

### Minimum System Requirements:

- 2.33GHz or faster x86-compatible processor
- 2GB of RAM
- 5 GB of disk space
- 128MB of graphics memory
Both BeanScape® 2.4GHz Premium+/Multiview integrate an OPC DA server (Data Access).

OPC DA is particularly well suited for real-time measurement and data sharing. Each data/measurement can be associated to a tag or its attributes and shared with one or several OPC clients.

It opens up to many third-party applications (SCADA, web portals, etc.). Our OPC server is DA 2, DA 2.5 and DA 3 compliant and allows two different presentations. The first is a compact presentation of the sensor tree, presenting all the secondary attributes under the form of attributes. The second is an extended presentation of the sensor tree where each secondary attribute is presented by an OPC item/tag rather than an attribute.

User looking for an easy integration with their PLC/Embedded PC can select the BeanGateway® 2.4GHz with Modbus communication link.

Modbus registers allow to collect data measurement and to configure remotely Beanair Wireless IIoT Sensors. Modbus protocol will work perfectly with Beandevice® 2.4GHz operating with a slow measurement heartbeat.
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.

**SOFTWARE VERSIONS:**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Manager</th>
<th>Basic</th>
<th>Premium</th>
<th>VA. Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Period technical assistance</td>
<td>3 months</td>
<td>1 year</td>
<td>1 year</td>
<td>1 year</td>
</tr>
<tr>
<td>Free of cost</td>
<td>✔</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Number of managed Beandevice® Wilow</td>
<td>35</td>
<td>35</td>
<td>Unlimited</td>
<td>Unlimited</td>
</tr>
<tr>
<td>Real time data base</td>
<td>✗</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>GUI (Graphical User Interface)</td>
<td>✗</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Alarm notification by email: System Alarm</td>
<td>✗</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>and Survey Data Acquisition (mode)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Streaming with Event Trigger (S.E.T.) mode</td>
<td>✗</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Real-Time FFT, Real-Time Velocity</td>
<td>✗</td>
<td>✗</td>
<td>✔</td>
<td>✔</td>
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<tr>
<td>Automatic Reports (Waveform, FFT, PPV,</td>
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<td>Only Waveform</td>
<td>✔</td>
<td>✔</td>
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<tr>
<td>Velocity)</td>
<td></td>
<td>report</td>
<td></td>
<td></td>
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<tr>
<td>Remote access (MQTT Architecture)</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✔</td>
</tr>
<tr>
<td>Integrated MQTT Broker</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✔</td>
</tr>
</tbody>
</table>

**MINIMUM SYSTEM REQUIREMENTS:**

- 2.33GHz or faster x86-compatible processor
- 4GB of RAM
- 10 GB of disk space
- 1 GB of graphics memory