BeanAir
WIRELESS IIOT SENSORS

2.4 GHz

BeanGateway 2.4GHz Indoor

Wireless IIOT Sensors Coordinator Indoor-Version | Modbus Protocol

PRODUCT VIDEO

USER GUIDE

MODBUS UM

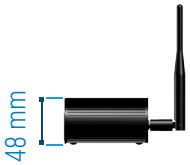
MECHANICAL DRAWING

STEP FILE

2year Warranty

MADE IN GERMANY

CE FC R 207-132085



MAIN FEATURES

- Wireless technology IEEE 802.15.4
- Ethernet/LAN interface with a server
- Advanced UPS (Uninterruptible power supply) with integrated rechargeable Lithium battery
- Auto-Reboot : Periodic reboot at a specified time interval

HOW DOES IT WORK ?

BeanAir
Rethinking Sensing Technology

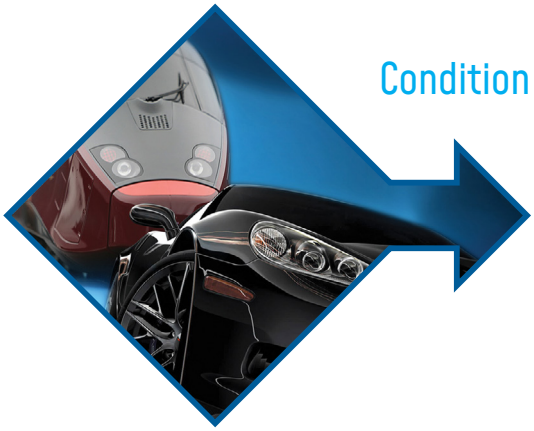
BeanScape

BeanGateway
2.4GHz Indoor Version

Wireless IIOT Sensors Cloud
(IEEE 802.15.4)

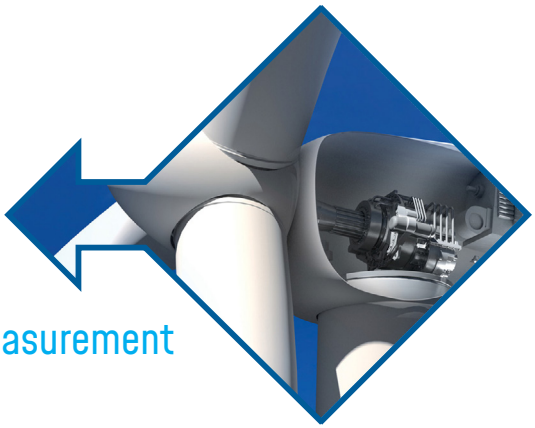
BeanGateway INDOOR

APPLICATIONS



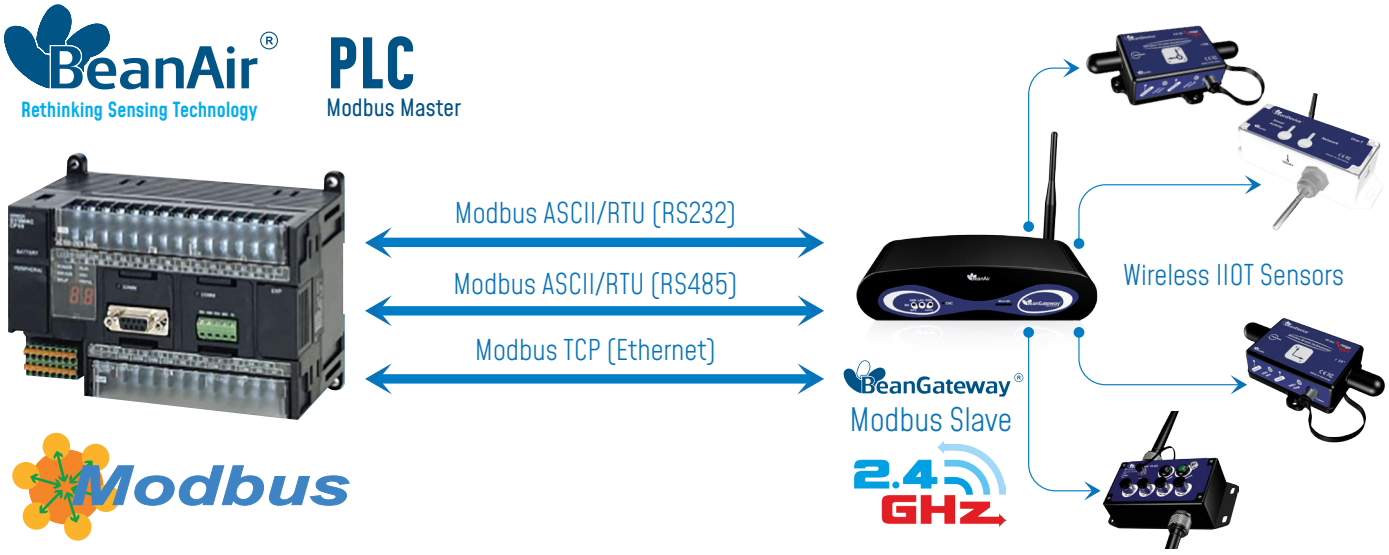
Condition Monitoring

Test and Measurement



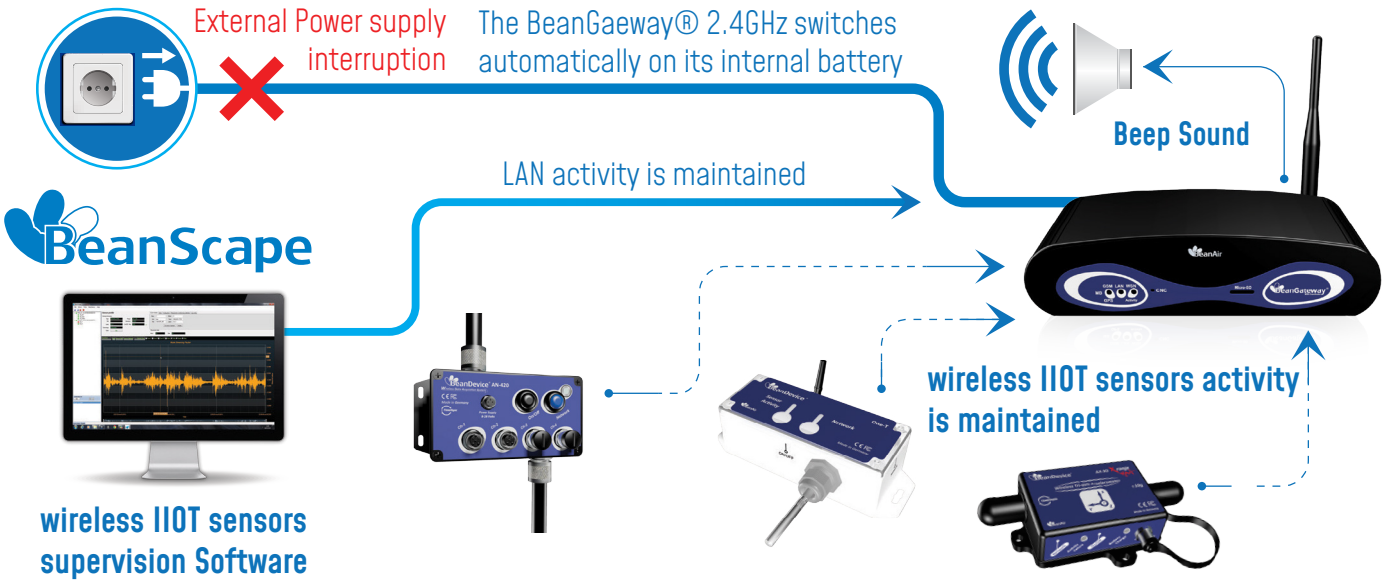
A MULTI-PROTOCOL WIRELESS IIOT SENSORS COORDINATOR

The BeanGateway® 2.4GHz Modbus is used to build and manage Beanair® wireless IIOT sensors. It can manage queues for every network element (BeanDevice® 2.4GHz). As a gateway, it controls the external access to the network through a highly secured authentication procedure. It supports the conversion of data exchanged, compression and IP connectivity with the network thereby reducing the intelligence required in these platforms, maintenance and therefore the associated cost. The BeanGateway® 2.4GHz Modbus is also equipped with various communication interfaces with the customers IT infrastructure (Modbus over RS232/RS485, Modbus TCP, Ethernet - TCP / IP / UDP / DHCP / DNS).

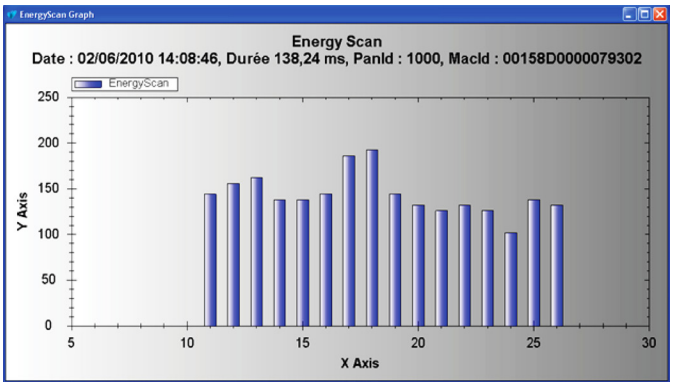


ADVANCED UNINTERRUPTIBLE POWER SUPPLY (UPS)

The BeanGateway® 2.4GHz Modbus operates with an external power supply (DC 8-28V). An integrated rechargeable battery with a capacity of 950mAh is used as an UPS battery (uninterruptible power supply). The internal battery provides instantaneous protection from external power supply interruptions, the wireless IIOT sensors activity & Ethernet LAN activity are maintained during this time (3h00 to 3h30 approximately). An internal buzzer emits a beep sound every 2 seconds in case the external power supply is disconnected.



EMBEDDED WIRELESS IIOT SENSORS DIAGNOSTIC TOOL



The BeanGateway® 2.4GHz Modbus provides a wireless IIOT sensors diagnotic tool useful for resolving some common networking troubleshooting :

- Energy Scan for choosing the more appropriate RF Channel
- BeanDevice® 2.4GHz PER (Packet Error Rate) calculation
- LQI (Link Quality Indicator) between the BeanGateway® 2.4GHz Modbus and the BeanDevice® 2.4GHz

TECHNICAL SPECIFICATIONS

PRODUCT REFERENCE	
BGTW-2.4GHZ-ETH-MODIP-IND	BeanGateway 2.4 GHz Ethernet & Modbus TCP/IP
BGTW-2.4GHZ-ETH-MODRS485-IND	BeanGateway 2.4 GHz Ethernet, ModBus Modbus TCP/IP & Modbus ASCII/RTU over RS485
BGTW-2.4GHZ-ETH-MODSERIAL-IND	BeanGateway 2.4GHz Ethernet, ModBus Modbus TCP/IP & Modbus ASCII/RTU over RS485 & RS232

WIRELESS IIOT SENSORS COORDINATOR	
Wireless Technology	Ultra-Power and license-free 2.4Ghz radio technology (IEEE 802.15.4E)
WSN Topology	Peer-to-peer/ Star
Raw data rate	250 Kbits/s
RF Characteristics	ISM 2.4GHz – 16 Channels
RF Transmit power	+18 dBm
Receiver sensitivity	-104 dBm
Maximum Radio Range	1 km (Line of Sight) , 70-150m (Non Line of Sight)
Built-in WSN Diagnostic tool	· Energy Scan for choosing a suitable RF Channel · BeanDevice® PER (Packet Error Rate) calculation · LQI (Link Quality Indicator) between the BeanGateway® and the BeanDevice® · RF channels Blacklist

SPECIFICATIONS	MODBUS SERIAL
ModBus over RS232 (only available on BGTW 2.4GHz-ETH-MODSERIAL-IND)	Slave, RTU/ASCII, Baudrate: Between 4800 bauds to 115 200 bauds
ModBus over RS485 (2W) (only available on BGTW 2.4GHz-ETHMODRS485-IND)	-Slave, RTU/ASCII, Baudrate: Between 4800 bauds to 115 200 bauds -Logic selectable 120 Ohm termination

ETHERNET/LAN NETWORK	
Network/Transport Protocol	Client TCP/IP, UDP, DNS, DHCP
Data Link Protocol	Ethernet / Fast-Ethernet with auto-uplink (MDI/MDI-X auto) - IEEE 802.3x
IP Addressing	Dynamic (DHCP) or static
IP configuration	LAN parameters (DNS, DHCP, Keep Alive...) are configurable from the BeanScape® (UDP/Ethernet Interface).

TECHNICAL SPECIFICATIONS

PHYSICAL & ENVIRONMENTAL	
Dimensions (L x l x h)	200 mm x 88 mm x 48 mm
Enclosure/Finish	Polycarbonate Enclosure - Protection ULV94/Getex
Weight	370g
Operating temperature	-20 °C to +65 °C during battery discharge 0 to 45°C during battery charge
Norms and Radio Certifications	· CE Labelling Directive R&TTE (Radio) ETSI EN 300 328 · FCC (North America) · ARIB STD-T66 Ver 3.6 · ROHS - Directive 2002/95/EC

INCLUDED ACCESSORIES	
2.4 GHz Antenna	· High gain antenna 5 dBi · V.S.W.R : 1.5 :1 · Connector : RPSMA
Ethernet Cable	· RJ45 Male · Cable length: 2 meters
Wall plug-in power supply	Wall plug-in, Switchmode power Supply 12V @ 1.25A

POWER SUPPLY	
Power Consumption	250 mA to 300 mA during wireless RX/TX and Ethernet activated
External power supply	+9V to +28 V , integrated Lithium-Ion battery charger with high-precision battery monitoring
Integrated Lithium-Ion Battery	Lithium-Ion rechargeable battery 950 mAh (reference BAT0.95DMG) In case of external power supply failure, the BeanGateway® can switch on the internal battery.

OVERVIEW BEANGATEWAY® INDOOR

BeanGateway® 2.4GHz

Wireless IIOT Sensors coordinator
Modbus and Ethernet Links | Indoor Version

- 2.4 Ghz Antenna
- SUBD9-RS232 connector
- ModBus RS485
- RJ45 & Auto-MDIX socket for LAN Network
- Reset push-button
- ON/OFF Slide-switch
- Power supply 8-28 Volts

ACCESSORIES

Omnidirectional antenna 5.5 dbi for indoor use only

Ref:HG_OMNI_5_5_DBI
- Freq Range 2400 - 2485 MHz
- Ver Beamwidth : 90° Deg
- VSWR : 1.5:1
- Input Power: 10 W
- Connector: SMA Male
- Weight: 26 gr

. Gain @ 2400 MHz 5.5 dBi
. Hor Beamwidth : 360° Deg
. Impedance : 50 Ohm
. Operating Temp: -10 +60 Deg C
. Dimensions: 210 x 10D mm

Omnidirectional antenna 9 dbi for indoor use only

Ref: HG_OMNI_9_DBI
- Freq Range 2400 - 2485 MHz
- Ver Beamwidth : 90° Deg
- VSWR : 1.5:1
- Input Power: 10 W
- Connector: RP-SMA Plug
- Weight: 60 gr

. Gain @ 2400 MHz 9 dBi
. Hor Beamwidth : 360° Deg
. Impedance : 50 Ohm
. Operating Temp: -10 +60 Deg C
. Dimensions: 380 x 10D mm

CONTACT US

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