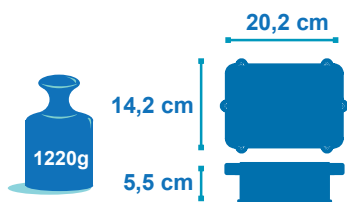


## WSN COORDINATOR - MODBUS / OUTDOOR & RUGGED VERSION

### //APPLICATIONS

**2year**  
Warranty



**made**  
**in**  
**Germany**

### HOW DOES IT WORK ?



### // MAIN FEATURES



Wireless technology IEEE 802.15.4



Ethernet/LAN interface with a server



Advanced UPS (Uninterruptible power supply) with integrated rechargeable Lithium battery



Watertight (IP67) & Robust Aluminum Enclosure

### FEATURED VIDEO



BeanGateway® (Outdoor Version) main presentation video

### TECHNICAL NOTE



TN\_RF\_009 – «BeanGateway® management on LAN infrastructure»

### USER MANUAL



BeanGateway® user manual



Modbus user manual

### APPLICATIONS

- Remote sites (solar & wind energy farm, water/ gas pipeline, mountains, water power plant ...)
- WSN in harsh industrial environment
- Embedded Measurement

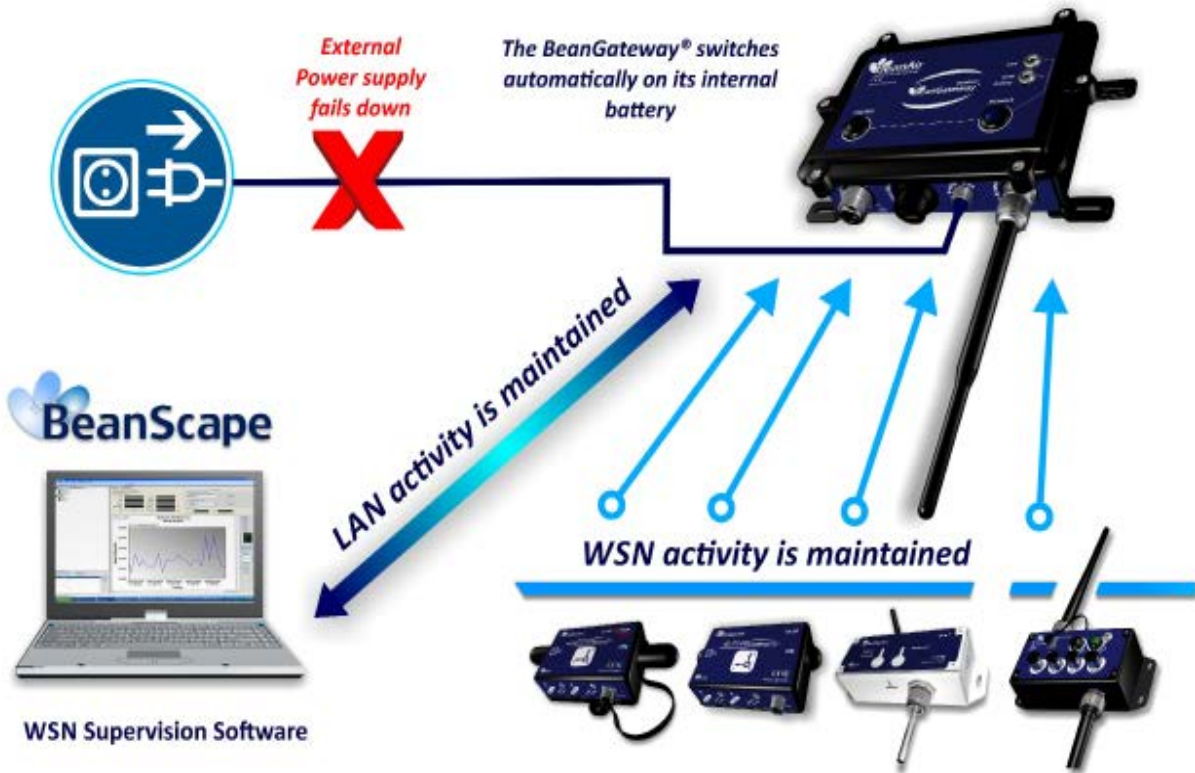
**//A MULTI-PROTOCOL WSN COORDINATOR**

The **BeanGateway® Modbus** is used to build and manage **Beanair®** wireless sensor network. It can manage queues for every network element (**BeanDevice®**). 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.

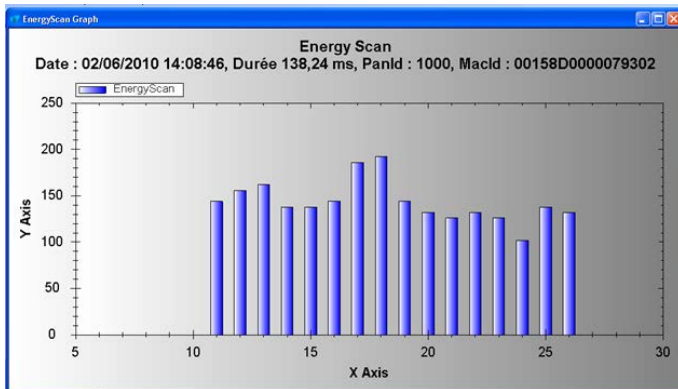
The **BeanGateway® Modbus** is also equipped with various communication interfaces with the customers IT infrastructure (Modbus over RS485, Modbus TCP, Ethernet - TCP / IP / UDP / DHCP / DNS)


**//ADVANCED UNINTERRUPTIBLE POWER SUPPLY (UPS)**

The **BeanGateway® 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 sensor network activity & Ethernet LAN activity are maintained during this time (3h00 to 3h30 approximately).



//EMBEDDED WSN DIAGNOSTIC TOOL



The BeanGateway® Modbus provides a WSN diagnostic tool useful for resolving some common networking troubleshooting :

- Energy Scan for choosing the more appropriate RF Channel
  - BeanDevice® PER (Packet Error Rate) calculation
  - LQI (Link Quality Indicator) between the BeanGateway® Modbus and the BeanDevice®
- The Energy Scan allows the user to know the network quality on each Radio channel. This operation allows the user to choose the appropriate RF channel on a site where the WSN is deployed.



Product reference	
BGTW-ETH-MODIP-OUT	BeanGateway Ethernet & Modbus TCP/IP
BGTW-ETH-MODRS485-OUT	BeanGateway Ethernet, ModBus TCP/IP & Modbus ASCII/RTU over RS485

Specifications	Wireless Sensor Network Coordinator
<b>Wireless Stack</b>	IEEE 802.15.4
<b>WSN Topology</b>	Peer-to-peer/ Star
<b>Raw data rate</b>	250 Kbits/s
<b>RF Characteristics</b>	ISM 2.4GHz – 16 Channels
<b>RF Transmit power</b>	18 dBm
<b>Receiver sensitivity</b>	-95.5 dBm to -101 dBm
<b>Encryption</b>	AES 128 bits (integrated AES coprocessor)
<b>Maximum Radio Range</b>	1 km (L.O.S.)
<b>WSN Diagnostic tool</b>	<ul style="list-style-type: none"> <li>• Energy Scan for choosing a suitable RF Channel</li> <li>• BeanDevice® PER (Packet Error Rate) calculation</li> <li>• LQI (Link Quality Indicator) between the BeanGateway® and the BeanDevice®</li> <li>• RF channels Blacklist</li> </ul>

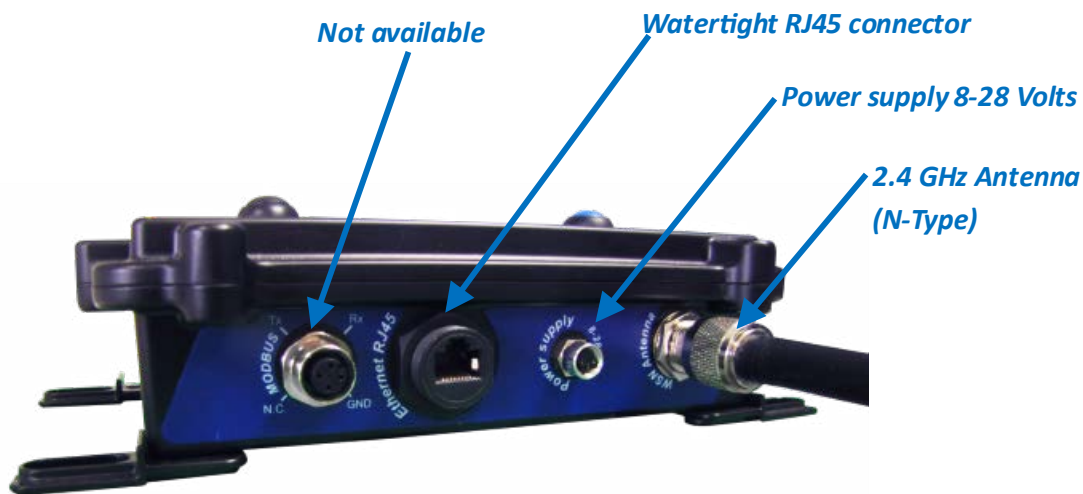
Specifications	Ethernet/LAN Network
<b>Network/Transport Protocol</b>	Client TCP/IP, UDP, DNS, DHCP
<b>Data Link Protocol</b>	Ethernet / Fast-Ethernet with auto-uplink (MDI/MDI-X auto) - IEEE 802.3x
<b>IP Addressing</b>	Dynamic (DHCP) or static
<b>IP configuration</b>	LAN parameters (DNS, DHCP, Keep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

Specifications	ModBus Serial
<b>ModBus over RS232</b>	Slave, RTU/ASCII, Baudrate: Between 4800 bauds to 115 200 bauds
<b>ModBus over RS485</b>	Slave, RTU/ASCII, Baudrate: Between 4800 bauds to 115 200 bauds
	Logic selectable 120 Ohm termination

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

Specifications	Physical & Environmental
<b>Dimensions (L x l x h)</b>	202 mm x142 mm x 55 mm
<b>Enclosure/Finish</b>	<ul style="list-style-type: none"> <li>Aluminum alloy ADC12 black finish</li> <li>Wall mounting holes (outside the sealing area)</li> </ul>
<b>IP Ratings</b>	IP67
<b>Weight</b>	1220g
<b>Connectors</b>	<ul style="list-style-type: none"> <li>Power supply connector: M8-3P female socket, Ratings IP67, Contact brass with gold plated</li> <li>Ethernet connector : RJ45 Female, Ratings IP67, Contact copper alloy with gold plated</li> <li>Antenna connector: N-Type female, Ratings IP67</li> <li>ON/OFF push button : Latching push-button, Ratings IP67</li> <li>Network context push button: momentary push-button, Ratings IP67</li> </ul>
<b>Operating temperature</b>	-20 °C to +65 °C – with Integrated internal temperature sensor (resolution 0.125°C)
<b>Norms</b>	CE Labeling directive R&TTE (Radio) , ETSI EN 300 328 , ROHS- Directive 2002/95/EC, FCC Part 15

Specifications	Accessories
<b>2.4 GHz Antenna</b>	<ul style="list-style-type: none"> <li>High gain antenna 5 dBi</li> <li>V.S.W.R : 1.5 :1</li> <li>Connector : N-Type (Watertight)</li> </ul>
<b>Ethernet Cable</b>	<ul style="list-style-type: none"> <li>RJ45 Male waterproof connector (casing side only)</li> <li>Cable length: 3 meters</li> </ul>
<b>M12-4Pins Plug</b>	Only for BGTW-ETH-MODRS485-OUT version
<b>Wall plug-in power supply</b>	Wall plug-in, Switchmode power Supply 12V @ 1,25A
<b>Connectors cap</b>	M8-3P cap

**//BEANGATEWAY REAR VIEW**


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

## // CONTACT US

FOR MORE INFORMATIONS :

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