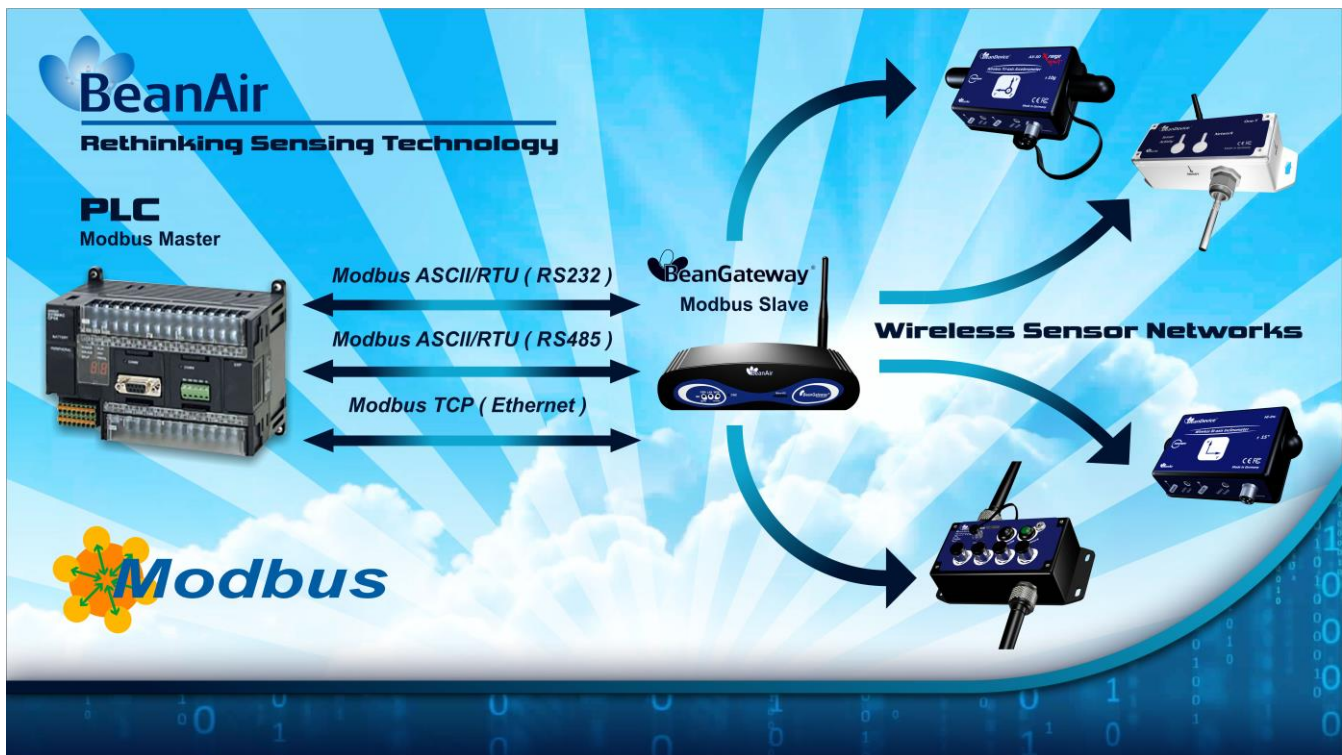




**APPLICATION NOTE**

***BeanGateway® and data terminal equipment interface***



[www.beanair.com](http://www.beanair.com)



"Rethinking sensing technology"

Document version : 1.1

Document Type : Application Note

*BeanGateway® and Data Terminal Equipment Interface*

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<b>Document Name</b>	BeanGateway® and Data terminal Equipment interface		

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<b>Reader</b>			X
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## 1. TECHNICAL SUPPORT

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For general contact, technical support, to report documentation errors and to order manuals, contact *BeanAir Technical Support Center* (BTSC) at:  
[tech-support@beanair.com](mailto:tech-support@beanair.com)




For detailed information about where you can buy the BeanAir equipment/software or for recommendations on accessories and components visit:

[www.beanair.com](http://www.beanair.com)

To register for product news and announcements or for product questions contact BeanAir’s Technical Support Center (BTSC).

Our aim is to make this user manual as helpful as possible. Please keep us informed of your comments and suggestions for improvements. BeanAir appreciates feedback from the users.

## 2. VISUAL SYMBOLS DEFINITION

Visual	Definition
	<p><b><u>Caution or Warning</u></b> – Alerts the user with important information about BeanAir wireless sensor networks (WSN), if this information is not followed, the equipment /software may fail or malfunction.</p>
	<p><b><u>Danger</u></b> – This information <b>MUST</b> be followed if not you may damage the equipment permanently or bodily injury may occur.</p>
	<p><b><u>Tip or Information</u></b> – Provides advice and suggestions that may be useful when installing BeanAir Wireless Sensor Networks.</p>




### 3. ACRONYMS AND ABBREVIATIONS

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AES	Advanced Encryption Standard
CCA	Clear Channel Assessment
CSMA/CA	Carrier Sense Multiple Access/Collision Avoidance
GTS	Guaranteed Time-Slot
kSps	Kilo samples per second
LLC	Logical Link Control
LQI	Link quality indicator
LDCDA	Low duty cycle data acquisition
MAC	Media Access Control
PAN	Personal Area Network
PER	Packet error rate
RF	Radio Frequency
SD	Secure Digital
SSD	Smart shock detection
WSN	Wireless sensor Network



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## 4. RELATED DOCUMENTS

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In addition to this User manual, please consult the application notes & technical notes mentioned below:

### 4.1 APPLICATION NOTES

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Document name (Click on the weblink)	Related product	Description
<a href="#"><u>AN RF 007 :“ Beanair WSN Deployment”</u></a>	All BeanAir products	Wireless sensor networks deployment guidelines
<a href="#"><u>AN RF 006 – „How to extend your wireless range“</u></a>	All BeanAir products	A guideline very useful for extending your wireless range
<a href="#"><u>AN RF 005 – BeanGateway® &amp; Data Terminal Equipment Interface</u></a>	BeanGateway®	DTE interface Architecture on the BeanGateway®
<a href="#"><u>AN RF 003 - “IEEE 802.15.4 2.4 GHz Vs 868 MHz”</u></a>	All BeanAir products	Comparison between 868 MHz frequency band and a 2.4 GHz frequency band.
<a href="#"><u>AN RF 002 – “Structural Health monitoring on bridges”</u></a>	All BeanAir products	The aim of this document is to overview Beanair® products suited for bridge monitoring, their deployment, as well as their capacity and limits by over-viewing various Data acquisition modes available on each BeanDevice®.





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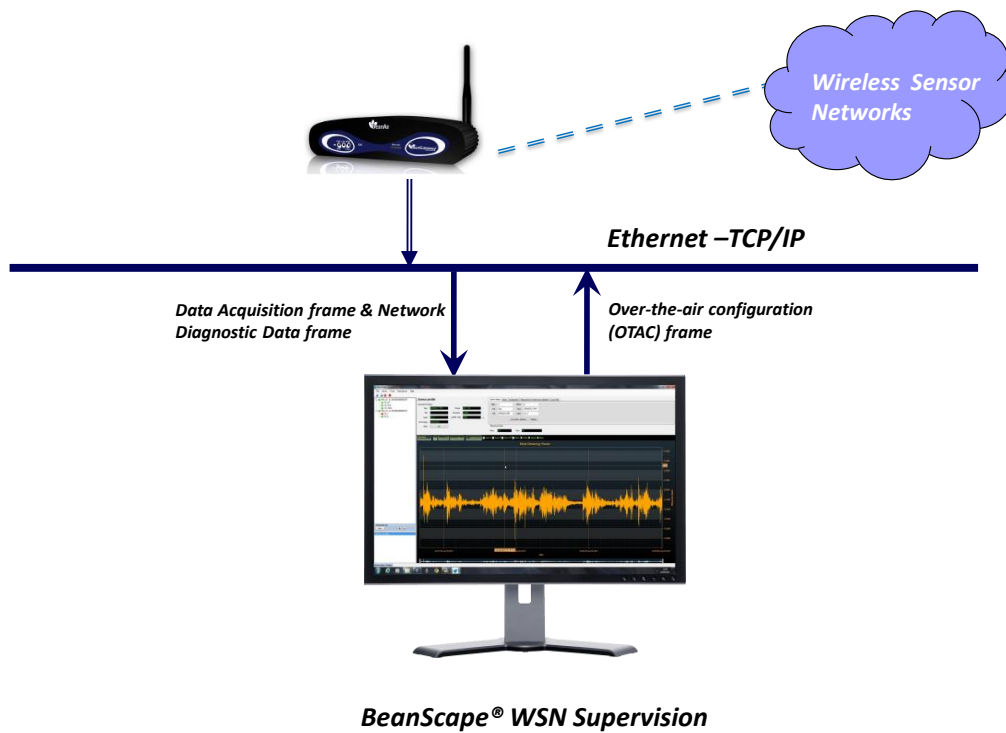
## 4.2 TECHNICAL NOTES

Document name (Click on the weblink)	Related product	Description
<a href="#"><u><i>TN RF 013 – « OPC configuration »</i></u></a>	BeanScape® Premium+	The aim of this document is to help deploying the OPC DA and all associated services.
<a href="#"><u><i>TN RF 012– « BeanDevice® battery life in streaming mode »</i></u></a>	All the products	The aim of this document is to describe the autonomy performance of the BeanDevice® SmartSensor® and ProcessSensor® product line in streaming and streaming packet mode.
<a href="#"><u><i>TN RF 011 – « Coexistence of Beanair WSN at 2.4GHz »</i></u></a>	All the products	This document aims to highlight the issues affecting co-existence of Beanair WSN (IEEE 802.15.4) in the presence of interference.
<a href="#"><u><i>TN RF 010 – « BeanDevice® Power Management »</i></u></a>	All the BeanDevice®	This technical note describes the sleeping & active power mode on the BeanDevice®.
<a href="#"><u><i>TN RF 009 – « BeanGateway® management on LAN infrastructure »</i></u></a>	BeanGateway®	BeanGateway® integration on a LAN infrastructure
<a href="#"><u><i>TN RF 008 – “Data acquisition modes available on the BeanDevice®”</i></u></a>	All the BeanDevice®	Data acquisition modes available on the BeanDevice®
<a href="#"><u><i>TN RF 007 – “BeanDevice® DataLogger User Guide ”</i></u></a>	All the BeanDevice®	This document presents the DataLogger feature on the BeanDevice®
<a href="#"><u><i>TN RF 006 – “WSN Association process”</i></u></a>	All the BeanDevice®	Description of the BeanDevice® network association
<a href="#"><u><i>TN RF 005 – “Pulse counter &amp; binary Data acquisition on the BeanDevice® SUN-BN”</i></u></a>	BeanDevice® SUN-BN	This document presents Pulse counter (ex: energy metering application) and binary Data acquisition features on the BeanDevice® SUN-BN.
<a href="#"><u><i>RF TN 003- “Aggregation capacity of wireless sensor networks”</i></u></a>	All the products	Network capacity characterization of Beanair Wireless Sensor Networks
<a href="#"><u><i>RF TN 002 V1.0 - Current consumption in active &amp; sleeping mode</i></u></a>	BeanDevice®	Current consumption estimation of the BeanDevice in active and sleeping mode
<a href="#"><u><i>RF TN 001 V1.0- Wireless range benchmarking</i></u></a>	BeanDevice®	Wireless range benchmarking of the BeanDevice®

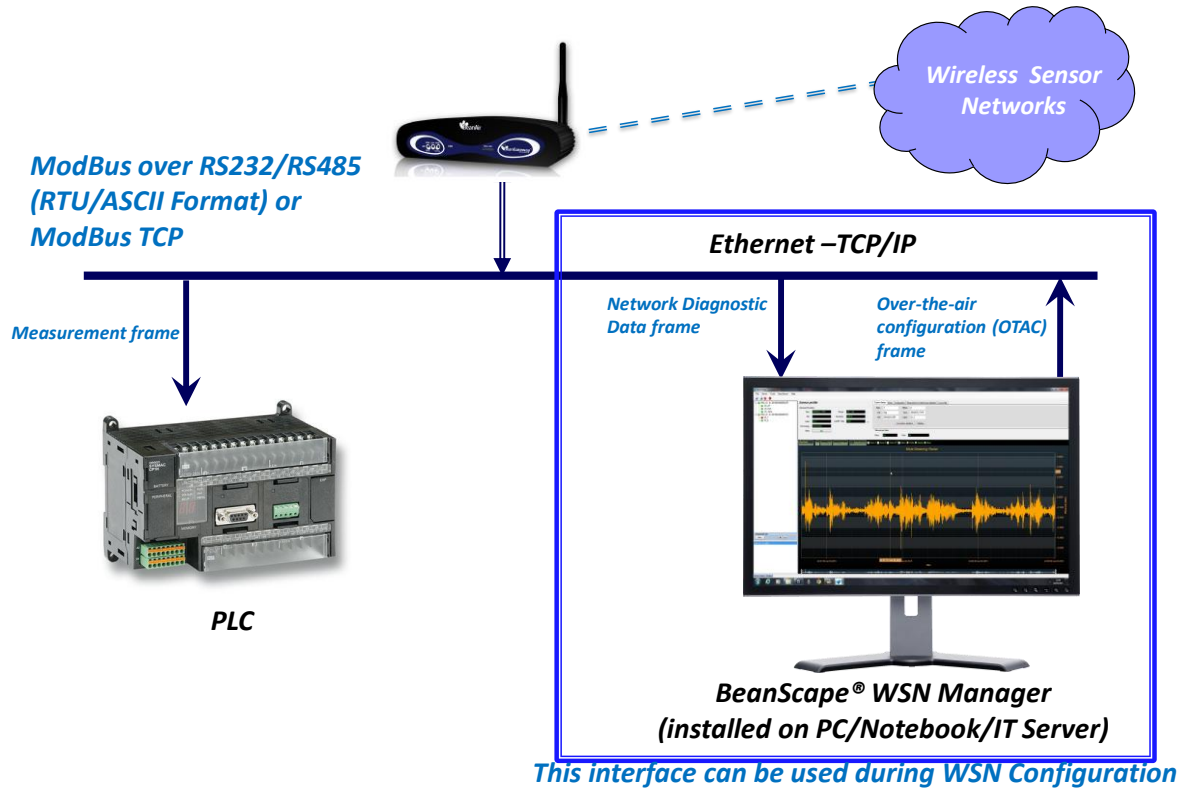


## 5. WSN MANAGEMENT FROM A DEDICATED SUPERVISION SOFTWARE

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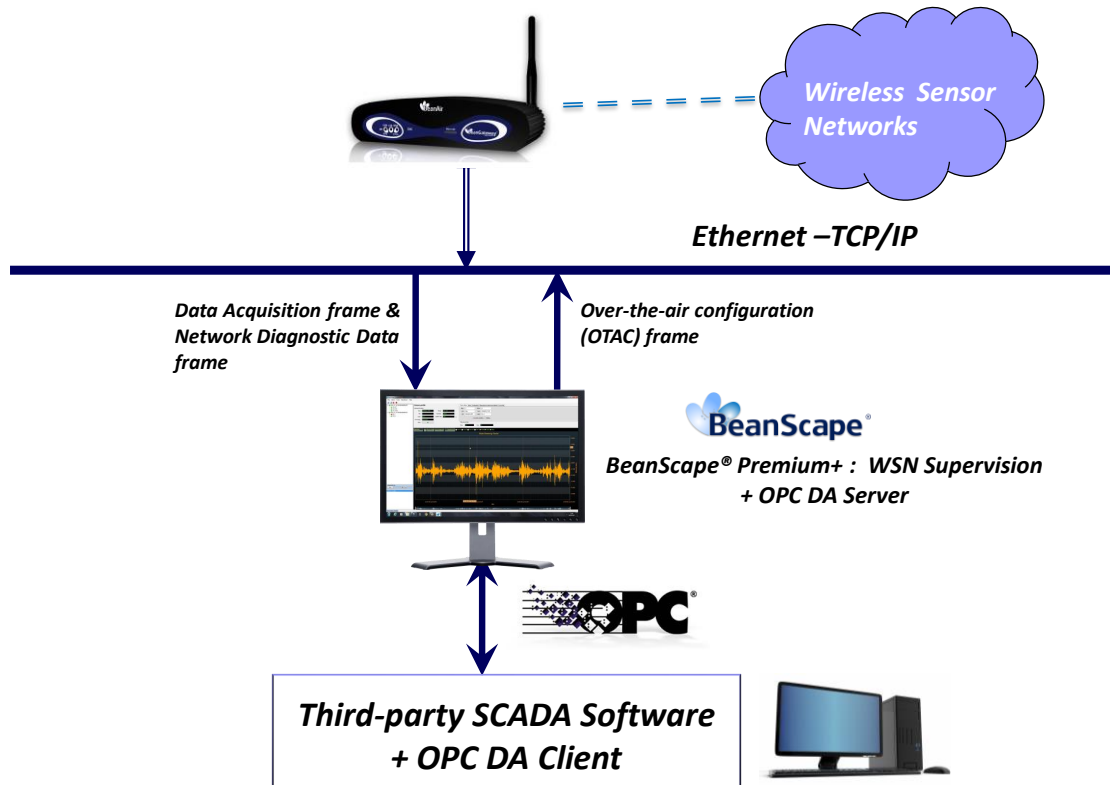
## 6. MODBUS INTERFACE



For more information, read ModBus messaging user manual: [Click here](#)



## 7. OPC SERVER



For more information, read OPC user manual: [Click here](#)

