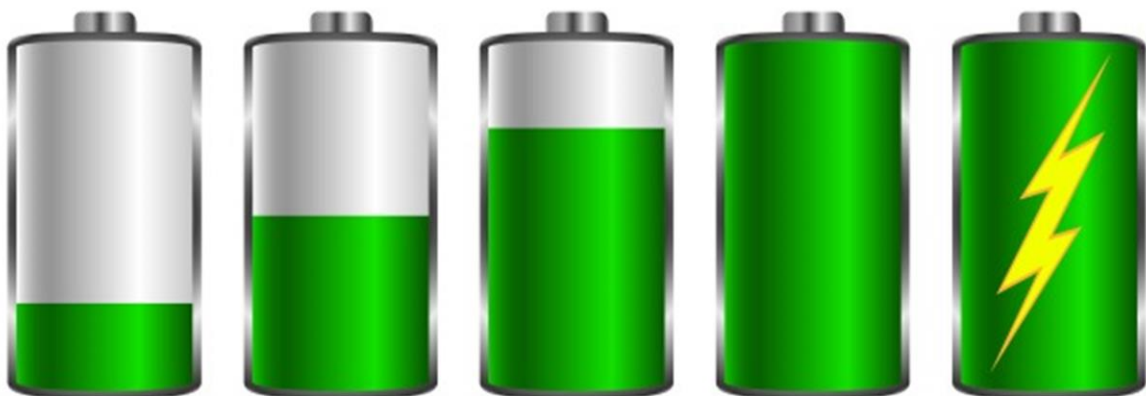




TECHNICAL NOTE

BeanDevice® Wilow® battery life in streaming mode





“Rethinking sensing technology”

Document version : 1.0

Document Type : Technical Note

Reference : RF_TN_012

*BeanDevice®(wireless sensor)
battery life in streaming mode*

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Reader	Yosri Jaouadi		X
Author	Aymen Jegham	X	


MAILING LIST

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Staffer 1	Yosri Jaouadi	X	
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1. TECHNICAL SUPPORT

For general contact, technical support, to report documentation errors and to order manuals, contact **BEANAIR® Technical Support Center** (BTSC) at:

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

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><i><u>Caution or Warning</u> – 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.</i></p>
	<p><i><u>Danger</u> – This information MUST be followed if not you may damage the equipment permanently or bodily injury may occur.</i></p>
	<p><i><u>Tip or Information</u> – Provides advice and suggestions that may be useful when installing Beanair Wireless Sensor Networks.</i></p>




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3. ACRONYMS AND ABBREVIATIONS

RJ45	Refers to the RJ45 cable. It refers to an Ethernet connection
dBm	The abbreviation for the power ratio in decibels (dB) of the measured power referenced to one milliwatt (mW)
Hz	Hertz




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4. AIM OF THE DOCUMENT

The aim of this document is to describe the battery life performance of the BeanDevice® in streaming mode.

This document is not intended to display with an extreme precision the battery life you can expect from our BeanDevice®. However, you will have an estimated battery life of the BeanDevice® operating in an environment with an ambient temperature.

Please note that these computed values could change, depending strongly on your environment. By the way, you will find information about interferences on other Beanair documents.

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5. TEST OVERVIEW

- The BeanDevice® Wilow® battery life is given with:
 - Different data acquisition modes and different sampling rate
 - Data logger feature enabled/disabled
 - Power mode
 - Axis/channels activated
- An internal High density Lithium-Ion rechargeable battery with a capacity of **780 mAh** Powers Each BeanDevice® Wilow®.



Two different BeanDevice® Wilow® were used during these tests:

- | |
|---|
| <ul style="list-style-type: none"> • BeanDevice® Wilow® AX-3D(+/- 2g) • BeanDevice® Wilow® HI-INC 15° |
|---|



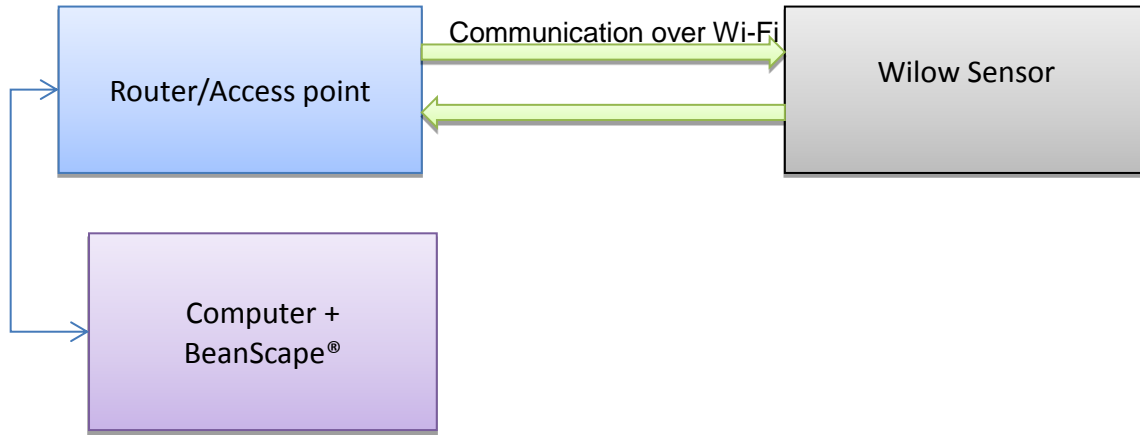


Figure 1: Global presentation of the system

- All the streaming mode tests were performed with continuous monitoring option.
- BeanDevice® Willow® battery life is valuated at a room temperature of 25°C.

6. BATTERY LIFE DURING STREAMING MODE DATA ACQUISITION

6.1.1 BeanDevice® Wilow® AX-3D (+/-2g)

- Data logger is enabled
- All channels activated

<i>BeanDevice® Wilow</i>	<i>Sampling Rate (Hz)</i>	<i>Battery life</i>
AX3D +/-2g	2000	08h32
	1000	09h37

6.1.2 BeanDevice® Wilow® HI-INC® (±15°)

- Data logger is enabled
- All channels activated

<i>BeanDevice® Wilow</i>	<i>Sampling Rate (Hz)</i>	<i>Battery life</i>
HI INC 15M	2000	08h29
	1000	09h08



6.1.3 BeanDevice® Wilow® AX-3D® (+/-2g)

- Data logger is disabled
- All channels activated

<i>BeanDevice® Wilow</i>	<i>Sampling Rate (Hz)</i>	<i>Battery life</i>
AX3D +/-2g	2000	09h24
	1000	10h40

6.1.4 BeanDevice® Wilow® HI-INC® (+/-15°)

- Data logger is disabled
- All channels activated

<i>BeanDevice® Wilow</i>	<i>Sampling Rate (Hz)</i>	<i>Battery life</i>
HI INC 15M	2000	10h20
	1000	10h38

6.1.5 BeanDevice® Wilow® AX-3D® (+/-2g)

- Data logger is disabled
- Only one channel is activated

<i>BeanDevice® Wilow</i>	<i>Sampling Rate (Hz)</i>	<i>Battery life</i>
AX3D +/-2g	2000	12h01
	1000	12h58



6.1.6 BeanDevice® Wilow® HI-INC® (+/-15°)

- Data logger is disabled
- Only one channel is activated

<i>BeanDevice® Wilow</i>	<i>Sampling Rate (Hz)</i>	<i>Battery life</i>
HI INC 15M	2000	10h27
	1000	10h40



[For more information on Battery life, please download our battery life simulator](#)



7. TEST SUMMARY AND CONCLUSION

Sampling rate

- The **BeanDevice® Willow®** battery life is inversely proportional to the sampling rate configured on your **BeanDevice® Willow®**
- The Beandevic battery life will increase if you set the sampling rate at 1000Hz (1000 mesures per second) than at 2000 Hz (2000 mesures per second).

Datalogger function

- When the datalogger is enabled, the Beandevic battery life will decrease by 15% ;

