Waveport Bluetooth

429MHz, 433MHz, 868MHz

Starter Guide

Version 1.0

elster
Coronis

Note :

This product was developed for the purpose of communication.

It is intended solely for our clients for integration into their own technical solutions after careful examination by experienced technical personnel for its suitability for the intended purpose.

The product was not developed for or intended for use in any specific customer application.

It may have to be adapted to the specific intended modalities of use or even replaced by other components in order to ensure flawless function in the respective areas of application.

Performance data (range, power requirements, etc.) may depend on the operating environment, the area of application, the configuration, and method of control, as well as on other conditions of use; these may deviate from the technical specifications.

The actual performance characteristics can be determined only by measurements subsequent to integration in the target environment.

Variations in the performance data of mass-produced devices may occur due to individual differences between such devices.

Product samples were tested in a reference environment for compliance with the legal requirements applicable to the reference environment.

No representation is made regarding the compliance with legal, regulatory, or other requirements in other environments.

No representation can be made and no warranty can be assumed regarding the suitability of the product for a specific purpose.

Elster Coronis Division reserves the right to make changes to the product without prior notice or to replace the product with a successor model. Of course, any changes to the product for which we have entered into a supply agreement with our customers will be made only if, and only to the extent that, such changes can reasonably be expected to be acceptable to our customers.

No general commitment will be made regarding periods of availability; these must be subject to individual agreement.

Table of Contents

1 Introduction

The Waveport Bluetooth is Wavenis™ to Bluetooth transparent gateway.

- WPO_BTE is for model with Wavenis™ External antenna
- WPO_BTI is for model with Wavenis™ Internal antenna

2 Characteristics

Conformity	ARIB STD T67 and STD T66 EN300-220 and EN300-228
Bluetooth	SIG V2.0 +EDR
Operational temperature range	-15°C to +60°C
Accidental temperature range	-20°C to +70°C
Dimensions	119,3 x 64,9 x 26,5 mm
Weight	150 g
Wavenis Line Of Sight reading distance[1]	400 m – Internal antenna 700 m – External antenna
Power	=< 10 mW – 429MHz – 433MHz =< 25 mW – 868MHz
Warranty[3]	One (1) Year
Autonomy	10 Hours operation
Charging Time[4]	5 Hours
Power source	Lithium Polymer battery
Charger Port	Mini USB
Battery life time[2]	Five (5) Years
Miscellaneous	Belt Clip
Protective seal	Shock protection

1: Waveport Bluetooth and Waveflow at 1,7m height on wood support – Free Field with no obstacle – Sunny weather – +25°C
2: Under normal applications within the specified reference operating conditions.
3: Refer to Section 6 for Warranty T&Cs
4: Charger characteristic dependent

Each Waveport Bluetooth device has its own fixed and globally unique Wavenis address.

Wavenis addresses are noted in the 000000000000 format, that is, as a sequence of 12 hexadecimal digits.

Waveport Bluetooth devices have always a Wavenis address in the following format:

- aa63ww3xyyzz for 868MHz
- aa90wwBxyyzz for 429MHz
- aa1AwwCxyyzz for 433MHz

Each Waveport Bluetooth device has its own fixed and globally unique Bluetooth address.

Bluetooth addresses are noted in the 00:00:00:00:00:00 format, that is, as a sequence of 12 hexadecimal digits.

WPO_Bt_V2 devices have always a Bluetooth address in the following format: 00:80:25:xx:yy:zz

3 Button and LEDs description and usage

 On/Off Button	**Green light ➔ Solid On – No light ➔ Off** - One short button press turns On the product - A second short button press Reset the Bluetooth and Wavenis™ modules - A long button press turns Off the product
 Bluetooth Status	**Blue light ➔ Blinking On – No Light ➔ Off**
 Wavenis Status	**Green light ➔ Blinking On - No light ➔ Off**
 Battery charger status[1]	**Green light ➔ Solid Full**
 Battery charger status[1]	**Solid Yellow light ➔ Charge is on going**

1: Both LEDs Off ➔ USB cable is not plug
1: Both LEDs On ➔ Charging Issue (e.g: Input voltage is too low, Charger is out of service, etc…)

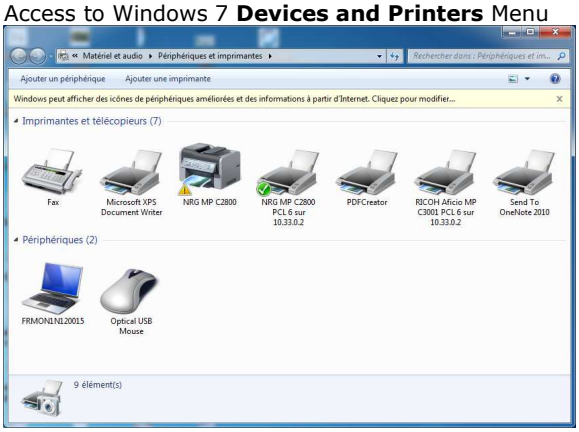
4 Setup Bluetooth connection

Since the Waveport Bluetooth device is recognized

Enter **0000 –** Password value to setup the connection and perform the pairing

Following example is for Bluetooth pairing with a Windows 7 a Laptop.

1. Power On the Waveport Bluetooth
2. Access to Windows 7 **Devices and Printers** Menu



3. Select and click on : **Add Devices** button

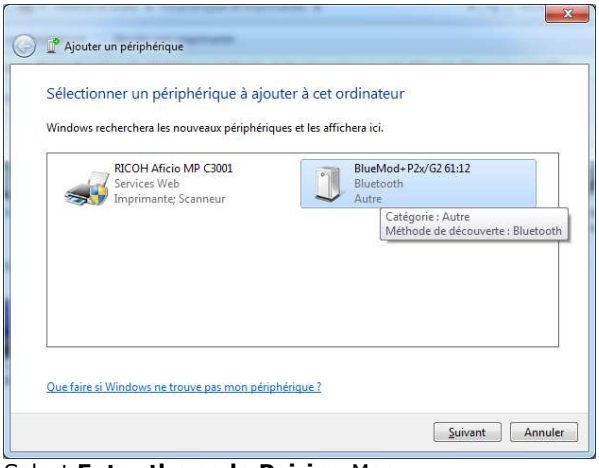
4. Select **M-COM xx:yy:zz** and click on **Next**

Or Select **WPO-BT-E 868 xx:yy:zz** and click on **Next**

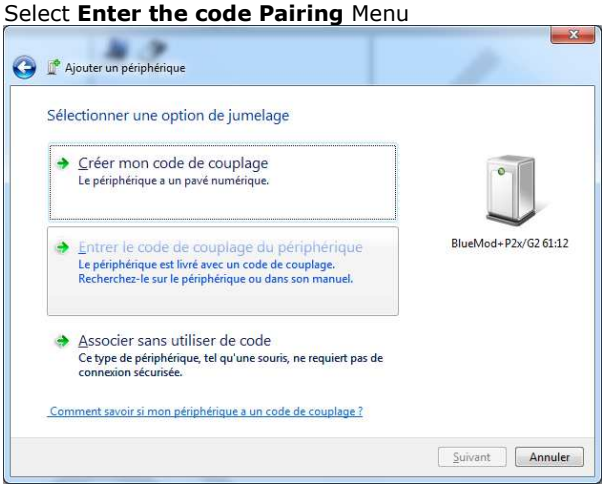
Or Select **WPO-BT-I 433 xx:yy:zz** and click on **Next**

Or Select **WPO-BT-E 433 xx:yy:zz** and click on **Next**

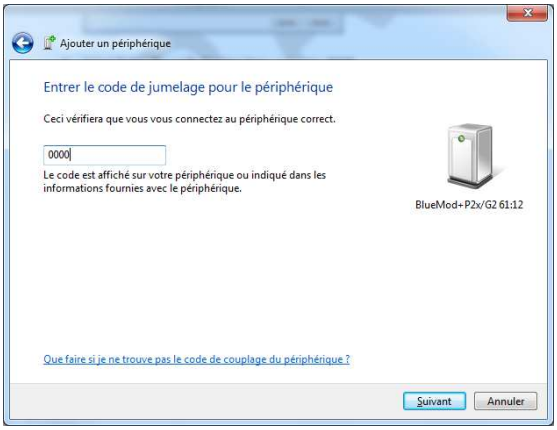
Or Select **WPO-BT-I 868 xx:yy:zz** and click on **Next**

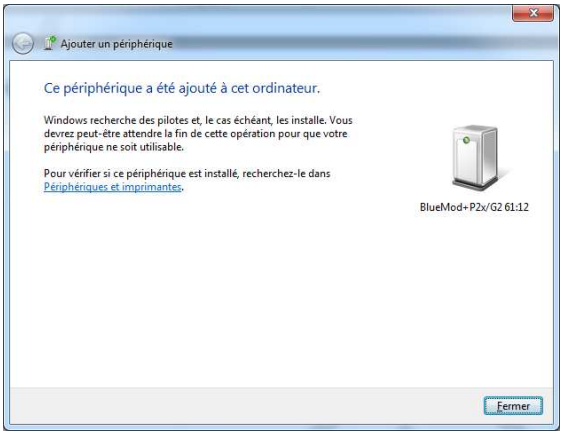


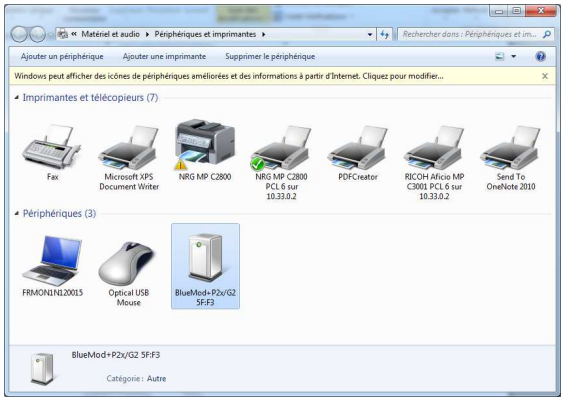
5. Select **Enter the code Pairing** Menu



6. Enter **0000**





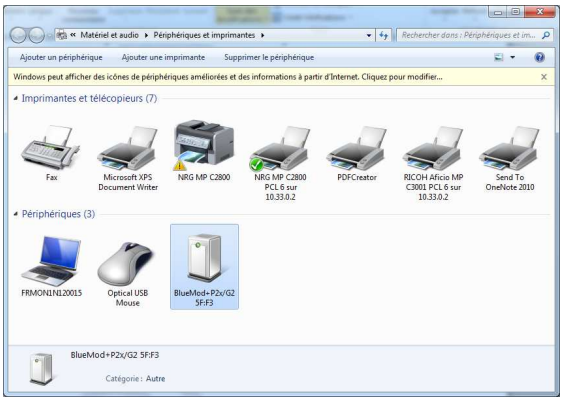


Waveport Bluetooth is ready for operating.

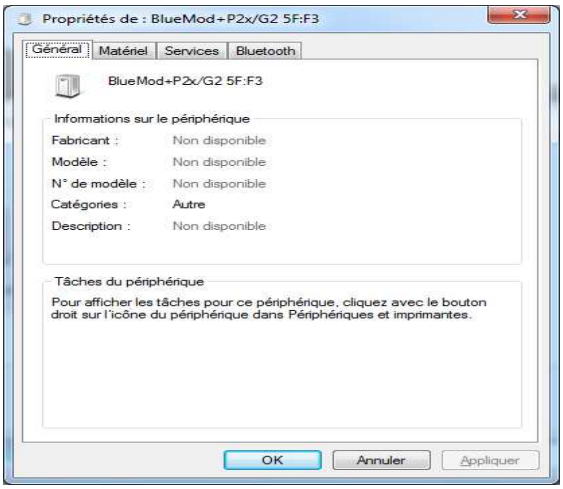
A Virtual Serial Port Com. Is created and ready to use

7. **Serial Port Com.** Identification

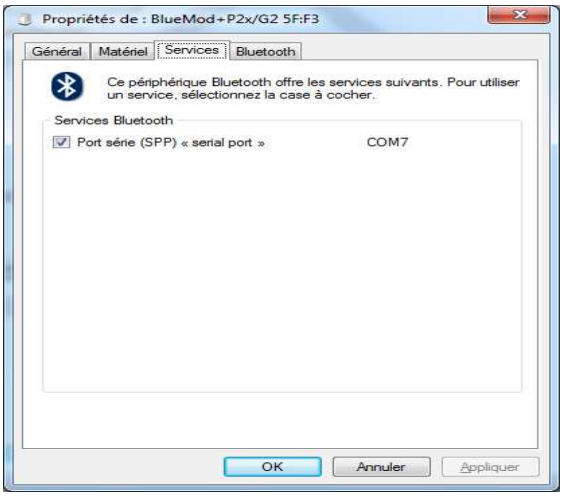
   a. Select BlueMod+P2x/G2



   b. Double click on BlueMod+P2x/G2



   c. Select Services Tab



5 Recommendations for use

- Make sure the product's battery is charged
- Power on the product before usage
- Power down the product after usage
- Orient the product so that "Elster" logo is on the outside and towards the top of the product getting the antenna in upper position
- Reset the product in case of communication issue
    - A second short button press Reset the Bluetooth and WavenisTM modules
- For external antenna product kept in prolonged storage, remove the antenna to avoid breaking
- Storage condition

Temperature range	Duration[1]	Remaining Capacity	Capacity to Recover
0°C - +25°C	10 Days	50%	50%
	1 Month	30%	70%
	1 Year	20%	80%

1: From 100% charging is the maximum duration value (Without load) before check and charge

- Battery charging
    - From Personal Computer USB port
    - From USB car charger
    - From AC outlet USB charger adapter plug
- Battery charger main characteristics
    - Output nominal voltage : 5V
    - Output Minimum current : 750mA
- Warning:
    - Do not throw the product into fire
    - Do not leave the product exposed to heat for a prolonged time e.g: sun, heat, car glove box pocket or glove box etc…

6 Bluetooth parameters

Following value are used for the Modem Bluetooth*.

- Page Scan Repetition Window: 11 ms
- Page Scan Repetition Interval: 1280 ms
- Page Scan Repetition Mode: 1.28 s Interval – 11.25 ms Window

*: All tests of autonomy were performed with values listed above

7 Approvals/Certification

7.1 R&TTE Declaration of conformity

Elster S.A.S Ingénierie en électronique radiofréquence

Espace Concorde – 120 Impasse Jean-Baptiste Say – 34470 Perols – France

déclare que les produits décrit ci-dessous :

CE

Désignation	Référence
WPO-BT-I 868MHz - Wavenis™ to Bluetooth transparent gateway	3WPO419F1B005ZH000
WPO-BT- E 868MHz - Wavenis™ to Bluetooth transparent gateway	3WPO829F3B005ZH000
WPO-BT- I 433MHz - Wavenis™ to Bluetooth transparent gateway	3WPO419F1B005ZH000
WPO-BT- E 433MHz - Wavenis™ to Bluetooth transparent gateway	3WPO419F3B005ZH000

Caractéristiques électriques / Applications :

Transmissions sans fil est conforme aux dispositions de la Directive du Conseil des Communautés Européennes :99/5/CE – R&TTE du 9 Mars 1999

Normes appliquées :

Compatibilité électromagnétique : EN301-489-1 V1.4.1 (2002-08)

Sécurité électrique : EN 60950(2000)

Compatibilité électromagnétique des systèmes radio : EN 300-220-2

7.2 Conformity for Japan

Elster S.A.S Ingénierie en électronique radiofréquence

Espace Concorde – 120 Impasse Jean-Baptiste Say – 34470 Perols – France

déclare que le produit décrit ci-dessous :

Arib - Telec Identifier : **207-13MCOM**

Désignation	Référence
M-COM - Wavenis™ to Bluetooth transparent gateway	3WPO411M1B005ZH000