



User Manual WiBlue

How to set up your WiBlue:

Necessary hardware components:

You can purchase any of these components independently. The links will provide you with the requirements needed for each component to work properly.

1. [Raspberry Pi 2](#) with enclosure
2. [WiFi USB module](#) for Raspberry Pi
3. [Bluetooth 4.0 \(LE\) USB](#) module
4. PC with SD card reader
5. [8 GB SD card and Micro SD to SD card adapter](#)

Instructions:

1. Put the Raspberry Pi 2 board in the corresponding enclosure.
2. Connect the WiFi USB module to one of available USB ports.
3. Connect Bluetooth LE USB module to available USB port.
4. Download latest WiBlue image on Your PC from [here](#).
5. Extract the image using file archiver tool (e.g. 7Zip or WinRAR).
6. Download and install [Win32DiskImager](#) software on Your PC.
7. Put micro SD card (size 8GB) in Your PC SD card slot (use SD card adapter if necessary).
8. Format the SD card.
9. Open Win32DiskImager software, select the previously extracted WiBlue image file and click write.
10. Once the image has been successfully written to the micro SD card, put the card in the WiBlue SD slot.

WiBlue user manual:

1. Connect WiBlue via Ethernet cable to a switch/router providing DHCP server enabled network with Internet access.
2. Power on the device.
3. Connect to WiBlue SSID with Your PC/smart phone. Use the credentials provided in Table 1.

WiBlue Access Point Mode	
SSID	WiBlue
WPA2 KEY	VLWi385Blue

Table 1.

4. In Your web browser open following URL: <http://192.168.100.1>
5. Login to the WiBlue WebGUI (Figure 1) with credentials provided in Table 2. By default, the registration page of the device will be displayed.

Figure 1. - WiBlue WebGUI login

WiBlue WebGUI	
Username	wiblueuser
Password	password

Table 2.

6. We strongly advise you to change the default password under the menu "Accounts->Change Password".

7. Register the device by providing the requested information. In order to register the device, a user account on [WiBlue cloud platform](#) is required. Registration form is depicted on Figure 2.

Figure 2. - Registration form

8. Upon device registration, the device will automatically reboot and following features will be enabled:

1. WiBlue will be powered on in iBeacon mode with following predefined parameters:
 1. UUID: 92E9E7664153422F95073074A007546A
 2. MAJOR: 0000
 3. MINOR: 0000
 4. TX Power: C8
2. Haystack API providing access to sensors automatically discovered by WiBlue.
3. AllJoyn WiBlue service providing AllJoyn interface for access to automatically discovered sensors.

9. You can use WebGUI to update any of iBeacon related parameters as depicted on Figure 3. Each update triggers automatic device reboot in order for settings to be applied.

iBeacon Configuration Device registration Account ▾

Here You can configure Your iBeacon settings.

Current iBeacon status

UUID: 92E9E7664153422F95073074A007546A
 MAJOR: 0000
 MINOR: 0000
 TX POWER: C8
 LAST UPDATED: May 9, 2016, 9:52 a.m.

UPDATE SETTINGS:

UUID

MAJOR

MINOR

TX POWER

Figure 3. - iBeacon configuration

10. Once the device is activated, access to device's the WebGUI or remote connection to the device via SSH could be achieved by:
 - a) Connecting to local WiBlue SSID as described in steps 3 and 4
 - b) Connecting device via Ethernet cable to a router/switch with enabled DHCP server on the network (Wireless Mesh Gateway mode)
11. In case of b) once connected, the device will be assigned an IP address from your router. Use this address to connect to WebGUI (<http://X.X.X.X>) or to open an SSH connection with the device.
12. The default login for SSH connection is provided in Table 3.

WiBlue Bridge default SSH/TTY login info	
username	pi
password	wiblue155

Table 3.

13. Haystack feature:
 - a) Haystack server is available at port 8086 by default (You can change this setting in the `/etc/haystack/haystack_server.properties` config file)



- b) Authentication credentials are provided in Table 3.
- c) Visiting `http://X.X.X.X:8086/about` gives you basic information about haystack server.
- d) Names and description of all supported operations available on the server are provided on `http://X.X.X.X:8086/ops`.
- e) Read operations gives you information about whole haystack model, e.g. you can read list of all sensors and actuators with `http://X.X.X.X:8086/read?filter=point`.
- f) To handle real-time data you can subscribe watch on entity with HTTP post request on `http://X.X.X.X:8086/watchSub` with entity id and then fetch data by sending HTTP post request `/watchPoll` with watch id.
- g) To read a time-series data from historized point send HTTP post request with point node id and date-time range on `http://X.X.X.X:8086/hisRead`.
- h) For more information about haystack server operations and complete reference please visit this [link](#).

BE AWARE: Any attempt to tamper with the software (including but not limited to SD card cloning) will be detected and reported to VizLore WiBlue cloud platform. Upon device registration device's micro SD card should not be used on any other device.