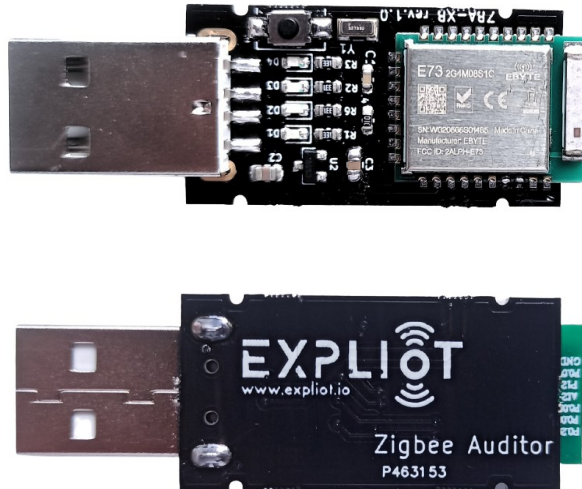# Getting Started Guide
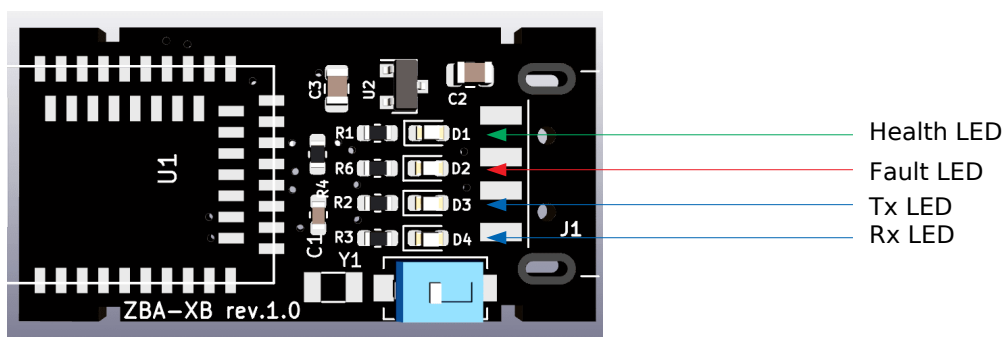

Welcome to the ZigBee Auditor, getting started guide. This guide is designed to help you through initial setup of hardware and EXPLIoT Framework.

1. System Requirements

- Linux
- Python 3
- One USB port available

2. Hardware

ZigBee Auditor Design based on nRF52840 ARM® Cortex-M4 processor with on board 2.4 GHz antenna

2.1. Description

Part Name	Description	Functionality
SW1	Reset Button	Press to enter in boot loader mode
D1	Health LED (GREEN)	Indicates application is up and running
D2	Fault LED (RED)	Continuous red indicates device is in boot loader mode Flashing red indicated fault in application
D3	ZigBee Tx LED (Blue)	Flash once on ZigBee packet Transmission
D4	ZigBee Rx LED (Blue)	Flash once on ZigBee packet Reception

2.2. What's included
- ZigBee Auditor hardware

3. Getting Started
1. Download and install EXPLIoT Framework using any of the below options
   a. Directly from pypi
      i. *$ pip3 install expliot*
   b. Clone the git repo and install from local package
      i. *$ git clone https://gitlab.com/expliot_framework/expliot.git*
      ii. *$ cd expliot*
      iii. *$ python3 setup.py install*
2. Connect USB cable between ZigBee Auditor and computer. Green Power LED will light up.
3. To verify USB communication with ZigBee Auditor is working correctly, first run EXPLIoT framework using below command:
   a. *$ sudo expliot*
   b. If prompted, enter the root password to run the framework

4. Now run Device information plugin from EXPLIoT framework:
   a. ef> run zbauditor.generic.devinfo


```
ef> run zbauditor.generic.devinfo
[*] Test:         zbauditor.generic.devinfo
[*] Author:       Dattatray Hinge
[*] Author Email: dattatray@expliot.io
[*] Reference(s): ['Reference: Zigbee Auditor user manual']
[*] Category:     technology=zbauditor|Interface=radio|Action=recon
[*] Target:       Name=generic|Version=generic|Vendor=generic
[*]
[*] Zigbee Auditor Details:
[*] Device Name     : ZigBee Auditor
[*] FW Revision     : 0.0.19
[*]
[*] Services:
[*]     GET_FW_REV      : True
[*]     GET_FW_SERV     : True
[*]     CHANNEL_CHNG    : True
[*]     MAC_ON_OFF      : True
[*]     802154_SNIFF    : True
[*]     802154_INJECT   : True
[*]     802154_NWK_SCAN : True
[*]     SUPP_FREQ_2400  : True
[*]
[+] Test zbauditor.generic.devinfo passed
ef>
```

This will display device name, firmware revision, and supported services

4. Plugins Supported
1. ZigBee Network Scanner - zbauditor.generic.nwkscan
2. ZigBee Packet Sniffer - zbauditor.generic.sniffer
3. ZigBee Packet Replay - zbauditor.generic.replay

5. Troubleshoot

1. "OS Error: Device not found"

```
ef> run zbauditor.generic.devinfo
[*] Test:          zbauditor.generic.devinfo
[*] Author:        Dattatray Hinge
[*] Author Email: dattatray@expliot.io
[*] Reference(s): ['Reference: Zigbee Auditor user manual']
[*] Category:      technology=zbauditor|Interface=radio|Action=recon
[*] Target:        Name=generic|Version=generic|Vendor=generic
[*]
[-] Test zbauditor.generic.devinfo failed. Reason = Exception caught: [OSError:Device not found]
ef>
```

Troubleshoot steps:
- Check the USB cable for correct working
- Connect ZigBee Auditor to PC and verify Health LED is on and Fault is off
- Check *syslog* or dmsg to verify USB device is recognized by system using below commands.

```
$ tail -f /var/log/syslog
```

OR

```
$ dmesg
```