



Quick Start Guide

Computer System Requirements

Supported Systems

- Operating System: Windows 7/8/10
- USB: USB 2.0 and later

Minimum Requirements

- Processor: Core i5 at 2.7 GHz
- RAM: 4 GB
- Free Hard Disk Space on C: drive: 20 GB

Install Software

- From Download: Download the latest ComProbe installer from FTE.com. Once downloaded, double-click the installer and follow the directions.

<http://www.fte.com/bpale-soft>

1. Connecting/Powering

Insert the USB cable mini-connector into the USB port on the Frontline BPA low energy hardware.

Insert the other end of the USB cable into the PC.



2. Select Data Capture Method

Now that the Frontline BPA low energy hardware is powered up, the next step is to open Frontline BPA low energy software and select the data capture method.

Open "Frontline [version #]" from the Start menu or from the Desktop folder.

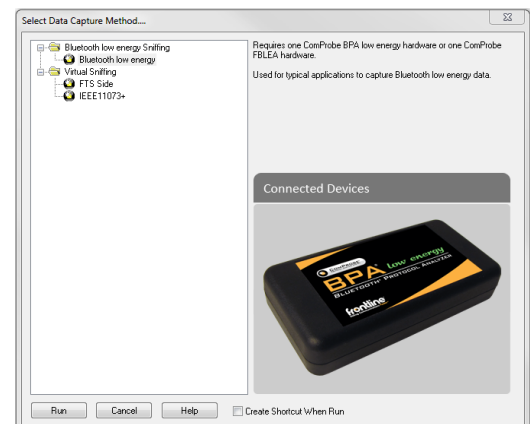
Select "Frontline ComProbe Protocol Analysis System".

The Select Data Capture Method dialog appears.

Select **Bluetooth low energy** and click **Run**.

The ComProbe BPA low energy analyzer's **Control** window will open. From the

Options menu select **I/O Settings** or click  on the toolbar.



3. Configure the Datasource

Note: Frontline BPA LE supports *Bluetooth* low energy features through *Bluetooth 4.2*, except optional extended packet length.

The **Devices Under Test** dialog has all the setup information the analyzer needs in order to capture data from the *Bluetooth* device(s).

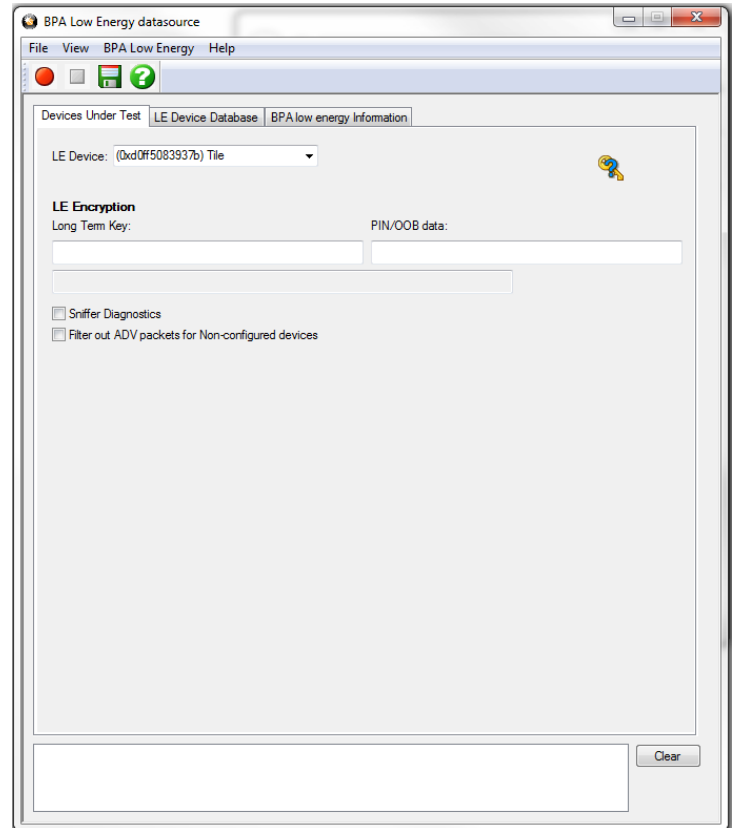
You do not need to actually do anything here. If you leave the **LE Device** drop down set to the default of **Sync with First Master**, the low energy analyzer will scan the three advertizing channels, and follow the first connect request it sees regardless of which device the connect request comes from.

You can also fill in a device address instead. If you do so, the low energy analyzer will only follow connect requests originating at the address specified.

LE Encryption

For encrypted low energy transmissions, enter the **Long Term Key**. The **Long Term Key** is similar to the link key in Classic *Bluetooth*. It is a persistent key that is stored in both devices in a link, and it is used to derive a fresh encryption key each time the devices go encrypted.

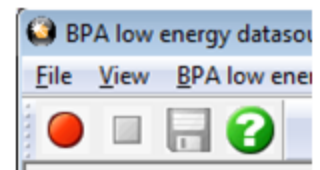
Enter a **PIN/OOB data** for pairing. The PIN entry is a six-digit (or less if leading zeros are omitted) decimal. For OOB enter a 14-digit hexadecimal code preceded by 0x. OOB exchange is via a channel that is different than the low energy transmission itself.



4. Start Sniffing

Now we have our Frontline software installed, devices turned on, and identified the Frontline BPA low energy hardware. It is time to sniff the communication between the devices.

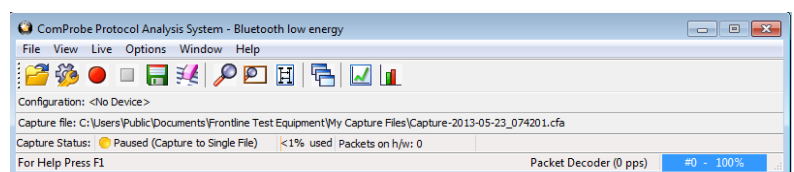
Select **Start Sniffing** on the datasource dialog toolbar red button or from the **ComProbe BPA low energy** menu .






5. Analyze the Data

From the **Control** window toolbar select the following icons to view and analyze the captured data.

- **Event Display** - for framed data, used to conduct byte-level analysis.
- **Frame Display** - for framed data, used to conduct protocol-level analysis.



-  **Message Sequence Chart (MSG)** - Displays information about messages passed between protocol layers.
 -  **Bluetooth low energy Timeline** - Graphically displays Bluetooth low energy packet information with emphasis on time and payload throughput.
 -  **Bluetooth low energy Packet Error Rate Statistics** - displays information about levels of retransmits used for isolating bad communications links.
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This quick start guide provides sufficient information to begin the data capture. Detailed hardware and software information is contained in the ComProbe BPA low energy User Manual. The manual is available on FTE.com.

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