

# Frontline® Sodera® Bluetooth Protocol Analyzer



## Key Features and Benefits

- Capture ALL over-the-air and chip level (HCI) Bluetooth packets
- Bluetooth / Wi-Fi Coexistence with Frontline 802.11 Analyzer
- Every Bluetooth channel captured concurrently for decryption and analysis at any time
- Faster root cause analysis on protocol and audio issues with Bluetooth Protocol Expert System and the included Bluetooth Audio Expert System
- All profiles and protocols supported through Bluetooth 5
- Intuitive analysis of multiple wireless devices and connections
- User-replaceable battery and small footprint lets you work when and where you need to
- Software defined radio architecture is ready for future Bluetooth updates
- Support for CSRMESH and Bluetooth mesh technology
- Spectrum analysis helps identify potential RF conflicts

Supporting all profiles and protocols through Bluetooth 5, Teledyne LeCroy's Frontline Sodera concurrently captures all over-the-air and HCI (with provided cables) Bluetooth packets (BR/EDR/LE) across all channels, including paging, inquiry, secure connections, secure simple pairing, and data exchange packets. Simply start the analyzer and begin capturing - the raw data can be decrypted, decoded and filtered later. Frontline Sodera's software-defined radio architecture means that it not only supports Bluetooth 5, but is ready to grow with updates to the Bluetooth specification.

Frontline Sodera provides the ultimate in portability, allowing developers and QA engineers to effortlessly capture data not just in the lab, but in automotive and other remote settings. "Excursion Mode" allows the developer to capture all Bluetooth traffic in the air with the push of one button, completely independent of a PC connection. Data can be captured in the real-world setting, then decrypted and analyzed back at the lab. Supported by Frontline Sodera's compact size and quick-change battery, testing in automobiles and other power-sparse environments becomes not just possible, but absolutely convenient.

### Easier Root Cause Analysis of Bluetooth Protocol and Audio Issues

Frontline Sodera works with the Bluetooth Protocol Expert System and the included Bluetooth Audio Expert System software modules to quickly pinpoint Bluetooth protocol-related issues. The Bluetooth Protocol Expert System provides developers at all experience levels with concise in-depth analysis of configuration, HCI/transport, and Bluetooth profile issues and errors. Additionally, it provides test tools which allow the user to actively enhance their debugging scenarios for greater precision and more robust products by synchronizing audio, codec, and Bluetooth protocol events directly back to the protocol trace.

The Bluetooth Audio Expert System, included as standard with the Frontline software, provides real-time visualization of audio impairment events that are time correlated with Bluetooth protocol and transport events, enabling the user to clearly see and thoroughly understand what's happening at the precise moment audio problems occur. No more guesswork- the Bluetooth Audio Expert System visually and in real time correlates protocol, codec and audio events to the moment of the audio error, making root cause diagnoses faster and easier than ever.

## Specifications

- **Power**  
9-17 VDC
- **Dimensions**  
6.25" wide X 2.125 tall" X 6.5 deep"  
158.75 mm X 53.975 mm X 165.1 mm
- **Weight**  
2.2 lbs
- **Bus Type**  
USB Standard Type-B
- **Operating Frequencies**  
2402 MHz – 2480 MHz
- **Sensitivity Range**  
-85.0 dBm to +10 dBm
- **Supported Demodulators**  
BR/EDR and LE (GFSK,  $\pi/4$  DQPSK, 8DPSK)
- **Timestamp Resolution**  
125 ns
- **Operating Temperature**  
5° to 35° Celsius (41° to 95° Fahrenheit)
- **Humidity**  
Operating: 10% to 90% RH (noncondensing)
- **Regulatory Compliance**  
PSE                    FCC part 15 B  
CE                     NRTL  
ARIB T-66            EMC  
EN 60950
- **OS Supported**  
Windows 7, 8 and 10
- **USB Port**  
USB 2.0 or USB 3.0 High-Speed

Frontline Sodera is available in 6 configurations.

This allows you to select the best product for your needs, and gives you a flexible upgrade path.

	Base Model			Advanced Model		
	LE	BR/EDR	Dual Mode	LE	BR/EDR	Dual Mode
Decode all application layers	•	•	•	•	•	•
BR/EDR support		•	•		•	•
Capture and decode of all Bluetooth le technologies	•		•	•		•
Simultaneous capture of all Bluetooth 5 PHYs	•	•	•	•	•	•
Full Mesh support	•	•	•	•	•	•
Wideband for easy device selection and data capture	•	•	•	•	•	•
Capture and decode unlimited complex topologies	•	•	•	•	•	•
Post-capture decryption	•	•	•	•	•	•
On-board battery	•	•	•	•	•	•
Software defined radio (evolves with spec changes)	•	•	•	•	•	•
Includes Bluetooth Audio Expert System	•	•	•	•	•	•
Optional Bluetooth Protocol Expert System	•	•	•	•	•	•
Wi-Fi Coexistence *				•	•	•
Spectrum analysis				•	•	•
Logic analysis				•	•	•
Excursion mode for captures without attached PC				•	•	•
UART and USB HCI support				•	•	•

\* Requires connection to Frontline 802.11 Protocol Analyzer

## PREMIUM MAINTENANCE - Frontline Sodera

Premium Maintenance for Frontline Sodera Dual Mode Bluetooth Protocol Analyzer ensures that your product is up to date with the latest software updates and features, Your Frontline Sodera product comes with one year of Premium Maintenance and includes:

- Updates addressing changes to the core Bluetooth Specification
- New software features
- New decodes
- Product bug fixes



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