

Frontline Analyzer 15.11 Release Notes

Updated: July 31, 2019

1. Overview

This document contains release notes for Frontline Analyzer software and various hardware products. For full instructions on using the software and the hardware, please see the User's Manual and other documents provided with the software.

2. Release Notes for 15.11

- Fixed an issue related to capturing Isochronous Channels CIS Data packets with Sodera hardware.
- Fixed an issue related to OPP decoding.

3. Release Notes for 15.10

What's new in Sodera

- Updated support for beta LE Isochronous Channels feature to spec revision CR 22.
 - Supports decrypting CIS packets.
 - Captures BIS BIG Info packets.
 - Updated opcodes to SIG official opcodes.
- Added support for capturing AoA/AoD CTE tone bits.
- Added support for capturing and decrypting Mesh data using keys transmitted over-the-air (OTA) after provisioning of their devices.

3.1. Improvements and Bug Fixes for All Products

	Changes	Sodera	Sodera LE	BPA 600	BPA le	802.11	HSU	NFC	SD
1	Updated support for beta LE Isochronous Channels feature to spec revision CR 22. Supports decrypting CIS packets. Captures BIS BIG Info packets. Also, updated opcodes to SIG official opcodes.	*							
2	Added support for capturing AoA/AoD CTE tone bits.	*							

3	Added support for capturing and decrypting Mesh data using keys transmitted over-the-air (OTA) after provisioning of their devices.	*	*						
4	Fixed an issue where connection/data packets were missing after AUX_CONNECT_REQ and RES with Soder hardware.	*							
5	Fixed display of packets with length error on Timeline, Coexistence View, etc.	*							
6	Stability improvements.	*	*	*	*	*			
7	Improved HFP decoding for RSSI in +CSQ and AT+BIND commands.	*		*					
8	Several improvements to GATT cache feature.	*	*						
9	Added support for showing undecoded Mesh data in separate tab.	*	*						
10	Fixed an occasional eSCO issue.	*							
11	Fixed a decoding issue with Periodic Sync IND.	*	*						
12	Fixed an issue where ACL connection stopped decrypting after several eSCO packets.			*					

4. System Requirements

The following is a list of recommendations for the host machine that runs the Frontline Analyzer Software application and that connects to Frontline hardware: Soder, Soder LE, ComProbe 802.11, etc.

For optimal performance, the software should run on a recent generation computer. However, the software should also operate on machines that are below the minimum requirements specified here, at the cost of slower performance, provided the memory, storage and display requirement are satisfied.

4.1. Software

Operating System:

- Windows 10, Windows 8, Windows 7 (32 and 64 bit) with latest Service Pack.
- MacOS Mojave 10.14 with Parallels Desktop 14 with Windows 10 64-bit.

4.2. Hardware

6	Fixed an issue with payload length and payload data fields decoding for error packets.	*							
7	Fixed a decoding issue with PBAP.	*		*					
8	Replaced HTML-based “Help” with PDF.	*	*	*	*	*	*	*	*
9	Stability improvements in Mesh, BTSnoop, HCI, and other areas.	*	*	*	*				
10	Improved scanner functionality for reporting channel number for Access Point.					*			
11	Fixed an issue where no devices were seen on Wi-Fi scanner until after the first capture.					*			
12	Performance improvements.	*							

5.1.2. Known Issues

		Sodera	Sodera LE	BPA 600	BPA le	802.11	HSU	NFC	SD
1	Occasionally, while capturing 4.1 Classic Secure Connection using BPA 600 hardware, the hardware fails to follow connection and packets are marked with CRC error.			*					
2	When reopening a capture file (with .frm file) that has LE data, packet duration is incorrect on “Logic Analyzer” view. The packet duration is correct in other views, such as LE timeline. The packet duration is also correct during live capture. To fix the problem, click on "recreate companion file" from File menu on Frame Display.	*	*						

3	On very rare instances, when a user clicks on "Record" repeatedly to start and stop capture, the Sodera hardware stops capturing new packets. When this happens and the capture LED on the hardware is ON, restart recording. If the capture LED on the hardware does not turn ON when user clicks on "Record" button, power cycle the Sodera hardware to restart capture.	*							
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5.1.3. Firmware Versions in Release 15.01

- Sodera – Firmware: 201812051654; FPGA: 201808211235; PIC:1.12 (Firmware update required)
- BPA 600 - Firmware: 369 (4.2 Compliant); 268 (4.0) (No firmware change)
- BPA le - Firmware: 268 (No firmware change)
- 802.11 - Firmware: FPGA: 2.9; Application: 1.5; Interface: 1.4 (No firmware change).

5.2. Release 15

Sodera

- Added flexible licensing in Sodera analyzer that allows users to have various options to upgrade when needs change.
- Added support for Bluetooth Madrid features: Periodic Advertising Synchronous Transfers (PAST), Control Length Extension, Advertising Channel Index Changes, and updated decoders for Minor Functional Enhancements (Batch 1 CR12).
- Added limited beta support for LE Isochronous Channels. This is an early release of the feature. Please contact Teledyne if you have questions using this feature.
- Added new capture filters for improved user experience when capturing in a high RF environment, such as UPF. User can filter data based on Bluetooth® device address and/or signal strength (RSSI).
- Mesh decoder updates: Support for Friendship messages and Mesh Proxy Protocol.
- Added display of payload counter for AES encrypted packets in BR/EDR.

5.3. Other Improvements and Bug Fixes for All Products

		Sodera	Sodera LE	BPA 600	BPA le	802.11	HSU	NFC	SD
1	Fixed an issue where occasionally timestamps were sorted incorrectly.	*	*	*	*	*	*	*	*
2	Fixed a decoding issue with Hands-free Profile.	*		*					

3	Fixed a decoding issue where AVDTP signaling packets did not decode if ACL role switch happened during setup.	*		*					
4	Added packet status information in detail pane for retransmitted packets.	*		*					
5	Shows capture file name when user hovers over App icon in task bar.	*	*	*	*	*	*	*	*
6	Updated HCI decoders and fixed minor issues.	*	*	*	*				
7	Updated Insulin delivery decoding to v1.0.	*	*	*	*				
8	Fixed an issue where +CIEV event was decoded incorrectly when data included multiple devices in a capture session.	*		*					
9	Fixed an issue where encrypted packets were marked as unencrypted and decoded incorrectly.	*		*					
10	Improved decryption algorithm to handle missed "encryption_key_size_req" packet.	*							
11	Improved the algorithm to handle error packets in LE to enhance packet detection.	*							
12	Added support for CP bit in AoA/AoD feature.	*							
13	Fixed a decoding issue with "object action control point" in ATT decoders.	*	*	*	*				
14	Updated Mesh GATT Service data decoding.	*	*						
15	Updated Insulin Delivery Profile to v1.0.	*	*	*	*				
16	Updated Reconnection Configuration Profile to v1.0.	*	*	*	*				
17	Added support for Reconnection Configuration Service and Profile v1.0.0.	*	*	*	*				
18	Updated GATT Characteristics and fixed issues related to Central Address Resolution	*	*	*	*				
19	Fixed an issue to correctly display advertising PDU type name AUX_CHAIN_IND.	*	*						
20	Stability improvements.	*	*	*	*	*	*	*	*

5.4. Known Issues

		Sodera	Sodera LE	BPA 600	BPA le	802.11	HSU	NFC	SD
1	Occasionally, while capturing 4.1 Classic Secure Connection using BPA 600 hardware, the hardware fails to follow connection and packets are marked with CRC error.			*					
2	When reopening a capture file (with .frm file) that has LE data, packet duration is incorrect on logic analyzer view. The packet duration is correct in other views, such as LE timeline. The packet duration is also correct during live capture. To fix the problem, click on "recreate companion file" from File menu on Frame Display.	*	*						
3	While capturing 2M packets using Sodera LE hardware, some packets on higher channels are truncated and marked with error "Length in header too big for packet type".		*						
4	On very rare instances, when a user clicks on "Record" repeatedly to start and stop capture, the Sodera hardware stops capturing new packets. When this happens and the capture LED on the hardware is ON, restart recording. If the capture LED on the hardware does not turn ON when user clicks on "Record" button, power cycle the Sodera hardware to restart capture.	*							

5.5. Firmware Versions in Release 15

- Sodera – Firmware: 201808241607; FPGA: 201808170821; PIC:1.12 (Firmware update required)
- BPA 600 - Firmware: 369 (4.2 Compliant); 268 (4.0) (No firmware change)
- BPA le - Firmware: 268 (No firmware change)
- 802.11 - Firmware: FPGA: 2.9; Application: 1.5; Interface: 1.4 (No firmware change).

6. API

Automation Server:

- There are several sample projects included with the application. To run them, you should make sure that the Frontline Protocol Analysis Software application is already installed. For details, please refer to Automation Server Protocol.pdf included with the software.
- **C# Sample:** CSharpAutomationSampleClientProject
- **TCL sample:** SampleClient.tcl

DecoderScript:

- There is a sample DecoderScript project included with the application to help programmers who want to write decoders using Teledyne's proprietary language. To run them, you should make sure that the Frontline Protocol Analysis Software application is already installed. For details, please refer to DecoderScript QSG.pdf included with the software.
- You will need Visual Studio 2012 to compile your methods and a text editor to write decoders.

4. Support

Online Download

Please periodically check Teledyne LeCroy Protocol Solutions Group's web site for software updates and other support related to this product. Software updates are available to those users with current Maintenance Agreements.

Web (SW downloads): <http://www.fte.com/products/default.aspx>

Online Support

Web: <http://www.fte.com/support/supportrequest.aspx>

E-Mail: Frontline_TechSupport@Teledyne.com

Sales Information

Web: <http://www.fte.com/support/supportrequest.aspx>