

# NOW SUPPORTS V2.1 + EDR **FTS4BT**<sup>™</sup> Wireless Sniffer for *Bluetooth*® Technology

# World's First *Bluctooth* v2.1 + EDR Analyzer: Now Sniffs High Speed

### **Bluetooth** Challenges

#### Complex & Ever Changing

Bluetooth wireless technology is an extremely complex software and hardware technology that is evolving fast. If you are new to Bluetooth, just getting a good understanding of how it works is a large task. But even the most experienced Bluetooth developers and test engineers are challenged by keeping up with the latest changes from the baseband all the way to the profile level.

#### Interoperability

There are now enough Bluetooth-enabled devices on the market to prove that the technology is viable. Commercial success is tied to making sure that your devices interoperate smoothly so consumers can realize the benefits of Bluetooth technology.

## FTS4BT Meets the Challenge

Developers and test engineers rely on FTS4BT to get them through the design, debug, test, verify, and qual-

ification cycle. Our users tell us their products would have never made it to market in a timely fashion without it. No matter where you are in the Bluetooth chain, you will find invaluable features in FTS4BT.

#### **SUPPORTS EDR** (Enhanced Data Rate)

FTS4BT is the only analyzer currently on the market to support Bluetooth v2.1 + EDR.

## Debug, Test, & Verify Fast with FTS4B1



#### Synchronized air and HCI sniffing: FTS4BT provides multiple points of observation, speeding up debug, test, and verification time. Sniffs air plus HCI 6 ways.

Works in Real-time: Captures, decodes, filters and displays data, and detects protocol errors (indicated in red) simultaneously, all live and in real-time to find and fix problems fast.

- Decodes all Bluetooth protocols and most profiles allowing for thorough interoperability testing.
- Quick release of new profiles to keep pace with changing Bluetooth specifications.
- Extract Audio into WAV files: Supports A2DP, HSP & HF Profiles. Playback for rapid guality check or perform a more detailed analysis.

Includes Frontline's FrameDecoder<sup>™</sup> technology for swift development and seamless integration of HCI Vendor Extensions and other custom protocol implementations. FrameDecoder is how we meet ever-changing Bluetooth technology challenges-and now so can you!

# Synchronized Air & **HCI Sniffing: Live!**

### **Sniff HCI 6 Wavs:** Externally

By tapping the **1** serial or 2 USB\* HCI interface between a host CPU and a host controller. \*Requires optional USB ComProbe.

### Internally

By spying on the Serial or USB HCI interface between a host CPU and a host controller.

### Virtually

O Via the Live Import API which enables any application to feed data into FTS4BT.

### Off-Line

**6** By loading BTSnoop log files that can be created when it isn't convenient to do live analysis.

FTS4BT users love bringing their ComProbes to Bluetooth UnPlugFests!

We have learned through extensive experience supporting our customers that many problems are most effectively debugged live, using multiple points of observation.

### **HCI Sniffina**

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Baseband with Auto

Finger-sized Bluetooth **ComProbe**<sup>®</sup> Hardware is incredibly portable and requires no power.



Simultaneous 79 Channel view provides immediate insight into baseband reduces your debug and performance. verification time

in.

Display: Time-tested GUI provides comprehen-sive, bit-level decoding &

lew T Interactively view throughput over time and drill down . to packet-level detail to isolate problems-FAST!



## **Optional HCI Sniffing ComProbes**

If your embedded device utilizes a high speed UART HCI interface between the host CPU and the host controller you can tap that connection with the Embedded Bus ComProbe and sniff H4, H5, and BCSP links at speeds up

to 8M bits/sec.



### The Fronfline Edge

### **Outstanding Technical Support**

Whether you need help using a basic FTS4BT product feature, want Frontline's explanation of the protocol stack, or have a question on using FrameDecoder to write a decode, you can be assured of a response that is friendly, thorough, and timely.

### Trusted Bluetooth Expertise

The Bluetooth SIG (the governing body of Bluetooth technology) has selected Frontline to provide worldwide technical support for the SIG's Profile Tuning System (PTS) test tool. PTS is the cornerstone of the Bluetooth product qualification program.



Frontline is a proven protocol analyzer industry leader since 1985. FTS4BT is a member of the growing family of Frontline Test System® (FTS®) protocol analyzers, each of which incorporates our time-tested user interface and the FrameDecoder protocoldecoding engine. FTS analyzers support serial, Ethernet, Bluetooth, USB, ZigBee™ and numerous industrial protocols and buses such as Modbus, DH+, and DeviceNet.

### Free Premium Maintenance

With FTS4BT not only will you receive free software, firmware, and protocol decoder upgrades for one year, but you will also receive free or low-cost air sniffing hardware upgrades. After a year, it is inexpensive to keep your Premium Maintenance current. Bluetooth Lemium technology moves fast—with Frontline products,



### FTS4BT: Builf for Blucfooth Troubleshoofing

#### Air Sniffing

- Supports v2.1 + EDR
- Automatically handles decryption, pairing, master/slave role switches, and park, hold, and sniff low power modes.
- Excellent piconet synchronization using master inquiry, slave inquiry, or passive slave page.
- **Basic sniffing**—up to seven slaves in one piconet all on the same frequency hopping sequence.
- Advanced sniffing (requires one or more optional additional Bluetooth ComProbes)-Mixed piconets (multiple frequency hopping sequences in one piconet). Scatternet (multiple piconets). Redundant (for improved packet reception).

#### **User Interface**

- Familiar tree (Explorer style) protocol decode display with single-click protocol filtering.
- Decodes and displays multiple protocol layers of multiple data packets simultaneously.
- Detects and displays protocol errors (in red) in real-time.
- Session notes and annotated bookmarks allow for quick identification of questionable packets.

#### Users Typical **FIS4B**

Chips CSR (their corporate standard) • Broadcom • Infineon • RFMD • QUALCOMM • TI

Mobile Phones/ Headsets Nokia • Sony Ericsson • Kyocera • Siemens Mobile • Jabra •

Motorola • Sprint • Nextel • Cingular • Órange

Software, Stacks, & BQTFS Microsoft • Extended Systems • Symbian • Open Interface • RFI • Canon i-tech • 7 Layers • Teleca • CETECOM

Automotive Audi •

DaimlerChrysler • Johnson Controls • Delphi • BMW • Nissan • Temic • VW • Harman/Becker • Tovota • Ford • Visteon

#### Electronics Panasonic • Hitachi • GE •

Alps • Symbol Technology • Intel • HP • Siemens • Sony • Sanyo • Epson • Toshiba • Ćanon

#### Aerospace &

Defense NASA • Lockheed Martin • U.S. Dept. of Defense • Northrop Grumman

#### **Detailed Decodes**

- TCP/IP support comparable to an Ethernet analyzer. Decodes all key Dial-Up Networking and TCP/IP protocols.
- Transports: HCI USB (H2), HCI UART (H4), HCI Three-Wire UART (H5), BCSP
- Protocols: Baseband, LMP, HCI, L2CAP, SDP, RFCOMM, TCS Binary, OBEX, AVCTP, AVDTP, BNEP, AT Commands, CMTP, HDLC, PPP, TCP/IP
- Profiles: Audio Visual: A2DP, AVRCP, GAVDP, VCP, VDP. Car: HFP, PBAP, SAP. Printing: BIP, BPP, HCRP. Other: CIP, CTP, DUN, FAX, FTP, GOEP, HID, HSP, ICP, LPP, OPP, PAN, SDAP, SPP, SYNCH, UDI

#### Additional Features

- Continuous direct logging to disk with unlimited file size.
- Counts retransmitted packets.
- Export into CSV and other formats.
- Data extraction into original file formats. For example, PDF.
- Graphic display of Packet Error Rate.
- Audio extraction into WAV files.
- Reads BTSnoop files.

#### Minimum PC Requirements

- IGHz Pentium PC or equivalent
- Windows XP
- 512 MB RAM
- 50 MB free disk space
- USB port for basic air sniffing
- One additional USB port for each additional Bluetooth ComProbe
- USB 2.0 port for optional USB ComProbe
- Serial HCI Sniffing: For RS-232 data at speeds up to 921.6K bps - Monitor one or two serial ports using included cables

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