Bluetooth Low Energy and Wi-Fi Protocol Analyzer

Ellisys Bluetooth Tracker



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Key Points:

- All-in-One: wired and wireless, concurrently, perfectly synchronized
- Wideband Capture: easy and rock-solid capture of all Bluetooth Low Energy channels
- Reprogrammable Digital Radio: ready today for tomorrow's specifications
- Wi-Fi: debug your Wi-Fi a/b/g/n and BLE connections simultaneously, as well as coexistence
- Raw Spectrum Capture: characterize the wireless environment and visualize interferences
- Logic Analysis: visualize digital signals such as GPIOs, interrupts, debug ports, etc.
- Extremely Compact: pocket-sized at 7.5 x 7.5 x 1.7 cm (2.9 x 2.9 x 0.7")
- **USB Powered:** portable, convenient and environmentally friendly
- All Protocols and Profiles: best-of-breed protocol decoding
- Free Maintenance: never a charge for software updates, free fully-featured viewer





Technical Specifications

Bluetooth Capture Characteristics

- Ellisys Rainbow™: Wideband, concurrent capture of all BLE channels
- Frequency band: 2.402-2.480 GHz
- Sensitivity range: From -90 to +15 dBm
- Gain: Programmable from -30 to +15 dB
- Modulations: All BLE modulations (GFSK 1 Mbps and 2 Mbps)
- Baseband: Support of Bluetooth 5, upgradeable by software

Wi-Fi Capture Characteristics

- 802.11 a/b/g/n
- Channel width 2.4GHz: 20 MHz
- Channel width 5GHz: 20 MHz
- 11n MCS 2.4 GHz 20 MHz channel: 0 to 7
- 11n MCS 5 GHz 20 MHz channel: 0 to 7

Logic Capture Characteristics

- Maximum bandwidth: 50 MHz
- Sampling precision: 5 ns
- Supported input voltage: 1.8 to 3.3V

HCI Capture Characteristics

 UART / SPI transports: Up to 8 Mbit/s, automatic detection of all parameters

Embedded Memory

- 128 MB of FIFO memory
- Data is stored in highly optimized format
- Analyzed data is uploaded in real time through USB 2.0 connection

Timing

- Clock: ±10 ppm frequency accuracy over -10 to +60 degrees Celsius range
- BLE timestamp accuracy: 125 nsWi-Fi timestamp accuracy: 1 us
- Logic timestamp accuracy: 5 ns

Connectors

- Capture: Standard SMA female
- Logic: 16 logic signals
- Sync: Multi-unit synchronization ports
- Control: USB 2.0 connection to control PC
- Power: Optional 5V power input, max 3W

Enclosure

- 75 x 75 x 17 mm (2.9 x 2.9 x 0.7")
- 100 g (0.2 lbs)

Hardware Upgrade

■ The Ellisys Rainbow™ engine is automatically updated with each software release (no user intervention required)

Maintenance and Licensing

- Free lifetime updates no maintenance fees
- Free full-featured viewer application easily share annotated traces between computers and colleagues
- Use Ellisys hardware on any computer no additional licenses needed

Warranty

- Two-year limited warranty for Professional and Enterprise editions
- One-year limited warranty for Basic and Standard editions

Ordering Information

Description	Code
Ellisys Bluetooth Tracker Basic	BTR1-
Hardware unit with Basic features set	LE-BAS
Ellisys Bluetooth Tracker Standard	BTR1-
Hardware unit with Standard features set	LE-STD
Ellisys Bluetooth Tracker PRO	BTR1-
Hardware unit with PRO features set	LE-PRO
Ellisys Bluetooth Tracker Enterprise Hardware unit with Enterprise features set	BTR1- LE-ENT

Configurations

Editions	BAS	STD	PRO	ENT
Wideband BLE capture	x	x	x	x
Bluetooth 5 capture ¹			x	x
Wi-Fi capture				x
Spectrum capture				x
HCI capture (UART, SPI)			x	x
Logic capture			x	x
Advanced software features ²		x	x	x
Warranty	1yr	1yr	2yr	2yr

- 1. BLE 2Mbps, BLE Coded (Long Range) and BLE Adv Ext
- 2. Instant Timing, Instant Channels, Instant Spectrum, Instant Throughput, and Instant Piconet features

More information on: www.ellisys.com/btracker

