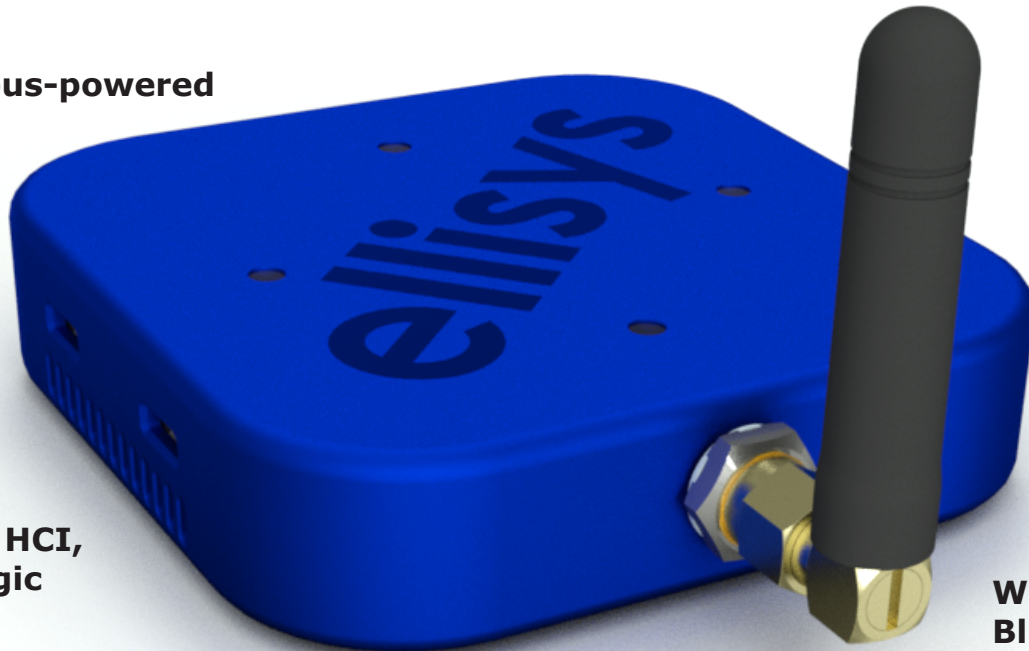# Bluetooth Low Energy and Wi-Fi Protocol Analyzer

Ellisys Bluetooth Tracker

USB bus-powered

UART/SPI HCI, WCI-2, Logic

Wideband Bluetooth LE Spectrum Wi-Fi

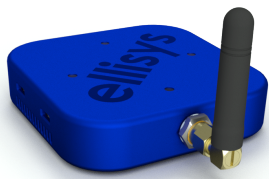**Sales Contact**
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ellisys
Better Analysis

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 ns
- Wi-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

Ellisys reserves the right to change the features and specifications of the product without notice.

Ordering Information

Description	Code
Ellisys Bluetooth Tracker Basic Hardware unit with Basic features set	BTR1-LE-BAS
Ellisys Bluetooth Tracker Standard Hardware unit with Standard features set	BTR1-LE-STD
Ellisys Bluetooth Tracker PRO Hardware unit with PRO features set	BTR1-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
BLE 5.0 capture			x	x
Wi-Fi capture				x
Spectrum capture				x
HCI capture (UART, SPI)			x	x
Logic capture			x	x
Advanced software features		x	x	x
Warranty	1yr	1yr	2yr	2yr

More information on: www.ellisys.com/btracker

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