Beagle™

USB 5000 v2 SuperSpeed Protocol Analyzer - Ultimate Edition



Key Features

Real-Time Non-Intrusive Monitoring

- SuperSpeed/High-/Full-/Low-Speed USB (up to 5 Gbps)
- Digital I/Os to synchronize with oscilloscopes or logic analyzers
- 2 ns resolution for USB 3.0
- USB 3.0 downlink

USB 3.0/2.0 Advanced Triggers

- Create state-based and flexible trigger conditions based on data patterns, packet types, error types, events, and other criteria
- Hardware packet filtering
- Up to eight independent states and six matches per state
- Digital I/Os to synchronize with oscilloscopes or logic analyzers

Data Center™ Software

- Real-time display, search, and filtering of captured data
- LTSSM graphical view
- Descriptor and class-level decoding
- Automatic bus speed detection
- Capture traces to >25 GB
- Cross-platform support for Windows, Linux, macOS

Beagle API

- Create custom software applications
- Example files included

Quality

- CE, REACH, RoHS
- Manufacturing: ISO 9001, ISO 13485, AS9100C, ITAR
- One year warranty

With the increasing complexity of USB, especially USB 3.0, and growing array of USB devices, the need for interactive, real-time analysis is more important than ever and the Beagle USB 5000 v2 SuperSpeed Protocol Analyzer - Ultimate Edition is expressly designed to enable your competitive edge.

The Beagle USB 5000 v2 analyzer is the ideal tool for debugging and monitoring traffic on your SuperSpeed and High-speed USB devices. Combined with the award-winning Data Center Software, it provides a comprehensive, high-performance and powerful monitoring solution, helping to minimize debugging and development time.

Enhanced Visibility for USB 3.0

- Detection of low-level bus events: link training, LFPS polling, training sequences
- LTSSM View tracks upstream and downstream link state transitions
- Automatic support for data scrambling, spread spectrum clocking, and receiver detection

Advanced Triggers

- Start a capture using the flexible trigger environment: 8 states, 6 matches per state, plus timer and bus events
- Perform hardware filters and utilize digital I/Os for synching with external logic for comprehensive captures

Enumeration Debugging

The ability to detect LFPS polling events, training sequences, the link layer, as well as parse descriptors makes the Beagle USB 5000 analyzer invaluable in debugging issues with device enumeration. In particular, the real-time display, search, and filtering abilities of the analyzer streamlines the debugging and development process for USB 3.0 developers.

Power Management

With the introduction of low-power states in USB 3.0, gaining visibility into a device's current state is essential for troubleshooting bugs with state transitions. The LTSSM View provides that visibility, allowing users to easily trace through state transitions and identify events that occurred before and after those transitions.

Beagle™ USB 5000 v2 SuperSpeed Protocol Analyzer

Applications

Storage	Hubs	Cameras	Audio
Bridges	Video	Mobile Devices	Controllers

Specifications

Software

The Data Center™ Software is a bus monitoring software application that displays captured USB, I2C, SPI, and CAN bus data in true real-time through the Beagle™ line of hardware protocol analyzers and the Komodo™ CAN Duo Interface.

Data Center Software Features

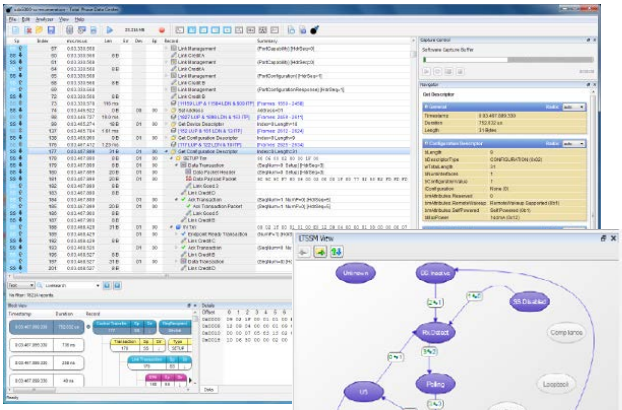
- LiveDisplay™ technology allows for real-time interactive display and analysis of SuperSpeed, High-, full- and low-speed USB (up to 5 Gbps)
- Automatic class-level decoding and descriptor parsing
- LiveFilter™ and LiveSearch™ tools allow for real-time interactive filtering and searching
- Collaborate easily by sharing capture files
- Export saved capture files to CSV format

Beagle API

- Create custom applications using the flexible, powerful, and well-documented Beagle API
- 32- and 64-bit support for C/C++/C#, Python, .NET, VB.Net, VB 6

Operating Systems Supported (32-bit and 64-bit)

- Windows: 7, 10, 11, and later
- Linux: Red Hat, SuSE, Ubuntu, Fedora
- macOS: 13 and later



Data Center

Scan for Video

LTSSM View

Hardware

USB Monitoring:
SuperSpeed, 5 Gbps
High Speed, 480 Mbps
Full Speed, 12 Mbps
Low Speed, 1.5 Mbps

Target Device Port:
USB 3.0 Type A receptacle

Target Host Port:
USB 3.0 Type B receptacle

Analysis Port (connects to PC):
USB 3.0 Type B receptacle

USB 3.0 Digital I/O Port:
2 SMA connectors:1 input, 1 output
Impedance: 50 OHM
Digital I/O are rated for 1.8V and 12 mA

USB 2.0 Digital I/O Port:
Mini DIN-9 connector: 4 inputs, 4 outputs, 1 ground
Digital inputs are rated for 3.3 V and max 30 MHz
Digital outputs are rated for 3.3 V and 10 mA

Cross Analyzer Sync Ports:
2 HDMI connectors:1 input, 1 output

On-board Memory Buffer
Up to 4 GB for USB 3.0
128 MB for USB 2.0

Dimensions (W x D x L)
16 cm x 15.4 cm x 4.7 cm (6.3" in x 6.1" x 1.8")

Weight
900 g (1.9 lbs)

Operating Temperature
10 to 35 °C (50 to 95 °F)

Ordering Information

Beagle USB 5000 v2 SuperSpeed Protocol Analyzer - Ultimate Edition

Part Number	TP322610
Country of Origin	USA
HTS	9030890100
ECCN	EAR99

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