Beagle™

USB 480 Power Protocol Analyzer - Ultimate Edition



Key Features

Current/Voltage Monitor

- Real-time graphing of V_{BUS} current and voltage values
- Interactive and bi-directional correla-tion of current/voltage values with USB data

USB 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 for USB 2.0 captures
- Digital inputs and outputs to synchronize with oscilloscopes or logic analyzers

High-Performance HW Buffer

- 256 MB capacity
- Large circular buffer

Real-Time Non-Intrusive Monitoring

- Real-time data analysis and display
- Automatic bus speed detection
- Low/Full/High-Speed USB 2.0
- Capture traces to >25 GB

Real-Time USB Class-Level Decoding

- HID, Audio, Video, Still Image, Printer
- Mass Storage, Hub
- Network, Mobile, CDC

Quality

- CE, REACH, RoHS, ISO9001
- One year warranty

As USB devices continue to grow in number and complexity, developers need their monitoring and analysis tools to keep pace. The Beagle™ USB 480 Power Protocol Analyzer - Ultimate Edition enables your competitive edge with its unique, powerful features and a price that is a fraction of competing equipment.

The Beagle USB 480 Power Protocol Analyzer - Ultimate Edition enables V_{BUS} current and voltage measurement within our industry-leading Data Center Software. The enhanced USB 2.0 advanced triggering, extra-large hardware buffer, and one-click correlation of voltage and current measurement to protocol-level activity ensures that engineers can take advantage of our unique real-time data analysis and display, enabling them to easily debug the functionality of their embedded systems while also optimizing the power profile of their applications.

Link V_{BUS} Current/Voltage Measurements with USB Data

Other than DMMs and oscilloscopes, few tools are dedicated to measuring current and voltage of USB V_{BUS} and even fewer link these measurements with captured USB data. The Beagle USB 480 Power Protocol Analyzer - Ultimate Edition correlates current and voltage data with USB traffic at the click of a mouse button.

Host-Side Use Case

Developers of host-related products such as rechargeable batteries, tablets, and laptops can verify their VBUS current/voltage output, and monitor any effects caused by the attachment of various peripheral devices.

Create USB 2.0 Advanced Triggers and Filters

Build flexible state-based event triggers with up to eight independent states and six matches per state for USB 2.0 captures. Developers can now trigger the capture, filter data, or set external triggers by matching data patterns, packet types, error types, events, and other criteria.

Device-Side Use Case

There is a plethora of USB peripherals on the market, each with its own specific power consumption profile. Developers of peripherals such as web cameras, HID devices, mobile devices, and portable mass storage devices can verify how much current and voltage their devices consume, with respect to timing and USB data.

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Applications

Audio	HID	Mobile Broadband	Tablets	**Scan for Video**
Bridges	Hubs	Mobile Phones	Video	
Cameras	Mass Storage	Music Players		

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

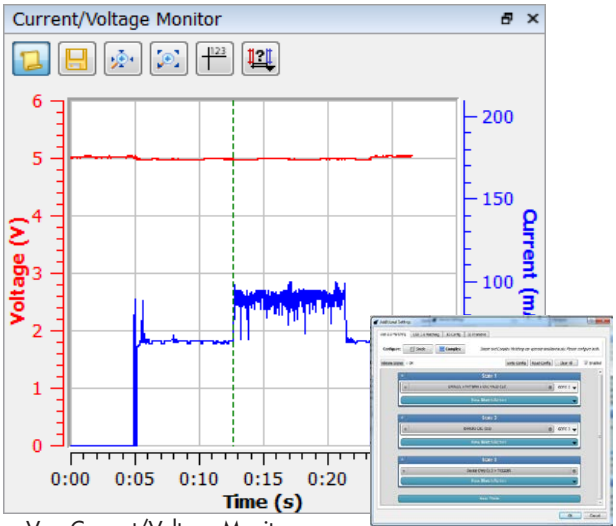
- Real-time V_{BUS} current/voltage monitoring
- Interactive correlation of current/voltage with USB data
- USB 2.0 advanced user-defined triggers available
- LiveDisplay™ technology allows for capture and display of current/voltage readings and USB traffic
- LiveFilter™ and LiveSearch™ tools allow for real-time interactive filtering and searching
- Real-time USB class-level decoding
- Collaborate easily by sharing capture files

Beagle API

- Create your own custom applications using the flexible, powerful, and well-documented Beagle API
- Supported languages: C/C++/C#, Python, .NET, VB.NET, Visual Basic 6

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

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



V_{BUS} Current/Voltage Monitor

USB 2.0 Advanced Triggers

Hardware

USB 2.0 Monitoring:
High Speed, 480 Mbps
Full Speed, 12 Mbps
Low Speed, 1.5 Mbps

Target Device Port:
USB 2.0 Type A receptacle

Target Host Port:
USB 2.0 Type B receptacle

Analysis Port (connects to PC):
USB 2.0 Type B receptacle
Analyzer is bus-powered

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

Current/Voltage Measurement:
Peak Current: 3 A (transient)
Peak Voltage: 20 V (transient)

Dimensions:
W x D x L: 70 mm x 26 mm x 114 mm
(2.76 in x 1.02 in x 4.49 in)

Weight:
97.5 g (0.21 lbs)

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

Ordering Information

Beagle USB 480 Power Protocol Analyzer - Ultimate Edition	
Part Number	TP323610
Country of Origin	USA
HTS	9030890100
ECCN	EAR99

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