



High End USB 2.0 Protocol Analyzer

#### OVERVIEW

The USB Explorer 200 is a USB protocol analyzer allowing you to display the bus states and the packets sent, decode the descriptors, detect errors in devices or drivers and measure their performances.

It is the ideal companion for anyone developing USB peripherals, embedded software or drivers. Its analysis and display software is easy to use so that you can quickly learn all about USB protocol.

Connect the analyzer between any USB host and any USB peripheral to instantly view the traffic. When capturing the packets, the real-time statistics display allows you to check the bus status even before you look at the packets which have been read.

The USB transactions and transfers are displayed in a chronological list together with the peripheral's address and the endpoint number. A second window gives details on the selected item. To make it easier to identify the packets you are interested in, the software provides filtering and packet colour coding functions.

#### **CONTACT INFORMATION**

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## ellisys™

# The powerful USB 2.0 protocol analyzer for developing USB systems

The USB Explorer 200 is a non-intrusive high speed USB 2.0 protocol analyzer allowing you to display the bus states and the packets sent, decode the descriptors, detect errors and incompatibilities in devices or drivers and measure their performance. Very simple to use, it is the ideal companion for anyone developing USB devices, hosts, embedded software or drivers.

## **Highlights**

- ✓ Compatible with all three USB2.0 speeds
- ✓ Automatic discovery of the Link Under Test speed
- Measurement of USB bus states and protocols
- ✓ Affordable price allowing to provide one unit per developer
- ✓ Non intrusive analysis

- Small and robust enclosure, powered by the USB bus
- ✓ Scalable design of the hardware
- Display of transactions and transfers layers
- High level decoding of requests and descriptors
- ✓ Free viewer software

## **Applications**

- Enumeration issues verification and validation
- USB device and host development
- Performances analysis
- USB drivers and software stacks debugging
- Quick learning of the USB protocol
- Test-bench automation

## **Technical specifications**

#### **Enclosure**

Width: 150mm (5.91")
Length: 120mm (4.72")
Height: 65mm (2.56")
Weight: 850g (1.9lbs.)

#### **Analysis Computer Connector**

■ USB 2.0 high-speed (480 Mbps)

#### **Link Under Test Connectors**

- USB 2.0 high-speed (480Mbit/s), full-speed (12Mbit/s) and low-speed (1.5Mbit/s)
- Automatic discovery of the Link Under Test speed

#### **Trigger Connector**

Type: BNC

Input: 5V max, 1MΩ

Output: 3.3V, max 20mA

Absolute maximum ratings: -0.5V..+6.5V, 50mA

#### **Indicators**

- Power: illuminated when the analyzer in powered on
- Activity: illuminated in green when packets are detected (in red when they are recorded)
- Trigger: illuminated in green when a trigger is detected in input (in red when detected in output)

#### **Memory**

- 32MB of FIFO memory
- Analyzed data are transmitted continuously

#### **Bus analysis**

- Timestamp: 16.67ns (60MHz) precision
- Low-level errors: detection of bit-stuffing, CRC5 and CRC16 errors
- Bus states: detection and measurement of Reset, Suspend, Keep Alive and High-Speed Handshake states

#### **Power supply**

- Powered by the USB port of the Analysis Computer
- No external power supply needed

#### Hardware upgrade

The decoding engine and the firmware can be updated by software

#### **Product warranty**

Two years limited warranty

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

## Requirements

- Pentium III 600MHz
- 128 MB RAM
- USB 2.0 host controller
- Display: 800x600, 256 colors
- Internet Explorer 5.0 or higher
- Windows® 2000 Service Pack 4, Windows® XP Service Pack 1 or higher

#### Know more...

For more information about the USB Explorer, please visit the website dedicated to this tool:

#### www.usbexplorer.com

