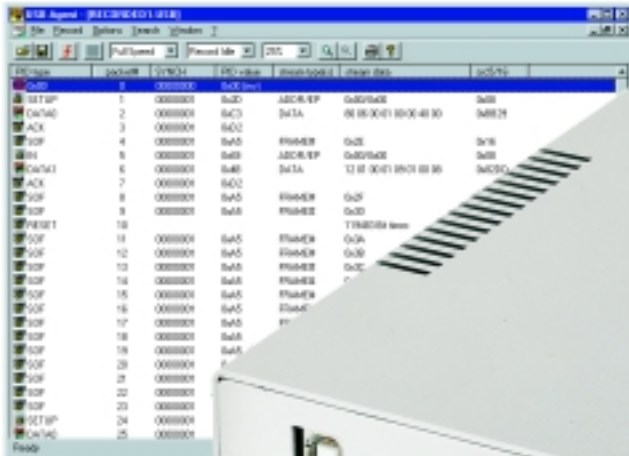


hitex

DEVELOPMENT TOOLS



Highlights

- Is an Indispensable tool for quality development of USB controllers, USB functions and device drivers
- Records and analyzes USB traffic and USB protocol
- Operates with both portable and desktop PCs; it is controlled through the parallel port
- Provides recording of real-time USB traffic in full-speed and/or low-speed branches
- Allows powerful triggering on user-definable conditions or external input
- Connects non-intrusively to any branch of a USB system through a high-impedance probe
- Comes with 8Mbit capture buffer (which stores both data lines)
- Includes a one-year warranty and hotline customer support
- USB training on request

USB Agent Explores the secrets of USB

USB Agent – the efficient USB bus & protocol analyzer

Hitex's USB Agent – the efficient USB bus & protocol analyzer - will become your preferred development tool for any Universal Serial Bus design. The easy-to-use Windows® driven software monitors all bus traffic and static states, and also signals abnormal bus conditions. Simply connect the USB agent into any branch of your system to immediately reveal any potential problems in your USB network.

Universal Serial Bus

USB is a convenient bus and protocol definition, which is used for connecting peripheral devices to their host computers. The USB specification dictates that USB-devices be easy-to-use and that they function on a plug-and-play basis. The USB Agent is used by developers of USB controllers, USB functions and USB software drivers as a means for compliance testing of the different levels of the USB protocol. Additionally, it is an ideal tool for quality control and production testing. Since the USB Agent provides these benefits, as well as decreasing the time-to-market for USB development projects, it is an indispensable tool for everyone who has to deal with the USB protocol.

Easily To Use

The very compact USB Agent is a highly integrated USB analyzer, which is operated through straightforward, very intuitive control software. The USB Agent software runs under all commonly used Windows® Versions (Windows 9x and Windows NT). Simply connect the USB Agent to your PC through the parallel port - no additional hardware is required. This means: the USB Agent is a plug-and-play product that may be operated from any commonly available desktop or portable PC. This easy-to-use product comes complete with power supply and all necessary cables. User-documentation and a one-year warranty are provided with each purchased unit. USB training is available on request. Free telephone support is available through a customer hotline.

How it works

Through its high-impedance, non-intrusive probes, the analyzer may be connected to any branch of your USB

system. All USB traffic, full-speed or low-speed, that passes along the analyzer unit is monitored. Recording of data on the bus is made visible with status LEDs. The analyzer samples all data on both data lines, collects it, and writes it to the users hard disk. The control software scans the collected data and displays it in a meaningful and easy to interpret format. The format is configurable, and the displayed information can be filtered. All USB traffic can be stored for documentation purposes and can be reviewed later, or can be compared directly to other recordings in different windows. The user can review and print stored data without even having the USB Agent connected.

Powerful Triggering

Numerous USB events can be defined for on-the-fly detection and triggering. Some of these events are: data patterns, all USB defined PIDs, user defined PIDs, PID combinations with address and endpoints. This permits, for example, starting the recording of data upon detection of the enumeration process of a new USB function, the transmission of a specified data pattern or the beginning of data transfers over a specified pipe.

Additionally, an external input makes it possible for an external circuit or device, such as an in-circuit emulator, to start a recording sequence. If an in-circuit emulator is used, even a software event, as detected by the emulator, could trigger the USB Agent thus making it possible to synchronize the code lines of executing software with the USB data stream. USB traffic is recorded until the trace buffer is completely full, or filled up to a certain level defined by the user. Naturally, a

recording can also be stopped by the user hitting a key. To conserve the capacity of the recording buffer, the user can specify that it be filtered. A typical recording of full-speed traffic (idle recording disabled) may contain up to 120 seconds of USB data depending on the USB bandwidth needed by the functions.



User Interface

The USB Agent's User's Interface, i.e., control software, presents the collected data to the user in useful formats which can be further specified by the user himself. Bus error conditions like bad PID, bad CRC, extra data, missing frame or bit stuff errors are signaled in an easy to understand fashion. The powerful search features makes it possible to quickly position the display to show, for example, errors, PIDs, addresses and endpoints, frames, or static bus signals. Records of mixed low-speed and full-speed traffic are displayed conveniently so that distinguishing the low-speed and the full-speed packets is not a problem. Data transfers, such as USB device requests, are decoded and displayed in a readily understood fashion.



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