



Ellisys USB Device Examiner™

Automated USB Device Compliance Test Suite



USB 2.0 Chapter 9 and Class-Specific Compliance Test Suite

Overview

Ellisys USB Device Examiner (DEX) is a stand-alone USB device compliance test application that operates on the USB Explorer 260 hardware. DEX is provided with the Generator, or can be added as an option to the Analyzer. DEX provides a comprehensive set of robust compliance tests covering Chapter 9 of the USB Specification (Device Framework).

Test results are pass/fail, annotated with descriptive detail, and are summarized in a convenient HTML-formatted summary report upon completion of testing. Each test can optionally be captured with an EX260 Analyzer, providing for quick and in-depth analysis of test results. The summary report includes instant links to analyzer captures for each test.

In addition to the Chapter 9 coverage for any USB device, DEX also provides class-specific testing of several device classes, including mass storage devices, HID devices, and hub class (Chapter 11). The mass storage device class test suite includes read and write bandwidth stress tests.

Operation

Operating DEX is simple. Just attach your device to the EX260 unit, click Run, and wait for the results. DEX does all the work from here. Hundreds of tests and sub-tests execute in a few minutes. An EX260 Analyzer can be optionally installed between the DEX-Enabled EX260 and the device under test, to capture test activity.

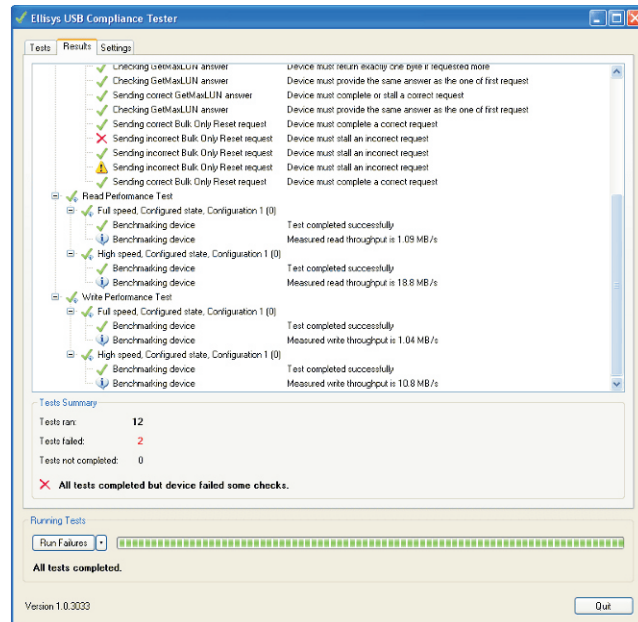
When DEX is launched, a summary of the device's USB and class-specific characteristics is conveniently and automatically displayed on the simple and intuitive user interface. Applicable tests are automatically selected but can be optionally configured manually.

Dynamic Test Configuration

Device Examiner reads the attached device's descriptors automatically upon attach, and structures the available tests accordingly. For example, a mass storage class device will enable selection of tests specific to that class.

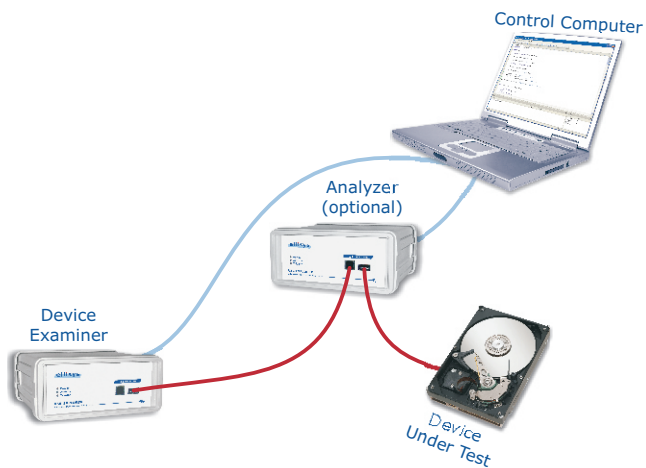
The device's configurations, interfaces, and endpoints are all read by DEX and test cases and suites are dynamically created and made available to the user, according to the device's capabilities, such as class, speeds supported, number of endpoints, and endpoint types.

Device Examiner Easy Interface



The easy-to-use DEX user interface includes test selection for Chapter 9 and applicable device class, a results summary, and settings to control the test environment.

Ellisys USB Device Examiner



The Device Examiner unit automatically executes the test scripts, optionally through an EX260 Analyzer, under control of a PC hosting the Ellisys Device Examiner application.



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Major Features

- Device Compliance Testing for Chapter 9 (All Devices)
- Class-Specific Test Suites
- Annotated Pass/Fail Results
- HTML Test Summary Report with Trace Links

Test Options

- Re-Run Only Failed Tests
- Run Chapter 9, Class-Specific, or Custom Test Selections
- Port-Specific Selections for Hub Class Testing
- Option to Test All Speeds Supported or Specify Speed

Class-Specific Test Suites

- Mass Storage Class
- Hub Class (Chapter 11)
- Human Interface Device (HID)

Device Scan

- Query Device Characteristics at Start-Up or Manually
- Standard USB Characteristics and Capabilities
- Class-Specific Characteristics and Capabilities
- Control Starting States (Configured, Address, Default)

Test Suites (Chapter 9 and Class-Specific)

Chapter 9 Test Suite

- Device Descriptor Test
- Device Qualifier Test
- Configuration Descriptor Test
- Interface Descriptors Test
- Endpoint Descriptors Test
- Halt Endpoint Test
- String Descriptor Test
- Bad Descriptor Test
- Bad Feature Test
- Remote Wakeup Test
- Set Configuration Test
- Enumeration Test
- Suspend/Resume Test

Human Interface Device (HID) Test Suite

- HID Get Descriptor Test
- HID Get/Set Idle Test
- HID Get/Set Protocol Test
- HID Report Test
- HID Specification Version Test

Mass Storage Class Test Suite

- Interface Descriptor Test
- Class-Specific Request Test
- Error Recovery Test
- Case Tests (13 Separate Case Tests)
- Power Up Test
- bCBLength Test
- Required Commands Test
- Optional Command Test
- Read Performance Test
- Write Performance Test

Hub Class (Chapter 11) Test Suite

- Detach Device from Enabled Port Test
- Detach Device from Suspended Port Test
- Disable Enabled Ports Test
- Hot Plug Device Port Test
- Power Off Suspended Port Test
- Power Off and On Port Test
- Remote Wakeup Port Test
- Reset Enabled Port with Device Connected
- Reset Disabled Port with Device Connected
- Reset Suspended Port Test
- Resume Port Test
- Suspend Port Test
- Suspend and Ignore Connect
- Suspend and Ignore Disconnect
- Suspend and Disconnect
- Suspend and Connect
- Suspend and Remote Wakeup

Ordering Information

Description	Code
USB Explorer 260 Analyzer (includes 1 hardware unit with USB analyzer option, 1 CD, 2 USB cables and 1 carrying case)	USBEX260A
USB Explorer 260 Analyzer Device Examiner Option (includes 1 USB-DC power cable and 1 CD with DEX software; requires the USB Explorer 260 Analyzer)	USBEX260A-DEX
USB Explorer 260 Generator (includes 1 hardware unit with USB generation option, 1 CD, 2 USB cables and 1 carrying case)	USBEX260G
USB Explorer 260 Duo (includes 2 full-option hardware units, 2 CDs, 4 USB cables and 2 carrying cases)	USBEX260DUO

Options Chart

	Analyzer	Generator	Duo
Hardware units	1	1	2
USB analysis	yes		yes
USB generation		yes	yes
USB device examiner	OPT	yes	yes