Video for Windows Performance Test Contents

You can use VidTest to measure the video performance of your computer. To learn how to use Help, press F1.

 About VidTest

 Starting and Running Tests

 Selecting Test Options

 Interpreting Test Results

Video for Windows Performance Test Contents

You can use VidTest to measure the video performance of your computer. To learn how to use Help, press F1.

 About VidTest
- ▶ Introducing VidTest
- ▶ Exiting VidTest

 Starting and Running Tests

 Selecting Test Options

 Interpreting Test Results

Video for Windows Performance Test Contents

You can use VidTest to measure the video performance of your computer. To learn how to use Help, press F1.

About VidTest

Starting and Running Tests
  ► Starting the Performance Tests
  ► Configuring Video for Windows

  Running the Complete Set of Tests

  Running Component Tests (Advanced)

Selecting Test Options

Interpreting Test Results

Video for Windows Performance Test Contents

You can use VidTest to measure the video performance of your computer. To learn how to use Help, press F1.

About VidTest

Starting and Running Tests

Selecting Test Options

  Selecting Video Playback Test Options

  Selecting Display Test Options

  Selecting Audio Test Options

  Selecting Data Streaming Test Options

 <u>Interpreting Test Results</u>

Video for Windows Performance Test Contents

You can use VidTest to measure the video performance of your computer. To learn how to use Help, press F1.

 <u>About VidTest</u>

 <u>Starting and Running Tests</u>

 <u>Selecting Test Options</u>

 <u>Interpreting Test Results</u>

 <u>Interpreting Overall VidTest Results</u>

 <u>Interpreting Component Test Results</u>

 <u>Interpreting Video Playback Test Results</u>

 <u>Interpreting Video Playback Performance Test Results</u>

 <u>Interpreting Display Test Raw Data</u>
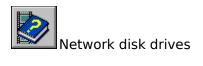
 <u>Interpreting Audio Test Raw Data</u>

 <u>Interpreting Data Streaming Test Raw Data</u>

drive to test

You can test any of the following mass-storage devices connected to your computer system by playing an .AVI file stored on that device.
- Hard-disk drives
- CD-ROM drives

Network disk drives

Microsoft RLE compression method

The Microsoft RLE compression method is normally used in two ways:

When playing video sequences from a base-level multimedia PC (80386SX CPU, 8-bit video display adapter, 150K per second CD-ROM drive).

When the content is a computer-generated animation or has little movement (such as the face of a newscaster reading the news).

Microsoft RLE compresses a video sequence by saving differences between successive frames of the video and then compresses the pixel information with run-length encoding. This compressor is available only for 8-bit video clips.

Microsoft Video 1 compression method

The Microsoft Video 1 compression method gives the best overall quality and performance for playing digital-video sequences across a wide range of software-only configurations, including the following:

A base-level multimedia PC

A more powerful (80486-based) multimedia PC

This is the default compression method for Video for Windows. As a result, most compressed video files from Video for Windows use this method.

Intel Indeo compression method

The Intel Indeo compression method can be used with software only, or with additional hardware to enhance video playback quality. This compression method is used when creating video clips for the following:

Systems with an 80486 or higher processor, and a display adapter that is supported by a Windows-compatible video-display driver.

Systems with the Intel ActionMedia II adapter. This adapter can enhance video playback quality.

The Intel Indeo compressor allows full-motion video playback at 30 frames per second, the same as broadcast television. The Intel Indeo compression method stores video clips in 24-bit video format.

The Video for Windows run time includes a software version of the Intel Indeo compressor. You can use this software to play files compressed with the Intel Indeo method.

SuperMatch Cinepac compression method

The SuperMatch Cinepac compression method is excellent for video sequences delivered on CD-ROM. It provides good image and motion quality at CD-ROM data-transfer rates (320-by-240 frame size at 150K per second data rate).

The video sequence is stored using the 24-bit color format, which preserves much of the color information from the original video. When playing on 8-bit displays, Cinepac uses dithering to transfer the 24-bit color values to an 8-bit palette format.

Cinepac uses an asymmetric compression technique, one that takes much longer during compression than during playback. On a fast capture system, allow approximately one hour of compression time per minute of video at 320-by-240 frame size, 15 frames per second.

custom video playback file

The custom file option lets you use your own Video for Windows file (.AVI file extension) in the test. To obtain accurate results, use a test file that is 1.5 MB, or larger.

audio subsystem

The components of your system used to play sound. They include the following:

Central processing unit (CPU)

Reads data, separates audio and video data, and sends digital sound to the audio (sound) board.

Audio board

Provides the audio signals that your speakers generate as sound. Normally, the audio board either occupies one or more of the slots in your computer, or is included on the computer's motherboard.

Speakers

Convert signals from the audio board into audible sounds, such as music and speech.

Device drivers

Control individual devices, such as an audio board. Drivers are small, specialized applications. You can identify the Windows audio drivers installed on your system by using the Drivers application in the Control Panel.

display subsystem

The components of your PC used to display images on the monitor. They include the following:

Mass-storage device

Stores video clips. This is usually a CD-ROM drive or a hard-disk drive. When playing a video clip, the clip's content is transferred one portion at a time from the mass-storage device to random-access memory (RAM).

Central processing unit (CPU)

Builds frame images and transfers the images to the display adapter.

Display adapter

Provides the video signal to your monitor. The adapter either occupies one or more of the slots in your computer, or is included on the motherboard.

System monitor

Converts the video signal from the display adapter into text, images, and motion video.

Device drivers

Small, specialized applications that control individual devices, such as a monitor. To identify the display driver installed on your system, run the Windows Setup application.

data streaming subsystem

The data streaming subsystem moves large amounts of information from a mass-storage device to random access memory (RAM). The components of your PC that are used in the data transfer include the following:

Mass-storage device

Storage medium for video clips, sound, and other files on a computer. This is usually a CD-ROM drive or a hard-disk drive. When playing a video clip, the clip's content is transferred, a portion at a time, from the mass-storage device to random-access memory (RAM).

Central-processing unit (CPU)

Requests and coordinates data transferred from the mass-storage device to RAM.

Device drivers

Device drivers for your hard disk are part of the MS-DOS operating system. Device drivers for a CD-ROM drive are extensions to the MS-DOS operating system. Your system-configuration files, CONFIG.SYS and AUTOEXEC.BAT, contain entries to load the CD-ROM drivers into MS-DOS memory.

AVI file

Audio Video Interleaved (.AVI) files contain digital-video clips and are produced by the Video for Windows application. These files can interleave (store in alternating layers) sections of sound and video data, which provides the following benefits:

Efficient playback from hard disk and CD-ROM.

Efficient playback on systems with limited memory. Playback applications can read and play video files without pre-loading lengthy sound segments.

Quick loading in an application. Playback applications can begin playing quickly because they only need to access a few frames of video and a portion of sound at a given time.

audio device driver

A small application that controls the sound system. To use a sound system with Windows, you must install an audio device driver.

One audio device driver in your system is the Sound Mapper. This driver ensures that Windows uses an audio device driver that matches the characteristics of the audio file (or data) that you want to play. If your computer does not support the audio format, Sound Mapper converts the files.

Video for Windows device driver

The Video for Windows device driver (MCIAVI.DRV) controls playback of video sequences stored as .AVI files. Media Player also uses this driver to play video sequences.

pixel

The smallest graphics unit on the screen. Also known as picture elements (pels).

Run-Length Encoding

A data-compression method based on recognizing repeated data values. When used with images, RLE scans each line in an image, encoding information for portions that have repeated pixel values. The encoded information is stored instead of the original pixel data. The system then recreates the image from the stored information.

streaming test priming phase

The priming phase, which occurs at the beginning of the streaming test, activates the streaming device and allows it time to reach its optimal operating speed. The optimal operating speed provides the best performance level for transferring data by minimizing the time required to retrieve data.

streaming test data-gathering phase

The data-gathering phase collects information while the streaming device operates in the optimal portion of its performance range.

buffer

A section of random-access memory (RAM) that is used to hold data temporarily.

MS-DOS address space

The first megabyte of random-access memory (RAM) in your computer that is accessible by MS-DOS applications.

Additional RAM is called "extended memory" and is accessible by Windows-based applications and MS-DOS memory manager applications.

Buffers in the MS-DOS address space transfer data more quickly than buffers in extended memory; however, the amount of MS-DOS memory is limited. If insufficient MS-DOS memory is available for a specific operation, the operation might be performed using extended memory.

extended memory

The random-access memory (RAM) in excess of one megabyte. Extended memory is accessible by Windows-based applications, but not by MS-DOS.

The first megabyte of RAM, called the MS-DOS address space, is accessible by MS-DOS and Windows-based applications.

Typically, extended memory provides a much larger portion of memory than the MS-DOS address space; however, buffers in extended memory operate more slowly than buffers in the MS-DOS address space.

Introducing VidTest

Video for Windows Performance Test (VidTest) is an application that helps you determine how well your personal computer system can play digital-video clips created using Microsoft Video for Windows. VidTest examines the overall ability of your personal computer to play digital video, and the capabilities of the hardware subsystems that support video playback, including:

Audio

Display

Data streaming

See Also

[Selecting Video Playback Test Options](#)
[Selecting Display Test Options](#)
[Selecting Audio Test Options](#)
[Selecting Data Streaming Test Options](#)

Exiting VidTest

There are two ways to exit VidTest and return to Windows.

 To exit VidTest

Double-click the Control-menu box in the upper-left corner of the window.

From the main VidTest window, choose the Close button.

Starting the Performance Tests

The VidTest window shows a picture of a PC and a pair of speakers. VidTest uses this picture to show you which test is in progress. Descriptions or instructions appear in the area beneath the picture.

To run the complete set of tests and check overall performance

Choose Begin Testing.

To test a specific portion of your computer system

Choose the Advanced button.

See Also

[Selecting Video Playback Test Options](#)
[Selecting Display Test Options](#)
[Selecting Audio Test Options](#)
[Selecting Data Streaming Test Options](#)

Configuring Video for Windows

The Video Playback Options dialog box lets you adjust the way a video sequence appears on your screen for video clips used in the Video Playback Performance Test.

Note Changing these options affects playback of all video sequences that use the <u>Video for Windows device driver.</u>

To configure Video for Windows

1 In the main VidTest window, choose the Advanced button.

2 Choose the Video button.

3 Choose the Configure Video button.

4 In the Video Playback Options dialog box, choose the options you want to use.

Configuration Options

You can supply the following information for the configuration options:

Option	Description
Video Mode	Controls the video image display. In window mode, the video sequence plays in a small window. In full-screen mode, the screen temporarily switches to 320-by-240 display resolution, and the video sequence plays in a large box.
Zoom By 2	Doubles the frame size of the playback area.
Play Only If Waveform Device Available	Waits to play the video sequence until the audio resources become available (assuming the video sequence includes a sound track and the <u>audio subsystem</u> is already in use).
	If not selected, VidTest plays the video sequence immediately with or without the sound track, depending on the availability of the audio resources.
Seek To Nearest Full Frame	Plays the nearest full frame when a jump to a non-consecutive frame occurs (always displaying the correct frame image).
	If not selected, VidTest chooses the exact frame when a jump to a non-consecutive frame occurs. VidTest displays the current frame data correctly. However, if the frame depends on other frames for some of its data, the frame display might contain inaccuracies.
Skip Video Frames If Behind	Prioritizes the sound track of a video sequence above the frame. If VidTest cannot maintain the playback pace, it skips video frames to keep pace with the audio track.
	If not selected, VidTest plays all frames of the video sequence and skips portions of the audio

	track as needed.
Don't Buffer Offscreen	Provides a slightly faster video playback rate. If your system's video playback lags only slightly behind the audio-playback rate, this option might let you play the video sequence without dropping frames.
	If you select this option and your system still lags behind the playback rate of the video sequence, the video images might become fuzzy.

See Also

[Interpreting Overall VidTest Results](#)
[Interpreting Component Test Results](#)
[Interpreting Video Playback Test Results](#)
[Interpreting Video Playback Performance Test Results](#)
[Selecting Video Playback Test Options](#)

Running the Complete Set of Tests

Running the complete set of tests checks the overall ability of your computer to play digital-video clips. The complete set includes four tests: video playback, audio, display, and data streaming. The video-playback test is performed first, and you can choose whether to run the other tests. Each time you run the complete set of tests, VidTest measures video-playback performance for one of the following mass-storage devices:

CD-ROM drive

Hard-disk drive

Other drive (such as a network drive) connected to your system

You can select the storage device and video-playback test file you want to use in each test.

Note VidTest does not measure system resources used to decompress video frames. If VidTest reports satisfactory results for all components and yet drops frames or skips sound portions, the burden of decompressing video frames might be the cause.

 To run the complete set of tests

1 From the VidTest window, choose Begin Testing.
2 Select the drive you want to test.

   You should test all drives that you plan to use when playing Video for Windows sequences.

   Note The Video for Windows CD-ROM drive is the default drive to test. If it isn't detected, the hard-disk drive C becomes the default.

3 Select the test .AVI file you want to use.

   The Video for Windows CD-ROM includes files for the first four file types listed.

Microsoft RLE

8-bit Microsoft Video 1

16-bit Microsoft Video 1

Intel Indeo

SuperMatch Cinepac

Custom

4 Choose OK.

VidTest performs the set of component tests in the following order: video playback, display, audio, and data streaming.

See Also

Interpreting Overall VidTest Results

Running Component Tests (Advanced)

Component tests can be run as a set or individually. Running a component test provides two advantages:

You can test the portion of the system in question; you don't need to run the entire set of tests.

For the Video Playback, Audio, and Streaming tests, you can select specific files to use in the tests.

Note Running one or more component tests individually should be reserved for advanced users and video authors who need to measure system components for production purposes. To test Video for Windows performance, run the entire set of tests by choosing the Begin Testing button.

 To run a single component test

1 From the VidTest window, choose Advanced.

2 Choose the test you want to run.

3 To use a custom file or change test variables, make those selections in the dialog box.

4 Choose OK.

See Also

Selecting Video Playback Test Options

The Video Playback Test tests the playback performance of a specific video clip. This test monitors the number of frames that are skipped, and the number of blank sections of audio during playback of the video clip.

 To select Video Playback Test options

1 From the Video Playback Performance Test Configuration dialog box, select the options you want to use.
2 Choose OK.

Video Playback Test Options

You can supply the following information for the video-performance test:

Option	Description
File Name	The .AVI file to use in the test. The compression method can affect the video clip's playback performance and quality. Compressed video files require less disk space and a lower data-streaming rate to process the files. Compressed video files are loaded in small segments, so they can be played on systems with limited memory.
Configure Video button	Playback settings for the Video for Windows driver (MCIAVI).

See Also

Starting the Performance Tests

Configuring Video for Windows

Running the Complete Set of Tests

Interpreting Overall VidTest Results

Interpreting Component Test Results

Interpreting Video Playback Test Results

Interpreting Video Playback Performance Test Results

Selecting Display Test Options

The Display Test options are used to create and send images to the system display (several times a second) in order to test the performance of the video-display adapter and its driver for use with your video clips.

To select Display Test options

1 In the Display Performance Test Configuration dialog box, select the options you want.
2 Choose OK.

Display Test Options

You can supply the following information for the display test:

Option	Description
Frames	The number of frames displayed each second.
Width	The frame width in pixels of the test image.
Height	The frame height in pixels of the test image.
Zoom By 2	The frame size is doubled for the test.
Format	How pixel data is sent to the display.
	RGB stores frames as uncompressed images with Red/Green/Blue color information.
	RLE stores frames as compressed images with run-length encoded color information. RLE compression applies only to .AVI files with 8-bit color.
Colors	Specifies the image depth (the number of bits used to define the color of each pixel in a frame). Both the display driver and the display adapter must support the image depth you choose, as follows:
	4 bits per pixel supports images up to 16 colors.
	8 bits per pixel supports images up to 256 colors.
	16 bits per pixel supports images up to 65,535 colors (or 32,767 colors on some display drivers).
	24 bits per pixel supports images up to 16 million colors.

See Also

Starting the Performance Tests
Running Component Tests (Advanced)
Interpreting Display Test Raw Data
Interpreting Component Test Results

Selecting Audio Test Options

The Audio Test options are used to monitor the effect of playing a digital sound file. When testing a short file, VidTest plays the file several times. With a longer file, VidTest plays the file once in its entirety.

To select Audio Test options

1 From the Audio Performance Test Configuration dialog box, select the options you want.

   If you use the Browse button, you must select a .WAV file for this test.

2 Choose OK.

Audio Test Options

You can supply the following information for the audio-performance test:

Option	Description
Wave Device	The <u>audio device driver</u> and associated audio board you want to test.
File Name	The audio file you want to use in the test. VIDTEST.WAV is the default audio file supplied for the test (uncompressed, 8-bit, 22.050 kHz).
Writes Per Second	The frequency that the test writes blocks of audio data to the audio device. Video for Windows retrieves and plays audio and video at the rate you specify, so be sure to use the same value here as you use in the Video Playback and Display tests. Most .AVI files use 15 fps for this value.

See Also

<u>Interpreting Audio Test Raw Data</u>

<u>Interpreting Component Test Results</u>

<u>Running Component Tests (Advanced)</u>

Selecting Data Streaming Test Options

The Data Streaming Test options are used to monitor the rate at which data is transferred from either your hard disk or CD-ROM to your computer's RAM. The data-streaming test consists of two phases: priming and data gathering.

The priming phase occurs first and activates the streaming device. In the priming phase, the speed of the streaming device increases to an optimal performance level for transferring data.

The data-gathering phase of the test collects information while the streaming device operates in the optimal portion of its performance range.

 To select Data Streaming Test options

1 From the Data Streaming Performance Test Configuration dialog box, select the options you want.

   The most important option is File Name, which identifies the device, the path, and the test file you want to use in the test. Other options are more relevant for video authors and device-driver developers.

2 Choose OK.

Streaming Test Options

You can supply the following information for the data-streaming test:

Option	Description
File Name	The device, path, and file you want to use. For this test, select any file that is 1.5 MB, or larger.
Requested Transfer Rate	The rate at which data is transferred from the hard disk or CD-ROM to RAM. The standard transfer rate for CD-ROM drives is 150K per second. Transfer rates for hard disks vary from 100K per second to over 300K per second.
Read Block Size	The number of bytes to read and transfer each time the disk or CD-ROM drive is accessed during the data-gathering phase.
Allowed Percent Block	The maximum percent of time that the CPU should wait for data from the disk or CD-ROM drive. Although this option does not affect performance, it provides a goal for the streaming device to attain and is reported as the first Reads Exceeding xx MS field in the Test Results. The default value is 40%, the standard CD-ROM streaming performance for a multimedia PC.
Prime Transfer Rate	The sustained data-read rate for the priming phase.
Prime Read Block	The number of bytes to read and transfer each

Size	time the disk or CD-ROM drive is accessed during the priming phase.
Total Prime Size	The length (in bytes) of the priming phase.
DOS Addressable Buffers	That the buffers used in the test are located in the MS-DOS address space. Reads and writes to buffers in this section of memory are performed more quickly than buffers located in extended memory. If not selected, buffers for the test are allocated from extended memory.

See Also

Interpreting Component Test Results

Interpreting Data Streaming Test Raw Data

Running Component Tests (Advanced)

Interpreting Overall VidTest Test Results

The graphs resulting from the audio, display, and data-streaming tests, which are color-coded to show different performance levels, let you quickly understand the motion-video performance capabilities of your system. When the tests are complete, VidTest provides a pointer and a number to indicate the performance level of your computer, as follows:

Good

Satisfactory

Unsatisfactory

If VidTest indicates satisfactory or unsatisfactory performance for one or more areas, be sure to read the additional information provided for suggestions about how to improve overall performance.

Note VidTest does not measure system resources used to decompress video frames. Therefore, your system's performance might vary from the predicted test results.

 To see individual component performance-test results

Choose Audio Info to see more audio-test results

Choose Display Info to see more display-test results

Choose Streaming Info to see more streaming test results

See Also

Configuring Video for Windows
Running the Complete Set of Tests

Interpreting Component Test Results

Component tests measure the performance of the subsystems in your computer involved in playing video sequences. When you run the complete set of tests, VidTest provides a bar graph and an information button for each component test. The bar graphs rate the overall component performance as good, satisfactory, or unsatisfactory. The information buttons display text that describes common problems, solutions, and technical data relating to each component test.

 To display test data

From the test results dialog box, choose Raw Data.

See Also

Interpreting Video Playback Test Results

If skipped video frames or sound breaks occur during the Video Playback test, your computer cannot keep pace with the content of the tested video clip. (The video data isn't being transferred quickly enough from the disk or CD-ROM drive to the sound and video subsystems; therefore, it is overloading your CPU, the audio, the display, or the data-streaming subsystem of your computer.) You should check the performance of these subsystems. If the video clip plays without skipped frames and without sound breaks, you can perform the remaining tests, or exit VidTest.

To continue the VidTest performance tests

From the Video Playback Test Results dialog box, choose Continue.

Note During the test, you might notice audio sputtering, but find that VidTest reports no sound breaks. Sputtering indicates that your audio subsystem is receiving data correctly, but is struggling to keep the audio and video correctly synchronized. If you experience audio sputtering, you should consider the following ways to improve audio performance:

Make sure you have the correct drivers for your equipment, and that you have the latest versions of those drivers.

Upgrade the sound card in your computer.

Try to find a more efficient file decompressor.

As a last resort, consider upgrading to a faster computer.

See Also

Interpreting Video Playback Performance Test Results

Raw data from the video-playback performance test produces three kinds of test statistics.

Test Results

Test results are gathered during the test or calculated from information gathered during the test.

Parameter	Description
Frames Skipped	How many frames out of the total number of frames were skipped.
Audio Breaks	The number of breaks in the audio track occurring during playback. Breaks usually indicate blockages in other parts of the system, such as network activity, resource limitations, or other system loads. If an audio break occurs in your tests, try running the other performance tests (Display, Audio, and Streaming) to determine the nature of the blockages.

Test Parameters

The test parameters reiterate the audio-test options you selected before running the test. For more information, see Selecting Video Playback Test Options.

Test-File Information

The test file has the following characteristics:

Option	Description
File Length	The number of frames in the file.
Frame Width	The frame width in pixels of the test image.
Frame Height	The frame height in pixels of the test image.
Bit Depth	The number of bits used to represent the color of each pixel in a frame. Bit depth ranges from 4 bits (a maximum of 16 different colors) to 24 bits (a maximum of 16 million colors).
Frame Rate	The number of frames displayed each second of playback.
Frame Compression	How pixel data in each frame is sent to the display:
	RGB stores frames as uncompressed images with Red/Green/Blue color information.
	RLE stores frames as compressed images with run-length encoded color information.
Video Compression	The video-storage format used to reduce the overall file size. VidTest recognizes the following formats (compressed or uncompressed):

Full Frames (uncompressed image)
Microsoft RLE Compression
Microsoft Video 1 Compression
Intel Indeo Compression

See Also

[Configuring Video for Windows](#)
[Running the Complete Set of Tests](#)
[Selecting Video Playback Test Options](#)

Interpreting Display Test Raw Data

Raw data from the display-performance test produces two kinds of test statistics.

Test Results

Test results are gathered during the test or calculated from data gathered during the test.

Parameter	Description
CPU Usage	The amount of CPU processing power the test used. CPU usage is expressed as a percentage of your computer's total processing power. For optimal video-playback performance, this value should be less than 30%.
Total Test Time	The duration of the Display Test, normally two seconds.

Test Parameters

The test parameters reiterate the display-test options you selected before running the test. For more information, see Selecting Display Test Options.

See Also

Running Component Tests (Advanced)

Selecting Display Test Options

Interpreting Audio Test Raw Data

Raw data from the audio-performance test produces three kinds of test statistics.

Test Results

Test results are gathered during the test, or calculated from information gathered during the test.

Parameter	Description
CPU Usage	The amount of CPU processing power this test used. CPU usage is expressed as a percentage of the your computer's total processing power. For good performance, this value should be 10%, or less.
Total Test Time	The duration of the audio test, in milliseconds. Sound files that are less than 7 seconds are played more than once to give more accurate results.

Test Parameters

The test parameters reiterate the audio-test options you selected before running the test. For more information, see <u>Selecting Audio Test Options</u>.

Test-File Information

The test file has the following characteristics:

Option	Description
Total Data Read	The number of bytes of audio data read from the test file.
Channels	The audio stream as monaural (1 channel) or stereo (2 channels).
Sample Rate	The recording frequency, which is commonly: 11.025 kHz (voice grade), 22.05 kHz (FM radio quality), and 44.1 kHz (CD quality).
Sample Size	8- or 16-bit samples. 8-bit samples require less storage; 16-bit samples provide better quality.
Block Alignment	The number of bytes in a sample, or the data-block size. (This value is used by the audio device driver to allocate its buffers.)
Average Bytes Per Second	The number of bytes required to play each second of the audio file. For example, for audio data in pulse-coded modulated (PCM) format, the average bytes per second is the product of the number of channels, sample rate, and the sample size.
Format Tag	The audio data type, such as PCM or ADPCM. Pulse-code modulation (PCM) is a method of digitizing sound by representing it as a series of

numeric values. PCM samples the sound source at a fixed rate and stores the sampled values.

Adaptive differential pulse-code modulation (ADPCM) is a method of digitizing sound that extends PCM by predicting sample values and then storing the difference between the predicted and sampled values. ADPCM typically produces smaller values (and files) than PCM; however, VidTest only tests PCM sound files.

See Also

Selecting Audio Test Options

Running Component Tests (Advanced)

Interpreting Data Streaming Test Raw Data

Raw data from the data-streaming test produces three kinds of test statistics.

Test Results

Test results are gathered during the test, or calculated from information gathered during the test.

Option	Description
Overall CPU Usage	The amount of CPU processing power used in streaming data. CPU usage is expressed as a percentage of your computer's total processing power. For optimal video playback performance, this value should be less than 30%.
Background CPU Usage	How the data-streaming test affects other CPU processing that occurs while the CPU waits for data or other resources.
Overall Transfer Rate	The transfer rate achieved during the data-gathering phase.
Total Data Read	The total number of bytes read in the test.
Total Time Blocked By Reads	The accumulated time that the CPU waited for data buffers.
Reads Exceeding xx MS	The number of reads from the streaming device that exceeded the stated time. The first entry identifies the amount of time beyond the Allowed Percent Block value that the CPU waited. The second entry identifies the number of reads of the data-streaming device that hindered the Requested Transfer Rate.
Longest Time Blocked By Read	The longest time that the CPU waited for the next buffer of data.
Shortest Time Blocked By Read	The shortest time that the CPU waited for the next buffer of data.

Test Parameters and Advanced Parameters

The Test Parameters and Advanced Parameters reiterate the audio-test options you selected before running the test. For more information, see Selecting Data Streaming Test Options.

See Also
[Running Component Tests (Advanced)](#)
[Selecting Data Streaming Test Options](#)