BrightSign

Diagnostics Web Server

Aug 2011

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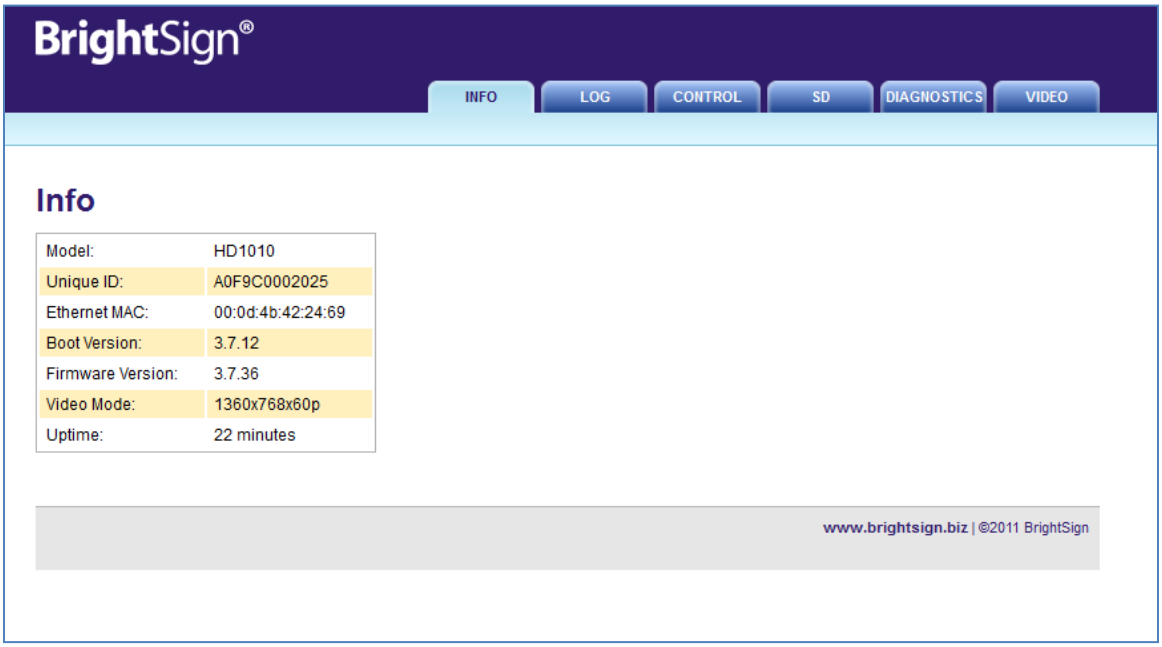
1. Overview

As of V3.7.12, BrightSign's firmware has new diagnostic web server. This allows a user to check various aspects of the BrightSign unit using any web browser by simple pointing the browser at the device.



2. Enabling Diagnostics Web Server

The web server is enabled by setting the [networking] http_server registry key to the port number that you wish to run the server on. To run the web server on the standard port -

- registry write networking http_server 80
- registry flush
- Or in a script run:
  - registrySection = CreateObject("roRegistrySection", "networking")
  - registrySection.Write ("http_server","80")
  - registrySection.Flush()

Note: A registry flush is necessary if the next thing you do is just pull the power plug. Registry writes buffered for a few seconds because the EEPROM and NAND only have a limited number of writes so we want to protect against writing lots very quickly.

A registry flush should not be necessary if you issue the "reboot" command to perform an "orderly" shutdown.

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3. Authentication

By default, access does not require a password. By setting up a password you can switch on 'digest' authentication, this is done by a password in the [networking]http_auth registry key;

- Registry write networking http_auth password
- Use a username of admin along with your chosen password when connecting.

Note - The older web server supported basic authentication only, if for some reason you wish to this less secure authentication you can do this by setting the [networking]http_basic registry key.

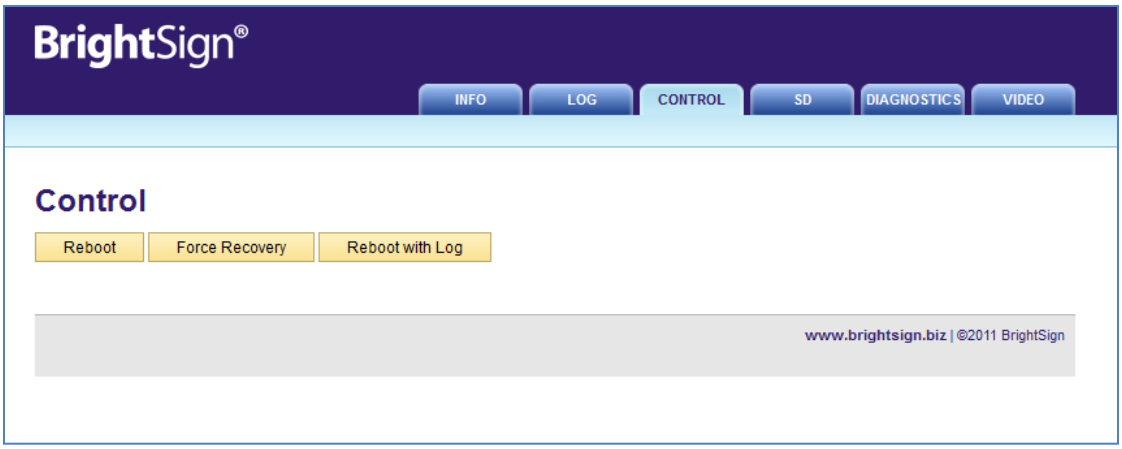
4. Connecting

Bonjour/Mac/Linux Users - you should be able to find your BrightSign by its host name. The default hostname is brightsign-*serial-number*.local. I.e. http://brightsign-a0f9c1001600.local/

5. Features

The provided web page has several "tabs" that can be used to show various diagnostics information.

"Control" allows the BrightSign to be rebooted remotely or forced into recovery mode (by deleting autorun.brs from all available storage devices and rebooting.)



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6. Secret Features

7. Time Doctor

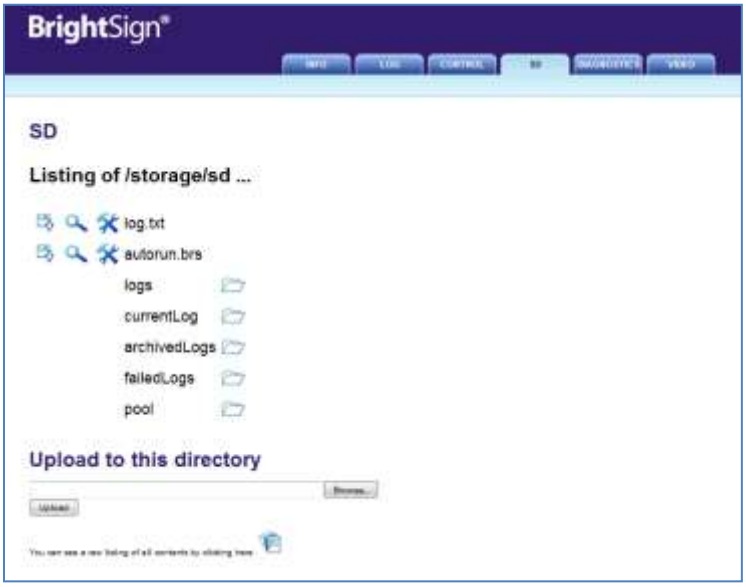
- You can stop TimeDoctor, grab the log, reset the log and then start it again with http://172.30.1.125/td . In case the TimeDoctor was not running then this will start it
- The old behaviour of just grabbing the log without stopping or starting it is available via http://172.30.1.125/td2 this should only use when TimeDoctor is not running.

8. SD/USB Tab

Access to files on the card SD card is via the 'SD' tab

Files can be downloaded using the 'floppy disk' icon; certain file types can be viewed using the 'magnifying glass' icon, clicking on the 'tools' icon takes you to another screen with further actions available for that particular file (see "File Tools" below).

Folders that indicate on the RHS with the usual icon, clicking on the icon will drill-down into that subfolder. You can upload into the viewed directory by using the 'Upload' button in a obvious way. You can list all files on the given storage using the link at the bottom of the page, all files regardless of which folder you are viewing.



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9. File Tools

9.1.1. Delete

Deletes the named file

9.1.2. Rename

Various rename options, with a history of previous renames for ease of use.

9.1.3. Set Autorun

Set the current file as the current autorun file (by copying), the current autorun file will be preserved as 'autorun.backup'. Note there is no checking of the file for integrity, i.e. you could make any file you like the autorun file.

9.1.4. Content Playback

This option will create replace the current autorun on the device with a custom script that will attempt to playback the current file (note the old autorun file is renamed). The user needs to observe the output device to see the results of the script.
The custom script displays the current mode in big white letters on screen for 5 seconds before displaying the content.
Note that other than for text files there are no other checks that the content chosen can be played back by the device.

9.1.5. Video Mode Test

This is an extension of the 'Content Playback' test above, however in this test the custom script will also cycle through all video modes.

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Note this option is not available on the TTK.

9.1.6. Diagnostics Tab

This tab contains a bunch of options useful for diagnosis problems on the BrightSign.

9.1.7. Network Diagnostics

This option runs the 'network diagnostics' as available from the brightsign shell. It may take a long time to run, particularly when tests fail.

9.1.8. DNS Lookup

Enter a DNS name here to test whether name resolution is working.

9.1.9. PING

Enter a DNS name or IP address here to ping that device.

9.1.10. Download Speed Test

Enter a URL to test download speed on. If you have a proxy configured you can choose to ignore that setting.
You can also choose whether to store the URL target on the available storage or not. Storing the target is likely to give a more accurate results.

9.1.11. Network Settings

This option will output a raw dump of the network settings as stored in the registry.

9.1.12. Network Config

This option will output a raw dump of the linux network settings (i.e the 'ifconfig' command).

9.1.13. Disable Autorun

This option will cause the device to reboot but will disable autorun when the device restarts.

10. Video Tab

The first item on the video tab is the current display mode.

10.1.1. Change Video Mode

You can change the current video mode using the drop down list. NB this operation will cause the device to reboot and also disables the autorun script on the next boot (see 'Disable Autorun' above), otherwise the current autorun might well simple reset the video back to what is setup.

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10.1.2. Video Mode Test

This option will create replace the current autorun on the device with a custom script that tests all video modes (note the old autorun file is renamed). The user needs to observe the output device to see the results of the script.
The custom script displays the current mode in big white letters on screen for 5 seconds before moving onto the next mode.

10.1.3. Powersave

This enables/disables the 'powersave' mode on the HDMI/VGA output.

10.1.4. Implementation

This functionality is all implemented using a custom HTTP server. It runs completely separately from the main BrightSign application.

10.1.5. Potential features

The following features could probably be added to the existing system relatively easily:

- Upload new autorun.brs and reboot into it.
- Display the lastring log so we can see kernel output from the previous boot.
- Download crash dump log.
- Display contents of card/files in a prettier way.

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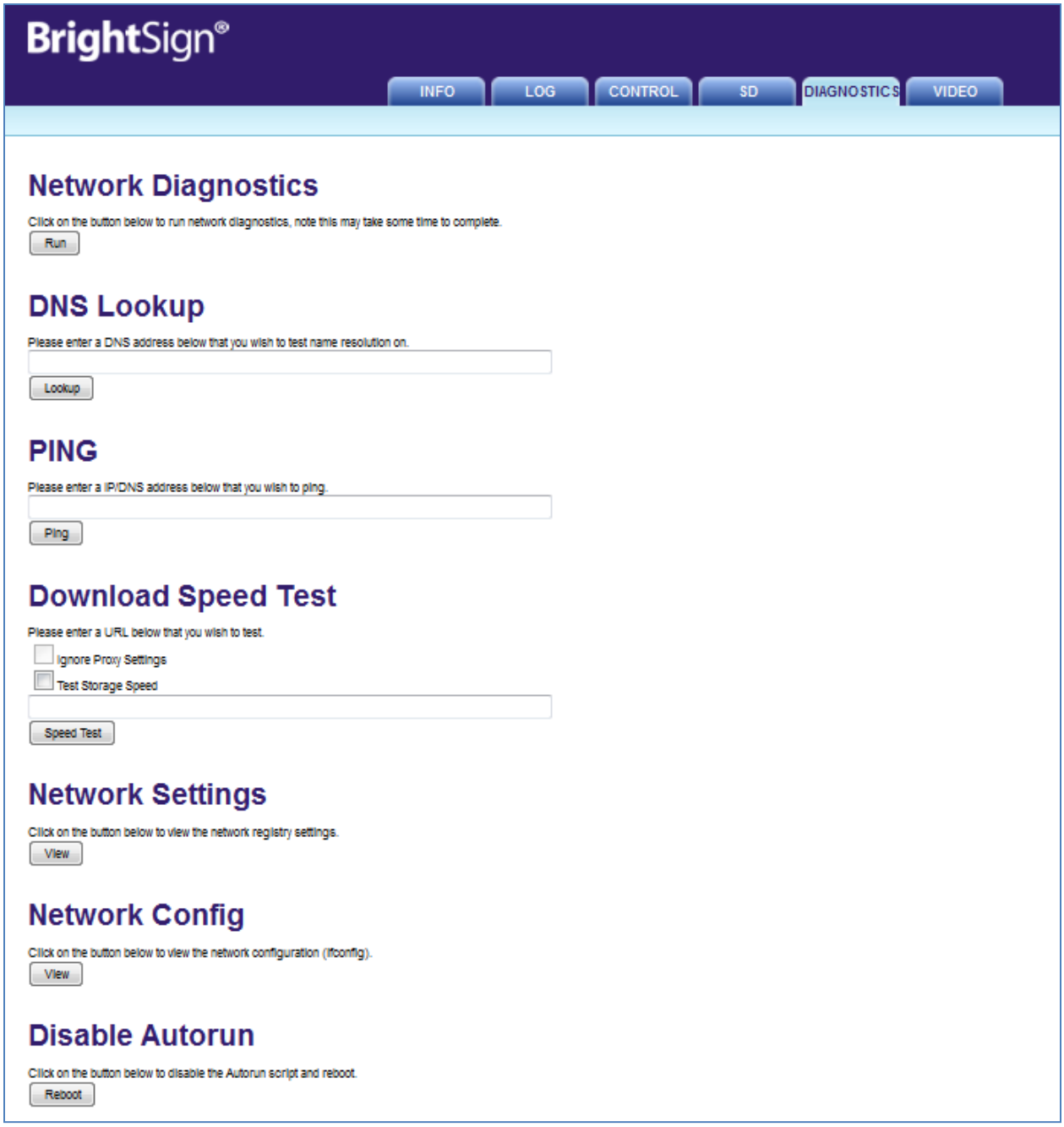

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