
EPWave Documentation

Release

Doulos

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EPWave (EDA Playground Wave) is a free interactive browser-based wave viewer.
EPWave web application located at <http://www.edaplayground.com/w>

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1.1 Introduction

EPWave web application located at <http://www.edaplayground.com/w>

1.1.1 Overview

EPWave is a free interactive browser-based waveform viewer for design and verification engineers. The primary use cases are:

- Run prototype/example code on EDA Playground and view wave results with *EPWave*.
- Quickly view waves for simulations that ran in the cloud (private or public).
 - Example: *EPWave* plugs into existing browser-based regression systems.

EPWave is part of the *EDA Playground* tool suite.

1.1.2 Example Waves

- Trivial Example
- OpenCores Example

1.1.3 Support, Feature Requests and Bug Fixes

Support available on *EDA Playground* forum

Or open a bug here: <https://github.com/edaplayground/epwave/issues> (requires GitHub account).

1.1.4 News and Site Updates

New features are frequently being added to *EPWave* and *EDA Playground*. Follow the updates on your favorite social media site:

- @EDAPlayground on Twitter
- EDA Playground on Facebook
- EDA Playground on Google+

1.1.5 Credits

EPWave was created by Doulos.

1.2 Quick Start

You must be logged in to load or save waves.

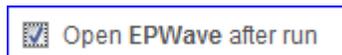
1.2.1 Loading Waves from EDA Playground

You can run a simulation on EDA Playground and load the resulting waves in EPWave.

- Go to your code on EDA Playground. For example: [RAM Design and Test](#)
- Make sure your code contains appropriate function calls to create a *.vcd file. For example:

```
initial begin
    $dumpfile("dump.vcd");
    $dumpvars(1);
end
```

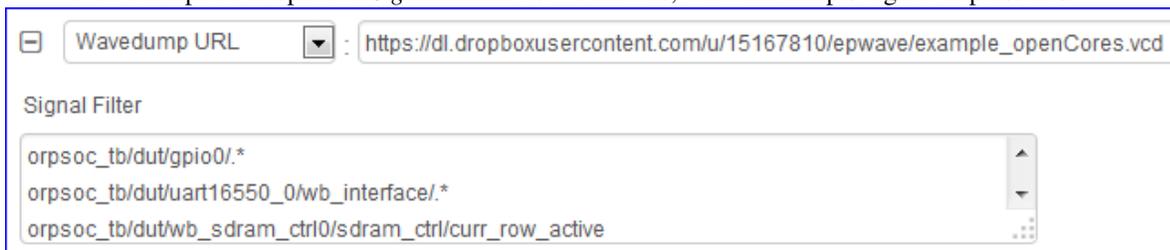
- Select a simulator and check the **Open EPWave after run** checkbox. (Not all simulators may have this run option.)



- Click **Run**. After the run completes, the resulting waves will load in a new EPWave window. (Pop-ups must be enabled.)

1.2.2 Loading Waves from File or URL

- On [EPWave Homepage](#), specify the wave dump file to load. There are 2 sources for loading waves.
 1. Specify the URL pointing to the waves accessible over the web, such as a file in a public Dropbox folder.
 2. Upload the wave dump from your own computer.
- After specifying the wave dump file, you can click the **Load** button to load the waves.
- If your wave dump contains 2000 signals or larger, you may specify a *Signal Filter* so that fewer than 2000 signals are loaded. If *Signal Filter* is not specified, then only the first 2000 signals will be loaded. Click on the + on the top left to open the *Signal Filter*. For *.vcd files, the filter accepts regular expressions.



After specifying the *Signal Filter*, click the **Load** button to load the waves.

- (Optional) You may specify the *From* and/or *To* times to limit the time range of the loaded wave. If your wave dump contains a lot of data, then the ending *To* time will automatically be limited.

From: To:

1.2.3 Viewing Signals

After loading the waves, you can display signals by using the **Get Signals** button.

The screenshot shows the EPWave interface with a 'Get Signals to Display' dialog box open. The dialog box has a table with two columns: 'Scope' and 'Signal Name'. The 'Scope' column lists various paths, and the 'Signal Name' column lists the signals available for that scope. The signal 'B0_row_addr[11:0]' is highlighted in blue. At the bottom of the dialog, there are three buttons: 'Append Selected', 'Append All', and 'Close'.

Scope	Signal Name
orpsoc_tb/dut/gpio0	Act_b0
orpsoc_tb/dut/uart16550_0/wb_interface	Act_b1
orpsoc_tb/dut/wb_sdram_ctrl0/sdram_ctrl	Act_b2
orpsoc_tb/sdram0	Act_b3
	Active_enable
	Addr[11:0]
	Aref_enable
	B0_row_addr[11:0]
	B1_row_addr[11:0]
	B2_row_addr[11:0]
	B3_row_addr[11:0]
	Ba[1:0]
	Bank[1:0]
	Burst_counter[7:0]
	Burst_length_1
	Burst_length_2
	Burst_length_4
	Burst_length_8
	Burst_length_f
	Burst_term

1.3 FAQ

1.3.1 Can I view the waves from my EDA Playground sim using EPWaves?

Yes, see *Loading Waves from EDA Playground*

1.3.2 Which wave formats are supported?

*.vcd wave format is currently supported. *.fsdb support is available for private deployments.

1.3.3 How do I get updates about new EPWave features?

New features are frequently being added to EPWave and EDA Playground. Follow the updates on your favorite social media site:

- @EDAPlayground on Twitter

- EDA Playground on Facebook
- EDA Playground on Google+

1.3.4 What are the limits for loading waves?

The *.vcd file size limit is 20MB. Larger limits are available for private deployments.

If the wave dump contains more than 2000 signals, then only the first 2000 signals will be loaded. You may use the *Signal Filter* to load the other signals. See *Loading Waves from File or URL*

1.3.5 Which web browsers are supported?

- Firefox
- Chrome
- Internet Explorer 9 or higher

1.3.6 How do I log in if I don't have a Google or Facebook account?

We are working on providing additional ways to sign into **EDA Playground**. Meanwhile, please create a new Google account at <https://accounts.google.com/SignUp> and use that to sign in.

Note: If you're using EDA Playground on a private network, log in with the authentication credentials for your network.

1.3.7 I have more questions. How do I get support?

EPWave is actively being improved. If you need help or have suggestions, support is available on [EDA Playground forum](#)

If you see a bug, however minor, please post on the forum or file a new issue at <https://github.com/edaplayground/epwave/issues> (requires GitHub account)