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# 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.

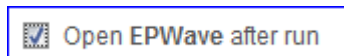
### 1.2.1 Loading Waves from EDA Playground

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
```

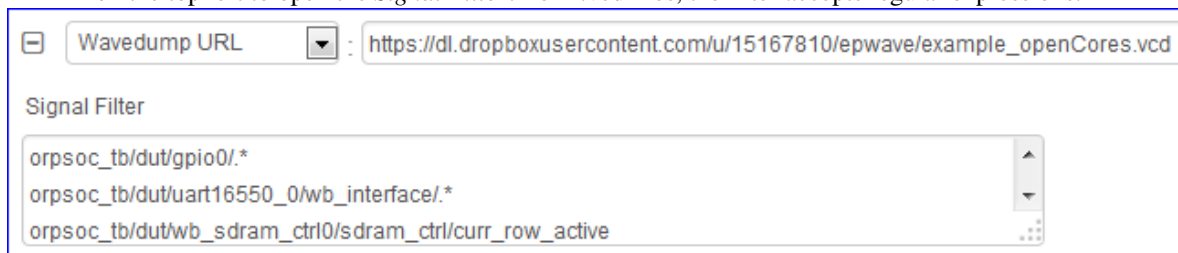
- Select a simulator and check the **Open EPWave after run** checkbox. (Not all simulators may have this run option.)



- 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.

A screenshot of the EPWave interface. At the top, there is a "Wavedump URL" field with a dropdown arrow and a text input containing "https://dl.dropboxusercontent.com/u/15167810/epwave/example\_openCores.vcd". Below this is a "Signal Filter" section with a text input containing three lines of regular expressions: "orpsoc\_tb/dut/gpio0/\*", "orpsoc\_tb/dut/uart16550\_0/wb\_interface/\*", and "orpsoc\_tb/dut/wb\_sram\_ctrl0/sdram\_ctrl/curr\_row\_active". There is a small "+" icon on the top left of the Signal Filter input and a small "x" icon on the top right.

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

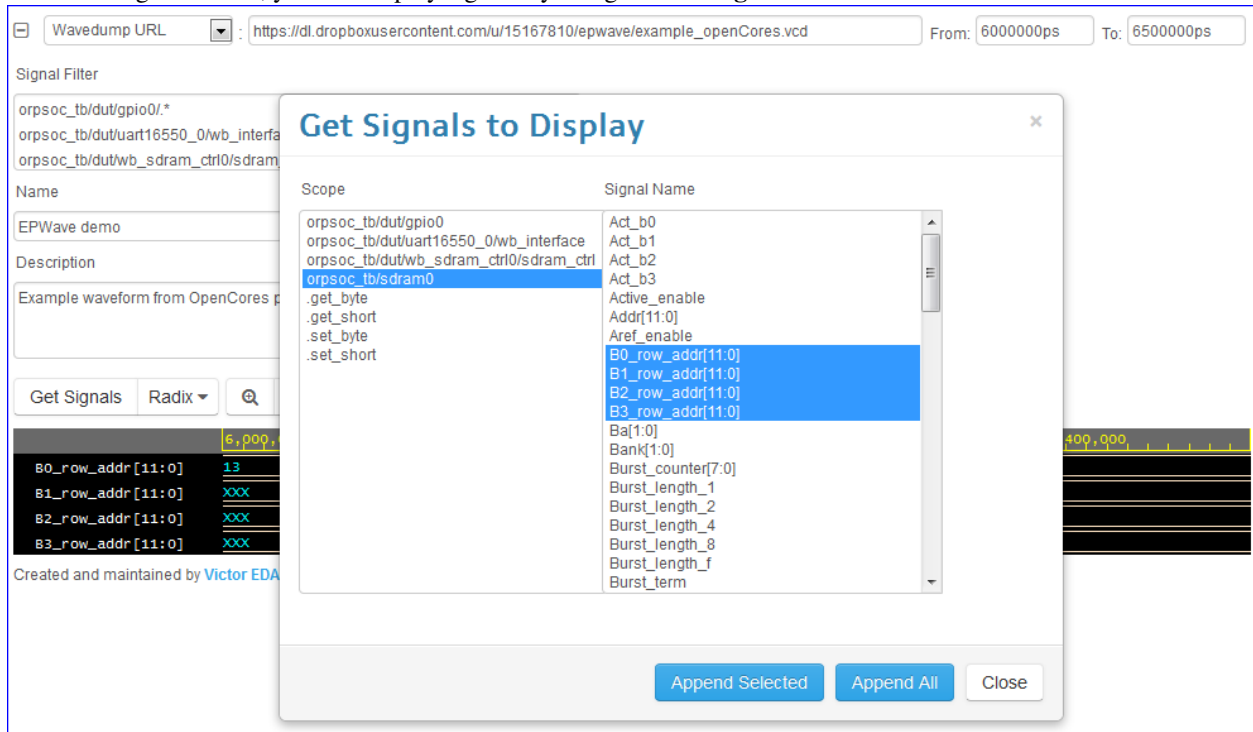


- (Optional) You may specify the *From* and/or *To* times to limit the time range of the loaded wave. If your wave dump contains a lot of data, then the ending *To* time will automatically be limited.

From:  To:

## 1.2.3 Viewing Signals

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



## 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)