



Weston keyboard shortcuts



Contents

| |
|------------------------------------|
| 1. Weston keyboard shortcuts |
| 2. Wayland Weston overview |



Weston keyboard shortcuts

Stable: 03.10.2019 - 13:36 / Revision: 03.10.2019 - 13:35

A [quality version](#) of this page, [accepted](#) on 3 October 2019, was based off this revision.

Weston is the reference implementation of a Wayland compositor.

The table below lists the actions that can be performed through Weston keyboard shortcuts, when the development board is connected to a keyboard.

It must be noted that:

- **<modifier-key>** in the table below corresponds to the key used for common bindings. It is defined by *binding-modifier=<modifier-key>* in the */etc/xdg/weston/weston.ini* file. Possible values for *<modifier-key>* are:
 - "super", i.e. Windows key between "ctrl" and "alt" (default Weston value)
 - "ctrl" (default value in STMicroelectronics images)
 - "alt"
 - "none"
- The shortcuts are defined in *desktop-shell/shell.c^[1]* file (*shell_add_bindings()* function)
- Some shortcuts require that both a keyboard and a mouse are connected to the development board
- Some shortcuts require that several workspaces are defined. The number of workspaces is defined by *num-workspaces=<num-workspaces>* in the */etc/xdg/weston/weston.ini* file. The maximum number of workspaces is 6. If *num-workspaces* is not set, one single workspace is configured.
- The left mouse button allows the activation of a window.

Before proceeding, it is recommended to

- check the *<modifier-key>* value:

```
Board $> grep binding-modifier /etc/xdg/weston/weston.
ini
binding-modifier=ctrl
```

- check the *<num-workspaces>* value:

```
Board $> grep num-workspaces /etc/xdg/weston/weston.
ini
num-workspaces=6
```

| Command | Action | Condition(s) |
|--------------------------------------|---------------------------------|------------------|
| ctrl + alt + backspace | Kill Weston | Keyboard |
| super + scroll | Zoom in / out the desktop | Keyboard + mouse |
| super + alt + scroll | Change activated window opacity | Keyboard + mouse |
| <modifier-key> + page up / page down | Zoom in / out the desktop | Keyboard |
| <modifier-key> + shift + f | Put activated window fullscreen | Keyboard |



| Command | Action | Condition(s) |
|--|---|-----------------------|
| <modifier-key> + left mouse button | Move activated window | Keyboard + mouse |
| <modifier-key> + middle mouse button | Rotate activated window | Keyboard + mouse |
| <modifier-key> + right mouse button | Resize activated window | Keyboard + mouse |
| <modifier-key> + shift + left mouse button | Resize activated window | Keyboard + mouse |
| <modifier-key> + tab | Switch windows | Keyboard |
| <modifier-key> + k | Kill activated window | Keyboard |
| <modifier-key> + key up / key down | Switch to previous / next workspace | Keyboard + workspaces |
| <modifier-key> + shift + key up / key down | Move activated window to previous / next workspace | Keyboard + workspaces |
| <modifier-key> + Fn | Switch to workspace n | Keyboard + workspaces |
| super + s | Capture a screenshot (see details below) | Keyboard |
| super + r | Start / stop recording a screencast (see details below) | Keyboard |

Weston keyboard shortcuts

Additional shortcuts can be found on internet.

1 Capturing a screenshot

1. Refer to the table above for the command to be used.
2. The captured picture (PNG format) is automatically stored in `/wayland-screenshot-2018-01-06_01-48-19.png`.
3. Copy the screenshot from the board to the host PC in the `<file-path>` directory (for example with the `scp` command).

```
PC $> scp root@<ip address>:/wayland-screenshot-*.png <file-path>/
```

Note: a screenshot capture is also named a snapshot or a screen capture.

2 Recording a screencast

1. Refer to the table above for the command to be used.



Weston keyboard shortcuts

2. The recorded screencast (WCAP format) is automatically stored in `/capture.wcap`. The WCAP format is a lossless video format specific to Weston (only the frame differences are recorded).
3. To play the recorded screencast, convert it to a format that can be interpreted by any video player (e.g. VP8). Three steps are required:
 - On the board, convert the WCAP file into a YUV file using `wcap-decode`:

```
Board $> wcap-decode capture.wcap --yuv4mpeg2 > capture.y4m
```

- Copy the YUV file from the board to the host PC in the `<file-path>` directory (for example with the `scp` command):

```
PC $> scp root@<ip address>:/capture.y4m <file-path>/
```

- On the host PC, transcode the YUV file to any other well-known format (e.g. VP8) using `ffmpeg`:

```
PC $> ffmpeg -i capture.y4m -c:v libvpx -b:v 1M capture.webm
```

- Optionally, choose a higher bitrate (`-b:v 1M` means a target bitrate of 1 MBit/s) if a better quality is required. Optionally, use the `transpose` parameter when a 90 degree clockwise rotation is needed:

```
PC $> ffmpeg -i capture.y4m -vf transpose=1 -c:v libvpx -b:v 1M capture.webm
```



Note that the YUV file size might be huge if the recording is long (see example below).

Example:

- On the board: a 5-second screencast is recorded

```
Board $> wcap-decode capture.wcap --yuv4mpeg2 > capture.y4m
wcap file: size 720x1280, 192 frames
Board $> ls -l capture.*
-rw-r--r-- 1 8246868 Dec 13 14:58 capture.wcap
-rw-r--r-- 1 167821312 Dec 13 14:59 capture.y4m
```

- On the host PC

```
PC $> scp root@<ip address>:/capture.y4m .
PC $> ffmpeg -i capture.y4m -vf transpose=1 -c:v libvpx -b:v 1M capture.webm
PC $> ls -l capture.*
-rw-r--r-- 1 104470 Feb 8 11:01 capture.webm
-rw-r--r-- 1 167821312 Feb 8 10:56 capture.y4m
```

References list:

- <https://cgit.freedesktop.org/wayland/weston/tree/desktop-shell/shell.c> Weston Wayland Compositor official git



Weston keyboard shortcuts

Stable: 29.11.2019 - 09:55 / Revision: 26.11.2019 - 09:52

Weston is the reference implementation of a Wayland compositor.

The table below lists the actions that can be performed through Weston keyboard shortcuts, when the development board is connected to a keyboard.

It must be noted that:

- **<modifier-key>** in the table below corresponds to the key used for common bindings. It is defined by *binding-modifier=<modifier-key>* in the */etc/xdg/weston/weston.ini* file. Possible values for *<modifier-key>* are:
 - "super", i.e. Windows key between "ctrl" and "alt" (default Weston value)
 - "ctrl" (default value in STMicroelectronics images)
 - "alt"
 - "none"
- The shortcuts are defined in *desktop-shell/shell.c*^[1] file (*shell_add_bindings()* function)
- Some shortcuts require that both a keyboard and a mouse are connected to the development board
- Some shortcuts require that several workspaces are defined. The number of workspaces is defined by *num-workspaces=<num-workspaces>* in the */etc/xdg/weston/weston.ini* file. The maximum number of workspaces is 6. If *num-workspaces* is not set, one single workspace is configured.
- The left mouse button allows the activation of a window.

Before proceeding, it is recommended to

- check the *<modifier-key>* value:

```
Board $> grep binding-modifier /etc/xdg/weston/weston.
ini
binding-modifier=ctrl
```

- check the *<num-workspaces>* value:

```
Board $> grep num-workspaces /etc/xdg/weston/weston.
ini
num-workspaces=6
```

| Command | Action | Condition(s) |
|--------------------------------------|---------------------------------|------------------|
| ctrl + alt + backspace | Kill Weston | Keyboard |
| super + scroll | Zoom in / out the desktop | Keyboard + mouse |
| super + alt + scroll | Change activated window opacity | Keyboard + mouse |
| <modifier-key> + page up / page down | Zoom in / out the desktop | Keyboard |
| <modifier-key> + shift + f | Put activated window fullscreen | Keyboard |
| <modifier-key> + left mouse button | Move activated window | Keyboard + mouse |



| Command | Action | Condition(s) |
|--|---|-----------------------|
| <modifier-key> + middle mouse button | Rotate activated window | Keyboard + mouse |
| <modifier-key> + right mouse button | Resize activated window | Keyboard + mouse |
| <modifier-key> + shift + left mouse button | Resize activated window | Keyboard + mouse |
| <modifier-key> + tab | Switch windows | Keyboard |
| <modifier-key> + k | Kill activated window | Keyboard |
| <modifier-key> + key up / key down | Switch to previous / next workspace | Keyboard + workspaces |
| <modifier-key> + shift + key up / key down | Move activated window to previous / next workspace | Keyboard + workspaces |
| <modifier-key> + Fn | Switch to workspace n | Keyboard + workspaces |
| super + s | Capture a screenshot (see details below) | Keyboard |
| super + r | Start / stop recording a screencast (see details below) | Keyboard |

Weston keyboard shortcuts

Additional shortcuts can be found on internet.

1 Capturing a screenshot

1. Refer to the table above for the command to be used.
2. The captured picture (PNG format) is automatically stored in `/wayland-screenshot-2018-01-06_01-48-19.png`.
3. Copy the screenshot from the board to the host PC in the `<file-path>` directory (for example with the `scp` command).

```
PC $> scp root@<ip address>:/wayland-screenshot-*.png <file-path>/
```

Note: a screenshot capture is also named a snapshot or a screen capture.

2 Recording a screencast

1. Refer to the table above for the command to be used.



Weston keyboard shortcuts

2. The recorded screencast (WCAP format) is automatically stored in `/capture.wcap`. The WCAP format is a lossless video format specific to Weston (only the frame differences are recorded).
3. To play the recorded screencast, convert it to a format that can be interpreted by any video player (e.g. VP8). Three steps are required:
 - On the board, convert the WCAP file into a YUV file using `wcap-decode`:

```
Board $> wcap-decode capture.wcap --yuv4mpeg2 > capture.y4m
```

- Copy the YUV file from the board to the host PC in the `<file-path>` directory (for example with the `scp` command):

```
PC $> scp root@<ip address>:/capture.y4m <file-path>/
```

- On the host PC, transcode the YUV file to any other well-known format (e.g. VP8) using `ffmpeg`:

```
PC $> ffmpeg -i capture.y4m -c:v libvpx -b:v 1M capture.webm
```

- Optionally, choose a higher bitrate (`-b:v 1M` means a target bitrate of 1 MBit/s) if a better quality is required. Optionally, use the `transpose` parameter when a 90 degree clockwise rotation is needed:

```
PC $> ffmpeg -i capture.y4m -vf transpose=1 -c:v libvpx -b:v 1M capture.webm
```



Note that the YUV file size might be huge if the recording is long (see example below).

Example:

- On the board: a 5-second screencast is recorded

```
Board $> wcap-decode capture.wcap --yuv4mpeg2 > capture.y4m
wcap file: size 720x1280, 192 frames
Board $> ls -l capture.*
-rw-r--r-- 1 8246868 Dec 13 14:58 capture.wcap
-rw-r--r-- 1 167821312 Dec 13 14:59 capture.y4m
```

- On the host PC

```
PC $> scp root@<ip address>:/capture.y4m .
PC $> ffmpeg -i capture.y4m -vf transpose=1 -c:v libvpx -b:v 1M capture.webm
PC $> ls -l capture.*
-rw-r--r-- 1 104470 Feb 8 11:01 capture.webm
-rw-r--r-- 1 167821312 Feb 8 10:56 capture.y4m
```

References list:

- <https://cgit.freedesktop.org/wayland/weston/tree/desktop-shell/shell.c> Weston Wayland Compositor official git