

# RZ MPU HTML5 (Chromium132) Package v4.0.0.0 for RZ/G3E Board Support Package V1.0.0

R01US0744EJ0102

Rev. 1.00

Nov. 28, 2025

## HTML5(Chromium) Start-up Guide

### Introduction

This release note describes the contents, building procedures for HTML5 (Chromium132) and important points of the RZ MPU HTML5 (Chromium132) Package v4.0.0.0 for Board Support Package (hereinafter referred to as “BSP”).

If you need information to build Linux BSPs without a GUI Framework of HTML5, please refer to “RZ/G3E Board Support Package Version 1.0.0 Release Note” (r01us0804ej0100-rzg3e(Release\_Note\_RZG3E).pdf).

### Contents

1. Release Items .....	2
2. Build Instructions .....	5
2.1 Build BSP without HTML5 .....	5
2.2 Building images enabling HTML5.....	6
2.3 Browser application .....	8
2.3.1 Launch the browser application on the evaluation board .....	8
3. Note .....	9
4. Revision History .....	9

## 1. Release Items

- **Name and version**

RZ MPU HTML5 (Chromium132) Package v4.0.0.0 for RZ/G Board Support Package Version 1.0.0 (hereinafter referred to as “HTML5 (Chromium132) Package v4.0.0.0” and “BSP v1.0.0”)

- **Distribution method**

Please visit the site below and create an account to download the packages. This site is for the entire RZ Family which includes the RZ/G series. Basic packages of BSP can be downloaded.

RZ Family:

<https://www.renesas.com/products/microcontrollers-microprocessors/rz-arm-based-high-end-32-64-bit-mpus>

You can also download the basic packages of BSP v1.0.0 from the site below.

[RZ/G3E Board Support Package | Renesas](#)

- **Target board for HTML5 (Chromium132)**

The target boards of this BSP are as below table.

- Table 1. Target board list

Device	Evaluation Board
RZ/G3E	RZ/G3E Evaluation Board Kit (P/N: RTK9947E57S01000BE).

- **Build Environment**

Linux Host PC:

- OS: Ubuntu 22.04 LTS (64-bit).
- 250 GB of free disk space.

Note) VLP cannot be built on Ubuntu 24.04 LTS.

- **Functions**

Linux BSP

- Linux Kernel
- Linux Drivers
- Graphics Libraries
- Codec Libraries

- **File contents**

BSP is delivered by the files listed in Table 2.

**Table2. RZ/G3E Board Support Package**

**Basic files of BSPv1.0.0**

File	Description
RTK0EF0045Z0040AZJ-v1.0.0.zip (*)	Board Support Package. This file includes the <b>Yocto recipe packages</b> and the necessary documents.
rzg3e_bsp_v1.0.0.tar.gz	<b>Yocto recipe packages</b>
r01us0804ej0100-rzg3e(Release_Note_RZG3E).pdf	Release Note of BSP without a GUI Framework of HTML5.
r01us0805ej0100-rzg3e(Linux_Start-up_Guide_RZG3E).pdf	Document Release Note of BSP without a GUI Framework of HTML5 describing booting method and the required settings of bootloader for <b>RZ/G3E</b> .

**Basic files of HTML5 (Chromium132) Package v4.0.0.0**

File	Description
RTK0EF0193Z00002ZJ_v4.0.0.0.zip (*)	Board Support Package for HTML5 (Chromium132). This file includes the <b>Yocto recipe packages</b> for HTML5 (Chromium132) and the necessary documents.
rzg_bsp_chromium132_v4.0.0.0.tar.gz	<b>Yocto recipe packages</b>
r01us0744ej0102-rz-g(Chromium Start-up Guide).pdf	This document
oss_pkg_chromium132_v4.0.0.0.7z (*)	Open source software packages for HTML5 (Chromium132). <b>See the Note below before you download.</b>

- (\*) These packages are provided “AS IS” with no warranty and the license which is described in the source code. Please check the contents of the license, then consider the applicability to the product carefully.

Note) The open source software (OSS) packages contain all the relevant source code files. These are the same versions of OSS that was used when BSP was verified. Downloading a using this large OSS package file (oss\_pkg\_chromiumXXX\_xxx.7z) is not mandatory if your build PC is connected to the Internet and can directly download the individual source code packages listed in the Yocto recipes. However, if your build PC is not connected to the Internet, this OSS package file contains all the source packages required by the Yocto build.

Open source software packages are required for an “offline” environment. The word “offline” means an isolated environment which does not connect to any network. BSP can always build images in this “offline” environment by using these packages without affected from changes of original repositories of OSSs. Also, this “offline” environment always reproduces the same images as the images which were verified by Renesas. Note that if you build without using open source software packages, there are possibilities to use different source codes than Renesas used due to the implicit changes of the repositories of OSSs. Most bootable images that BSP supports can be built on an “offline” environment. Please refer to the documents of “Linux\_Start-up\_Guide”.

**Optional packages**

	<b>File</b> ("XX" is replaced by "EN" or "JP".)	<b>Description</b>
RZ MPU Graphics Library	RTK0EF0045Z14001ZJ- v4.2.0.2_rzg_XX.zip	For <b>RZ/G3E</b> . This provides graphics function compliant with the OpenGL ES standard.
RZ MPU Video Codec Library	RTK0EF0207Z00001ZJ- v4.4.0.0_rzg3e_XX.zip	RZ MPU Video Codec Library for <b>RZ/G3E</b> .

## 2. Build Instructions

### 2.1 Build BSP without HTML5

Please follow the below documents and build the BSP first. You can read the release note and check the release items. You can build BSP by following the chapter 1 and 2 of the Linux Start-up guide.

**Table3. Documents for the first step**

r01us0804ej0100-rzg3e(Release_Note_RZG3E).pdf	Release Note of BSP without a GUI Framework of HTML5. You can check the release items.
r01us0805ej0100-rzg3e(Linux_Start-up_Guide_RZG3E).pdf	Documents describing booting methods and the required settings of bootloader for <b>RZ/G3E</b> . Please refer to the chapter 1 and 2 for building BSP.

Please note that it is necessary to run the below command in the step 2.1(6) of the Linux Start-up guide:

<code>\$ MACHINE=smarc-rzg3e bitbake core-image-weston</code>
---

HTML5 (Chromium132) supports only core-image-weston for the build image.

And BSP has some additional packages and options, so users can select the combination themselves and build. Please note that HTML5 (Chromium132) packages are tested with the below combination.

**Table 4. Combinations of HTML5**

		Packages and Option				
		Graphics	Codec	Security	MultiOS	Docker
Devices	RZ/G3E	O		-	-	-

(\*) “-” means that the packages and the option are not tested with HTML5.

Example) Chromium132 for RZ/G3E is tested using both the graphics library and the codec library, but it is not tested using Security, MultiOS, and Docker.

After you complete the build, please move to the section 2.2 in this document and enable HTML5 (Chromium132).

## 2.2 Building images enabling HTML5

This section describes the instructions to enable HTML5 (Chromium132) to the build images.

**Copy all files obtained from Renesas into your Linux Host PC prior to the steps below. The directory which you put the files in is described as <package download directory> in the build instructions.**

### (1) Move to a working directory at your home directory, and decompress Yocto recipe package

Run the commands below. The name and the place of the working directory can be changed as necessary.

```
$ cd ~/rzg3e_bsp_v1.0.0
$ cp ../<package download directory>/*.zip .
$ unzip ./RTK0EF0193Z00002ZJ_v4.0.0.0.zip
$ tar zxvf ./RTK0EF0193Z00002ZJ_v4.0.0.0/rzg_bsp_chromium132_v4.0.0.0.tar.gz
```

### (2) Build Initialize

Please initialize a build using the 'oe-init-build-env' script in Poky and point TEMPLATECONF to platform conf path.

```
$ TEMPLATECONF=$PWD/meta-renesas/meta-rz-distro/conf/templates/rz-conf/ source \
poky/oe-init-build-env build
```

### (3) Add layers

Please follow the below steps to add the layers you need. The steps add the settings to bblayers.conf.

```
$ bitbake-layers add-layer ../meta-clang
$ bitbake-layers add-layer ../meta-lts-mixins
$ bitbake-layers add-layer ../meta-browser/meta-chromium
$ bitbake-layers add-layer ../meta-openembedded/meta-networking
$ bitbake-layers add-layer ../meta-browser-hwdecode
```

### (4) Enable HTML5 (Chromium132)

Please follow the following instructions to edit the configuration file and enable HTML5 (Chromium132).

- Add the below lines to "`~/rzg3e_bsp_v1.0.0/build/conf/local.conf`".

```
IMAGE_INSTALL:append = " chromium-ozone-wayland "
IMAGE_INSTALL:append = " ntp "
IMAGE_INSTALL:append = " ttf-sazanami-gothic ttf-sazanami-mincho "
IMAGE_INSTALL:append = " adwaita-icon-theme-cursors "
```

(5) **Start a build**

Run the commands below to start a build. Building an image can take up to a few hours depending on the user's host system performance.

Build the target file system image using bitbake

```
$ MACHINE=smarc-rzg3e bitbake core-image-weston
```

After the build is successfully completed, a similar output will be seen, and the command prompt will return.

```
NOTE: Tasks Summary: Attempted 7427 tasks of which 16 didn't need to be rerun and all succeeded.
```

All necessary will be generated by the bitbake command and will be located in the **build/tmp/ deploy/ images** directory.

## 2.3 Browser application

This section describes how to launch and configure the browser application after building BSP.

### 2.3.1 Launch the browser application on the evaluation board

#### (1) Prepare the SD card and boot the evaluation board

Please follow the below documents again to boot the evaluation board. You can prepare the SD card and boot the evaluation board by following the chapter 3 and 4 of the Linux Start-up guide.

After booting the target board, please move to the next section 2.3.1(2) in this document.

**Table 2. Documents for the first step**

01us0805ej0100-rzg3e(Linux_Start-up_Guide_RZG3E).pdf	Documents describing booting method and the required settings of bootloader for <b>RZ/G3E</b> . Please refer to the chapter 3 and 4.
--	--

#### (2) Launch the browser application on the evaluation board

Please connect a USB hub, a mouse, and a keyboard to your evaluation board. Then please run the below command on Tera Term.

“https://~~~” means a website URL, so please enter the URL of the site you want to open. “/home/root/xxx.html” means a html content in the root file system, so please enter the path of the file you want to open.

```
$ chromium --no-sandbox https://~~~  
$ chromium --no-sandbox /home/root/xxx.html
```

**Note:** The above procedure is based on Chapter 3 and Chapter 4 of the Start-up Guide and assumes login as the root user on Tera Term.

When starting from Wayland Terminal, please follow the steps below.

```
$ chromium https://~~~  
$ chromium /home/root/xxx.html
```



### 3. Note

#### (1) Test Status of the HTML5 (Chromium132) package

The HTML5 (Chromium132) package is tested. Two types of tests are conducted.

- web-platform-tests:  
This is to test functions which the browser application have in detail.
- Performance tests:  
Based on <https://github.com/webdino/gecko-embedded/wiki/QA>, the performance of the browser application is tested.

#### (2) Video Play

When playing H.265 videos, playback may not resume after the video ends or after using the seek bar.  
In such cases, please reload the browser page.

### 4. Revision History

Rev.	Date	Description	
		Page	Summary
1.00	Nov. 28, 2025	-	First edition for RZ/G3E BSPv1.0.0

## Website and Support

Renesas Electronics Website

<http://www.renesas.com/>

Inquiries

<http://www.renesas.com/contact/>

All trademarks and registered trademarks are the property of their respective owners.