RZ/G Verified Linux Package for 64bit kernel
Version 1.0.12

R01TU0283EJ0110
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Patch application guide

Introduction

This document describes the contents of the "diff" files of RZ/G Verified Linux Package for 64bit kernel (hereinafter referred to as "VLP64") and instructions to use them.

Please read the "Release Note" of VLP64 v1.0.12 carefully before using this document.

Contents

1.   Release Items

VLP64 is delivered by the files listed in **Table 1**. A develop environment of VLP64 v1.0.10 can be changed to that of VLP64 v1.0.12 by applying the patch files included in diff files without downloading basic packages.

Table 1. RZ/G Verified Linux Package

Diff files for VLP64 v1.0.9-RT users

File	Explanation
r01tu0283ej0110-rz-g.pdf	This document
v1010-to-v1012.patch.tar.gz (Evaluation and Product version) (43KB)	Diff files of Yocto recipes compared with VLP64 v1.0.10
v1010-to-v1012.oss_packages.7z (241MB)	Diff file of OSS packages compared with VLP64 v1.0.10

Basic packages

File	Explanation
rzg2_bsp_eva_v1012.tar.gz (Evaluation version) (65MB) rzg2_bsp_pro_v1012.tar.gz (Product version) (65MB)	Yocto recipe packages (including Multimedia package)
oss_pkg_v1012.7z (7.27GB)	Open source software packages

Basic packages for HTML5 (Gecko) environment

File	Explanation
rzg2_bsp_gecko78_v1012.tar.gz (592KB) (*)	Yocto recipe packages for HTML5 (Gecko78)
oss_pkg_gecko78_v1012.7z (**1.75**GB) (*)	Open source software packages for HTML5 (Gecko78)

Documents

File	Explanation
r01tu0277ej0115-rz-g.pdf	Release Note
r01tu0311ej0112-rz-g.pdf	Release Note for HTML5 (Gecko)
r01tu0278ej0112-rz-g.pdf	Component list

Note: (*) If you want to support Gecko68 instead of Gecko78, please use basic gecko packages from VLP64 v1.0.10 due to no changes.

The above packages are downloaded with the different file names like as "REN_rzg2_bsp_eva_v10x.tar.gz_ ESW_2021xxxx.gz". When you use the packages, please rename them to the above file names.

Additional packages

File	Description
RTK0EF0045Z9002AZJ-v1.0.12.zip (23MB)	RZ/G2 Group BSP Manual Set.

Note)   Detailed information regarding the configuration (Device tree) and usage of the device drivers contained in this BSP can be downloaded from Renesas.com. Please download the "RZ/G2 Group BSP Manual Set".

https://www.renesas.com/document/rzg2-group-bsp-manual-set

2. Patch Application Guide

This chapter describes how to prepare a clean environment of **VLP64 v1.0.10** and update it to **VLP64 v1.0.12**.
It is recommended to prepare and use a clean new environment, but if the environment prepared with **VLP64 v1.0.10** is being used, it can also be updated with the section **2.1** or **2.2** below. In this case, it is highly recommended to backup whole environment before updating them. If HTML5 (Gecko) is not required, please refer to only the section **2.1**. If HTML5 (Gecko) is required, please skip the section **2.1** and refer to only the section **2.2**.

Copy all files obtained from Renesas into your home directory prior to the steps below.

2.1 Patch Application Guide

(1) Create a working directory (rzg2_vlp_v1.0.12) at your home directory and decompress Yocto recipe package of v1.0.10

Run the commands below. The name and the place of the working directory can be changed, as necessary. Please replace "*eva*" with "*pro*" for the product version.

```
$ mkdir ~/rzg2_vlp_v1.0.12
$ cd ~/rzg2_vlp_v1.0.12
$ tar zxvf ~/rzg2_bsp_eva_v1010.tar.gz
$ tar zxvf ~/v1010-to-v1010update1.patch.tar.gz
$ patch -p1 < v1010-to-v1010update1.patch
```

Note) In case updating existing environment:
- Please revert the patch which enables HDMI with below command if necessary. Please replace "*directory*" to the path to the directory which stores the patch file.

```
$ patch -R -p1 < directory/0001-BSPv1.0.10-Add-HDMI-support-for-RZ-G2.patch
```

- Please revert all **update1** patches with below command if necessary. Please replace "*directory*" to the path to the directory which stores the patch file.

```
$ patch -R -p1 < directory/0001-recipes-container-lxc-Update-broken-link.patch
$ patch -R -p1 < directory/0002-recipes-devtools-go-systemd-update-branch-for-SRC_U
 R.patch
```

(2) Apply the patch file to Yocto recipes and remove a directory and add a file

Run the commands below.

```
$ cd ~/rzg2_vlp_v1.0.12
$ tar zxvf ~/v1010-to-v1012.patch.tar.gz
$ patch -p1 < v1010-to-v1012.patch
```

(3)   Decompress OSS files of v1.0.10 to "build" directory

Run the commands below. All OSS packages will be decompressed at once with this '7z' command. Please place all oss_pkg_v1010.7z files in the same directory before running this '7z' command. 7ziped files are not able to decompress individually.

```
$ cd ~/rzg2_vlp_v1.0.12
$ mkdir build
$ cd build
$ 7z x ~/oss_pkg_v1010.7z
```

(4) Add OSS files

Run the commands below to remove the old files.

```
$ cd ~/rzg2_vlp_v1.0.12/build/downloads
$ rm -rf git2/github.com.renesas-rz.renesas-u-boot-cip.git \
git2/github.com.OP-TEE.optee_os.git \
git2/github.com.OP-TEE.optee_client.git \
git2/github.com.renesas-rz.rzg_trusted-firmware-a.git
```

Run the commands below to add the new files. Copy the compressed OSS diff file to the home directory and decompress the new files.

```
$ cd ~/rzg2_vlp_v1.0.12/build
$ 7z x ~/v1010-to-v1012.oss_packages.7z
```

(5) Build new BSP

Now it is ready to build the BSP. Please build it according to the Release Note section 3.1. Note that the below steps in the chapter 3 of the Release Note is not necessary. These steps overwrite your environment.

> (1) Create a working directory (rzg2_vlp_v1.0.12) at your home directory, and decompress Yocto recipe package
>
> (5) Decompress OSS files to "build" directory

2.2   Patch Application Guide for HTML5 (Gecko78)

(1)   Create a working directory (rzg2_vlp_v1.0.12) at your home directory and decompress Yocto recipe package of v1.0.10

Run the commands below. The name and the place of the working directory can be changed, as necessary. Please replace "*eva*" with "*pro*" for the product version.

```
$ mkdir ~/rzg2_vlp_v1.0.12

$ cd ~/rzg2_vlp_v1.0.12

$ tar zxvf ~/rzg2_bsp_eva_v1010.tar.gz

$ tar zxvf ~/rzg2_bsp_gecko78_v1010.tar.gz (*)

$ tar zxvf ~/v1010-to-v1010update1.patch.tar.gz

$ patch -p1 < v1010-to-v1010update1.patch
```

Note: (*) If you want to support Gecko68 instead of Gecko78, please use "rzg2_bsp_gecko68_v109rt.tar.gz".

Note)   In case updating existing environment:
- Please revert the patch which enables HDMI with below command if necessary. Please replace "*directory*" to the path to the directory which stores the patch file.

```
$ patch -R -p1 < directory/0001-BSPv1.0.10-Add-HDMI-support-for-RZ-G2.patch
```

- Please revert all **update1** patches with below command if necessary. Please replace "*directory*" to the path to the directory which stores the patch file.

```
$ patch -R -p1 < directory/0001-recipes-container-lxc-Update-broken-link.patch

$ patch -R -p1 < directory/0002-recipes-devtools-go-systemd-update-branch-for-SRC_U
 R.patch
```

(2)   Apply patch files to Yocto recipes

Run the commands below.

```
$ cd ~/rzg2_vlp_v1.0.12

$ tar zxvf ~/v1010-to-v1012.patch.tar.gz

$ patch -p1 < v1010-to-v1012.patch
```

(3)   Decompress OSS files of v1.0.10 to "build" directory

Run the commands below. All OSS packages will be decompressed at once with this '7z' command. Please place all oss_pkg_v1010.7z files and oss_pkg_gecko78_v1010.7z files in the same directory before running this '7z' command. 7ziped files are not able to decompress individually.

```
$ cd ~/rzg2_vlp_v1.0.12

$ mkdir build

$ cd build

$ 7z x ~/oss_pkg_v1010.7z

$ 7z x ~/oss_pkg_gecko78_v1010.7z (*)
```

Note: (*) If you want to support Gecko68 instead of Gecko78, please use "oss_pkg_gecko68_v1012.7z".

(4)   Add OSS files

Run the commands below to remove the old files.

```
$ cd ~/rzg2_vlp_v1.0.11rt/build/downloads
$ rm -rf git2/github.com.renesas-rz.renesas-u-boot-cip.git \
git2/github.com.OP-TEE.optee_os.git \
git2/github.com.OP-TEE.optee_client.git \
git2/github.com.renesas-rz.rzg_trusted-firmware-a.git
```

Run the commands below to add the new files. Copy the compressed OSS diff files to the home directory and decompress the new files.

```
$ cd ~/rzg2_vlp_v1.0.12/build
$ 7z x ~/v1010-to-v1012.oss_packages.7z
```

(5)   Build new BSP

Now it is ready to build the BSP. Please build it according to the Release Note section 3.1. Note that the below steps in the chapter 3 of the Release Note is not necessary. These steps overwrite your environment.

  (1) Create a working directory (rzg2_vlp_v1.0.12) at your home directory, and decompress Yocto recipe
        package
  (5) Decompress OSS files to "build" directory

Website and Support

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