

RZ/G Verified Linux Package v2.1.24

R01TU0271EJ0123

Rev. 1.23

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Patch Application Guide

Introduction

This document describes the contents of the “diff” files of RZ/G Verified Linux Package v2.1.24 (hereinafter referred to as “VLP v2.1.24”) and instructions to use them.

Please read the “Release Note” of VLP v2.1.24 carefully before using this document.

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1. Release Items

VLP v2.1.24 is delivered by the files listed in **Table 1**. A develop environment of RZ/G Verified Linux Package V2.1.23 (hereinafter referred to as “VLP v2.1.23”) can be upgraded to that of VLP v2.1.24 by applying the patch files included in diff files without having to download basic packages.

Table 1. RZ/G Verified Linux Package

For VLP v2.1.23 users

File	Description
r01tu0271ej0123-rz-g.pdf	This document
v2123-to-v2124.patch.tar.gz	Diff files of Yocto recipes between VLP v2.1.23 and VLP v2.1.24
v2123-to-v2124.oss_packages.7z (2.6GB)	Diff files of Open Source Software Packages between VLP v2.1.23 and VLP v2.1.24

Basic packages

File	Description
rzg_bsp_eva_v2124.tar.gz (Evaluation version) (100MB) rzg_bsp_pro_v2124.tar.gz (Product version) (100MB)	Yocto recipe packages
rzg_bsp_gecko_v2124.tar.gz	Yocto recipe packages for HTML5
oss_pkg_v2124.7z (3.3GB)	Open source software packages
oss_pkg_gecko_v2124.7z (753MB)	Open source packages for HTML5
setup_env_script_v2124.py	Script for setting up a build environment
RTK0EF0045Z0004AZJ-v2.1.24.zip (100MB)	Verified Linux Package. This file includes the Yocto recipe packages and the necessary documents.

Documents

File	Explanation
r01tu0269ej0127-rz-g.pdf	Release Note
r01tu0270ej0123-rz-g.pdf	Component list

2. Patch Application Guide

This section explains how to prepare a clean environment of VLP v2.1.23 and update it to VLP v2.1.24. It is recommended to prepare and use a clean new environment, but if the environment prepared with VLP v2.1.23 is being used, it can also be updated with the steps (2) and (4) below. In this case, it is highly recommended to backup whole environment before updating them.

(1) Make a working directory, and copy Yocto recipe packages into it

Run the commands below.

```
$ export WORK=[user's working directory]
$ mkdir -p $WORK/user_work
```

Copy all VLP's files obtained from Renesas into the \$WORK directory.

(2) Decompress Yocto recipe package of previous VLP version

Run the commands below. Please replace “*type*” by “*pro*” (product version) or “*eva*” (evaluation version) depending on your VLP type.

```
$ tar xvzf $WORK/rzg_bsp_type_v2123.tar.gz -C $WORK/user_work
```

Additionally, in case to use HTML5, run the commands below to decompress Yocto recipe package for building Gecko.

```
$ tar xvzf $WORK/rzg_bsp_gecko_v2123.tar.gz -C $WORK/user_work
```

(3) Apply patch files to Yocto recipes

Run the commands below. Copy the compressed patch file to home directory prior to this step.

```
$ cd $WORK/user_work
$ tar xvzf $WORK/v2123-to-v2124.patch.tar.gz
$ patch -p1 < ./v2123-to-v2124.patch
```

Note) In this VLP, video output is set to LVDS as default setting. In case to use HDMI as a video output, please apply an extra patch as following.

```
$ cd $WORK/user_work/meta-renesas
$ patch -p1 < ../extra/0001-VLP2.1.24-Add-HDMI-support-for-RZ-G1.patch
```

Note) In case to use HTML5 on iWave board for RZ/G1E and RZ/G1C, please apply a patch to the meta-renesas directory.

```
$ cd $WORK/user_work/meta-renesas
$ patch -p1 < ../extra/0001-mmngr-iwg22m-iwg23s-reducing-CMA-reserved-for-MMP-\
to.patch
```

(4) Decompress OSS files of VLP v2.1.23 to “build” directory

Copy the compressed OSS package files (oss_pkg_v2123.7z, oss_pkg_gecko_v2123.7z) into your home directory prior to these steps. All OSS packages will be decompressed at the step marked (*1) and (*2).

Run the commands below.

```
$ mkdir $WORK/user_work/build
$ cd $WORK/user_work/build
$ 7z x $WORK/oss_pkg_v2123.7z (*1)
```

Additionally, in case to use HTML5, run the command below to decompress OSS files for building Gecko.

```
$ cd $WORK/user_work/build
$ 7z x $WORK/oss_pkg_gecko_v2123.7z (*2)
```

(5) Remove old OSS files and add new OSS files

Remove old files:

```
$ cd $WORK/user_work/build/oss_packages
$ rm -rf git2/
$ rm -rf binutils_2.31.1-16.* \
  busybox_1.30.1-4.* \
  glibc_2.28-10+deb10u4.* \
  ldconfig-native-2.12.1.* \
  openssh_7.9p1-10+deb10u2.* \
  openssl_1.1.1n-0+deb10u6.* \
  pam_1.3.1-5.* \
  perl_5.28.1-6+deb10u1.* \
  bzip2-1.0.6.tar.gz_bad-checksum* \
  icu4c-59_1-src.tgz_bad-checksum*
```

Add new OSS files: copy and decompress the OSS diff file

```
$ cd $WORK/user_work/build
$ 7z x $WORK/v2123-to-v2124.oss_packages.7z
```

(6) Build new BSP

Now it is ready to build BSP. Please follow **Section 3.1** in the VLP’s Release Note document but skip the steps as below. Otherwise, they will overwrite your environment.

- (2) Create the working directory, and decompress Yocto recipe package
- (6) Decompress OSS files to “build” directory

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