

Linux Interface Specification Yocto recipe

Release Note: Software

R-Car H3/M3 Series

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How to Use This Manual

- **[Readers]**

This manual is intended for engineers who develop products which use the R-Car H3/M3 processor.

- **[Purpose]**

This manual is intended to give users an understanding of the functions of the R-Car H3/M3 processor device driver and to serve as a reference for developing hardware and software for systems that use this driver.

- **[How to Read This Manual]**

It is assumed that the readers of this manual have general knowledge in the fields of electrical

— engineering, logic circuits, microcontrollers, and Linux.

→ Read this manual in the order of the CONTENTS.

— To understand the functions of a multimedia processor for R-Car H3/M3

→ See the R-Car H3/M3 User's Manual.

— To know the electrical specifications of the multimedia processor for R-Car H3/M3

→ See the R-Car H3/M3 Data Sheet.

- **[Conventions]**

The following symbols are used in this manual.

Data significance: Higher digits on the left and lower digits on the right

Note: Footnote for item marked with Note in the text

Caution: Information requiring particular attention

Remark: Supplementary information

Numeric representation: Binary ... xxxx, 0bxxxx, or xxxxB

Decimal ... xxxx

Hexadecimal ... 0xxxxx or xxxxH

Data type: Double word ... 64 bits

Word ... 32 bits

Half word ... 16 bits

Byte ... 8 bits

Table of Contents

| | |
|--|---|
| 1. Introduction..... | 1 |
| 2. List of R-Car H3 Series Linux Yocto package contents..... | 2 |
| 2.1 Software | 2 |
| 2.2 English documentation..... | 2 |
| 2.3 Japanese documentation..... | 2 |
| 3. Notice..... | 3 |
| 4. Change History | 4 |
| 4.1 v2.0.0 | 4 |
| 4.2 v2.1.0 | 4 |
| 4.3 v2.2.0 | 4 |
| 5. Revision Numbers of Referred S/W Packages | 5 |
| 6. Commit ID of Renesas Yocto Recipe | 6 |

1. Introduction

This manual explains the package construction of R-Car H3 Linux Yocto package.

2. List of R-Car H3 Series Linux Yocto package contents

The following is included in this product.

2.1 Software

IPL, U-Boot, Kernel, root file system and Multi Media package are provided by using the Yocto Project.

2.2 English documentation

| NO. | Contents | File name | version |
|-----|----------------|--|---------|
| 1 | Start-Up guide | RENESAS_RCH3M3_YoctoStartupGuide_UME_v0.30.pdf | 0.30 |

2.3 Japanese documentation

None.

3. Notice

In BSP only, local-wayland.conf is provided.

However, it is not supporting.

4. Change History

4.1 v2.0.0

- Initial Revision of the R-Car H3 Linux BSP package by Yocto Recipe Package based on Yocto Project 1.8.
- Yocto recipe package Ver2.0.0 for R-Car H3.
 - R-Car H3 Linux BSP package based on Linux Kernel 4.2-RC7.
 - 3D Graphics package
 - GSX: Pre-Alpha (64bit only)
- Not support lib32-core-image-weston.

4.2 v2.1.0

- Yocto recipe package Ver2.1.0 for R-Car H3.
 - R-Car H3 Linux BSP package v3.0.0 based on Linux Kernel 4.2.
 - Please refer BSP's release note in detail
 - U-boot: The file name was changed into u-boot-elf.srec from u-boot.srec.
- Not support 3D graphics and Multi Media Packages.
- Recipe of IPL cannot create the following file. Please contact a Renesas Electronics sales office.
 - bootparam_sa0.srec
 - cert_header_sa6.srec
- In BSP Only, core-image-weston is not supported even though local-wayland.conf is provided.

4.3 v2.2.0

- Yocto recipe package Ver2.2.0 for R-Car H3.
 - R-Car H3 Linux BSP package v3.0.2 based on Linux Kernel 4.2.
 - Please refer BSP's release note in detail
- Recipe of IPL can create all srec file.
 - add recipe for bootparam_sa0.srec
 - add recipe for cert_header_sa6.srec
- Support 3D graphics and Multi Media Packages
 - Please refer to Section5 table1 for package name and version.
 - Please add mem=2048M to bootargs.
- In BSP Only, core-image-weston is not supported even though local-wayland.conf is provided.
- 32-bit Environment included in SDK cannot be used. Please build 32bit SDK (lib32-core-image-weston-sdk).
- Display may have an distorted screen in sometimes and Audio function doesn't work that are caused by un-optimized QoS settings.

5. Revision Numbers of Referred S/W Packages

Table 1 : Revision Numbers of Referred S/W Packages

| Package Name (abbreviation) | Package Name | Package Id | Package Revision | Software Revision |
|---|---|-------------------------|---------------------|----------------------|
| U-Boot On Board Drivers On chip Peripheral Drivers etc. | R-Car H3 Linux BSP | — | v3.0.2 | — |
| Initial Program Loader | R-Car H3/M3/E3 Initial Program Loader | — | — | — |
| OpenGL3.1 Library | R8A7795 GX6650 OpenGL ES3.1 Library for Linux | RTM0RC7795GLTG0001SL40C | 1.0.1 | 1.0.15.3604260 |
| GSX driver | R8A7795 GX6650 Device Driver for Linux | RCH3G001L4001ZDO | 1.0.1 | 1.0.15.3604260 |
| GSX Offline Compiler | R8A7795 GX6650 GLSL Offline Compiler for Linux | RCH3G002L4001ZNI | 1.0.1 | 1.0.15.3604260 |
| OMX | OMX Media Component Common Library for Linux | RTM0AC0000XCMCTL30SL40C | 3.0.1 | 3.0.0 |
| OMX | OMX Media Component Video Decoder Common Library for Linux | RTM0AC0000XVCMND30SL40C | 3.0.1 | 3.0.0 |
| OMX | OMX Media Component H.264 Decoder Library for Linux | RTM0AC0000XV264D30SL40C | 3.0.1 | 3.0.0 |
| UVCS Driver | UVCS Driver for Linux | RCG3VUDRL4001ZDO | 3.0.1 | 3.0.0 |
| OMX | OMX Media Component Audio Common Library for Linux | RTM0AC0000XACMND30SL40C | 3.0.1 | 3.0.0 |
| OMX | OMX Media Component for AAC- LC Decoder Library for Linux | RTM0AC0000XAAACD30SL40C | 3.0.1 | 3.0.0 |
| AAC decoder | AAC-LC 2ch Decoder Middleware Library for Linux | RTM0AC0000ADAACMZ1SL40C | 3.0.1 | 3.00 alpha1 |

6. Commit ID of Renesas Yocto Recipe

Table 2: Commit ID of Renesas Yocto Recipe

| Release | Repository | branch | Commit ID |
|---------|---|--------|---|
| 2.0.0 | git://github.com/renesas-rcar/meta-renesas.git | fido | 5bea92a2b135cfe304605435a277b30a4e27788d |
| | git://git.yoctoproject.org/poky | fido | cd2c9acdbd75c83790e8144d2a834f5b5de35df0b |
| | git://git.linaro.org/openembedded/meta-linaro.git | fido | 7f630688d426831d195509843f9c8f282f459dd73 |
| 2.1.0 | git://github.com/renesas-rcar/meta-renesas.git | fido | 0268245db91d3715b1816979e7063a94a2cae51b |
| | git://git.yoctoproject.org/poky | fido | b50596d8f6e858e2e733f2d9913a19c6f3cd5863 |
| | git://git.linaro.org/openembedded/meta-linaro.git | fido | 3f1933242062d1cf473d20b86fa4582963ff9441 |
| 2.2.0 | git://github.com/renesas-rcar/meta-renesas.git | fido | d2a2b521ed1b807f82d861bd514c04468fd8bb42 |
| | git://git.yoctoproject.org/poky | fido | b74ea963ceffad9fbd91d4eb9b240f6a8c86cd0 |
| | git://git.linaro.org/openembedded/meta-linaro.git | fido | 3f1933242062d1cf473d20b86fa4582963ff9441 |

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