

# 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

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# 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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