Release Note

Linux Interface Specification Yocto recipe

Release Note: Software

R-Car H3/M3 Series

Renesas Electronics
www.renesas.com

Rev.2.16.0 Jan. 2017

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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 ... ××××, 0b××××, or ××××B
  Decimal ... ××××
  Hexadecimal ... 0x×××× or ××××H
  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/M3 Linux Yocto package.

2. List of R-Car H3/M3 Series Linux Yocto package contents

The followings are included in this product.

2.1 Software

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

2.2 English documentation

NO.	Contents	File name	version
1	Start-Up guide	RENESAS_RCH3M3_YoctoStartupGuide_UME_v2.16.0.pdf	2.16.0

2.3 Japanese documentation

None.

3. Notice

- In BSP only, local-wayland.conf is provided. However, it is not supported.
- System settings (CPU clock, DDR clock, etc): Please refer to IPL Release note.

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.

4.4 v2.3.0

- Yocto recipe package Ver2.3.0 for R-Car H3.
    - R-Car H3 Linux BSP package v3.0.3 based on Linux Kernel 4.2.
        - Please refer BSP's release note in detail
    - Updated QoS settings. Audio function works.
        - Please refer IPL's release note in detail

    - Fix symbol error in gdb. This is defect of yoctoproject (poky) gdb recipes.
- 3D graphics and Multi Media Packages
    - Same as v2.2.0
- 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 caused by un-optimized QoS settings.

4.5 v2.4.0

- Yocto recipe package Ver2.4.0 for R-Car H3.
    - R-Car H3 Linux BSP package
        - same as v2.3.0
    - Updated IPL
        - arm-trusted-firmware adds the supports of PSCI function.
        - Please refer to IPL's release note
    - Userland: Add media-ctl (v4l-utils) package
- 3D graphics and Multi Media Packages
    - Same as v2.2.0
- 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 a distorted screen in sometimes caused by un-optimized QoS settings.

4.6 v2.5.2

- Yocto recipe package Ver2.5.2 for R-Car H3.
    - Yocto Recipes package base upgrade to Yocto Project 2.0 from 1.8
        - linaro gcc version upgrade to 5.1 from 4.9
        - Changed XDG_RUNTIME_DIR to /run/usr/root from /run/user/0
    - R-Car H3 Linux BSP package
        - same as v2.4.0
    - Updated IPL for linaro gcc 5.1
- 3D graphics Packages and Multi Media Packages
    - upgrade linaro gcc version to 5.1 from 4.9 (except omx video)
    - mem=2048M in bootargs became unnecessary
- 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 a distorted screen in sometimes caused by un-optimized QoS settings.
- In MMP, please always enable H.264 decoder. Default is enable.

4.7 v2.6.0

- Yocto recipe package Ver2.6.0 for R-Car H3.
    - Wayland/Weston upgrade to 1.8 from 1.6
    - Add Security softwares to userland in BSP only (core-image-minimal)
    - R-Car H3 Linux BSP package v3.1.1 based on Linux Kernel 4.4
        - Upgrade linux kernel version to v4.4 rc2 from v4.2
        - Deleted console setting from bootargs

        - Please refer BSP's release note in detail
    - Updated IPL for Linux Kernel 4.4
        - Please refer to IPL's release note
- 3D graphics Packages and Multi Media Packages
    - OMX Video: upgrade linaro gcc version to 5.1 from 4.9
    - GFX: support Wayland/Weston 1.8
- 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 a distorted screen in sometimes caused by un-optimized QoS settings.
- In MMP, please always enable H.264 decoder. Default is enable.

4.8 v2.7.0

- Yocto recipe package Ver2.7.0 for R-Car H3.
    - Wayland/Weston upgrade to 1.9 from 1.8
    - Add support R-Car H3 WS1.1
    - R-Car H3 Linux BSP package v3.2.0 based on Linux Kernel 4.4
        - Upgrade linux kernel version to v4.4 from v4.4 rc2
        - Please refer BSP's release note in detail
    - Updated IPL for Linux Kernel 4.4
        - Add support secure boot in optee-os
        - Add support 32bit TEE Client Library
        - Please refer to IPL's release note
- 3D graphics Packages and Multi Media Packages
    - GFX: Support Wayland/Weston 1.9
- 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 a distorted screen in sometimes caused by un-optimized QoS settings.
- In MMP, please always enable H.264 decoder. Default is enable.

4.9 v2.8.0

- Yocto recipe package Ver2.8.0 for R-Car H3/M3.
    - Add support R-Car M3.
    - R-Car H3/M3 Linux BSP package v3.2.1 based on Linux Kernel 4.4
        - Please refer BSP's release note in detail
    - Updated IPL for Linux Kernel 4.4
        - Please refer to IPL's release note
- 3D graphics Packages and Multi Media Packages
    - GFX: support R-Car M3
    - MMP: alpha2 release (Only R-Car H3)
    - Add support Lossy compression (Frame Compression Near Lossless, FCNL) feature. For this feature, includes IPL support and Linux Kernel support.
- R-Car M3 is not support Multi Media Package.
- 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 a distorted screen in sometimes caused by un-optimized QoS settings.

4.10 v2.9.0

- Yocto recipe package Ver2.9.0 for R-Car H3/M3.
    - R-Car H3/M3 Linux BSP package v3.2.2 based on Linux Kernel 4.4
        - Please refer BSP's release note in detail
    - Updated IPL for Linux Kernel 4.4
        - Please refer to IPL's release note
- 3D graphics Packages and Multi Media Packages
    - R-Car M3 supported Multi Media Packages
    - MMP: Alpha2 release
    - Ether AVB: Integrated in yocto recipe package
- 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 a distorted screen in sometimes caused by un-optimized QoS settings.
- R-Car M3 does not support Lossy compression.
- In R-Car M3, if vspm, v4l2 or vspfilter are used, please use up-down scaling except for x1 in them.

4.11 v2.10.0

- Yocto recipe package Ver2.10.0 for R-Car H3/M3.
    - linaro gcc version upgrade to 5.2 from 5.1
    - R-Car H3/M3 Linux BSP package v3.3.0 rc3 based on Linux Kernel 4.6
        - Upgrade linux kernel version to v4.6 from v4.4
        - Please refer BSP's release note in detail
    - Updated IPL for Linux Kernel 4.6
        - Lossy compression is enabled only MMP configuration
        - Please refer to IPL's release note
- 3D graphics Packages and Multi Media Packages
    - Audio, Video, GFX: upgrade linaro gcc version to 5.2 from 5.1
- 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 a distorted screen in sometimes caused by un-optimized QoS settings.

4.12 v2.11.0

- Yocto recipe package Ver2.11.0 for R-Car H3/M3.
    - Changed ARM gcc option to -mtune=cortex-a57.cortexa53
    - Userland supports only 64bit. 32bit environment was deleted.
    - R-Car H3/M3 Linux BSP package v3.3.1 rc4 based on Linux Kernel 4.6
        - Please refer BSP's release note in detail
- 3D graphics Packages and Multi Media Packages
    - Audio: Added ALAC, FLAC, Dolby(R) Digital decoder and AAC-LC encoder
    - Video: Added DivX and RealVideo decoder
- In BSP Only, core-image-weston is not supported even though local-wayland.conf is provided.
- Display may have a distorted screen in sometimes caused by un-optimized QoS settings.
- In MMP configuration, fixed the following issue.

Data corruption occurs when kernel reads any data that is stored in "CMA for Lossy comp" (default: 0x00_5400_0000 - 0x00_5700_0000) because of "reusable" memory property in DeviceTree.

4.13 v2.12.0

- Yocto recipe package Ver2.12.0 for R-Car H3/M3.
    - R-Car H3/M3 Linux BSP package v3.3.2 based on Linux Kernel 4.6
        - Please refer BSP's release note in detail
- 3D graphics Packages and Multi Media Packages
    - MMP: Beta release
    - CMS: CMM3 and VSP2 Basic Color Management is integrated by one package.
- In BSP Only, core-image-weston is not supported even though local-wayland.conf is provided.
- Please set SW7 Pin-1. In after Yocto BSP v2.12.0, it is necessary to enable BKUP_TRG signal for Suspend to RAM.
- You have to re-compile out-of-recipe software like user application by v2.12.0 SDK toolchains.

4.14 v2.15.0

- Yocto recipe package Ver2.15.0 for R-Car H3/M3.
    - Yocto Recipes package base upgraded to Yocto Project 2.1.2 from 2.0
    - R-Car H3/M3 Linux BSP package v3.4.0 based on Linux Kernel 4.9
        - Upgrade Linux kernel version to v4.9 from v4.6
        - Fix frame work of System Suspend to RAM
        - Please refer BSP's release note in detail
    - U-boot: Changed load address to H'50000000 from H'49000000
    - Updated IPL for Linux Kernel 4.9
        - IPL: Clean-up to the DDR setting code
        - IPL: Add support R-Car Gen3 M3 WS1.05
        - Please refer to IPL's release note
    - Wayland/Weston upgraded to 1.11 from 1.9.
    - Gstreamer upgraded to v1.6.3 from v1.4.5
        - Gstreamer-1.0-plugins-bad: Support Wayland/Weston 1.11.0
- 3D graphics Packages and Multi Media Packages
    - GFX: Support Wayland/Weston 1.11.0.
    - ADSP, Video: Fix duplicate header files
- In BSP Only, core-image-weston is not supported even though local-wayland.conf is provided.
- Please set SW7 Pin-1. In after Yocto BSP v2.12.0, it is necessary to enable BKUP_TRG signal for Suspend to RAM.
- The dtb filename was changed in R-Car H3. Only "Image-r8a7795-es1-salvator-x.dtb" is supported in this version. Please use "Image-r8a7795-es1-salvator-x.dtb". It supports R-Car H3 WS1.0 and WS1.1.
- You have to re-compile out-of-recipe software like user application by v2.15.0 SDK toolchains.

4.15 v2.16.0

- Yocto recipe package Ver2.16.0 for R-Car H3/M3.
    - R-Car H3/M3 Linux BSP package v3.5.1 based on Linux Kernel 4.9 Stable
        - Upgrade Linux kernel version to v4.9 Stable from v4.9 RC1
        - Please refer BSP's release note in detail
    - Updated IPL for Linux Kernel 4.9 Stable

        - Please refer to IPL's release note
- 3D graphics Packages and Multi Media Packages
    - GFX: Update to support Linux Kernel 4.9 Stable
    - Wayland: Update libgbm to v10. 3.0
    - XDG_RUNTIME_DIR has been changed from "/run/user/root" to "/run/user/0".
    - Video: Update video packages to v3.0.7
        - Support new codecs: H263 Decode
    - Change location of include directory, which stores common user header files, to $(INCSHARED).
- In BSP Only, core-image-weston is not supported even though local-wayland.conf is provided.
- Please set SW7 Pin-1. In after Yocto BSP v2.12.0, it is necessary to enable BKUP_TRG signal for Suspend to RAM.
- The dtb filename was changed in R-Car H3. Only "Image-r8a7795-es1-salvator-x.dtb" is supported in this version. Please use "Image-r8a7795-es1-salvator-x.dtb". It supports R-Car H3 WS1.0 and WS1.1.
- Please update your local.conf and bblayers.conf corresponding to Yocto v2.16.0 package. You can refer to meta-rcar-gen3/docs/sample/conf/ for updated contents.
- You have to re-compile out-of-recipe software like user application by v2.16.0 SDK toolchains.
- In some boards, the resuming from System Suspend to RAM may cause unstable operation or failed to resume.

o v2.15.0 or later : U-boot start address is H'50000000.

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
U-Boot On Board Drivers On chip Peripheral Drivers etc.	R-Car H3/M3 Linux BSP	–	v3.5.1
Initial Program Loader	R-Car H3/M3/E3 Initial Program Loader	–	–
OpenGL3.1 Library	R8A7795 GX6650 OpenGL ES3.1 Library for Linux	RTM0RC7795GLTG0001SL40C	1.3.0
GSX driver	R8A7795 GX6650 Device Driver for Linux	RCH3G001L4001ZDO	1.3.0
GSX Offline Compiler	R8A7795 GX6650 GLSL Offline Compiler for Linux	RCH3G002L4001ZNI	1.3.0
OpenGL3.1 Library	R8A7796 GX6250 OpenGL ES3.1 Library for Linux	RTM0RC7796GLTG0001SL40C	1.3.0
GSX driver	R8A7796 GX6250 Device Driver for Linux	RCM3G001L4001ZDO	1.3.0
GSX Offline Compiler	R8A7796 GX6250 GLSL Offline Compiler for Linux	RCM3G002L4001ZNI	1.3.0
OMX	OMX Media Component Common Library for Linux	RTM0AC0000XCMCTL30SL40C	3.0.7
OMX	OMX Media Component Video Decoder Common Library for Linux	RTM0AC0000XVCMND30SL40C	3.0.7
OMX	OMX Media Component Video Encoder Common Library for Linux	RTM0AC0000XVCMNE30SL40C	3.0.7
OMX	OMX Media Component H.263 Decoder Library for Linux	RTM0AC0000XV263D30SL40C	3.0.7
OMX	OMX Media Component H.264 Decoder Library for Linux	RTM0AC0000XV264D30SL40C	3.0.7
OMX	OMX Media Component H.265 Decoder Library for Linux	RTM0AC0000XV265D30SL40C	3.0.7
OMX	OMX Media Component MPEG-2 Decoder Library for Linux	RTM0AC0000XVM2VD30SL40C	3.0.7
OMX	OMX Media Component MPEG-4 Decoder Library for Linux	RTM0AC0000XVM4VD30SL40C	3.0.7
OMX	OMX Media Component VC-1 Decoder Library for Linux	RTM0AC0000XVVC1D30SL40C	3.0.7
OMX	OMX Media Component H.264 Encoder Library for Linux	RTM0AC0000XV264E30SL40C	3.0.7
OMX	OMX Media Component DivX Decoder Library for Linux	RTM0AC0000XVDVXD30SL40C	3.0.7
OMX	OMX Media Component RealVideo Encoder Library for Linux	RTM0AC0000XVRLVD30SL40C	3.0.7

Package Name (abbreviation)	Package Name	Package Id	Package Revision
UVCS Driver	UVCS Driver for Linux	RCG3VUDRL4001ZDO	3.0.7
OMX	OMX Media Component Audio Common Library for Linux	RTM0AC0000XACMND30SL40C	3.0.6
OMX	OMX Media Component for AAC-LC Decoder Library for Linux	RTM0AC0000XAAACD30SL40C	3.0.6
OMX	OMX Media Component for aacPlus V2 Decoder Library for Linux	RTM0AC0000XAAAPD30SL40C	3.0.6
OMX	OMX Media Component for ALAC Decoder Library for Linux	RTM0AC0000XAALAD30SL40C	3.0.3
OMX	OMX Media Component for Dolby(R) Digital Decoder Library for Linux	RTM0AC0000XADD5D30SL40C	3.0.3
OMX	OMX Media Component for FLAC Decoder Library for Linux	RTM0AC0000XAFLAD30SL40C	3.0.3
OMX	OMX Media Component for MP3 Decoder Library for Linux	RTM0AC0000XAMP3D30SL40C	3.0.6
OMX	OMX Media Component for WMA Standard Decoder Library for Linux	RTM0AC0000XAWMAD30SL40C	3.0.6
OMX	OMX Media Component for AAC-LC Encoder Library for Linux	RTM0AC0000XAAACE30SL40C	3.0.3
AAC decoder	AAC-LC 2ch Decoder Middleware Library for Linux	RTM0AC0000ADAACMZ1SL40C	3.0.6
aacPlus V2 decoder	aacPlus V2 Decoder Middleware Library for Linux	RTM0AC0000ADAAPMZ1SL40C	2.0.6
Dolby(R) Digital decoder	Dolby(R) Digital Decoder Middleware Library for Linux	RTM0AC0000ADDD5MZ1SL40C	2.0.4
MP3 decoder	MP3 Decoder Middleware Library for Linux	RTM0AC0000ADMP3MZ1SL40C	2.0.6
WMA standard decoder	WMA Standard Decoder Middleware Library for Linux	RTM0AC0000ADWMAMZ1SL40C	2.0.6
AAC encoder	AAC-LC Encoder Middleware Library for Linux	RTM0AC0000AEAACMZ1SL40C	3.0.3
CMS	Basic Color Management Middleware for Linux	RTM0AC0000JRCMBCV0SL40C	0.5.2
CMS	CMM3 Backlight Control Middleware for Linux	RTM0AC0000JRCMBLC0SL40C	0.5.2
CMS	VSP2 Dynamic Gamma Correction Middleware for Linux	RTM0AC0000JRCMDGV0SL40C	0.5.3
ADSP	ADSP Interface for Linux	RCG3AHIFL4001ZDP	1.0.5
ADSP	ADSP Driver for Linux	RCG3AHPDL4001ZDO	1.0.5
ADSP	ADSP Framework	RCG3AHFWN0101ZDP	1.0.4
ADSP	ADSP Reference Plugin	RCG3AHPLN0101ZDO	1.0.4

6. Commit ID of Renesas Yocto Recipe

Table 2: Commit ID of Renesas Yocto Recipe

Release	Repogitory	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	b74ea963cefffad9fbd91d4eb9b240f6a8c86cd0
	git://git.linaro.org/openembedded/meta-linaro.git	fido	3f1933242062d1cf473d20b86fa4582963ff9441
2.3.0	git://github.com/renesas-rcar/meta-renesas.git	fido	63ccf5dcf40a15f039473f62e0fc0bdf36ad616f
	git://git.yoctoproject.org/poky	fido	fa55b8e5050c6d7a47ef8e9bc213d0cc9471b43a
	git://git.linaro.org/openembedded/meta-linaro.git	fido	08a46787862966f2236c5a9b3eb4d4ec68263593
2.7.0	git://github.com/renesas-rcar/meta-renesas.git	jethro	318c9b7daa44219a2f44e0966c17ae58266452c0
	git://git.yoctoproject.org/poky	jethro	c8e5c38b8a36cbb45831fcd8469bd96068ae300c
	git://git.linaro.org/openembedded/meta-linaro.git	jethro	acf4f1f701e07670ec88435897a74f88dbe8ba87
	git://git.openembedded.org/meta-openembedded	jethro	dc5634968b270dde250690609f0015f881db81f2
2.8.0	git://github.com/renesas-rcar/meta-renesas.git	jethro	1d6ca1f7d9080c4807f60ed477be5311b107b16d
	git://git.yoctoproject.org/poky	jethro	6dba9abd43f7584178de52b623c603a5d4fcec5c
	git://git.linaro.org/openembedded/meta-linaro.git	jethro	acf4f1f701e07670ec88435897a74f88dbe8ba87
	git://git.openembedded.org/meta-openembedded	jethro	c305ac5d2f5285d5eec8952a4ca7f3b4f89aed96
2.9.0	git://github.com/renesas-rcar/meta-renesas.git	jethro	20319d147591f9aaf2f32bf2d74abe188b538d61

Release	Repogitory	branch	Commit ID
	git://git.yoctoproject.org/poky	jethro	65306b0bfc1afd0de9b1d470fd78c8c69f55f791
	git://git.linaro.org/openembedded/meta-linaro.git	jethro	acf4f1f701e07670ec88435897a74f88dbe8ba87
	git://git.openembedded.org/meta-openembedded	jethro	cb7e68f2a39fa6f24add48fc7b8d38fb7291bb44
2.12.0	git://github.com/renesas-rcar/meta-renesas.git	jethro	522efd09043aa8af1eec01af2b9e025df424d9a5
	git://git.yoctoproject.org/poky	jethro	40376446904ae3529be41737fed9a0b650ed167d
	git://git.linaro.org/openembedded/meta-linaro.git	jethro	9b1fd178309544dff1f7453e796a9437125bc0d9
	git://git.openembedded.org/meta-openembedded	jethro	8ab04afbffb4bc5184cfe0655049de6f44269990
2.16.0	git://github.com/renesas-rcar/meta-renesas.git	krogoth	3613b2780a6b5d5d70ea6802be5060a8214cbdb5
	git://git.yoctoproject.org/poky	krogoth	yocto-2.1.2 (cca8dd15c8096626052f6d8d25ff1e9a606104a3)
	git://git.linaro.org/openembedded/meta-linaro.git	krogoth	2f51d38048599d9878f149d6d15539fb97603f8f
	git://git.openembedded.org/meta-openembedded	krogoth	55c8a76da5dc099a7bc3838495c672140cedb78e

REVISION HISTORY	Linux Interface Specification Yocto recipe Start-Up Guide User’s Manual: Software

Rev.	Date	Description	
		Page	Summary
2.5.2	Jan 25 2016	2	2.2 updated version number
		5	4.6 add history of v2.5.2
		6	5 Table1 updated version number
		7	6 Table2 added v2.5.2 commit id
2.6.0	Feb 25 2016	2	2.2 updated version number
		5	4.7 add history of v2.6.0
		6	5 Table1 updated version number
		7	6 Table2 added v2.6.0 commit id
2.7.0	Mar 25 2016	2	2.2 updated version number
		6	4.8 add history of v2.7.0
		7	5 Table1 updated version number
		8	6 Table2 added v2.7.0 commit id
2.8.0	Apr 25 2016	all	Added description for R-Car M3. For example, R-Car H3 -> R-Car H3/M3
		2	2.2 updated version number
		6	4.9 add history of v2.8.0
		7-8	5 Table1 updated version number and add new MMP
		9	6 Table2 added v2.8.0 commit id
2.9.0	May 25 2016	2	2.2 updated version number
		7	4.10 add history of v2.9.0
		8-9	5 Table1 updated version number and add new MMP
		10-11	6 Table2 added v2.9.0 commit id
2.10.0	Jun 27 2016	2	2.2 updated version number
		7	4.11 add history of v2.10.0
		8-9	5 Table1 updated version number and add new MMP
		10-11	6 Table2 added v2.10.0 commit id
2.11.0	Jul 25 2016	2	2.2 updated version number
		7	4.12 add history of v2.11.0
		9-11	5 Table1 updated version number and add new MMP
		12-13	6 Table2 added v2.11.0 commit id
2.12.0	Aug 25 2016	2	2.2 updated version number
		7	4.13 add history of v2.12.0
		9-11	5 Table1 updated version number and add new MMP
		12-13	6 Table2 added v2.12.0 commit id
2.15.0	Dec 07 2016	2	2.2 updated version number
		8	4.14 add history of v2.15.0
		9-11	5 Table1 updated version number
		13	6 Table2 added v2.15.0 commit id
2.16.0	Jan 27 2017	2	2.2 updated version number
		3	3 fixed typo
		8-9	4.15 add history of v2.16.0
		10-11	5 Table1 updated version number
		12-13	6 Table2 added v2.16.0 commit id

Linux Interface Specification Yocto recipe
Release Note: Software

Publication Date: Rev.2.16.0 Jan. 27, 2017

Published by: Renesas Electronics Corporation

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