REVISION HISTORY	Linux Interface Specification Device Driver Display
	User's Manual: Software

Rev.	Date		Description
		Page	Summary
0.1	Sep. 25, 2015	-	New creation.
0.2	Oct. 23, 2015	23	4.1 External Interface for DRM/KMS Driver Update the version of libdrm from 2.4.59 to 2.4.65.
0.3	Nov. 20, 2015	4	1.5 Notice Add notice of hang-up workaround when VSP underrun occurs
		20	5.2 Integration Procedure Add Renesas VSP1 underrun debug messages configuration
		20	5.2.2 Size of CMA Change Delete CMA change method of bootargs and described the referenced document
0.4	Mar. 18, 2016	2	Table 1.1 Supported resolution High resolution (1080p, 720p, etc.,) of Analog RGB is supported.
		4	1.4 Restrictions  Delete the description of the resolution that are not supported with the Analog RGB.
		4	1.4 Restrictions Add restriction of Vmute function
		5	1.5 Notice Add the information in the chip revision about work-around.
		6	Table 2.1 Terminology Add Terminology of 5P49V5923A
		7	Figure 3.1 Module configuration (R-Car H3) Add VSP2 module and 5P49V5923A (programmable clock generator) module.
		13	4.1.7 Add Resolution Setting Fix Analog RGB resolution change function
		15	Add 4.1.9 Vmute function (DRM)
		19	5.1 Directory Configuration Add clk-5p49v5923a.c and rcar_du_drm.h
		21	5.2.1 Kernel Configuration Add "Clock driver for 5P49V5923A programmable clock generator" configuration
		22	5.2.3 Kernel Parameters Add 1080p setting example method of Analog RGB by bootargs.
0.5	Apr. 15, 2016	All	Add R-Car M3 support.
		4	1.4 Restrictions Delete the restriction of vmute function.
0.6	Aug. 5, 2016	1,3	1.2 Function, Table 1.2 Supported pixel format New pixel format support (YUV420,YVU420,YUV422,YVU422,YUV444,YVU444)
		1,16	1.2 Function, 4.1.5 Setting of plane property  The same use of pixel alpha and plane alpha is supported.(ARGB4444, BGRA8888, ARGB8888)
		2,8	1.2.1 Display Resolution, 1.7 P/I conversion Interlaced mode is supported.
		1,20	1.2 Function, 4.1.10Write back function (DRM) Write back is supported.
		1,16	1.2 Function, 4.1.5 Setting of plane property Plane order is supported.
		5	1.5 Notice Add note of caution in interlaced mode
		5,10	Table 1.4, Table 3.1 Add M3 System Evaluation Board information
		14	4.1 External Interface for DRM/KMS Driver Update the version of libdrm from 2.4.65 to 2.4.68.
		21	Table 4.4 List of DRM resources ID  Each object ID is corrected by update of kernel v4.6
		24	Add 4.5 IPMMU Setting

		27	Figure 5.1 Add rcar-fcp.c source file
		28	Figure 5.2 Kernel configuration
		_	Add "Renesas Frame Compression Processor" configuration 5.2.3 Kernel Parameters
		29	Add 1080i setting method in HDMI connector
0.7	Dec. 16, 2016	22	Fix 4.2 DRM resource information by updating to kernel-v4.9
		29	Fix 5.1 Directory Configuration
		31	Fix 5.2.1 Kernel Configuration by updating to kernel-v4.9
		32	5.2.3 Kernel Parameters
			Add calculation method in Notes  Table 1.1 Supported resolution
0.8	Mar. 15, 2017	2	Add notice *6 when R-Car H3 (WS2.0)
		5	Table 1.4 Related document (R-Car H3 / M3) Update revision of H/W manual, and add Salvator-XS manual
		7	Add Figure 1.2 accesses of layers (R-Car H3 (WS2.0))
		22	Table 4.4 List of DRM resources ID
			Add specification of H3(WS2.0)
		23	Add 4.4 BRS number setting
		29	5.1 Directory Configuration Change file name 5p49v5923a to 5p49x for Salvator-XS board support
		32	Figure 5.2 Kernel configuration
			Change configuration name 5P49V5923A to 5P49X for Salvator-XS board support 4.1.6 Resolution Change, 5.2.3. Kernel Parameters
		18, 32	Add reference document to change the resolution when starting Wayland
0.9	Apr. 14, 2017	25	4.6 IPMMU Setting
			Add setting of ipmmu_vi1 and fcpvd2 for R-Car H3 (WS2.0)
0.10	Jun. 14, 2017	-	Fix H/W revision notation from WS to Ver.
		5	Table 1.4 Related document (R-Car H3 / M3) Update revision of H/W manual
		5	1.5 Notice
			Add notice of drmModePageFlip API issue timing
1.00	Aug. 8, 2017	All	Update document format.
		2	Table 1.1 Supported resolution 1080p is not supported in Analog RGB resolution because it does not meet the
			electrical characteristics
		5	1.5 Notice
			Delete notice of drmModePageFlip API issue timing 4.1.10 Write back function (DRM)
		21	Add notice when other display update was executed.
1.01	Oct. 24, 2017	ALL	Add R-Car M3N support
		5	Table 1.4 Related document (R-Car H3 / M3 / M3N)
1.50	Jan. 29, 2018		Update revision of H/W manual Update for Kernel v4.14
1.50	Jan. 29, 2016	18	Add color key function support
			Table 4.2
		19	Add atomic API
		21	Table 4.1  Poloto dovice file of /dov/dri/controllD64 from v4.14
		25	Delete device file of /dev/dri/controlID64 from v4.14  Delete IPMMU setting.
1.51	Mar. 28, 2018	ALL	Add R-Car E3 support
1.01	IVIGIT. 20, 2010	18	Add Linux GPU Driver Developer's Guide URL
			Table 4.2
		19	Update atomic API
1.52	Apr. 25, 2018	2	Table 1.2 Add 1920x720 resolution for R-Car E3
			4.3 DRM connector selection
		29	Fix dual-link mode from lvds to hdmi in Ex 2)

1 1	ſ	32	Add 4.5 PDC number setting
		32	Add 4.5 BRS number setting 5.2.1 Kernel Configuration
		35	Delete note of Dumb VGA DAC Bridge support because it is wrong.
1.53	Jun. 27, 2018	7	1.6 Plane access Add description of BRS and WPF1
		23	4.1.5 Setting of plane property Add notice of colorkey alpha use
		24	4.1.7 Add Resolution Setting Add method to add resolution table
		30	4.3 DRM connector selection Fix Ivds port number in Ex 3)
1.54	Oct, 22, 2018	2	Table 1.1 Add M3N notation
		6	Table 1.6 Related document (R-Car H3 / M3 / M3N / E3) Update Related Documents
1.55	Oct, 29, 2018	6	1.5 Notice Add notice about sync signal of DU1 in E3
		16	Figure 3-2 Add notice about LVDS in E3
		28	Table 4.4 List of DRM resources ID Update Connectors ID of E3 for kernel version up
		29	4.3 DRM connector selection Update for kernel version up
			5.1 Directory Configuration
		35	Update for kernel version up
			5.2.1 Kernel Configuration
		27	Modified by kernel version
		37	Add Thine THC63LVD1024 LVDS decoder bridge configuration
			Delete R-Car DU VSP Compositor Support so it is set y by default
			5.2.3 Kernel Parameters
		37	Fix bootargs example setting from 1080p to 1080i in case of VGA. (Because 1080p in VGA cannot be used.)
2.00	Dec. 25, 2018	-	Update AddressList
		6	Table 1.6 Related document
			Update reference documents
		14	Table 3.1 Hardware specification  Update board name
			4.3 DRM connector selection
		31	Add Ex 4) for ebisu board
			5.2.3 Kernel Parameters
		38	Add notice of 1080i setting
2.01	Apr. 17, 2019	-	Update AddressList
	' ,		Table 1.6 Related document (R-Car H3 / M3 / M3N / E3)
		6	Update reference documents
		25,30, 31	4.1.7 Add Resolution Setting, 4.3 DRM connector selection
		31	Add description of r8a77990-es10-ebisu.dts
		25	4.1.7 Add Resolution Setting [LVDS output] Add description polarity setting in LVDS panel
2.50	Apr 24 2020		Add R-Car V3U support
2.50	Apr. 24, 2020	-	1.2 Function
		1	1.2 I UNGUOTI

		2	1.2 Function Add DSI/CSI-2-TX-IF for V3U
		3	Table 1.3 Supported resolution  Add new supported resolution table with DSI/CSI-2-TX connection for V3U
			Table 1.4 Supported pixel format
		4	Update new pixel formats
			Table 1.7 Supported connector
		5	Add new supported connector table for V3U
		6	Table 1.8 Related document
			Update document
		11	Figure 1-5 Accesses of layer Add Layer Access diagram for V3U
		15	Table 3.1 Hardware specification Update document
			Figure 3-3 Module configuration
		18	Add new image for V3U's module configuration
		29	Table 4-4 List of DRM resources ID
		29	Update connector ID and CRTCs ID for V3U
		40	5.2.3 Kernel Parameters
			Add example command to set bootargs for V3U
2.51	lun 24 2020	32	4.3 DRM connector selection
2.51	Jun. 24, 2020	32	In Example 3 LVDSx2 Single link, setting for dts in case of using 2 LVDS panels is added
		00	4.3 DRM connector selection
		33	In Example 4 Analog RGB + LVDS Single link, setting for dts in case of using Analog RGB and LVDS is added
		36	5.1 Directory Configuration
			Add DSI driver file into directory configuration
2.50	Dag 4 2020	_	1.2.3 Connector
2.52	Dec. 1, 2020	5	Change the name of output signal for DSI-TX-IF at Table 1.7 Supported connector for R-Car V3U
			1.3 Related Document
		6	Add edition and issed date for [R-Car V3U Series User's Manual] and [R-CarV3U System Evaluation Board Falcon Hardware Manual]
			1.6 Plane access
		11	Due to supporting only DU0 on V3U Falcon Board, the access of layers (Figure 1-5) was modified.
			4.2 DRM resource information
		29	Add R-Car V3U resource ID (connector's and crtc's ID) to Table 4.4 List of DRM resources ID
		34	4.4 Hot plug Operation     Add checking status of DP cabble
			5.1 Directory Configuration
		36	Add tn-sn65dsi86.c file as bridge source file to directory sources tree
2.53	Jan. 29, 2020	-	Add R-Car V3H v2.0 support.
2.54	Apr. 21, 2021	-	Add R-Car D3 support
		-	Add Kernel 5.10 support
2.55	Aug. 16, 2021	22	Update libdrm v2.4.104

3.00	Dec. 10, 2021	-	Add Kernel v5.10.41 support
3.1.0	Dec. 25, 2023	-	Add Kernel v5.19.194 support for H3, M3, M3N, E3