RFP - Release Notes - 2021 - M2

Release Notes - 2021 - M2
RDK Reference Platform (RFP)

Version: 1.12
28 Feb 2021

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Revision History

Release No.	Date	Revision Description
1.12	28 Feb 2021	Broadband • Analyze and ensure the tiny RDK Changes brought up in Raspberry PI - REFPLTB-916 • RDK-B Upgradation to R-Pi4 - REFPLTB-931 • Yocto 3.1 Migration with WebUI JST support in rpi3 Fixes - REFPLTB-923 • TR-069 Data Parameters Support- GPV, SPV for RPI - REFPLTB-928 • Extensible SDK (eSDK) support for Turris Omnia Phase2 - REFPLTB-584 • Git tagged releases for Turris Omnia on rdk-next branch - REFPLTB-976 Camera • Resolve buffer glitches and hang issue in RMS feature with libcamera. - REFPLTCAM-115 • validate cvr feature using libcamera - REFPLTCAM-108 • Bringup pipewire component in RDK-C. - REFPLTCAM-116 Video • RDKCentral's generic TR-069 Data Model used in RPi platform • Fixed RDK Services stabilization tickets • Pinned Revision for RDK components in eSDK support • Resolved few Community tickets
1.11	31 Jan 2021	Broadband • Yocto 3.1 with WebUI JST migration Support in RPI(Model 3B+/3B) target platform - REFPLTB-862 • Remote Management Support With HTTPS in RDKB RPI target platform - REFPLTB-893 • TR-069 Support for RPI - REFPLTB-899 • Telemetry- Cron Expression Support for Turris Omnia - REFPLTB-866 • Extensible SDK (eSDK) support on Dunfell Turris -REFPLTB-584 • Wireless Protection Setup(WPS) support for Turris Omnia - REFPLTB-673 • Git tagged releases for Turris Omnia on rdk-next branch - REFPLTB-924 Camera • extensible SDK (eSDK) support for raspberrypi - REFPLTCAM-105 • fixing zoom issue observed on libcamerasrc video capture - REFPLTCAM-106 • crash observed during capturing video using libcamerasrc after 40+ seconds of capture - REFPLTCAM-107 • Support RMS with RTSP feature using libcamera src - REFPLTCAM-110 Video • New RDK Resident App available in RPi images NEW! • Telemetry 1.0 feature on Video profiles NEW! • RDKShell runtime crash is fixed • MPEG-2 playback using hardware decoding on RPi available in Yocto 3.1 • Build issues fixed in RPi RefApp image on Yocto 3.1 • Migration of BRCM Reference Device 72180 to 20.2 sdk

1.10	08 Jan 2021	Broadband • Yocto 3.1 Migration and validation of RDKB features with opensync - REFPLTB-836 • Git tagged releases for Turris Omnia on rdk-next branch - Dec_30_12_2020 • Yocto 3.1 migration Support in RPI(Model 3B+/3B) target platform - REFPLTB-862 Camera • Yocto 3.1 Migration on rdk-next branch for RPI - REFPLTCAM-91 • Firmware Upgarde with HTTP support for RPI - REFPLTCAM-92 • libcamera validation with gst-launch-1.0 -REFPLTCAM-68 Video • Extensible SDK for Raspberrypi Platform - REFPLTV-730 NEW • Yocto 3.1 (Dunfell) Migration of RDK-Video profile's yocto builds on rdk-next branch - Phase 2 - REFPLTV-412 NEW • Firmware Upgrade on RPi platform from XCONF Server - REFPLTV-759 NEW • Stabilization of RDK Services on RDK-V images - fixed most of the issues - REFPLTV-514

1.9	30 Nov 2020	Broadband
		
		• RDK Telemetry for Turris omnia reference platform - REFPLTB-664
		• Yocto 3.1 Migration on rdk-next branch for RPI - REFPLTB-862
		• Validation on Migration from dunfell to rdk-next on Turris Omnia - REFPLTB-836
		• Mesh config on R-Pi 4 (Proof of Concept)
		• Git tagged releases for Turris Omnia on rdk-next branch - Nov_30_11_2020
		
		Camera
		
		• Support RTSP streaming with RMS in Dunfell branch - REFPLTCAM-86
		• Validate CVR use case in RPI3 with dunfell branch - REFPLTCAM-82
		• Support Normal Thumbnail in RPI3 with Dunfell branch - REFPLTCAM-88
		• Support Firmware upgrade in RPI3 with dunfell branch - REFPLTCAM-87
		• Smart Home with Security Surveillance Video Streaming (Proof of Concept)
		  ◦ Face detection
		  ◦ Thumbnail support
		  ◦ RTSP Streaming
		
		Video
		
		• Yocto 3.1 (dunfell) build framework support on rdk-next RPi RDK image builds NEW
		  ◦ Supports generation of both media client and hybrid gateway generic images
		• Smart Home with Security Surveillance Video Streaming (Proof of Concept)
		  ◦ Thumbnail Notification handling
		  ◦ Picture-in-Picture video playback
		  ◦ IOT device control application
		• RDK Services on x86 PC Emulator NEW
		  ◦ Supports Controller UI
		  ◦ Services: DeviceInfo,

1.8	31 Oct 2020	Broadband
		
		Yocto 3.1 Turris Omnia - Synchronizing from topic branches to mainstream branches
		
		• Synchronizing yocto 3.1 changes in meta-turris layer - REFPLTB-807
		• Git tagged releases for Turris Omnia on rdk-next branch - Oct_30_10_2020
		
		Camera
		
		• Validation of RDK-C use cases of CVR, Normal thumbnail and firmware upgrade in RPI-3B+ target. - REFPLTCAM-74
		• CVR crash issue was fixed - REFPLTCAM-69
		• Supported firmware upgrade with both ethernet and wifi Mac - REFPLTCAM-77
		• CVR build issue was fixed - REFPLTCAM-76
		
		Video
		
		• Firmware Control service on HYB and MC images
		• Wifi service enabled for HYB images
		• Yocto 3.1 Migration on rdk-next build - Phase 1
		  ◦ Parsing errors were resolved and RPi specific changes are merged
		  ◦ Supporting Jenkins team to merge Comcast migration changes into rdk-next
		• meta-wpe layer removal - Supported all images including RefApp image where video and graphics issue fixed
		• RMF Streamer crash was fixed

1.7	30 Sept 2020	• Support rdk-generic-camera-image for RPI-3 target - REFPLTCAM-67 • Validate RMS Feature in RPI3 B+ - REFPLTCAM-75 • Upstream patches in `meta-rdk-camera` - REFPLTCAM-2 • After initial bootup RPI-0 target not up on reboot. - REFPLTCAM-71 • Graphics and Video rendering issue resolved on RPi for RDK Service integration - REFPLTV-597, REFPLTV-594 • Bluetooth RDK service enabled for both MediaClient and Hybrid Gateway - REFPLTV-610 • RDK Services on RPi Generic MediaClient • RDK Services on RPi Generic Hybrid Gateway • Yocto 3.1 Turris Omnia - Synchronizing from topic branches to mainstream branches - REFPLTB-808 • Git tagged releases for Turris Omnia on rdk-next branch - Sep_30_09_2020_RDKB_Gateway
1.6	31 Aug 2020	Updated Release Information, Release Identification for 2020 M8 Release Updated Features supported for this sprint and Community tickets addressed • Yocto 3.1 integration and validation for rdk-generic-camera-image - REFPLTCAM-31(REFPLTCAM-55,REFPLTCAM-56, REFPLTCAM-57,REFPLTCAM-60) • Telemetry with cron job support - REFPLTB-607 • RDKServices on Raspberrypi 's Firebolt ® Media Client Image - REFPLTV-514 • Yocto-3.1 Turris-Omnia Opensync Integration with Plume NOC and MeshAgent Support - REFPLTB-750 • Git tagged releases for Turris Omnia on rdk-next branch - Aug_31_08_2020
1.5	31 Jul 2020	Updated Release Information, Release Identification for 2020 M7 Release Updated Features supported for this sprint and Community tickets addressed • Integarted SNMP module in RDKB stack in RPI - REFPLTB-714 • RDKB Emulator hal refactoring - REFPLTB-758 • Online / Offline status of connected devices on RDKB in R-Pi - REFPLTB-622 • Fixed high priority run-time/build time issues: Yocto 3.1 RDK MediaClient Generic Image - REFPLTV-474 • Validation and fixes for runtime issues for Yocto 3.1 RDK Hybrid Generic image - REFPLTV-473 • Integrate yocto3.1 for rdk-generic-camera-image - REFPLTCAM-31 • Yocto 3.1 dunfell RDKB build for Turris Omnia: Brought all RDKB feature that are available in rdk-next build - REFPLTB-566 • Git tagged release build(rdk-next) for Turris omnia - REFPLTB-680
1.4	30 Jun 2020	Updated Release Information, Release Identification for 2020 M6 Release Updated Features supported for this sprint and Community tickets addressed • Firmware upgrade through XCONF server in Turris Omnia Platform - REFPLTB-665 • Added RDKM logo support in UI page and corresponding syndication DM parameters also updated with respect to emulator - REFPLTB-623 • Added Firmware Upgrade with http protocol support in rpi platform - REFPLTB-659 • Supported Normal Thumbnail feature for RPI-0 Device - REFPLTCAM-15 • Validation and fixes for various runtime/build time failures for rdk-generic-mediaclient-image - REFPLTV-474
1.3	29 May 2020	Updated Release Information, Release Identification for 2020 M5 Release Updated Features supported for this sprint and Community tickets addressed • *vc4graphics* and *v4l2* enabled for RDK Hybrid Thunder image on RPI platform to resolve MPEG TS streams playback issue - REFPLTV-433 • RDK Generic Hybrid image support on RPI platform from yocto 3.1 manifest - REFPLTV-473 • RDK Generic Mediaclient image support on RPI platform from yocto 3.1 fixing Issues - REFPLTV-474 • Yocto - 3.1 support in Turris Omnia Target - RDK Broadband generic gateway image - REFPLTB-566 • Implementated the hal-dhcpv4c api's for successfully fetching of Device.DHCPv4.Client.{i} data model tree - REFPLTB-635 • Supported Firmware Upgrade with XConf server for RDK-C - REFPLTCAM-21
1.2	30 Apr 2020	Updated Release Information, Release Identification for 2020 M4 Release Updated Features supported for this sprint and Community tickets addressed • Yocto-3.1 core minimal image support in Turris Omnia target (REFPLTB-564) • Yocto-3.1 RDK generic media client image support in R-Pi(REFPLTV-412) • EMS Refactored to RMS (REFPLTCAM-11 REFPLTCAM-18 REFPLTCAM-19 REFPLTCAM-20 and REFPLTCAM-2) • CVR Support in AWS cloud through gstreamer kvs sink (REFPLTCAM-10) • RDK Telemetry support in Emulator(REFPLTB-563)

1.1	31 Mar 2020	Updated Release Information, Release Identification for 2020 M3 Release Updated Features supported for this sprint and Community tickets addressed Updated Known Issues and Limitations for • Band Steering Support in RPI - RDKB (REFPLTB-432) • Bring WebPA support for Turris Omnia - RDKB (REFPLTB-550) • Continuous Video Recording (CVR) - RDKC (REFPLTCAM-10)
1.0	02 Mar 2020	Updated Release Information, Release Identification for 2020 M2 Release Updated Features supported for this sprint and Community tickets addressed • Super POD connectivity to *Plume* cloud server through Turris Omnia RDKB Gateway (REFPLTB-434) • Wi-Fi Hostapd dynamic Configuration - Turris Omnia (REFPLTB-539) • Emulator for Developer in rdk-next branch (REFPLTB-540 & REFPLTB-541) • IO connector plugin in R-PI Thunder image (REFPLTV-393) • Community Tickets (REFPLTB-528 & REFPLTB-487)

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Introduction

This Release Notes document details for the delivery of version 2021 M2 for the RDK Reference Platform to the RDK Community

1. Release Feature Information
2. Software and Hardware requirements to build
3. Known limitations
4. Updated Platform Tickets

Release Information

Below is the list of release features supporting Turris Omnia, R-Pi, and Emulator platforms.

S. No.	Feature	Device	Profile	Tickets	Remarks
1	Analyze and ensure the tiny RDK Changes brought up in Raspberry PI	R-Pi	RDK-B	Key Summary Status No issues found	

2	RDK-B Upgradation to R-Pi4	R-Pi	RDK-B	Key Summary Status No issues found
3	Yocto 3.1 Migration with WebUI JST support in rpi3 Fixes	R-Pi	RDK-B	Key Summary Status No issues found
4	ccsp-logagent fixes in rpi	R-Pi	RDK-B	Key Summary Status No issues found
5	TR-069 Data Parameters Support- GPV, SPV for RPI	R-Pi	RDK-B	REFPLTB-928 - Getting issue details... STATUS
6	Extensible SDK (eSDK) support for Turris Omnia Phase2	Turris-Omnia	RDKB	REFPLTB-584 - Getting issue details... STATUS
7	Community / BD / TDK Tickets	Raspberrypi	RDK-B	REFPLTB-951 - Getting issue details... STATUS
8	RDKC Use case(RMS and CVR) feature validation with libcamera	Raspberrypi	RDK-C	REFPLTCAM-115 - Getting issue details... STATUS REFPLTCAM-108 - Getting issue details... STATUS
9	Pipewire support	Raspberrypi	RDK-C	REFPLTCAM-116 - Getting issue details... STATUS
10	Yocto 3.1 stabilization	Raspberrypi	RDK-V	key summary status ⚠ Jira project doesn't exist or you don't have permission to view it. View these issues in Jira

11	RDK Services stabilization	Raspberrypi	RDK-V	key summary status Jira project doesn't exist or you don't have permission to view it. View these issues in Jira
12	eSDK support	Raspberrypi	RDK-V	key summary status Jira project doesn't exist or you don't have permission to view it. View these issues in Jira
13	Community Tickets	Raspberrypi	RDK-V	key summary status Jira project doesn't exist or you don't have permission to view it. View these issues in Jira

Hardware and Software Requirements

Hardware Requirements

Broadband

Supported software and hardware

- Preferred 2.4GHZ WIFI adapter for Emulator: Tenda 150Mbps Wireless PICO USB Adapter with RT5370 chipset (W311MI) (or) Preferred 2.4GHZ WIFI adapter for Emulator: TP-Link AC1200 Wireless Dual Band USB Adapter (Archer T4U)
- Preferred 5GHZ WIFI adapter for Emulator/RPI: TP-Link AC1200 Wireless Dual Band USB Adapter (Archer T4U)
- Preferred xfinity-wifi 2.4GHZ WIFI adapter for RPI: TP-LINK TL-WN823N 300Mbps Mini Wireless N USB Adapter
- New dongle - Ultra-fast 1300 (867+400) mbps wireless speed with 802.11ac
- Turris Omnia Target for Wi-Fi Extender functionality
- USB to Ethernet
- Desktop PCs
- 8 GB SD-Card

Video

- Raspberrypi 3 Model B+   - 1 No.
- Power Supply (Output: 5V 2A) - 1 No.
- HDMI Supported TV - 1 No.
- HDMI cable - 1 No.

- Micro SD Card - 1 No.
- Card Reader - 1 No.
- Keyboard - 1 No.

Camera

- Raspberrypi 3 Model B+ - 1 No.
- RPI-3 ribbon cable with RPI 2.1 camera module - 1No.
- Power Supply (Output: 5V 2A) - 1 No.
- HDMI Supported TV - 1 No.
- HDMI cable - 1 No.
- Micro SD Card - 1 No.
- Card Reader - 1 No.
- Keyboard - 1 No.

System Requirements

- How to Build#SettinguptheHostEnvironment - This Link provides the Software and System requirements for both Yocto 2.2 (Morty) and Yocto 3.1 (Dunfell) builds

Known Issues and Limitations

Camera

- RMS and CVR validation with libcamera works only with SD resolution.
- Observed 2 to 3 sec's of glitches in RMS with RTSP validation using both v4l2 and libcamera

Video

Dunfell RPI image

- playback from rmfApp is not consistent. Upon several attempts, failure cases are encountering Network error
- RMF playback-related TDK test cases are failed
- Adaptive stream playback from aamp-cli and from UI are crashed with a segmentation fault
- Dunfell build fails at do_compile of wpeframework-clientlibraries recipe
- Cobalt crashes on launching from UI or Controller UI
- Metrological apps take more time to load its home screen

Project Documentation

Below is the list of supporting documents that are part of the release

1	Build Instructions	Camera
		• RDK-C rdk-next Yocto 3.1 dunfell build for Raspberrypi
		Video
		• Release build - Yocto Build Instructions - RPi - RDK Video - 2021 - M2
		• Latest rdk-next RPi build
		  ◦ RDK-V (Raspberry Pi) Yocto Build Instructions - Morty
		  ◦ RDK-V rdk-next Yocto 3.1 dunfell build for Raspberrypi
		Broadband
		• Release(Dunfell) - RPI 3B/3B+ Model Reference Platform
		• General (Morty) - RDK-B Raspberrypi - Host SetUp and Build Instructions#BRaspberrypi-HostSetUpandBuildInstructions-BRaspberrypi-HostSetUpandBuildInstructions-YoctoBuildSteps
		• RPI 4B(dunfell) - RPI 4B Model Reference Platform
			The wiki links provided here give the Linux commands to setup Yocto Project build framework's workspace and to generate RDK images.

2	High Level Design	Broadband - RPI	An high level design document which explains the design flow of each and every feature also covers Design Considerations, Architecture, Data Model, Limitations and Future Enhancements

3	User Manual	Broadband - RPI, Turris Omnia • RPI 4 Model B support for RDKB RPI Reference Platform • TR-069 Get/Set Data Parameters Support through GenieACS Server for RDKB RPI Reference Platform • Extensible SDK (eSDK) support for Turris Omnia Phase2 Camera • RDKC : RDKC Media server(RMS) with RTSP streaming • RDK-C : Continuos Video Recording (CVR) Video • Extensible SDK support on RDK-V Raspberrypi Yocto 3.1 dunfell build • RDK Services on Raspberrypi	The user manual consists of a procedure to test the particular feature also covers Environment setup, Executing the System, and Troubleshooting steps
4	System Test Plan Results	Video • System Test Plan and Report - RDK Video - 2021 - M2 ◦ RDK-services-Yocto-3.1-E-09874-01-01STP86.xls Camera • System Test Plan and Report - Camera - 2021 - M2 ◦ E-09874-01-01STP85.xls Broadband • System Test Plan and Report - RDK Broadband - 2021 - M2 ◦ E-09874-01-01STP84.xls	This document contains multiple test cases and test results which are captured after test execution
5	Release Notes	RFP - Release Notes - 2021 - M2	Release Notes -This document

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