

RFP - Release Notes - 2020 - M11



Release Notes - 2020 - M11 RDK Reference Platform (RFP)

Version: 1.9
30th November 2020

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Revision History

Release No.	Date	Revision Description
1.9	30 Nov 2020	<p>Broadband</p> <ul style="list-style-type: none">• 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 <p>Camera</p> <ul style="list-style-type: none">• 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)<ul style="list-style-type: none">◦ Face detection◦ Thumbnail support◦ RTSP Streaming <p>Video</p> <ul style="list-style-type: none">• Yocto 3.1 (dunfell) build framework support on rdk-next RPi RDK image builds NEW<ul style="list-style-type: none">◦ Supports generation of both media client and hybrid gateway generic images• Smart Home with Security Surveillance Video Streaming (Proof of Concept)<ul style="list-style-type: none">◦ Thumbnail Notification handling◦ Picture-in-Picture video playback◦ IOT device control application• RDK Services on x86 PC Emulator NEW<ul style="list-style-type: none">◦ Supports Controller UI◦ Services: DeviceInfo,
1.8	31 Oct 2020	<p>Broadband</p> <p>Yocto 3.1 Turris Omnia - Synchronizing from topic branches to mainstream branches</p> <ul style="list-style-type: none">• 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 <p>Camera</p> <ul style="list-style-type: none">• 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 <p>Video</p> <ul style="list-style-type: none">• Firmware Control service on HYB and MC images• Wifi service enabled for HYB images• Yocto 3.1 Migration on rdk-next build - Phase 1<ul style="list-style-type: none">◦ 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	<ul style="list-style-type: none"> • 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	<p>Updated Release Information, Release Identification for 2020 M8 Release</p> <p>Updated Features supported for this sprint and Community tickets addressed</p> <ul style="list-style-type: none"> • 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	<p>Updated Release Information, Release Identification for 2020 M7 Release</p> <p>Updated Features supported for this sprint and Community tickets addressed</p> <ul style="list-style-type: none"> • Integrated 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	<p>Updated Release Information, Release Identification for 2020 M6 Release</p> <p>Updated Features supported for this sprint and Community tickets addressed</p> <ul style="list-style-type: none"> • 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-mediadclient-image - REFPLTV-474
1.3	29 May 2020	<p>Updated Release Information, Release Identification for 2020 M5 Release</p> <p>Updated Features supported for this sprint and Community tickets addressed</p> <ul style="list-style-type: none"> • <i>vc4graphics</i> and <i>v4l2</i> 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 • Implemented 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	<p>Updated Release Information, Release Identification for 2020 M4 Release</p> <p>Updated Features supported for this sprint and Community tickets addressed</p> <ul style="list-style-type: none"> • 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	<p>Updated Release Information, Release Identification for 2020 M3 Release</p> <p>Updated Features supported for this sprint and Community tickets addressed</p> <p>Updated Known Issues and Limitations for</p> <ul style="list-style-type: none"> • 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	<p>Updated Release Information, Release Identification for 2020 M2 Release</p> <p>Updated Features supported for this sprint and Community tickets addressed</p> <ul style="list-style-type: none"> • Super POD connectivity to <i>Plume</i> 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)



Introduction

This Release Notes document details for the delivery of version 2020 M11 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	Yocto 3.1 Migration on rdk-next branch PHASE 2 Supports image generation NEW <ul style="list-style-type: none"> • Generic Mediaclient image • Generic Hybrid image 	R-Pi	RDk-V	<div>key</div> <div>summary</div> <div>  Jira project doesn't exist or you don't have permission to view it. View these issues in Jira </div>	
2	RDK Services on Generic Media Client image Supported Services: <ul style="list-style-type: none"> • DeviceInfo NEW 	Emulator	RDk-V	<div>key</div> <div>summary</div> <div>  Jira project doesn't exist or you don't have permission to view it. View these issues in Jira </div>	
3	Yocto 3.1 Turris Omnia - Synchronizing Yocto 3.1 changes from topic to mainstream branches	Turris-Omnia	RDkB	REFPLTB-836 - Getting issue details... STATUS	
4	RDK Telemetry for Turris omnia reference platform	Turris-Omnia	RDkB	REFPLTB-664 - Getting issue details... STATUS	
5	Yocto 3.1 Migration on rdk-next branch for RPI	R-PI	RDkB	REFPLTB-862 - Getting issue details... STATUS	

6	Community Tickets	R-Pi, Turris Omnia and Emulator	<div> <div>REFPLTB-833 - Getting issue details...<div>STATUS</div></div> <div>REFPLTB-838 - Getting issue details...<div>STATUS</div></div> <div>REFPLTB-803 - Getting issue details...<div>STATUS</div></div> <div>REFPLTB-804 - Getting issue details...<div>STATUS</div></div> </div> <div> <div>blocked URLREFPLTB-820 - [TDK][AUTO][EMU] When a NULL value is passed to wifi_getHalVersion causes segmentation fault</div> <div>RESOLVED</div> </div> <div> <div>blocked URLREFPLTB-817 - [TDK][AUTO][RPI]wifi_getRadioEnable api gives false success when a invalid radio index is passed</div> <div>RESOLVED</div> </div> <div> <div>blocked URLREFPLTB-818 - [TDK][AUTO][RPI] When a NULL value is passed to wifi_getHalVersion causes segmentation fault</div> <div>RESOLVED</div> </div> <div> <div>blocked URLREFPLTB-819 - [TDK][AUTO][EMU]wifi_getRadioEnable api gives false success when a invalid radio index is passed</div> <div>RESOLVED</div> </div> <div> <div>blocked URLREFPLTB-856 - [TDK][AUTO][RPI] RPI showing wrong date and time</div> <div>RESOLVED</div> </div>
7	Supporting RDK-C on R-Pi 3B+ with dunfell branch	R-Pi	<div> <div> <div> <div>REFPLTCAM-86</div> <div>REFPLTCAM-82</div> <div>REFPLTCAM-88</div> <div>REFPLTCAM-87</div> </div> <div> <div>Supported RTSP streaming in RPI3 with dunfell branch</div> <div>Validated CVR use case in RPI3 with dunfell branch</div> <div>Validated Normal thumbnail use case in RPI3 with dunfell branch</div> <div>Validated Firmware upgrade use case in RPI3 with dunfell branch</div> </div> </div> </div>
8	Smart Home Security Surveillance video streaming (POC)	R-Pi	<div> <div> <div>key</div> <div>summary</div> </div> <div> <div> <div> <div>⚠</div> <div>Jira project doesn't exist or you don't have permission to view it.</div> </div> <div>View these issues in Jira</div> </div> </div> <div> <div> https://wiki.rdkcentral.com/display/CONF/Hackathon+Demo+-+Smart+Home </div> </div> </div>
9	Mesh Config on Raspberrypi 4 (POC)	R-Pi	<div> <div> <div>key</div> <div>summary</div> </div> <div> <div> <div> <div>⚠</div> <div>Jira project doesn't exist or you don't have permission to view it.</div> </div> <div>View these issues in Jira</div> </div> </div> <div> <div> https://wiki.rdkcentral.com/display/CONF/Hackathon+Demo+-+Mesh+Config </div> </div> </div>

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

Video

- Yocto 3.1 RPi image build
 - Few change-sets for Yocto 3.1 build migration are under Comcast review (awaiting in stable2 approval) so that an error free build is possible with some cherry-pick commands and the same mentioned in the build instruction wiki page
 - Validation of MC and HYB images yet to be done
- RDK Services on x86 PC Emulator
 - Browser services are not working

Broadband

RPI 3B+ - yocto 3.1 upgrade

1. In WebUI, toggle the sub-menu is not happening .
2. Public wifi 2g support is not available in dunfell branch due to rtl8192eu driver source code is not compatibility in latest kernel version of 5.4.72
3. Default password pop-up change is not happening in WebUI.

Telemetry in Turris Omnia

1. Only HTTP Support for log Upload, yet to have TFTP Server Support
2. Support for creating a cron job to schedule periodic log collection and upload - to be done

Migration and Validation on dunfell - Turris Omnia

1. WebUI is not accessible , facing "500 Internal Server Error"
2. Opensync Plume status is "BACKOFF"

Camera

- By default current date and time is not updating in dunfell camera image.

Project Documentation

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

1	Build Instructions	<p>Camera</p> <ul style="list-style-type: none">• RDK-C Build Instruction for RPI-3 with Dunfell branch <p>Video</p> <ul style="list-style-type: none">• RDK-V rdk-next Yocto 3.1 dunfell build for Raspberrypi• RDK Services on x86 PC based Emulator• How to Build#SettinguptheHostEnvironment for Yocto 3.1	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	<p>Broadband</p> <ul style="list-style-type: none">• Telemetry Support in Turris Omnia - Design - 2020 M11	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	<p>Camera</p> <ul style="list-style-type: none">• RMS feature validation with RTSP streaming• CVR Feature validation• Normal Thumbnail Feature validation• Firmware Upgrade validation <p>Broadband</p> <ul style="list-style-type: none">• RDK-B rdk-next Yocto 3.1 dunfell build for Raspberrypi 3B+• RDK Telemetry for Turris omnia reference platform• Validation on Migration from dunfell to rdk-next on Turris Omnia	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	<ul style="list-style-type: none">• System Test Plan and Report - Camera - 2020 - M11<ul style="list-style-type: none">◦ E-09874-01-01STP73.xlsx	This document contains multiple test cases and test results which are captured after test execution
5	Release Notes	RFP - Release Notes - 2020 - M11	Release Notes -This document

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