

# RFP - Release Notes - 2020 - M7



Release Notes - 2020 - M7  
RDK Reference Platform (RFP)

Version: 1.5  
31th July 2020

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## Revision History

| Release No. | Date          | Revision Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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"><li>• Super POD connectivity to Plume cloud server through Turris Omnia RDKB Gateway (<a href="#">REFPLTB-434</a>)</li><li>• Wi-Fi Hostapd dynamic Configuration - Turris Omnia (<a href="#">REFPLTB-539</a>)</li><li>• Emulator for Developer in rdk-next branch (<a href="#">REFPLTB-540</a> &amp; <a href="#">REFPLTB-541</a>)</li><li>• IO connector plugin in R-PI Thunder image (<a href="#">REFPLTV-393</a>)</li><li>• Community Tickets (<a href="#">REFPLTB-528</a> &amp; <a href="#">REFPLTB-487</a>)</li></ul>                                                                                                                                                                                                                                                                                  |
| 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"><li>• Band Steering Support in RPI - RDKB (<a href="#">REFPLTB-432</a>)</li><li>• Bring WebPA support for Turris Omnia - RDKB (<a href="#">REFPLTB-550</a>)</li><li>• Continuous Video Recording ( CVR ) - RDKC (<a href="#">REFPLTCAM-10</a>)</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 1.2         | 30 April 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"><li>• Yocto-3.1 core minimal image support in Turris Omnia target (<a href="#">REFPLTB-564</a>)</li><li>• Yocto-3.1 RDK generic media client image support in R-Pi(<a href="#">REFPLTV-412</a>)</li><li>• EMS Refactored to RMS ( <a href="#">REFPLTCAM-11</a> <a href="#">REFPLTCAM-18</a> <a href="#">REFPLTCAM-19</a> <a href="#">REFPLTCAM-20</a> and <a href="#">REFPLTCAM-2</a> )</li><li>• CVR Support in AWS cloud through gstreamer kvs sink ( <a href="#">REFPLTCAM-10</a> )</li><li>• RDK Telemetry support in Emulator(<a href="#">REFPLTB-563</a>)</li></ul>                                                                                                                                                                                                                                  |
| 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"><li>• <i>vc4graphics</i> and <i>v4l2</i> enabled for RDK Hybrid Thunder image on RPI platform to resolve MPEG TS streams playback issue - <a href="#">REFPLTV-433</a></li><li>• RDK Generic Hybrid image support on RPI platform from yocto 3.1 manifest - <a href="#">REFPLTV-473</a></li><li>• RDK Generic Mediaclient image support on RPI platform from yocto 3.1 fixing Issues - <a href="#">REFPLTV-474</a></li><li>• Yocto - 3.1 support in Turris Omnia Target - RDK Broadband generic gateway image - <a href="#">REFPLTB-566</a></li><li>• Implemented the <i>hal-dhcpv4c</i> api's for successfully fetching of Device.DHCPv4.Client.{i} data model tree - <a href="#">REFPLTB-635</a></li><li>• Supported Firmware Upgrade with XConf server for RDK-C - <a href="#">REFPLTCAM-21</a></li></ul> |

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|-----|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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"> <li>Firmware upgrade through XCONF server in Turris Omnia Platform - <a href="#">REFPLTB-665</a></li> <li>Added RDKM logo support in UI page and corresponding syndication DM parameters also updated with respect to emulator - <a href="#">REFPLTB-623</a></li> <li>Added Firmware Upgrade with http protocol support in rpi platform - <a href="#">REFPLTB-659</a></li> <li>Supported Normal Thumbnail feature for RPI-0 Device - <a href="#">REFPLTCAM-15</a></li> <li>Validation and fixes for various runtime/build time failures for rdk-generic-mediaclient-image - <a href="#">REFPLTV-474</a></li> </ul>                                                                                                                                                                                                                                            |
| 1.5 | 31 July 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"> <li>Integrated SNMP module in RDKB stack in RPI - <a href="#">REFPLTB-714</a></li> <li>RDKB Emulator hal refactoring - <a href="#">REFPLTB-758</a></li> <li>Online / Offline status of connected devices on RDKB in R-Pi - <a href="#">REFPLTB-622</a></li> <li>Fixed high priority run-time/build time issues: Yocto 3.1 RDK MediaClient Generic Image - <a href="#">REFPLTV-474</a></li> <li>Validation and fixes for runtime issues for Yocto 3.1 RDK Hybrid Generic image - <a href="#">REFPLTV-473</a></li> <li>Integrate yocto3.1 for rdk-generic-camera-image - <a href="#">REFPLTCAM-31</a></li> <li>Yocto 3.1 dunfell RDKB build for Turris Omnia: Brought all RDKB feature that are available in rdk-next build - <a href="#">REFPLTB-566</a></li> <li>Git tagged release build(rdk-next) for Turris omnia - <a href="#">REFPLTB-680</a></li> </ul> |

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## Introduction

This Release Notes document details on the delivery version 2020 M7 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 are the list of release features supporting Turris Omnia, R-Pi and Emulator platforms.

| S. No | Feature | Device | Profile | Remarks | Tickets |
|-------|---------|--------|---------|---------|---------|
|-------|---------|--------|---------|---------|---------|

|   |                                                                            |              |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                    |
|---|----------------------------------------------------------------------------|--------------|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Yocto 3.1 Image Stabilization and Validation                               | Turris Omnia | RDKB  | <ul style="list-style-type: none"> <li>Validating the features of RDKB for 3.1 image on Turris Omnia.</li> <li>Fixed the issues with inet6 addr, ccsp-wifi-agent, webui, and captive-portal.</li> <li>Enabled the features such as webPA and Firmware-upgrade.</li> <li>Resolved the build failures, and ensured the smooth build.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                      | <a href="#">REFPLTB-566</a><br><br>Sub Tasks:<br><br><a href="#">REFPLTB-737</a><br><br><a href="#">REFPLTB-738</a><br><br><a href="#">REFPLTB-739</a><br><br><a href="#">REFPLTB-740</a><br><br><a href="#">REFPLTB-741</a><br><br><a href="#">REFPLTB-765</a><br><br><a href="#">REFPLTB-766</a> |
| 2 | RDKB Emulator hal re-factoring                                             | Emu          | RDKB  | <p>Currently, we are hosting the Emulator hal source code in generic hal repo( i.e rdkb/components/opensource/ccsp/hal under the source-pc folder. So, it doesn't cause any impact on other targets). Getting the changes at rdk-next branch takes around 2 to 3 weeks after round tripping the comcast sprint, stable2 branches (Which is not ideally needed because the changes are in emulator HAL specific in source-pc) So, hosting the repo in CMF will save the time to greater extend.</p> <ul style="list-style-type: none"> <li>Added the updated RDKB emu hal source code in new repo</li> <li>Updated all the hal bbappend 's in bsp-emulator layer</li> <li>Removed the unwanted folders and moved all the remaining hal folders to source folder</li> </ul>          | <a href="#">REFPLTB-758</a><br><br>Sub Tasks:<br><br><a href="#">CMFSUPP ORT-83</a><br><br><a href="#">REFPLTB-759</a><br><br><a href="#">REFPLTB-767</a><br><br><a href="#">REFPLTB-768</a>                                                                                                       |
| 3 | Integrated SNMP module support in rpi platform                             | R-Pi         | RDKB  | <ul style="list-style-type: none"> <li>SNMP Protocol Agent (PA) provides the solution for SNMP Protocol to access CCSP Data Model.</li> <li>Externally, SNMP protocol agent works like a regular SNMP agent. It takes coming SNMP requests and sends back the corresponding results or errors.</li> <li>Internally, SNMP protocol agent processes the SNMP requests and translates those into CCSP Messages. Those messages go on to CCSP Message Bus and come back with response messages. SNMP protocol agent processes the response messages and response to SNMP requests accordingly.</li> <li>In order to translate between SNMP requests and CCSP Messages, SNMP protocol agent loads the XML files describing how MIB objects are mapped to Data Model objects.</li> </ul> | <a href="#">REFPLTB-715</a><br><br>Related tickets<br><br><a href="#">REFPLTB-714</a><br><br><a href="#">REFPLTB-752</a>                                                                                                                                                                           |
| 4 | Online / Offline status of connected devices on RDKB                       | R-Pi         | RDK-B | <ul style="list-style-type: none"> <li>In WebUI, connected Device &gt; Devices &gt; Connected clients status need to be updated properly.</li> <li>If any new associated clients connected with our Gateway Device,that client information should be properly updated in WebUI under online status.</li> <li>If any connected clients disconnects from our Gateway Device, that clients information's should be properly updated in WebUI under Offline status</li> <li>For that, we have implemented the below api's,</li> <li>update_wifi_inactive_AssociatedDeviceInfo()</li> <li>wifi_getAplinactiveAssociatedDeviceDiagnosticResult()</li> <li>CosaDMLWiFi_Send_FullHostDetails_To_LMLite()</li> </ul>                                                                        | <a href="#">REFPLTB-622</a>                                                                                                                                                                                                                                                                        |
| 5 | Fixing run time/build time issues: Yocto 3.1 rdk-generic-mediaclient-image | R-Pi         | RDKV  | <ul style="list-style-type: none"> <li>Fixes for aamp-cli and rdkmediaplayer playback issue caused by version changes in gstreamer1.0-libav</li> <li>Fixes for irmgr service crash due to a non-void function</li> <li>Temporary fixes for netstrmgr and tr69hostif services due to -Os optimization</li> <li>Major functional validation and runtime issues fixed on RDK MediaClient Generic image generated from Yocto 3.1</li> <li>Validation and runtime issues fixed on RDK Hybrid Generic image generated from Yocto 3.1</li> </ul>                                                                                                                                                                                                                                          | <a href="#">REFPLTV-500</a><br><br><a href="#">REFPLTV-511</a><br><br><a href="#">REFPLTV-499</a><br><br><a href="#">REFPLTV-474</a><br><br><a href="#">REFPLTV-473</a>                                                                                                                            |
| 6 | Integrate yocto3.1 for rdk-generic-camera-image                            | R-Pi         | RDKC  | <ul style="list-style-type: none"> <li>Integrated yocto 3.1 for rdk-generic-camera-image</li> <li>Validated the below features in Yocto-3.1 Image <ul style="list-style-type: none"> <li>RDKC Media Streamer(RMS)</li> <li>Normal thumbnail</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <a href="#">REFPLTCA M-31</a>                                                                                                                                                                                                                                                                      |



# Hardware and Software Requirements

## 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

## Known Issues and Limitations

### Yocto-3.1 RDK generic media client image support in R-Pi:

1. PREFERRED\_VERSION of gstreamer1.0-libav is set to 1.14 to resolve aamp playback issues.
2. The optimization level for netsrvmgr and tr69hostif packages are set to -O0 to fix the crash.
3. mfrmgr.service is crashing for the latest build
4. The triangle rendered by westeros\_test app is distorted.
5. rdkmediaplayer works with VID3 only.
6. appmanager is getting displayed after booting up the image but the login prompt is not available in the background as usual.
7. rmfApp prompt is not getting displayed after playing video using launch/play command. So we need to hard close the video using Ctrl + C combination.
8. Sometimes the appmanager disappear from the screen after sometime. We can bring it back by pressing ctrl button.
9. The fingerprint-dhcp-lease-file.patch is failing for dnsmasq\_2.81 version due to code changes in lease.c file hence excluded the patch until the patch is verified.

### Yocto-3.1 RDK Generic Hybrid Image on RPI:

1. RMF App prompt is not getting displayed after playing video using *launch/play* command

### Yocto-3.1 RDK Generic Camera Image in R-Pi:

1. Ethernet connection ( USB Ethernet Adapter):
  - Able to get 'Ethernet IP' but unable to ping any address like [www.google.com](http://www.google.com) due to this issue not able to validate RMS feature.
2. WiFi connection:
  - After bootup unable to get the 'WiFi IP' address by default.
  - Once we restart the " wpa\_supplicant.service" forcefully then we can able to get the 'WiFi IP'.
3. RDKC Media Streamer( RMS )
  - After bootup, RMS services are not running.
  - Everytime manually we need to run this " rms-launcher.service" command to launch rms.

### Yocto-3.1 RDK Generic Broadband Image in Turris-Omnia:

For WebPA Support,

In the below Get/Set parameters, able to set the value successfully, but retrieving the same 'value' set is failing. Wifi-HAL need to be updated in yocto\_3.1 for this issue.

- Device.Users.User.1.X\_CISCO\_COM\_Password
- Device.WiFi.Radio.10000.Channel

## Project Documentation

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

|   |                   |                                                                                                                                                                                                                                         |                                                                                                                                                                                         |
|---|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | High Level Design | <ul style="list-style-type: none"><li>• <a href="#">High level design approach - BroadBand - 2020 - M7</a><ul style="list-style-type: none"><li>◦ <a href="#">Integration of SNMP - RDKB RPI - Design - 2020 M7</a></li></ul></li></ul> | 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 |
|---|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|   |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                      |
|---|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2 | User Manual              | <ul style="list-style-type: none"> <li>• <a href="#">Release Feature User Manual - 2020 - Video -M7</a></li> <li>• <a href="#">Release feature user manual - Broadband - 2020 - M7</a> <ul style="list-style-type: none"> <li>◦ <a href="#">SNMP - RDKB RPI - User Manual - 2020 - M7</a></li> <li>◦ <a href="#">Yocto-3.1 Image Stabilization and validation on Turris-Omnia - User Manual -2020 - M7</a></li> <li>◦ <a href="#">Turris Omnia: Git Tagged build(rdk-next)</a></li> </ul> </li> <li>• <a href="#">Release feature user manual - Camera - 2020 - M7</a> <ul style="list-style-type: none"> <li>◦ <a href="#">Yocto 3.1 Build Procedure and validation for rdk-generic-camera-image</a></li> </ul> </li> <li>• <a href="#">Yocto 3.1 environment bringup and efforts done for Raspberrypi 3 platform</a> <ul style="list-style-type: none"> <li>◦ <a href="#">Build Procedure for RDK Generic Media Client image</a></li> <li>◦ <a href="#">Build Procedure for RDK Generic Hybrid Image</a></li> </ul> </li> </ul> | The user manual consists of a procedure to test the particular feature also covers Environment setup, Executing the System and Troubleshooting steps |
| 3 | System Test Plan Results | <ul style="list-style-type: none"> <li>• <a href="#">System Test Plan and Report - Camera - 2020 - M7</a> <ul style="list-style-type: none"> <li>◦ <a href="#">Yocto3.1-E-09874-01-01STP61.xlsx</a></li> </ul> </li> <li>• <a href="#">System Test Report - Broadband - 2020 - M7</a> <ul style="list-style-type: none"> <li>◦ <a href="#">FirmwareUpgrade-E-09874-01-01STP62.xls</a></li> <li>◦ <a href="#">WebPA_Server-E-09874-01-01STP63.xls</a></li> </ul> </li> <li>• <a href="#">System Test Plan and Report - Video - 2020 - M7</a> <ul style="list-style-type: none"> <li>◦ <a href="#">Yocto-3.1-MC- E-09874-01-01STP64.xls</a></li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                  | This document contains multiple test cases and test results which are captured after test execution                                                  |
| 4 | Release Notes            | <ul style="list-style-type: none"> <li>• <a href="#">RFP - Release Notes - 2020 - M7</a></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Release Notes -This document                                                                                                                         |

## Technical Support contact

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