Unmanaged Software Development Kit
Release Notes
UM 3.4.0

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Broadcom
Network Switching

BROADCOM®

Section 1: About This Document

These are the Release Notes for the Broadcom Unmanaged Software Development Kit, Release 3.4.0.

This document provides a general description of the release , the chips and platforms supported by the release and resolved issues for release 3.4.0.

Section 2: Product Documentation

The following documents are available through Broadcom's Customer Support Portal, http://support.broadcom.com. They are the primary source of information and should be referenced when using this release.

Table 1:

Document	*Description*
Unmanaged-SWUM104-RDS	Unmanaged Software Getting Started Guide
Unmanaged-PG104-RDS	Unmanaged Software Porting Guide

Section 3: Release Media

The Software Development Kit is released as a gzipped tar file on Broadcom's Customer Support Portal, http://support.broadcom.com.

Section 4: Support

Questions, feedback, and/or suggestions should be sent to your Broadcom FAE.

Section 5: New in this Release

The following section describes feature and device support that is introduced in this release.

NEW DEVICES AND SYSTEMS

Table 2: SOC/Switch Devices

Family	*Devices*	*Description*
BCM53460	BCM53460 A0	4-Port 1G and 8-Port 10G Ethernet Switch embeds ARM CPU
BCM53460	BCM53461 A0	8-Port 1G and 4-Port 10G Ethernet Switch embeds ARM CPU

NEW FEATURES

- Support the vendor-config update via Web interface.
- Add 54210(S) PHY driver support.
- Add UM-Dumb package in UM sfotware.

Section 6: Device and Platform Support

The section describes all devices and platforms which are supported by this release.

SOC/SWITCH DEVICES

Table 3: SOC/Switch Devices

Family	*Devices*	*Description*
BCM53330	BCM53333 A0	BCM53333 Integrated Multilayer Switch and CPU
	BCM53334 A0	BCM53334 Integrated Multilayer Switch and CPU
BCM53390	BCM53393 A0	BCM53393 Integrated Multilayer Switch and CPU
	BCM53394 A0	BCM53394 Integrated Multilayer Switch and CPU
BCM53340	BCM53342 A0	BCM53342 Integrated Multilayer Switch and CPU
	BCM53343 A0	BCM53343 Integrated Multilayer Switch and CPU
	BCM53344 A0	BCM53344 Integrated Multilayer Switch and CPU
	BCM53346 A0	BCM53346 Integrated Multilayer Switch and CPU
BCM53400	BCM53402 A0	BCM53402 Integrated Multilayer Switch and CPU
	BCM53405 A0	BCM53405 Integrated Multilayer Switch and CPU
	BCM53406 A0	BCM53406 Integrated Multilayer Switch and CPU
BCM53450	BCM53454 A0	BCM53454 Integrated Multilayer Switch and CPU
	BCM53456 A0	BCM53456 Integrated Multilayer Switch and CPU
BCM53420	BCM53422 A0	BCM53422 Integrated Multilayer Switch and CPU
	BCM53424 A0	BCM53424 Integrated Multilayer Switch and CPU
	BCM53426 A0	BCM53426 Integrated Multilayer Switch and CPU
BCM53430	BCM53434 A0	BCM53434 Integrated Multilayer Switch and CPU
BCM53460	BCM53460 A0	BCM53460 Integrated Multilayer Switch and CPU
	BCM53461 A0	BCM53461 Integrated Multilayer Switch and CPU

REFERENCE DESIGNS

The following Switch Reference Designs are available from Broadcom and are supported in this software release.

Table 4: Reference Designs

Platform	*Description*
BCM953334K	24-port GE 53334 Switch Ref Design
BCM953393K	14-port GE 53393 Switch Ref Design
BCM953394K	10-port GE + 4-port 10GE 53394 Switch Ref Design
BCM953406K	12-port GE + 12-port 10GE 53406 Switch Ref Design
BCM953456K	24-port GE + 4-port 10GE 53456 Switch Ref Design

Table 4: Reference Designs

Platform	*Description*
BCM953434K	24-port GE 53434 Switch Ref Design
BCM956270K	4-port GE + 8-port 10GE 53460 Switch Ref Design

Section 7: Resolved Issues for 3.4.0

The following issues are resolved in version 3.4.0 of the UM.

Table 5:

Number	*Release Notes For 3.4.0*
UM-313	Add BCM53460/BCM53461 support.
UM-345	Add BCM54210 driver support.
UM-376	Support the vendor-config update via Web interface.
UM-387	Let the serdes register can be access correctly by CLI.
UM-388	Add code to provide proper setting for "XTAL clock source" and "PLL configuration" based on strap pin in BCM53400 family.
UM-389	Power down the USB serdes in lite SKUs of BCM53400 family.
UM-390	Correct the ability for 1G fiber port of BCM953394 platform.
UM-391	Add code to support `phy_an_logical_ports/phy_cl73_logical_ports/ phy_cl37_logical_ports` for BCM5334X SKUs.
UM-392	Use `VLAN_DEFAULT` to control the default VID for 802.1Q VLAN.
UM-393	Let loop detect packet can be switched between front panel ports.
UM-396	Correct the mapping between uport and phyid to let write PHY register successfully on BCM5333X SKUs.
UM-401	Add UM-Dumb package in UM software.
UM-403	Add BCM54210S driver support.
UM-404	Use Broadcom LTD logo in web page.

Section 8: UM Externally Licensed Software Components

UM contains a number of third-party externally licensed software components. This appendix contains information regarding these components, the license for each of these components, and where these components are used in UM.

Table 6: EXTERNALLY LICENSED SOFTWARE COMPONENTS

Component	*Origin*	*Location in source tree*	*License terms and conditions*
The uIP TCP/IP stack	http://www.sics.se/~adam/old-uip/	src/net/, src/appl/dhcpc/ and include/appl/	See (uIP License terms and conditions) (page 10)
The Contiki OS	http://www.contiki-os.org/	src/net/	See (Contiki License terms and conditions) (page 11)

UIP LICENSE TERMS AND CONDITIONS

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uIP is developed by Adam Dunkels of the Networked Embedded Systems group at the
Swedish Institute of Computer Science. The uIP 1.0 distribution package
uip-1.0.tar.gz used in UM was obtained from the following location:
    http://www.sics.se/~adam/old-uip/download.html
Part of the uIP packege was modified and used for purposes of inclusion into
the UM source tree architecture for IPv4 protocol stack.

Used (and modified) files:
    include/appl/dhcp.h
    src/appl/dhcpc/dhcpc.c
    src/net/lc.h
    src/net/lc-switch.h
    src/net/pt.h
    src/net/uip.[hc]
    src/net/uip_arch.[hc]
    src/net/uip_arp.[hc]
    src/net/uipopt.h

Changed functionality:
    Added option UIP_CONF_ICMP to enable/disable ICMP
    Avoid dropping packets for specific IP address
    Extracted checksum algorithm to a standalone SAL function
    Changed max retry number and timeout interval for DHCP client application
    Added dual stack (IPv4 + IPv6) support

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Contiki is developed by a group of developers from industry and academia lead
by Adam Dunkels. The Contiki 2.5 distribution package contiki-2.5.zip used in
UM was obtained from the following location:
    http://www.contiki-os.org/p/download.html
Part of the Contiki package was modified and used for purposes of inclusion
into the UM source tree architecture for IPv6 protocol stack.

Used (and modified) files:
    src/net/uip_timers.h
    src/net/uip6.[hc]
    src/net/uip-debug.h
    src/net/uip-ds6.[hc]
    src/net/uip-icmp6.[hc]
    src/net/uip-nd6.[hc]

Changed functionality:
    Added dual stack (IPv4 + IPv6) support
    Revised debugging macro for using with C51 compiler

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