



Release Notes for Firmware Releases A2pv6C038q and B2pvC038r1

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Release: Cisco IOS Release 15.2(4)M

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Introduction

These release notes describe new enhancements and improvements for firmware releases A2pv6C038q and B2pvC038r1.

These release notes are updated as needed.



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System Requirements

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Hardware Requirements

The following hardwares are supported by firmware release A2pv6C038q:

- Cisco 887VA Series Multimode VDSL2/ADSL2/2+ DSL platforms
- Cisco 897VA Series Routers
- C1900/C2900/C3900/C3900e Series Routers with EHWIC-VA-DSL-A and EHWIC-VA-DSL-M module

The following hardwares are supported by firmware release B2pvC038r1:

- Cisco 886VA Series VDSL2 Router platforms
- Cisco 886VA-J Series Multimode VDSL2/ADSL2/2+ DSL platforms
- Cisco 896VA Series Routers
- C1900/C2900/C3900/C3900e Series Routers with EHWIC-VA-DSL-B

Memory and IOS Software Requirements

[Table 1](#) lists the supported Cisco 887 and 897 Series Multimode VDSL2/ADSL2/2+ DSL routers and also the memory and IOS requirements while using firmware release A2pv6C038q.

**Note**

This firmware version is compiled with the SDK version 4.02L.03 and supports IOS release 15.6(2)T and earlier releases up to the supported version mentioned in the firmware release note. This firmware is not supported with Cisco IOS 15.6(3)M and later releases.

Table 1 *Supported Cisco 887 and 897 Series Multimode VDSL2/ADSL2/2+ DSL and Memory Requirements*

Platform	Flash (MB)	DRAM (MB)	IOS version
C887VAM-W-E-K9	256	512	15.2(4) M or later
C887VA-W-A-K9			
C887VAGW+7-A-K9			
C887VAGW+7-E-K9			
C887VA-WD-A-K9			
C887VA-WD-E-K9			
C897VAW-A-K9			
C897VAW-E-K9			

[Table 2](#) lists the supported Cisco 886 and Cisco 896 VA Series Multimode VDSL2/ADSL2/2+ DSL platforms and memory requirements while using firmware release B2pvC038r1.

Table 2 *Supported Cisco 886 and 896 Series Multimode VDSL2/ADSL2/2+ DSL and Memory Requirements*

Platform	Flash (MB)	DRAM (MB)	IOS version
CISCO886VA-K9	256	512	15.2(4) M or later
CISCO886VA-SEC-K9			
CISCO886VA-J-K9			
CISCO896VA-K9			
CISCO896VA-SEC-K9			

[Table 3](#) lists the supported Cisco 886VA and 896VA Series Multimode VDSL2/ADSL2/2+ with WLAN platforms and memory requirements while using firmware release B2pvC038r1.

Table 3 *Supported Cisco 886VA/896VA Series Multimode VDSL2/ADSL2/2+ with WLAN Platforms and Memory Requirements*

Platform	Flash (MB)	DRAM (MB)	IOS version
CISCO886VA-W-E-K9	256	512	15.2(4) M or later
CISCO896VA-W-E-K9			

Determining the Firmware Version

To determine the version of firmware currently running on your Cisco C886, C887, C896 and C897 series router, issue the following IOS command and look for the firmware version entries shown at the end of this example:

```
897VAW# show controller vdsl 0
Controller VDSL 0 is up
Daemon Status: Establishing Link
XTU-R (DS) XTU-C (US)
Chip Vendor ID:          'BDCM'          'BDCM'
Chip Vendor Specific:    0x0000          0xA451
Chip Vendor Country:    0xB500          0xB5000
Modem Vendor ID:        'CSCO'          ' '
Modem Vendor Specific:  0x4602          0x0000
Modem Vendor Country:   0xB500          0x0000
Serial Number Near:     FGL17412466 C897VAM- 15.2(4)M6b
Serial Number Far:
Modem Version Near:     15.2(4)M6b
Modem Version Far:      0xa451
Modem Status:           TC Sync (Showtime!)
DSL Config Mode:        AUTO
Trained Mode:           G.993.2 (VDSL2) Profile 12a
TC Mode:                PTM
Selftest Result:        0x00
DELT configuration:     disabled
DELT state: not running
Trellis:                ON              ON
Full inits:             1
Failed full inits:      90
Short inits:0
Failed short inits:0

FirmwareSourceFile Name (version)
-----
VDSL  user configflash:VA_A_38q_B_38r1_24j.bin (10)
Modem FW Version:131219_1904-4.02L.03.A2pv6C038q.d24j
Modem PHY Version:A2pv6C038q.d24j
Vendor Version:Ap6v38q.24j 68
```

Upgrading to a New Firmware Release

Perform the following steps to upgrade to a new firmware release:

1. Download the new firmware from Cisco.com Software Center at <http://www.cisco.com/cisco/software/navigator.html>.
Choose **Products** -> **Routers** -> **Branch Routers** -> **Cisco 800 Series Routers** -> **Cisco 886, 887, 896 or 897 VA Integrated Services Router** -> **Very High Bitrate DSL (VDSL) Firmware** > **VA_A_38q_B_38r1_24j.bin**
2. Copy the **VA_A_38q_B_38r1_24j.bin** firmware to a designated location; for example, router flash or a TFTP server.
3. Configure the router to load the new firmware from a designated location.

```
Router# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.

Router(config)# controller vdsl 0
Router(config-controller)# firmware filename ?
```

```

archive: Download fw file name
cns:      Download fw file name
flash:   Download fw file name
ftp:     Download fw file name
http:    Download fw file name
https:   Download fw file name
null:    Download fw file name
nvram:   Download fw file name
rcp:     Download fw file name
scp:     Download fw file name
system:  Download fw file name
tar:     Download fw file name
tftp:    Download fw file name
tmpsys:  Download fw file name
xmodem:  Download fw file name
ymodem:  Download fw file name

```

```
Router(config-controller)# firmware filename flash:
```



Note Controller VDSL 0 should *not* be turned off.

4. Enter the **copy running-config startup-config** command to save your configuration.
5. Enter the **reload** command to restart the router.

Supported Features

The following features are supported by firmware release A2pv6C038q:

- G.993.2 (VDSL2) protocol.
 - Packet transfer mode (PTM) and asynchronous transfer mode (ATM).
 - Annex A and Annex B band plans
 - Profiles supported: 8a/b/c/d, 12a/b, 17a and 30a (BCM6306 required)
 - Upstream 0 (US0)
 - Diagnostics mode/dual-ended line testing (DELT)
 - Bit swap, Seamless Rate Adaptation (SRA), and SOS or robust overhead channel (ROC)
 - Far end cross talk (FEXT) Equalized upstream power back-off (UPBO)
 - Dying Gasp
 - Impulse noise monitoring (INM)
 - PhyR and G.INP (framing Type 1)
 - SRA or SOS+G.INP
 - G.vector and G.vector friendly mode (G.993.2 Annex Y)
 - Virtual noise
 - Alternate electrical length measurement
- ADSL protocols
 - G.992.5 (ADSL2+), G.992.3 (ADSL2), G.992.2 (G.LITE), G.992.1 (G.DMT)
 - ANSI T1.413
 - ATM/PTM mode

- Annex A/L/M
- L2 power management
- Diagnostics mode/DELT
- Bit swap and SRA
- INM
- PhyR and G.INP (Framing Type 1)
- SRA+G.INP
- Virtual Noise

The following features are supported by firmware release B2pvC038r1:

- G.993.2 (VDSL2) protocol.
 - Packet transfer mode (PTM) and asynchronous transfer mode (ATM).
 - Annex B over ISDN band plans
 - Profiles supported: 8a/b/c/d, 12a/b, and 17a
 - Upstream 0 (US0)
 - Diagnostics mode/dual-ended line testing (DELT)
 - Bit swap, Seamless Rate Adaptation (SRA), and SOS or robust overhead channel (ROC)
 - Far end cross talk (FEXT) Equalized upstream power back-off (UPBO)
 - Dying Gasp
 - Impulse noise monitoring (INM)
 - PhyR and G.INP (framing Type 1)
 - SRA or SOS+G.INP
 - G.Vector (G.993.5) and G.Vector friendly (G.993.2 Annex Y) mode
 - Virtual noise
 - Alternate electrical length measurement
- ADSL protocols
 - G.992.5 (ADSL2+), G.992.3 (ADSL2), G.992.1 (G.DMT)
 - ATM/PTM mode
 - Annex B/J
 - L2 power management
 - Diagnostics mode/DELT
 - Bit swaps and SRA
 - INM
 - PhyR and G.INP (Framing Type 1)
 - SRA+G.INP
 - Virtual Noise

New and Changed Information

The following changes are introduced with firmware release A2pv6C038q:

- Fixed no connection issues in certain fixed rate profiles when nitro is enabled.
- Improved G.992.[3/5] US rates against Calix C7 combo24A with Calix R8 code.
- Fixed long G.993.2 training time when dynamic handling of V43 tone is enabled.
- Provided driver bit control kPhyCfg1AlternateTogglingStartPhase to change start set for G.HS
- Improved US rates against IKNS CO5.

The following changes are introduced with firmware release B2pvC038r1:

- Fixed issue with G.993.2 SRA when block interleaver is used in G.INP.
- Fixed G.993.2 training issues when ROC tones have low PSD.
- Fixed G.993.2 Annex Y negotiation issue.
- Fixed G.998.4 LEFTRS threshold update issue after SRA.
- Fixed no connect issue in G.993.2 against ADTRAN DSLAM.
- Improved ATTNDR computation in G.993.2 Showtime.
- Improved G.INP+SRA upshift behavior in G.993.2.
- Fixed O-TPS parsing issue in G.993.2 when G.INP is enabled.
- Fixed minDelay initialization issue in G.993.2 G.INP.
- Fixed issue in disabling DS and US SRA separately in G.993.2 when G.INP is enabled.
- Improved LOS detection in G.993.2.
- Improved G.993.2 G.INP DS rates when SOS is not negotiated.
- Improved ATTNDR computation in G.992.[35].
- Fixed false triggering of DS SOS in G.993.2.
- Fixed no-connect in certain fixed rate profiles in G.992.[35] when nitro is enabled.
- Fixed G.Vector training issue in high cross-talk condition.
- Fixed G.993.2 sync issues in long loops.
- Fixed connect issue in G.993.2 for low fixed rate profiles when PhyR is enabled.

Known Issues and Limitations

- G.INP supports DTU framing type 1 only

Related Documentation

- [Release-Specific Documents, page 8](#)
- [Platform-Specific Documents, page 8](#)
- [Other Firmware Code, page 8](#)

Release-Specific Documents

For detailed information about the release-specific platforms, see the following documentations:

- [Cisco Multimode VDSL2 and ADSL2/ADSL2+ High-Speed WAN Interface Card](#)
- [Cisco 800 Series Integrated Services Routers Software Configuration Guide](#)
- [Cisco 800 Series Integrated Services Router Hardware Installation Guide](#)

Platform-Specific Documents

For more information about the supported platforms, see the following documentations:

- [Cisco 800 Series Integrated Services Routers Software Configuration Guide](#)
- [Cisco 800 Series Integrated Services Router Hardware Installation Guide](#)

Other Firmware Code

For information on the firmware used prior to this release, see the following release notes:

- [Release Notes for Firmware Release A2pv6C038k1](#)
- [Release Notes for Cisco 880VA Series Multimode VDSL2/ADSL2/2+ DSL Router with firmware release A2pv6C032b.d23b](#)
- [Release Notes for Cisco 880VA Series Multimode VDSL2/ADSL2/2+ DSL Router with firmware release A2pv6C035d.d23j](#)
- [Release Notes for Cisco 880VA Series Multimode VDSL2/ADSL2/2+ DSL Router with Firmware Release ABpv6C035j.](#)

Obtain Documentation and Submit a Service Request

For information on obtaining documentation, using the Cisco Bug Search Tool (BST), submitting a service request, and gathering additional information, see [What's New in Cisco Product Documentation](#).

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