Release Notes for Firmware Release ABpv6C035l

Content

Introduction

These release notes describe enhancements and requirements for firmware release ABpv6C035l. This firmware release is not pre-installed in any IOS routers or modules. For detailed information on supported hardware and platforms, see the "Hardware Supported" section on page 2. These release notes are updated as needed.

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System Requirements

Hardware Supported

The following are the hardware supported:

- Cisco 887V Series VDSL2 Router platforms
- Cisco 880VA Series Multimode VDSL2/ADSL2/2+ DSL platforms
- Cisco 880 Series Multimode VDSL2/ADSL2/2+ with WLAN platforms
- Cisco 800 Series Multimode VDSL2/ADSL2/2+ with analog and ISDN voice platforms
- Cisco EHWIC Multimode VDSL2/ADSL+ Multicard
  - Cisco 1900 Series
  - Cisco 2900 Series
  - Cisco 3900 Series
  - Cisco 3900E Series

Memory Requirements and IOS Software Requirements

The following tables list all platforms that support ABpv6C035l firmware.

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 version and later releases.

Table 1 lists the supported Cisco 880VA Series Multimode VDSL2/ADSL2/2+ DSL platforms and memory requirements.

Table 1   Supported Cisco 880VA Series Multimode VDSL2/ADSL2/2+ DSL and Memory Requirements

Platform	Flash (MB)	DRAM (MB)
CISCO886VA-K9	128	256
CISCO886VA-SEC-K9		
CISCO887VA-K9		
CISCO887VA-SEC-K9		
CISCO887VA-M-K9		
CISCO886VA-J-K9		

Table 2 lists the supported Cisco 880 Series Multimode VDSL2/ADSL2/2+ with WLAN platforms and memory requirements.

Table 2 **Supported Cisco 880VA Series Multimode VDSL2/ADSL2/2+ with WLAN Platforms and Memory Requirements**

Platform	Flash (MB)	DRAM (MB)
CISCO886VA-W-E-K9 CISCO887VAM-W-E-K9 CISCO887VA-W-A-K9 CISCO887VA-W-E-K9	256	512

Table 3 lists the supported Cisco 880 Series Multimode VDSL2/ADSL2/2+ with analog and ISDN voice platforms and memory requirements.

Table 3 **Supported Cisco 880 Series Multimode VDSL/ADSL2/2+ with Analog ISDN Voice Platforms and Memory Requirements**

Platform	Flash (MB)	DRAM (MB)
CISCO887VA-K9 CISCO887VA-W-E-K9 CISCO887VA-V-K9 CISCO887VA-V-W-E-K9	256	512

Table 4 lists the supported Cisco 880 Series Data ISR platforms and memory requirements.

Table 4 **Supported Cisco 880 Series Data ISR Platforms and Memory Requirements**

Platform	Flash (MB)	DRAM (MB)
CISCO886VAG+7-K9 CISCO887VAG+7-K9 CISCO887VAMG+7-K9 CISCO887VAGW+7-A-K9 CISCO887VAGW+7-E-K9 CISCO887VA-WD-A-K9 CISCO887VA-WD-E-K9	256	512

Table 5 lists the supported Cisco 887 Series VDSL Routers and memory requirements using firmware release ABpv6C035j.

Table 5 **Supported Cisco 887V Series Platforms and Memory Requirements**

Platform	Flash (MB)	DRAM (MB)
CISCO887V-K9 CISCO887V-SEC-K9 CISCO887VW-GNA-K9 CISCO887VW-GNE-K9	128	256

Determining the Firmware Version

To determine the version of firmware currently running on your router, issue the following IOS command and look for the output as shown below:

```
Router# show controllers vdsl 0


FirmwareSourceFile Name (version)
-------------------------------
VDSL    user configflash:vdsl.bin-testBuild_351_AB(10)

Modem FW  Version:120224_1722-4.02L.03.A2pv6C0351.d23j
Modem PHY Version:p6v351.d23j
```

✎

Note For a Cisco EHWIC Multimode VDSL2/ADSL+ Mutlicard, use the *slot/subslot/port number* argument for the **show controllers vdsl** command.

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 887VA Integrated Services Router** -> **Very High Bitrate DSL (VDSL) Firmware**

2. Copy the 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:vdsl.bin.35ld23jdslfw
```

✎

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.

New and Changed Information

The following list contains improvements with firmware release A2pv6C035l:

- Improves G.993.2 Showtime stability of DS in PEIN and other impulse noise tests
- Improves G.992.[135] and G.993.2 US bitswap behavior to accommodate COs with slower response time
- Reports correct retrain reasons in G.992.[35] and G.993.2
- Fixes Analog Loopback tests in G.992.5 Annex M
- Includes SES in the decision to retrain when DS margins are negative in G.992.[35] and G.993.2
- Avoids modem retrain conditions in high DS rate configurations (>105Mbps) of G.993.2 and negotiate higher rates against BRCM CO
- Adjusts US pilot PSD in T1.413 to meet ANSI requirements
- Reports correct interleaver delay information in G.993.2 30a profiles
- Improves Dynamic Framing behavior and parameter selection in G.993.2
- Improves Showtime Stability of G993.2 during US SRA tests

The following list contains improvements with firmware release B2pv6C035l:

- Improves Dynamic Framing behavior and parameter selection in G.993.2
- Reduces processing delay in sending packets in G.993.2 and also fix no connect in cases with DS rates higher than 105M
- Improves Showtime Stability of G993.2 during US SRA tests

Known Issues and Limitations

The following list contains known issues and limitations with firmware release A2pv6C035l:

- G.INP mode in 30a mode is not supported yet.
- G.INP supports DTU framing type 1 only.
- US PhyR in 30a mode has stability issue in certain loops with no delay queue feature enabled against BRCM CO FW ver 10.3.1 and older. The issue has been fixed and the fix will be in future CO FW releases.

- US SRA with dynamic D may have excessive CRCs under certain conditions with q = 2 against BRCM CO FW ver 10.3.4 and older. The issue has been fixed and the fix will be in future CO FW releases.

The following list contains known issues and limitations with firmware releaseB2pv6C035l:

- G.INP supports DTU framing type 1 only.

- US SRA with dynamic D may have excessive CRCs under certain conditions with q = 2 against BRCM CO FW ver 10.3.4 and older. The issue has been fixed and the fix will be in future CO FW releases.

Modem Settings

New and existing modem commands are integrated to the release of the ABpv6C035l firmware and IOS release 15.2(4)M to allow custom configurations of DSL modem settings and to ensure DSL interoperability in different environments.

Modem settings are optional, depending on the DSLAM used. Please consult your Service Provider on required modem settings (if any) for the particular SP network configuration.

Before you enable the modem settings, execute the **service internal** command in configuration mode. For example:

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

Router(config)# service internal
```

The following list contains the modem settings:

Setting UK Annex M Flag

- Default—disabled

- Command—**modem customUKAnnexM** under **controller vdsl 0**

- Purpose—enabling UK specific Annex M mask

- Firmware/Driver dependency—starting from d23j driver and A2pv6C035d

✎

Note   Reload the router after setting or unsetting this command.

- Verification:
    - When the command is configured:

        test vdsl 0 modem exec adsl info—cfg

        Bit 20 in adslAnnexAParam—ON

        Bit 9 in adslDemodCap2Mask—ON

        Bit 9 in adslDemodCap2Value—ON

        adslAnnexAParam—00107985

        adslDemodCap2Mask—00540200

        adslDemodCap2Value—00540200

        show controller vdsl 0 console—custom UK Annex M Mask SET

– When the command is not configured:

test vdsl 0 modem exec adsl info—cfg

Bit 20 in adslAnnexAParam—OFF

Bit 9 in adslDemodCap2Mask—OFF

Bit 9 in adslDemodCap2Value—OFF

adslAnnexAParam—00007985

adslDemodCap2Mask—00540000

adslDemodCap2Value—00540000

show controller vdsl 0 console—custom UK Annex M Mask NOT SET

Setting CO5 Flag

- Default—disabled

- Command—**modem co5** under **controller vdsl 0**

- Purpose—resolving performance related interoperability issues with Ikanos CO5 DSLAM

- Firmware/Driver dependency—starting from d23j driver and A2pv6C035d

> **Note** Reload the router after setting or unsetting this command.

- Verification:
  – When the command is configured:

  test vdsl 0 modem exec adsl info—cfg

  Bit 4 vdslCfgFlagsMask—ON

  Bit 4 vdslCfgFlagsValue—ON

  Bit 5 vdslCfgFlagsMask—ON

  Bit 5 vdslCfgFlagsValue—ON

  vdslCfgFlagsMask—00000434

  vdslCfgFlagsValue—00000434

  show controller vdsl 0 console—CO5 Flag SET

  – When the command is not configured:

  test vdsl 0 modem exec adsl info—cfg

  Bit 4 vdslCfgFlagsMask—OFF

  Bit 4 vdslCfgFlagsValue—OFF

  Bit 5 vdslCfgFlagsMask—OFF

  Bit 5 vdslCfgFlagsValue—OFF

  vdslCfgFlagsMask—00000404

  vdslCfgFlagsValue—00000404

  show controller vdsl 0 console—CO5 Flag NOT SET

Disabling V.43 Carrier Set

- Default—enabled
- Command—**modem disableV43** under **controller vdsl 0**
- Purpose—disabling V43 carrier set
- Firmware/Driver dependency—starting from d23b driver and B2pv6C032b

Note Reload the router after setting or unsetting this command.

- Verification:
  - When the command is configured:

    test vdsl 0 modem exec adsl info—cfg

    Bit 16 vdslCfgFlagsMask—ON

    Bit 16 vdslCfgFlagsValue—ON

    vdslCfgFlagsMask—00010404

    vdslCfgFlagsValue—00010404

    show controller vdsl 0 console—disable V43 SET
  - When the command is not configured:

    test vdsl 0 modem exec adsl info—cfg

    Bit 16 vdslCfgFlagsMask—OFF

    Bit 16 vdslCfgFlagsValue—OFF

    vdslCfgFlagsMask—00000404

    vdslCfgFlagsValue—00000404

    show controller vdsl 0 console—disable V43 CLEAR

Disabling GinpDs Support Carrier Set

- Default—enabled
- Command—**modem disableGinpDsSupport** under **controller vdsl 0**
- Purpose—disabling G.INP feature bit
- Firmware/Driver dependency—starting from d23j driver and A2pv6C035d

Note Reload the router after setting or unsetting this command.

- Verification:
  - When the command is configured:

    test vdsl 0 modem exec adsl info—cfg

    Bit 17 xdslAuxFeaturesMask—ON

    Bit 17 xdslAuxFeaturesValue—ON

    xdslAuxFeaturesMask—00040003

    xdslAuxFeaturesValue—00040003

show controller vdsl 0 console—disable GinpDsSupport

  – When the command is not configured:

    test vdsl 0 modem exec adsl info—cfg

    Bit 17 xdslAuxFeaturesMask—OFF

    Bit 17 xdslAuxFeaturesValue—OFF

    xdslAuxFeaturesMask—00060003

    xdslAuxFeaturesValue—00060003

    show controller vdsl 0 console—enable GinpDsSupport

Disabling GinpUs Support Carrier Set

- Default—enabled
- Command—**modem disableGinpUsSupport** under **controller vdsl 0**
- Purpose—disabling GinpUs support
- Firmware/Driver dependency—starting from 23j driver and ABpv6C035j

✎ **Note** Reload the router after setting or unsetting this command.

- Verification:
  - When the command is configured:

    test vdsl 0 modem exec adsl info—cfg

    Bits 18 kDslGinpUsSupported—OFF

    xdslAuxFeaturesValue—00024003

    show controller vdsl 0 console—disable GinpUsSupport
  - When the command is not configured:

    test vdsl 0 modem exec adsl info—cfg

    Bits 18 kDslGinpUsSupported—ON

    xdslAuxFeaturesValue—00064003

    show controller vdsl 0 console output—enable GinpUsSupport

Enabling HBI Feature

- Default—disabled
- Command—**modem hbifeature** under **controller vdsl 0**
- Purpose—enabling HBI specific feature bit
- Firmware/Driver dependency—starting from d23b driver and A2pv6C032b

✎ **Note** Reload the router after setting or unsetting this command.

- Verification:
  - When the command is configured:

    test vdsl 0 modem exec adsl info—cfg

    Bits 12 kDslG992FTFeatureBit—ON

    xdslAuxFeaturesMask—00061003

    xdslAuxFeaturesValue—00061003

    show controller vdsl 0 console output—HBI Bit SET
  - When the command is not configured:

    test vdsl 0 modem exec adsl info—cfg

    Bits 12 kDslG992FTFeatureBit—OFF

    xdslAuxFeaturesMask—00060003

    xdslAuxFeaturesValue—00060003

    show controller vdsl 0 console output—HBI Bit CLEAR

Enabling Channel Policy 2

- Default—disabled
- Command—**modem chanpolicy2** under **controller vdsl 0**
- Purpose—enabling Channel Policy 2 specific feature bit
- Firmware/Driver dependency—starting from d23b driver and A2pv6C032b

Note Reload the router after setting or unsetting this command.

- Verification:
  - When the command is configured:

    test vdsl 0 modem exec adsl info—cfg

    Bits 23 kDslAuxFeatureChanPolicy—ON

    xdslAuxFeaturesMask—00860003

    xdslAuxFeaturesValue—00860003

    show controller vdsl 0 console—Chan Policy Bit SET
  - When the command is not configured:

    test vdsl 0 modem exec adsl info—cfg

    Bits 23 kDslAuxFeatureChanPolicy—OFF

    xdslAuxFeaturesMask—00060003

    xdslAuxFeaturesValue—00060003

    show controller vdsl 0 console—Chan Policy Bit CLEAR

Disabling FireDS Support

- Default—enabled
- Command—**modem disableFireDsSupport** under **controller vdsl 0**
- Purpose—disabling FireDS support
- Firmware/Driver dependency—starting from d23j driver and A2pv6C035d

Note Reload the router after setting or unsetting this command.

- Verification:
  - When the command is configured:

    test vdsl 0 modem exec adsl info—cfg

    Bits 22 kDslFireDsSupported—OFF

    adslDemodCap2Value—00900000

    show controller vdsl 0 console—disable FireDsSupport
  - When the command is not configured:

    test vdsl 0 modem exec adsl info—cfg

    Bits 22 kDslFireDsSupported—ON

    adslDemodCap2Value—00d00000

    show controller vdsl 0 console—enable FireDsSupport

Disabling FireUs Support

- Default—enabled
- Command—**modem disableFireUsSupport** under **controller vdsl 0**
- Purpose—Disabling FireUS support
- Firmware/Driver dependency—Starting from d23j driver and A2pv6C035d

Note Reload the router after setting or unsetting this command.

- Verification:
  - When the command is configured.

    test vdsl 0 modem exec adsl info—cfg

    Bits 23 kDslFireUsSupported—Off

    adslDemodCap2Value—00500000

    show controller vdsl 0 console—disable FireUsSupport
  - When the command is not configured.

    test vdsl 0 modem exec adsl info—cfg

    Bits 23 kDslFireUsSupported—On

    adslDemodCap2Value—00d00000

    show controller vdsl 0 console—enable FireUsSupport

Disabling MonitorTone

- Default—enabled
- Command—**modem disableMonitorTone** under **controller vdsl 0**
- Purpose—disabling MonitorTone
- Firmware/Driver dependency—starting from d23j driver and A2pv6C035d

Note Reload the router after setting or unsetting this command.

- Verification:
  - When the command is configured:

    test vdsl 0 modem exec adsl info—cfg

    Bits 14 kDslMonitorToneDisable—ON

    xdslAuxFeaturesValue—00064003

    show controller vdsl 0 console—disable MonitorTone
  - When the command is not configured:

    test vdsl 0 modem exec adsl info—cfg

    Bits 14 kDslMonitorToneDisable—OFF

    xdslAuxFeaturesValue—00060003

    show controller vdsl 0 console—enable MonitorTone

Enabling UKfeature

- Default—disabled
- Command—**modem UKfeature** under **controller vdsl 0**
- Purpose—enabling British Telecom specific feature bit
- Firmware/Driver dependency—starting from d23b driver and A2pv6C032b

Note Reload the router after setting or unsetting this command.

- Verification:
  - When the command is configured:

    test vdsl 0 modem exec adsl info—cfg

    Bit 21 kDslG992BTFeatureBit—ON

    xdslAuxFeaturesMask—00260003

    xdslAuxFeaturesValue—00260003

    show controller vdsl 0 console—UKFeatureBit SET
  - When the command is not configured:

    test vdsl 0 modem exec adsl info—cfg

    Bit 21 kDslG992BTFeatureBit—OFF

    xdslAuxFeaturesMask—00060003

xdslAuxFeaturesValue—00060003

show controller vdsl 0 console—UKFeatureBit CLEAR

Enabling dsattn Flag

- Default—disabled

- Command—**modem dsattn** under **controller vdsl 0**

- Purpose—enabling dsattn

Note Reload the router after setting or unsetting this command.

- Verification:
  - When the command is configured:

    test vdsl 0 modem exec adsl info—cfg

    Bit 13 in adslDemodCapMask—ON

    Bit 13 in adslDemodCapValue—ON

    adslDemodCapMask—0092607a

    adslDemodCapValue—0010607a

    show controller vdsl 0 console—dsattn SET
  - When the command is not configured:

    test vdsl 0 modem exec adsl info—cfg

    Bit 13 in adslDemodCapMask—OFF

    Bit 13 in adslDemodCapValue—OFF

    adslDemodCapMask—0092407a

    adslDemodCapValue—0010407a

    show controller vdsl 0 console—dsattn CLEAR

Related Documentation

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 860 Series, Cisco 880 Series, and Cisco 890 Series Integrated Services Routers Software Configuration Guide
- Cisco 860 Series, Cisco 880 Series, and Cisco 890 Series Integrated Services Routers Hardware Installation Guide

Platform-Specific Documents

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

- Cisco 880 Series Integrated Services Router Software Configuration Guide
- Cisco 860 Series, Cisco 880 Series, and Cisco 890 Series Integrated Services Routers Hardware Installation Guide
- Cisco 860 Series, Cisco 880 Series, and Cisco 890 Series Integrated Services Routers Software Configuration Guide

Other Firmware Code

See the following links for more information on firmware used prior to this release:

- 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

Obtaining Documentation, Obtaining Support, and Security

For information on obtaining documentation, obtaining support, providing documentation feed-back, security guidelines, and also recommended aliases and general Cisco documents, see the monthly What's New in Cisco Product Documentation, which also lists all new and revised Cisco technical documentation at:

http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html

This document is to be used in conjunction with the documents listed in the "Related Documentation" section.

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