Release Notes for Cisco 880VA Series Multimode VDSL2/ADSL2/2+ DSL Router with firmware release A2pv6C032b.d23b

Contents

Introduction

These release notes describe new enhancements and fixed caveats for the Cisco 880VA Series Multimode VDSL2/ADSL2/2+ DSL Routers using firmware release A2pv6C032b.d23b. These release notes are updated as needed.

System Requirements

This section describes the system requirements for firmware Release A2pv6C032b.d23b and includes the following sections:

Cisco Systems, Inc.
www.cisco.com

Memory and IOS Software Requirements

Table 1 lists the memory and IOS Software requirements for the Cisco 880VA Series Multimode VDSL2/ADSL2/2+ DSL platforms, using firmware Release A2pv6C032b.d23b.

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 Memory and IOS Requirements for the Cisco 880VA Series Multimode VDSL2/ADSL2/2+ DSL platforms

Platform	Flash (MB)	DRAM (MB)	IOS Release	VDSL2 Firmware File
CISCO886VA-K9	128	256	15.1(2)T	vdsl.bin.32bdslfw (A2pv6C032b.d23b)
CISCO886VA-SEC-K9	128	256	15.1(2)T	vdsl.bin.32bdslfw (A2pv6C032b.d23b)
CISCO887VA-K9	128	256	15.1(2)T	vdsl.bin.32bdslfw (A2pv6C032b.d23b)
CISCO887VA-SEC-K9	128	256	15.1(2)T	vdsl.bin.32bdslfw (A2pv6C032b.d23b)
CISCO887VA-M-K9	128	256	15.1(2)T	vdsl.bin.32bdslfw (A2pv6C032b.d23b)

Determining the Firmware Version

To determine the version of firmware currently running on your Cisco 880VA series router, issue the following IOS command and look for the output in **BOLD**:

```
Router#show controller vdsl 0


FirmwareSourceFile Name (version)
---------------------------------
VDSL    user configflash:vdsl.bin.32bdslfw (10)

Modem FW  Version:100929_1300-4.02L.03.A2pv6C032b.d23b
Modem PHY Version:A2pv6C032b.d23b
```

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/web/download/index.html

    Choose 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#conf t
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.32bdslfw
```

4. Restart the controller interface for the new firmware to take effect

```
Router#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#controller vdsl 0
Router(config-controller)#shut
Router(config-controller)#no shut
Router(config-controller)#end
Router#
```

Modem Settings

New modem commands are introduced with the release of the A2pv6C032b.d23b firmware and IOS release 15.1(2)T. These commands allow custom configurations of DSL modem settings to ensure DSL interoperability in different environments. Please consult your Service Provider on required modem settings for the particular SPs network.

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

```
Router#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#service internal
```

The following list contains the modem settings:

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 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 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

UKfeature Carrier FLAG

- 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 vdslCfgFlagsMask—ON

    Bit 21 vdslCfgFlagsValue—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 vdslCfgFlagsMask—OFF

    Bit 21 vdslCfgFlagsValue—OFF

    xdslAuxFeaturesMask—00060003

    xdslAuxFeaturesValue—00060003

    show controller vdsl 0 console —ukfeatureBit CLEAR

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 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 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

"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

"GinpDsSupport" carrier set

- Default—enabled
- Command—**modem disableGinpDsSupport** under **controller vdsl 0**
- Purpose—Disabling G.INP 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 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

New and Changed Information

This section contains changes introduced with firmware release A2pv6C032b.d23b.

VDSL interoperability improvements:

- Fix a G993.2 training issue with Lantiq CO chipsets resulting in adsl modes on short loops
- Improve US rate around 3500m against Ikanos based DSLAMs in G992.5
- Fix a bug causing SRA not applied in G993.2 when only enabled in US
- Support alternative ATTNDR calculation in G993.2 which accounts for INP, delay and available interleaving memory
- Fix sync failure against Lantiq based DSLAMs in G993.2
- Support alternative ATTNDR calculation in G993.2 which accounts for INP, delay and available interleaving memory
- Fix a bug causing SRA not applied in G993.2 when only enabled in US
- Fix long sync time in G.993.2

ADSL interoperability improvements:

- Improve DS rate/reach against Vinax 2.1 when INP > 0
- Improve US rates against ADLT-L/ADLT-J
- Improve US rates against CNXT based DSLAMs
- Improve US rates against AFC 6+6 DSLAM with Lantiq CO in G.992.1
- Improve DS rates against Catena CNX5 in G.992.1
- Improve US rates against Lucent72
- Improve DS rates against Lucent72 in T1.413
- Improve DS attenuation accuracy against Lucent-48 and Lucent-72 in T1.413
- Improve sync time against Lucent72 in T1.413
- Fix T1.413 training failure in early activation phase against Cisco DSLAMs
- Fix training failure against CNXT based DSLAMs in G992.5 when Annex M is enabled
- Fix excessive FECs against CNXT based DSLAMs in G992.5
- Fix training failure against AD72 with Centillium chipset under certain conditions in G992.1
- Fix LATN Computation against Ikanos CO5 in G.992.5
- Fix US rate variations against IKNS CO5 in G992.5
- Fix vendor ID display with Alcatel AFC 4+6 DSLAMs
- Fix training failure against ALCB based DSLAMs in T1.413 mode
- Fix Annex L switching on long loops
- Fix TX signal PSD in Annex M ALB
- Fix US CRC reporting against ADLT-J/ADLT-L in G992.1
- Fix PSD mask selection for Annex L and Annex M in test mode
- Fix false Detection of G.HS tones due to cross-talk on long loops
- Fix CRC errors after certain dynamic framing change

- Fix bugs causing min delay and max ETR violation and wrong DS counter reporting in G.INP mode
- Improve data rate when G.INP is enabled
- Improve DS data rate with presence of REIN noise in ADSL modes
- Improve QLN measurement accuracy in ADSL modes
- Fix HEC counter reset issue under certain conditions
- Fix US bitswap counter update in G992.1
- Fix uncancelled echo reporting in G992.1/3/5
- Fix TR-67 margin test failure against AD72 and Anaconda
- Fix reverb freeze test mode in G992.3/5
- Fix framing parameter reporting after entering L2 in G992.3/5
- Avoid fallback to ADSL2 Annex L on Short loops in certain NA operator profile
- Improve US rates in G.992.3 Annex M
- Improve US and DS rates against CNXT-based DSLAMs in G992.5
- Improve sync speed against Lantiq-based DSLAMs in T1.413
- Improve US against IKANOS CO4 in G992.3/5
- Improve QLN measurement in loop diagnostic mode
- Improve G.992.5 showtime stability in the presence of REIN
- Fix TR-67 margin test failure against ADLT-L/ADLT-J and LU-A2p-72-HBI
- Fix HLOG calculation when DPBO is on in ADSL modes
- Fix no-connect with ADLT-E/ADLT-J on long loops in T1.413
- Fix low US rate in G992.3 Annex M
- Fix Annex A ALB when Annex L is selected from configuration
- Improve US rate against LU 72 in T1.413
- Improve DS rate/reach against Vinax 2.1 when INP > 0
- Improve connectivity on long loops against Lantiq FW 9.0.5.x in G992.5
- Improve US rate against TI-4000C in G992.1
- Fix sync failure against ECI and SAG 5635 DSLAMs in G992.5
- Fix continuous DS CRCs/FECs in certain conditions against Lantiq FW10.7.2 in G992.5
- Fix sync failure against Fujitsu (AC7 based) DSLAMs in certain condition
- Fix a bug causing US LCD/NCD when SRA upshift increases to a rate beyond training value
- Fix various reporting issues on rate and framing change after SRA or L2
- Fix wrong QLN measurement in ADSL LD mode
- Add DS SNR margin reporting over EOC and US error counter extraction in G992.1
- Fix a bug that causes link drop when S=1/2 in G992.1
- Improve performance of SRA with dynamic D
- Improve DS rate in FB noise in ADSL modes
- Fix CRC errors after certain dynamic framing change
- Support G.INP

- Fix HEC counter reset issue under certain conditions
- Fix US bitswap counter update in G992.1
- Fix reverb freeze test mode in G992.3/5
- Improve G.992.5 showtime stability in the presence of REIN
- Fix framing parameter reporting after entering L2 in G992.3/5

Additional References

Use this release note with the documents and websites in this release note and the documents listed in the following sections:

- Platform-Specific Documents, page 11
- Release-Specific Documents, page 11

Release-Specific Documents

The following documents are specific to Release 15.0 and apply to Release 15.0(1)XA:

- *New and Changed Information*
- *Caveats for Cisco IOS Release 15.0M*

Platform-Specific Documents

Hardware installation guides, configuration and command reference guides, and additional documents specific to the Cisco 800 series routers are available at:

http://www.cisco.com/en/US/products/hw/routers/ps380/tsd_products_support_series_home.html

Cisco IOS Software Documentation Set

The Cisco IOS software documentation set consists of the Cisco IOS configuration guides, Cisco IOS command references, and several other supporting documents.

Documentation Modules

Each module in the Cisco IOS documentation set consists of one or more configuration guides and one or more corresponding command references. Chapters in a configuration guide describe protocols, configuration tasks, and Cisco IOS software functionality, and contain comprehensive configuration examples. Chapters in a command reference provide complete command syntax information. Use each configuration guide with its corresponding command reference. Cisco IOS Software Documentation is available in html or pdf form.

Select your release and click the command references, configuration guides, or any other Cisco IOS

documentation you need.

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

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Notices

See the *Notices* section in About Cisco IOS Release Notes located at:

http://www.cisco.com/en/US/docs/ios/12_4/12_4x/12_4xy15/ReleaseNote.html.

Use this document in conjunction with the documents listed in the "Additional References" section on page 11.