Release Notes for NIM Firmware Releases A2pv6F039t and A2pvbF039t

First Published: 2016-05-30

Last Updated: 2016-05-30

Release: Cisco IOS XE Software Release 3.16S (15.5(3)S)

Contents

Introduction

These release notes describe new enhancements and fixed caveats for the Cisco **NIM-VAB-M**,**NIM-VAB-A**, **NIM-VA-B** modules using firmware release A2pv6F039t and A2pvbF039t. This firmware is used for Cisco CPEs and recommended for Australia's National Broadband Network (NBN).

This release notes are updated as needed.

System Requirements

Memory and IOS Software Requirements

Table 1 lists the supported Cisco routers and also the memory and IOS requirements while using firmware release A2pv6F039t and A2pvbF039t.

Table 1 Supported Platform and Memory Requirements

Platform	Flash (MB)	DRAM (MB)	IOS Version
ISR4451	8192	4096	IOS XE 3.16S onwards
ISR4431	8192	4096	IOS XE 3.16S onwards

Table 1 Supported Platform and Memory Requirements

ISR4351	4096	4096	IOS XE 3.16S onwards
ISR4331	4096	4096	IOS XE 3.16S onwards
ISR4321	4096	4096	IOS XE 3.16S onwards

Determining the Firmware Version

To determine the version of firmware currently running on your **NIM-VAB-M**,**NIM-VAB-A**, **NIM-VA-B** modules, execute the following command and look for the output entries shown in bold in the following examples.

- Bonding Mode (A2pvbF039t), page 2
- Non-Bonding Mode (A2pv6F039t), page 4

Bonding Mode (A2pvbF039t)

```
ovld1#show controllers vdsL 0/3/0

Controller VDSL 0/3/0 is UP

Daemon Status:UP

           XTU-R (DS)XTU-C (US)
Chip Vendor ID:'BDCM' 'BDCM'
Chip Vendor Specific:   0x0000 0xA41B
Chip Vendor Country:    0xB500 0xB500
Modem Vendor ID:'CSCO' '    '
Modem Vendor Specific:  0x4602 0x0000
Modem Vendor Country:   0xB500 0x0000
Serial Number Near:     FOC17461QEB 4451-X/K15.5(201603
Serial Number Far:
Modem Version Near:     15.5(20160330:092524
Modem Version Far:      0xa41b

Modem Status(L0):TC Sync (Showtime!)
Modem Status(L1):TC Sync (Showtime!)
DSL Config Mode:AUTO
Trained Mode(L0):G.993.2 (VDSL2) Profile 17a
Trained Mode(L1):G.993.2 (VDSL2) Profile 17a

TC Mode:PTM Bonded
Selftest Result:0x00
DELT configuration:disabled
DELT state:not running
Number of Ports:2
Port ID:0      1
Link Status:UP UP
Aggr US Rate(kbps):36150
Aggr DS Rate(kbps):116067

Failed full inits:0
Short inits:0
Failed short inits:0

Modem FW  Version:4.14L.04
Modem PHY Version:A2pvbF039t.d26d

Line 0:

           XTU-R (DS)XTU-C (US)
Trellis: ON         ON
```

```
SRA:        disabled disabled
SRA count:  0       0
Bit swap:  enabled enabled
Bit swap count: 17  224
Line Attenuation:  3.4 dB  0.0 dB
Signal Attenuation:  0.0 dB  0.0 dB
Noise Margin:  6.5 dB 5.8 dB
Attainable Rate:66118 kbits/s 18017 kbits/s
Actual Power:14.5 dBm- 4.3 dBm
Per Band Status:       D1 D2 D3 U0 U1 U2 U3
Line Attenuation(dB):   1.83.15.1N/A0.91.5N/A
Signal Attenuation(dB): 1.83.15.1N/A0.30.8N/A
Noise Margin(dB):       6.46.66.5N/A5.85.8N/A
Total FECC:0        0
Total ES:0          0
Total SES:0         0
Total LOSS:0        0
Total UAS:60        60
Total LPRS:0        0
Total LOFS:0        0
Total LOLS:0        0


         DS Channel1  DS Channel0US Channel1  US Channel0
Speed (kbps):  NA       62912NA       18148
SRA Previous Speed:  NA           0NA           0
Previous Speed:  NA           0NA           0
Reed-Solomon EC:  NA           0NA           0
CRC Errors:  NA           0NA           0
Header Errors:  NA           0NA           0
Interleave (ms):  NA       10.00NA        5.00
Actual INP:  NA        1.00NA        0.10

Line 1:

           XTU-R (DS)XTU-C (US)
Trellis: ON         ON
SRA:        disabled disabled
SRA count:  0       0
Bit swap:  enabled enabled
Bit swap count: 16  197
Line Attenuation:  3.8 dB  0.0 dB
Signal Attenuation:  0.0 dB  0.0 dB
Noise Margin:  6.1 dB 6.0 dB
Attainable Rate:54050 kbits/s 18017 kbits/s
Actual Power:14.5 dBm- 4.3 dBm
Per Band Status:       D1 D2 D3 U0 U1 U2 U3
Line Attenuation(dB):   1.73.27.0N/A0.11.1N/A
Signal Attenuation(dB): 1.63.37.0N/A0.00.1N/A
Noise Margin(dB):       6.16.16.2N/A6.16.0N/A
Total FECC:0        0
Total ES:0          0
Total SES:0         0
Total LOSS:0        0
Total UAS:61        61
Total LPRS:0        0
Total LOFS:0        0
Total LOLS:0        0


         DS Channel1  DS Channel0US Channel1  US Channel0
Speed (kbps):  NA       53155NA       18002
SRA Previous Speed:  NA           0NA           0
```

```
Previous Speed:  NA           0NA           0
Reed-Solomon EC:  NA           0NA           0
CRC Errors:  NA           0NA           0
Header Errors:  NA           0NA           0
Interleave (ms):  NA       12.00NA        5.00
Actual INP:  NA        1.00NA        0.10

Training Log :Stopped
Training Log Filename :flash:vdsllog.bin
```

Non-Bonding Mode (A2pv6F039t)

```
ovld1#show controllers vdsL 0/1/0

Controller VDSL 0/1/0 is UP

Daemon Status:UP

           XTU-R (DS)XTU-C (US)
Chip Vendor ID:'BDCM' 'BDCM'
Chip Vendor Specific:   0x0000 0xA41B
Chip Vendor Country:    0xB500 0xB500
Modem Vendor ID:'CSCO' '    '
Modem Vendor Specific:  0x4602 0x0000
Modem Vendor Country:   0xB500 0x0000
Serial Number Near:     FOC18086ML9 4451-X/K15.5(201603
Serial Number Far:
Modem Version Near:     15.5(20160330:092524
Modem Version Far:      0xa41b

Modem Status:TC Sync (Showtime!)
DSL Config Mode:AUTO
Trained Mode:G.993.2 (VDSL2) Profile 17a

TC Mode:PTM
Selftest Result:0x00
DELT configuration:disabled
DELT state:not running

Failed full inits:0
Short inits:0
Failed short inits:0

Modem FW  Version:4.14L.04
Modem PHY Version:A2pv6F039t.d26d

Line 0:

           XTU-R (DS)XTU-C (US)
Trellis: ON         ON
SRA:         disabled disabled
SRA count:  0       0
Bit swap:  enabled enabled
Bit swap count: 8   11
Line Attenuation:  1.4 dB  0.0 dB
Signal Attenuation:  0.0 dB  0.0 dB
Noise Margin: 20.1 dB 5.9 dB
Attainable Rate:149291 kbits/s 59681 kbits/s
Actual Power:14.5 dBm- 4.3 dBm
Per Band Status:       D1 D2 D3 U0 U1 U2 U3
Line Attenuation(dB):   0.81.91.6N/A1.50.2N/A
Signal Attenuation(dB): 0.81.91.6N/A0.90.0N/A
Noise Margin(dB):       21.319.619.4N/A5.96.0N/A
```

```
Total FECC:93       0
Total ES:0          0
Total SES:0         0
Total LOSS:0        0
Total UAS:56        56
Total LPRS:0        0
Total LOFS:0        0
Total LOLS:0        0


          DS Channel1  DS Channel0US Channel1  US Channel0
Speed (kbps):  NA      100014NA       59712
SRA Previous Speed:  NA            0NA            0
Previous Speed:  NA            0NA            0
Reed-Solomon EC:  NA           93NA            0
CRC Errors:  NA            0NA            0
Header Errors:  NA           0NA            0
Interleave (ms):  NA        7.00NA         0.00
Actual INP:  NA        1.01NA        0.00

Training Log :Stopped
Training Log Filename :flash:vdsllog.bin
```

Upgrading to a New Firmware Release

Refer to the *Firmware Upgrade on xDSL NIMs* section in below Cisco document:
http://www.cisco.com/c/en/us/td/docs/routers/access/interfaces/NIM/software/configuration/guide/vdsl2-and-adsl2-nim.html#task_FBE6047C23094EDCBC46B3042DB32B11

Bonding Firmware A2pvbF039t

Supported Features

This section contains information about various features supported by firmware release A2pvbF039t:

- G.993.2 (VDSL2) protocol
- PTM and ATM mode
- Both Annex A and Annex B band plans
- Profiles supported: 8a/b/c/d, 12a/b and 17a (BCM6306 required)
- US0
- Diagnostics mode/DELT
- Bitswaps, SRA and SOS/ROC
- FEXT Equalized UPBO
- Dying Gasp

- INM
- G.INP (Framing Type 1)
- G.Vector
- Virtual Noise
- ADSL protocols
- G.992.5 (ADSL2+), G.992.3 (ADSL2) (BCM6306 required)
- ATM/PTM mode
- Annex A/L/M
- L2 power management
- Diagnostics mode/DELT
- Bitswaps and SRA
- G.INP (Framing Type 1)
- INM
- Virtual Noise

New and Changed Information

This section contains changes introduced with firmware release A2pvbF039t.

- Provide driver bit control to use AELEM of 0 in G.993.2 [FW-8509]
- Fix G.HS issues in G.992.[35] and G.993.2 bonding when there is no common modulation [FW-8520]

Known Issues and Limitations

- Support BCM63168/268D0 chip only
- G.INP supports DTU framing type 1 only

Non-bonding firmware A2pv6F039t

Supported Features

This section contains information about various features supported by firmware release A2pv6F039t

- G.993.2 (VDSL2) protocol.
- PTM and ATM mode
- Annex A and Annex B band plans

- Profiles supported: 8a/b/c/d, 12a/b, 17a and 30a (BCM6306 required)
- US0
- Diagnostics mode/DELT
- Bitswaps, SRA and SOS/ROC
- FEXT Equalized UPBO
- Dying Gasp
- INM
- PhyR and G.INP (Framing Type 1)
- SRA/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
- Bitswaps and SRA
- INM
- PhyR and G.INP (Framing Type 1)
- SRA+G.INP
- Virtual Noise

New and Changed Information

This section contains changes introduced with firmware release A2pv6F039t.

- Improve G.992.1 Showtime Stability against ALU 7350 [FW-8502]
- Provide driver bit control to use AELEM of 0 in G.993.2 [FW-8509]
- Remove the CPE side work around for US PSD against NVLT-D to avoid no-connects in G.993.2 [FW-8471]

Known Issues and Limitations

- ANSI T1.413 is not supported with AFE A.12.40

- G.INP supports DTU framing type 1 only
- G.993.2 ATM mode testing is limited due to lack of DSLAM support

Obtaining Documentation and Submitting 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*.

To receive new and revised Cisco technical content directly to your desktop, you can subscribe to the What's New in Cisco Product Documentation RSS feed. The RSS feeds are a free service.