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Release Notes for Cisco MICA Portware Version 2.6.1.0 on Cisco AS5X00s

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These release notes document Cisco MICA portware, version 2.6.1.0, which supports SS7 (Signaling System 7) Continuity Testing (COT). This portware functionality is used in the SS7 networks to provide status on DSO channels and to detect failures on the channels by generating and detecting the COT tones.

This document includes the following sections:

- Overview
- Features of Portware Version 2.6.1.0
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- How to Obtain Current Status of Known Problems
- Portware Download and Fax DialOut Instructions
- Known Problems with Portware Version 2.6.1.0
- Cisco Connection Online

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Overview

Cisco MICA portware, version 2.6.1.0 software is designed for MICA modules.

Note Cisco MICA portware, version 2.6.1.0 requires that the access server be running with Cisco IOS Release 11.3 (7)AA or later when used as part of the Cisco SS7 dial access solution with a Cisco SC2200 signaling controller. COT also requires that the access server be running Cisco IOS Release 11.3(7)AA or later.

The modules require the following images:

- Cisco IOS 11.3(6)T1 for Cisco AS5200 and Cisco 5300.
- Cisco IOS 11.3(6)T, 11.2(16)P, and 11.3(5)T for Cisco AS5300.
- Cisco IOS 11.3(6)AA1 or 12.0(2)T for Cisco AS5800
- Cisco IOS boot image (for Cisco AS5200 only): c5200-boot-l.112-11.P2.

Compatibility

V.90 and Data Dial out compatibility matrixes for Cisco AS5200, Cisco AS5300, and Cisco AS5800 can be found at the following URLs:

- Cisco AS5200:
http://www.cisco.com/univercd/cc/td/doc/product/access/acs_serv/as5200/as52mfw/cm/mca6port.htm
http://www.cisco.com/univercd/cc/td/doc/product/access/acs_serv/as5200/ios52/as52ios.htm
- Cisco AS5300:
http://www.cisco.com/univercd/cc/td/doc/product/access/acs_serv/5300/mod_info/cm/56k12prt.htm
- Cisco AS5800:
http://www.cisco.com/univercd/cc/td/doc/product/access/acs_serv/as5800/5800_pw/cm/mca58mtx.htm

Features of Portware Version 2.6.1.0

Table 1 lists the features in portware, version 2.6.1.0

Table 1 Portware Features.

Modulation	V.90 standard supporting rates of 56000 to 28000 in 1.3333-bps increments Fax out (transmission) Group 3, standards EIA 2388 Class 2 and EIA 592 Class 2.0, at modulations V.33, V.17, V.29, V.27ter, and V.21 V.32bis = 14400, 12000, 9600, 7200, 4800; V.32 = 9600, 4800; V.22bis = 2400, 1200; V.21 = 300; Bell1212A = 1200, Bell1103 = 300; V.22 = 1200; V.23 = 1200/75. Rockwell K56flex Version 1.1 at 56000 to 32000 in 2000-bps increments ITU-T V.34 Annex 12 at 33600 and 31200 bps ITU-T V.34 at 28800, 26400, 24000, 21600, 19200, 16800, 14400, 12000, 9600, 7200, 4800, or 2400 bps
Signaling	MF DTMF R1 noncompelled and semicompelled R2 compelled, noncompelled, and semicompelled Continuity Testing (COT) of DSO channels in SS7 networks.
Protocols	ITU-T V.42 (including MNP 2-4 and LAPM) Error Correction ITU-T V.42bis (1K nodes) and MNP 5 Data Compression
Modem Standards	ITU-T V. 25—Automatic calling or answering equipment on dialup lines. This standard includes the procedures for disabling echo control devices for calls that are established manually and automatically.

Modems Supporting V.90

The following V.90 modems have been tested and can successfully establish V.90 connections with this release of Cisco MICA Portware, version 2.6.1.0:

- 3Com Megahertz Ethernet +56K PCMCIA
- 3Com Megahertz V.90 Cellular PC Card
- AOpen
- Boca
- Diamond Supra
- Garnett
- Hayes Accura V.90 (Rockwell chipset)
- Hayes Accura V.90 (Lucent chipset)
- Hayes Optima V.90 (Lucent chipset)
- MagicExpress MX56V (T1 only)
- Motorola Modem Surfer
- Motorola Voice Surfer
- Multitech 5634ZBA (Lucent)
- Multitech 56000ZDX (Rockwell)
- Psion V.90 PCMCIA
- USR Courier V.Everything

- USR Sportster
- Viking FM56K V.90 PCMCIA
- Zoom

Note Portware version 2.6.1.0 enables V.90 56K connections while continuing to support K56flex 1.1 connections. The client modem determines which modem protocol is to be used in a connection. Note that X2 is not supported in this release and because V.90 generally provides better performance than either K56flex or X2, X2 will not be supported in the future.

V.90 client modems using Lucent chipsets need an additional command in order to connect to an access server in V.90 mode. The following paragraphs describe how to use the additional command to connect the modems using these chipsets to an access server.

V.90 client modems using Lucent chipsets connect in K56flex mode by default on any access server. To connect a client modem with a Lucent chipset in V.90 mode, enter the following command:

```
ats109=2
```

If the modem responds with ERROR, the modem you are using does not contain the Lucent chipset. You may also check your modem for Lucent chipsets with this command:

```
at111
```

A modem using a Lucent chipset will respond with output similar to the following:

```
at111

Description                               Status
-----
Last Connection                            NA
Initial Transmit Carrier Rate              NA
Initial Receive Carrier Rate              NA
Final Transmit Carrier Rate               NA
Final Receive Carrier Rate                NA
Protocol Negotiation Result                NA
Data Compression Result                    NA
Estimated Noise Level                      NA
Receive Signal Power Level (-dBm)         NA
Transmit Signal Power Level (-dBm)        NA
Round Trip Delay (msec)                    NA
Near Echo Level (-dBm)                    NA
Far Echo Level (-dBm)                      NA
Transmit Frame Count                       0
Transmit Frame Error Count                 0
Receive Frame Count                        0
Receive Frame Error Count                  0
Retrain by Local Modem                     0
Call Termination Cause                     0
Robbed-Bit Signaling                       NA
Digital Loss (dB)                          NA

OK
```

Note Further information about the Lucent chipset V.90 56K connection will be available in a future release.

Portware Download and Fax DialOut Instructions

For instructions on how to download portware to Cisco AS5200, Cisco AS5300, and Cisco AS5800 access servers, see the following URL:

http://www.cisco.com/univercd/cc/td/doc/product/access/acs_serv/5300/mod_info/5238.htm

Note You can download Portware version 2.6.1.0 (mica-portware.2.6.1.0.bin) to any Cisco AS5200, Cisco AS5300, or Cisco AS5800 access server. For example, the file named mica-portware.2.6.1.0.bin can be downloaded from the Cisco AS5300 software center to a Cisco AS5800 access server.

For Fax DialOut instructions, see the following URL:

http://www.cisco.com/univercd/cc/td/doc/product/access/acs_soft/dialoutd/index.htm

If you have a CCO login, you can download the Cisco DialOut Utility from the following URL:

<http://www.cisco.com/kobayashi/sw-center/access/dialout-planner.shtml>

How to Obtain Current Status of Known Problems

The following sections describe known problems with Portware. If a workaround is not provided, the problem requires further investigation or a solution is being developed. For the latest information on known problems and to establish a bug Watcher Bin, follow these steps to consult Cisco Connection Online (CCO):

- Step 1** Connect to CCO as directed in the section “Cisco Connection Online.”
- Step 2** On the CCO home page, click **LOGIN** (which appears in green in the menu bar at the top of the page) and log in to CCO. If you are not a registered CCO user, follow the instructions to register so that you can log in. Login is complete when the word **LOGIN** no longer appears in green text in the menu bar.
- Step 3** After you log in, click **Software & Support** on the CCO home page.
- Step 4** Under the **Technical Support** menu, click **Software Bug Toolkit II**. (**Software Bug Toolkit II** is not visible on the **Software & Support** page unless you are logged into CCO as directed in Step 2.)
- Step 5** Click **Search for Bug by ID Number** from the main menu or click **Search by ID** under **Bug Toolkit** in the left column of the screen.
- Step 6** Enter a bug ID, such as CSCdj80580, in the **Search for Bug by ID Number** window and click **SEARCH**. The bug information is displayed.
- Step 7** To watch activity on the selected bug, click the **WATCH this bug** button at the top of the screen. The **Pick a Watcher Bin** entry screen is displayed.
- Step 8** Create a **Watcher Bin** for the bug selected by entering a **New Bin Watcher name**, such as V.90 Bugs. A new **Watcher Bin** is created. The new **Watcher Bin** creates a link to the **Bug Watcher** screen.
- Step 9** Click **Watcher** to access the **Bug Watcher** screen. The new **Watcher Bin** link is displayed in the left column of the screen.
- Step 10** For instructions on using other bug tools, go to the bottom of the Toolkit II page and click **Help—How to Use the Bug Toolkit** or click **Help** under **Common Tools** in the left column of the screen.

Known Problems with Portware Version 2.6.1.0

The following list describes known problems with Portware Version 2.6.1.0. If a workaround is not provided, the problem requires further investigation or a solution is being developed.

Known General Problems

- CSCdj80580—V.42bis call drops (illegal tokens) may occur with US Robotics (USR) modems. This has been seen only with the USR Courier modems in a Total Control Hub.
- CSCdk11008—MICA does not take full advantage of negotiated power control parameters and does not provide the client modem with such parameters so that the client modem can take advantage of them.
- .CSCdk18063—TDKModem V.34 PCMCIA (Model #DF2814C, Code Rev. 4.0) fails to connect with MICA on 20% of call attempts.
- CSCdk33782—Xircom PCMCIA modems do not connect in K56flex on an E1 line.
- CSCdk57180—MICA corrupts transmit data at 1200 baud with V.23 modulation.
- CSCdk11019—Cisco IOS status command **show modem** sometimes produces incorrect data. Under certain conditions, the data reported for RX level and SNR is inaccurate by as much as 3db.

Known Problems with V90

- CSCdk41358—MICA transmit levels are occasionally inconsistent. This is suspected to be a client modem issue and is being investigated by engineering.
- CSCdk41364—MICA transmit levels are incorrect when configured for less than 16dbm0.
- CSCdk43199—The Newcom V.90 internal client modem speed shifts and retrains constantly and eventually drops the call.
- CSCdk49167—Dynamalink internal modem does not connect in V.90 over E1 line.
- V.90 calls from a Zoom 1 MB modem may connect in sync mode, which results in spurious characters being received.

Known Problems with Fax and Data DialOut

- CSCdk12918—Fax calls to a USR voice/fax modem fail at 2400 baud.
- CSCdk14741—Fax calls to a Zoom 56K modem fail at 4800 baud. Fax calls are successful at 9600 and 14400 baud.
- CSCdk19428—Fax calls to a Panasonic kx-fm220 fax machine at 2400 baud disconnect immediately.
- CSCdk35988—Symbol rate and carrier frequency are incorrectly displayed for V.27ter Fax calls.
- CSCdk46504—Fax calls to Xircom PCMCIA modems at 4800 baud shift down to 2400 baud in order to complete successfully.

Related Links

- PIAFS Wireless Data Protocol for Cisco MICA Modems, Version 2.1
- Cisco IOS Release 12.2 Master Indexes
- AT Command Set and Register Summary for Cisco MICA 6-Port Modules
- SPE and Firmware Download Enhancements

- Cisco AS5300 universal access servers Cisco MICA release notes index page
- Cisco AS5x00 Cisco MICA 6-Port and 12-Port Modem Module Portware/Cisco IOS Software Compatibility Matrixes
- Cisco AS5300 access servers, Appendix A, “Managing Modems,” and Appendix B, “Rom Monitor,” in the *Cisco AS5300 Universal Access Server Software Configuration Guide*
- Modem Management Commands
- Cisco IOS Dial Services Command Reference for Cisco IOS Software Release 12.2
- Cisco IOS Dial Technologies Configuration Guide, Release 12.2
- *Quick Start Guide, Cisco AS5300 Universal Access Server Install and Configure*
- V.90 and RFC-2217 dialout support for fax/data

Note The Cisco DialOut Utility (CDU) is no longer supported. Refer to the *Sample NAS Configurations for Cisco DialOut Utility* document for information about RFC-2217 reverse TELNET support.

Cisco Connection Online

Cisco Connection Online (CCO) is Cisco Systems’ primary real-time support channel. Maintenance customers and partners can self-register on CCO to obtain additional information and services.

Available 24 hours a day, 7 days a week, CCO provides a wealth of standard and value-added services to Cisco’s customers and business partners. CCO services include product information, product documentation, software updates, release notes, technical tips, the Bug Navigator, configuration notes, brochures, descriptions of service offerings, and download access to public and authorized files.

CCO serves a wide variety of users through two interfaces that are updated and enhanced simultaneously: a character-based version and a multimedia version that resides on the World Wide Web (WWW). The character-based CCO supports Zmodem, Kermit, Xmodem, FTP, and Internet e-mail, and it is excellent for quick access to information over lower bandwidths. The WWW version of CCO provides richly formatted documents with photographs, figures, graphics, and video, as well as hyperlinks to related information.

You can access CCO in the following ways:

- WWW: <http://www.cisco.com>
- WWW: <http://www-europe.cisco.com>
- WWW: <http://www-china.cisco.com>
- Telnet: cco.cisco.com
- Modem: From North America, 408 526-8070; from Europe, 33 1 64 46 40 82. Use the following terminal settings: VT100 emulation; databits: 8; parity: none; stop bits: 1; and connection rates up to 28.8 kbps.

For a copy of CCO’s Frequently Asked Questions (FAQ), contact cco-help@cisco.com. For additional information, contact cco-team@cisco.com.

Note If you are a network administrator and need personal technical assistance with a Cisco product that is under warranty or covered by a maintenance contract, contact Cisco's Technical Assistance Center (TAC) at 800 553-2447, 408 526-7209, or tac@cisco.com. To obtain general information about Cisco Systems, Cisco products, or upgrades, contact 800 553-6387, 408 526-7208, or cs-rep@cisco.com.

This document is to be used in conjunction with the Cisco AS5X00 access server publications.

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