

Series 2000
3G/4G Modem / Router
Firmware Release Notes

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1 Introduction

This document provides a summary of the firmware changes and details the firmware upgrade procedure for the Cybertec Series 2000 of 3G and 4G Modem / Routers.

2 Version

The latest version of the Series 2000 firmware is v1.7.4.0.

The firmware files for the current release are:

- **Series 2000 Model 2155 & Model 2255** : S2155-v1.7.4.0.zip
- **Series 2000 Model 2450** : S2450-v1.7.4.0.zip
- **Series 2000 Model 2355 & Model 2455** : S2355-v1.7.4.0.zip
- **Model SMM-250 & Model DMM-250** : XMM250-v1.7.4.0.zip

The zip file contains two files, the upgrade file, for example S2155-v1.7.4.0.upg and the MD5 hash of the upgrade file. The upgrade file is the file to be used to upgrade the unit.

3 Applicability

The firmware described in this document is applicable for the following models:

- Series 2000
 - Model 2155
 - Model 2255
 - Model 2450
 - Model 2355
 - Model 2455
- SMM-250
- DMM-250

The firmware upgrade will fail for any model not listed above.

4 Version 1.7.4.0 (04/05/2016)

4.1 General

- This release includes new features, several enhancements and bug fixes.

4.2 New Features

- EMAIL: Add support for connecting to TLS encrypted email servers (such as gmail).

4.3 Enhancements

- GPS - Display the number of satellites being tracked and the signal to noise ratio.
- IPSEC: Allow IPsec to be brought up and down when the unit becomes the VRRP master.
- Modem Emulator: Add support for:
 - AT+CGMI
 - AT+CMGR
 - AT+CGSN
 - AT+CIMI
- Improved logging of wireless interface.

4.4 Bug Fixes

- WEB: Fix an issue with authentication settings being incorrectly decoded.
- Fixed issue where long hostnames were being truncated.
- Correctly save configuration after uploading an Astaro VPN file.
- Fixed issue with Custom NAT firewall page caching information.
- Fixed issue where browser add-on could prevent expansion of SSL VPN configuration section.

4.5 Known Issues

- No known issues.

5 Version 1.7.3.2 (05/02/2016)

5.1 General

- This is a bug fix release.

5.2 New Features

- No new features.

5.3 Enhancements

- No enhancements

5.4 Bug Fixes

- Fixed IPSec re-start on DNS update issue. IPsec and other services will now only re-start on IP address change.

5.5 Known Issues

- No known issues.

6 Version 1.7.3.1 (07/01/2016)

6.1 General

- This is a bug fix release.

6.2 New Features

- No new features.

6.3 Enhancements

- No enhancements.

6.4 Bug Fixes

- Handle switching LTE bands more efficiency.
- Fixed issue where “No Bands” was incorrectly displayed.
- Fixed issue with DMM-250 LED when no SIM is inserted.

6.5 Known Issues

- No known issues.

7 Version 1.7.3.0 (15/12/2015)

7.1 General

- This release includes new features, several enhancements and bug fixes.

7.2 New Features

- Added a technical support feature to the System / Support page.
- Fastpoll command added to CLI.
- Added SNMP support to DMM-250

7.3 Enhancements

- Improved the throughput of the LTE wireless interface.
- Added RSSI, BER , provider and current band logging.
- Improved wireless interface band search algorithm when changing bands.
- New option for Serial server to disconnect on idle.
- Improved LED behaviour on the DMM-250 to show signal and status information.
- Display and log the band used by the Wireless interface.

7.4 Bug Fixes

- Fixed issue which prevented data flow over the wireless interface when wireless band was changed.
- Fixed a typo on the VPN / IPsec web page.
- Fixed issue where selecting an LTE band sometimes did not change the operating band correctly.
- Update the displayed band information quicker.
- Fixed issue where RIP sends the default route's interface address through GRE tunnels which sometimes created a routing "loop" causing the GRE tunnel to fail.
- Fixed web pages typos.
- Remove the automatic connect option when VRRP is not available.

7.5 Known Issues

- No known issues.

8 Version 1.7.2.1 (20/11/2015)

8.1 General

- This is an enhancement and bug fix release.

8.2 New Features

- No new features.

8.3 Enhancements

- Removed excessive log messages when a SIM is not present.
- Improve timing when passing CSD data through the modem.
- Wireless interface Stability improvements.

8.4 Bug Fixes

- Fixed IPsec issue where the long certificate name sometimes caused re-start.
- Fixed issue where not have a SIM inserted would cause issues at boot.
- Fixed IPsec configuration input verification issue.
- Fixed issue with GRE Status web page.
- Fixed issue which sometimes prevented RIP messages to be accepted through GRE tunnels.

8.5 Known Issues

- No known issues.

9 Version 1.7.2.0 (29/09/2015)

9.1 General

- This release includes new features, several enhancements and bug fixes.
- Once installed firmware cannot be downgraded to a previous version.

9.2 New Features

- Added support for Privonet support.
- Added support to firewall for NATing entire subnet ranges (netmasks must match for a valid NAT).

9.3 Enhancements

- Added support for DNP3 backup master
- Allow the SNMP engineID to be regenerated to allow for unique values.
- Allow point-to-point multicast traffic over GRE.
- Do not constantly reboot when no SIM has been detected.
- Hardware controller firmware update.

9.4 Bug Fixes

- Fixed issue preventing L2TP from working.
- Fixed issue where SNMP OID's were reporting inconsistent information between models and versions.
- Changing the Serial Port configuration to CSD has an immediate effect.
- Fixed issue where CSD stops working.
- Fixed issue with RIP over GRE tunnels.
- Fixed issue with RIP so that it correctly advertises routes that have been configured but are down.
- Improve backward configuration for the WLS interface.
- Accept incoming CSD calls correctly. (Model 2455)
- Improved the upgrade process for internal hardware controller.
- Fixed IE8 compatibility issue with the Firewall > Access Control web page.
- Removed redundant log messages so that logs are more consistent and readable.
- Resolved backwards compatibility issues when using a 1.7 configuration in a 1.6 devices.

9.5 Known Issues

- No known issues.

10 Version 1.7.1.14 (04/06/2015)

10.1 General

- This is an enhancement and bug fix release.

10.2 New Features

- No new features.

10.3 Enhancements

- Improve powering up sequence.
- Updated SNMP.

10.4 Bug Fixes

- Fixed issue with CSD disconnecting.
- Fixed IE8 compatibility issue with the VPN▷SSL web page.

10.5 Known Issues

- No known issues.

11 Version 1.7.1.13 (13/05/2015)

11.1 General

- This is a bug fix release.

11.2 New Features

- No new features.

11.3 Enhancements

- No enhancements

11.4 Bug Fixes

- Fixed issue loading the Astaro configuration file.

11.5 Known Issues

- No known issues.

12 Version 1.7.1.12 (11/05/2015)

12.1 General

- This is an enhancement and bug fix release.

12.2 New Features

- No new features.

12.3 Enhancements

- Add the ability to forward SMS.
- Add support for RF firmware version 12.00.006

12.4 Bug Fixes

- Correctly read firewall access control configuration from 1.5 and 1.6 Series firmware.
- Correct emulation of AT+CSMS
- Correct emulation of AT+CMEE
- IPSec to recover when the local interface changes address.
- IPSec to ignore LAN Ethernet state.
- Correctly read IPSec configuration from 1.5 and 1.6 Series firmware.
- Fixed issue with Dynamic DNS.
- Fixed issue with power control.

12.5 Known Issues

- No known issues.

13 Version 1.7.1.11 (27/04/2015)

13.1 General

- This is an enhancement release.

13.2 New Features

- No new features.

13.3 Enhancements

- Added support for SMM-250 & DMM-250.

13.4 Bug Fixes

- No bug fixes.

13.5 Known Issues

- No known issues.

14 Version 1.7.1.10 (01/04/2015)

14.1 General

- This is an enhancement release.

14.2 New Features

- No new features.

14.3 Enhancements

- Hardware controller firmware update.

14.4 Bug Fixes

- No bug fixes.

14.5 Known Issues

- No known issues.

15 Version 1.7.1.9 (20/03/2015)

15.1 General

- This is an enhancement and bug fix release.

15.2 New Features

- No new features.

15.3 Enhancements

- Added IPSec connection management.
- Improved RF hardware recovery times.
- Improved details on the System▷ Information page when no SIM is present.

15.4 Bug Fixes

- Fixed firewall from dropping all packets within an IPSec tunnel when the local interface is either WLS or DSL.
- Fixed WLS connection management when configured to use "Poll at fixed interval" and using an ICMP poller.

15.5 Known Issues

- No known issues.

16 Version 1.7.1.8 (06/03/2015)

16.1 General

- This is an enhancement release.

16.2 New Features

- No new features.

16.3 Enhancements

- Hardware controller firmware update.

16.4 Bug Fixes

- No bug fixes.

16.5 Known Issues

- No known issues.

17 Version 1.7.1.7 (03/03/2015)

17.1 General

- This is an enhancement release.

17.2 New Features

- No new features.

17.3 Enhancements

- Added GPS support for Models 2355 and 2455.

17.4 Bug Fixes

- No bug fixes.

17.5 Known Issues

- No known issues.

18 Version 1.7.1.6 (27/02/2015)

18.1 General

- This is an enhancement release.

18.2 New Features

- No new features.

18.3 Enhancements

- Improved wireless band select for Models 2355 and 2455.

18.4 Bug Fixes

- No bug fixes.

18.5 Known Issues

- No known issues.

19 Version 1.7.1.5 (26/02/2015)

19.1 General

- First release to provide support for Models 2355 and 2455.
- For other models this is a bug fix release.

19.2 New Features

- No new features.

19.3 Enhancements

- No enhancements.

19.4 Bug Fixes

- Fixed incorrect random serial server POST fault message
- IPSec to accept a traffic map of 0.0.0.0/0
- Correctly emulate AT+CPIN

19.5 Known Issues

- No known issues.

20 Version 1.7.1.4 (06/02/2015)

20.1 General

- This is a bug fix release.

20.2 New Features

- No new features.

20.3 Enhancements

- Improve powering up sequence.
- Updated SNMP.

20.4 Bug Fixes

- Fixed web page error on Wireless ▷ SMS page.
- Fixed web page error on System ▷ GPIO page.
- Fixed web page error on Status ▷ GPIO page.
- Fixed IE8 compatibility issue with the Management ▷ SNMP web page.

20.5 Known Issues

- No known issues.

21 Version 1.7.1.3 (21/01/2015)

21.1 General

- This is an enhancement release.
- Once installed firmware cannot be downgraded to a previous version.

21.2 New Features

- No new features.

21.3 Enhancements

- Hardware controller firmware update.

21.4 Bug Fixes

- No bug fixes.

21.5 Known Issues

- No known issues.

22 Version 1.7.1.2 (23/12/2014)

22.1 General

- This is an enhancement release.

22.2 New Features

- No new features.

22.3 Enhancements

- Security enhancement.

22.4 Bug Fixes

- Security.

22.5 Known Issues

- No known issues.

23 Version 1.7.1.1 (23/12/2014)

23.1 General

- This is an enhancement release.

23.2 New Features

- No new features.

23.3 Enhancements

- Added low power mode.

23.4 Bug Fixes

- No bug fixes.

23.5 Known Issues

- No known issues.

24 Version 1.7.1.0 (17/12/2014)

24.1 General

- This release includes new features, several enhancements and bug fixes.

24.2 New Features

- Added serial server hunt-group feature added.
- Added support for AT+CGREG in the modem emulator.
- Added the ability to read and synchronise to network time.

24.3 Enhancements

- Allow port forwarding from the LAN interface.
- Web server no longer supports SSLv2 connections.

24.4 Bug Fixes

- Fixed IPSec issue when certificates are used.
- Read the correct RF hardware version number.
- Return the correct value when emulating AT+CREG.
- Improved RF hardware shut-down sequence.

24.5 Known Issues

- No known issues.

25 Version 1.7.0.0 (04/12/2014)

25.1 General

- First release in the 1.7 Series.

25.2 New Features

- Support for new hardware.

25.3 Enhancements

- No enhancements.

25.4 Bug Fixes

- No bug fixes.

25.5 Known Issues

- No known issues.

26 Firmware Upgrade Procedure

The firmware upgrade procedure for the Series 2000 3G/4G Modem / Router is described. The same procedure can be used for all models in the product range.

26.1 Connect to the Web interface

- Connect to the Web interface of the modem either via the Ethernet interface or the wireless interface if web access is enabled.
- If connecting via the Ethernet interface:
 - Connect an Ethernet cable between the modem and the PC which will be used for the upgrade.
 - Open a web browser on the PC and enter the IP address of the LAN address of the modem. Note: The IP address of the modem may be configured differently for each installation. The default IP address is 10.10.10.10
- If connecting via the wireless interface:
 - Open a web browser on the PC and enter the IP address of the wireless interface.
- When prompted supply the user-name and password.
- The main status page should now be displayed.
- If the main page is not shown check:
 - If using the Ethernet interface:
 - The Ethernet cable is connected correctly to the modem and the PC.
 - The IP address of the modem is correct.
 - The Ethernet ports are enabled.
 - If using the wireless interface:
 - The wireless IP address is correct and is publicly accessible.
 - The firewall rules have been set to allow wireless web access.

26.2 System Backup and Upgrade

- Select System ▸ Backup & Upgrade. The System Backup & Upgrade page will be displayed as shown in Figure 1.



Figure 1: The System Backup & Upgrade page.

26.2.1 Backup Configuration

- It is recommended to save the current configuration file.
- The configuration of the modem is forward compatible. This means the configuration of the modem will still be correct after a firmware upgrade to a later version even though the format used to store the configuration may be changed.
- The configuration of the modem is not always backward compatible. This means that if the modem firmware is replaced with an earlier version the configuration file may not be readable by the earlier version of firmware and so the configuration will revert to the default settings. If the configuration file from the earlier version was saved prior to the upgrade then this configuration can be loaded into the modem to restore the previous settings after reverting to the earlier revision of firmware.
- To save the configuration click the link in the section titled “Backup current configuration” as shown in Figure 2 and save the file to the local machine.



Figure 2: System configuration backup.

- To restore a configuration click the Browse button in the section title “Restore a saved configuration” as shown in Figure 3 then click the Upload button.

Restore a saved configuration	
Select configuration file	<input type="text"/> Browse...
Upload	

Figure 3: System configuration restore.

26.2.2 Firmware Upgrade

- In the section titled “Upgrade Series 2000 firmware” click the Browse button and navigate to and select the upgrade file appropriate for the modem being upgraded as shown in Figure 4. Refer to Section 2 on page 6 for the firmware file name and version number details.
- If the incorrect file is selected the upload will fail and report an error.

Upgrade Series 2000 firmware	
Current firmware version	1.21
Select upload file	<input type="text" value="00-images/S2000-v140.upg"/> Browse...
Upload	

Figure 4: Select the upgrade file.

- Click the Upload button. The file will now be transferred to the modem.
- When the upload is complete the Upgrade section of the page will change to be similar to that shown in Figure 5.

Upgrade Series 2000 firmware	
Status of uploaded file	Passed
Filename	series-2000-v140.img
Release	1.40
Build date	24/04/2010
Upgrade	Cancel Upgrade

Figure 5: File has been uploaded to the modem.

- Check that the information shown is correct.
- If the data is correct click the “Upgrade” button.



Once the Upgrade has started power must be maintained to the modem to prevent corruption of the Flash memory.

- The Upgrade section of the page will now show a message as shown in Figure 6.

Upgrade Series 2000 firmware
The Series 2000 is now starting the upgrade.
The upgrade will take several minutes to complete and the modem will be offline during this time.
The modem will reboot once the upgrade is complete.

Figure 6: The Upgrade page.

- During the upgrade:
 - the top two front panel LEDs will flash alternatively Red then Green.
 - the modem will disconnect from the wireless network.
 - the modem will not respond to any network traffic.
 - the modem will re-boot when the upgrade has completed
- When the Upgrade has completed and the modem has re-booted the new firmware version can be checked in the System Information page. Figure 7 is an example of the System Information page after the upgrade has completed. Note only the Application Version is shown.

Series 2000 Information	
Model	2000
Serial Number	XXXXXXXXXX
Application Version	1.40
Bootloader Version	1.00

Hardware Addresses	
LAN MAC	XXXXXXXXXX
Wireless IMEI	XXXXXXXXXX
Wireless IMSI	XXXXXXXXXX
Wireless Software Version	1.40

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Figure 7: The System Information page after the upgrade.

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