

Series 2000
3G 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 Modem / Routers.

2 Version

The latest version of the Series 2000 firmware is v1.6.5.0.

The firmware files for the current release are:

- **Series 2000** : S2150-v1.6.5.0.zip

3 Applicability

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

- Series 2000
 - Model 2150
 - Model 2250

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

4 Version 1.6.5.0 (20/01/2017)

4.1 General

- This is an enhancement release.

4.2 New Features

- No new features

4.3 Enhancements

- Added Privonet Support.

4.4 Bug Fixes

- No bug fixes.

4.5 Known Issues

- No known issues.

5 Version 1.6.4.0 (04/05/2016)

5.1 General

- This is a feature, enhancement and bug fix release.

5.2 New Features

- Added a technical support feature to the System / Support page.
- Added support for connecting to TLS encrypted email servers (such as gmail).
- Ability to forward an SMS to email and/or another SMS.

5.3 Enhancements

- Added the ability to reset the SNMP Engine ID used to allow a unique authentication to a unit.
- Enable RIP over GRE tunnels.
- RIP to advertise static manged and GRE interfaces.
- Allow point-to-point multicast traffic over GRE tunnel.
- Improved DSL connection management.
- Accept special characters in the DSL password field.
- Capture some lost DSL interface state change notifications.
- Updated the Dynamic DNS engine.
- Allow SysName to be set in SNMP.

5.4 Bug Fixes

- Fixed issue where Custom NAT web page could very occasionally cache incorrect information.
- Fixed issue where the authentication information used to login may have been incorrectly parse preventing login.
- Fixed issue where browser add-on could prevent expansion of SSL VPN configuration section.
- Fixed issue with the Serial Server phone book when deleting the final "connection" from a connection entry.
- Correctly save configuration after uploading an Astaro VPN file.
- Clean up of the SNMP log messages.
- Change the PING session each time a ping set is started for the connection manager.
- IPSec to ignore if the LAN Ethernet cable status.
- IPSec to restart whenever the outgoing interface address changes.
- Fixed IE8 compatibility issue with the VPN / SSL web page.
- Fixed web page working errors.
- Fixed IPSec re-start on DNS Update issue. IPsec and other services will now only re-start on IP address change.
- Fixed issue preventing the DSL interface updating VRRP on its status.
- Close CSD connections when "Reset Port" is pressed on the web page.
- Fixed issue of web authentication settings being incorrectly decoded.
- Fixed issue where long hostnames were being truncated.

5.5 Known Issues

- No known issues.

6 Version 1.6.3.0 (23/03/2015)

6.1 General

- This is a feature, enhancement and bug fix release.

6.2 New Features

- Add support for SNMPv3.
- Modem emulator: added huntgroup support:
 - Allow the phone book to try multiple endpoints per phone book entry.
 - Extended the number of phone book entries supported.
 - Allow the phone book to be uploaded and downloaded in a CSV file format.

6.3 Enhancements

- Added IPsec connection management.
- Updated SNMP engine.
- Improved system entropy.
- Added a loopback interface option to the Network > Diagnostic page.
- Added Static IP address configuration to OpenVPN.
- Added the ability to clear the DHCP leases.
- The web server no longer supports SSLv2 & SSLv3 connections.
- Added the command AT+CGREG to the modem emulator.
- Extend the command AT+CGREG to show roaming correctly
- Added ability for IPsec to be configured with up to 10 traffic maps per tunnel.
- Added command line upgrader.
- Connection management to change the ICMP identifier.
- Added support for Model 5350.

6.4 Bug Fixes

- On answer signaling protocol bug fixed.
- Fixed error where the 64bit interface counters incorrectly jump by 4 Gig.
- SNMP - Changed the data types of the following SerialServer object IDs from signed to unsigned:
 - BytesTx - 1.3.6.1.4.1.15428.1.5.4.1.1.6.x
 - BytesRx - 1.3.6.1.4.1.15428.1.5.4.1.1.7.x
 - FramingErrors - 1.3.6.1.4.1.15428.1.5.4.1.1.8.x
 - OverrunErrors - 1.3.6.1.4.1.15428.1.5.4.1.1.9.x
 - ParityErrors - 1.3.6.1.4.1.15428.1.5.4.1.1.10.x
 - Breaks - 1.3.6.1.4.1.15428.1.5.4.1.1.11.x
- SNMP - Changed the data types of the following object IDs from signed to unsigned.:

- OID - 1.3.6.1.4.1.15428.1.5.5.2.1.4.x
- Fixed firewall from dropping all packets within an IPSec tunnel when the local interface being either WLS or DSL.
- Fixed WLS connection management when configured to use "Poll at fixed interval" and using an ICMP poller.
- Fixed issue with policy routes.
- Fixed IE8 compatibility issue with the Management▷SNMP page.
- Fixed IPSec issue when certificates are used.
- IPSec to accept a traffic map of 0.0.0.0/0
- ADSL configuration to accept unusual characters.
- Correctly emulate AT+CPIN.
- Fixed the Reset button on the Routing▷Default & Static page.

6.5 Known Issues

- No known issues.

7 Version 1.6.2.2 (12/12/2014)

7.1 General

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

7.2 New Features

- No new features.

7.3 Enhancements

- Added support for revised hardware.

7.4 Bug Fixes

- No bug fixes.

7.5 Known Issues

- No known issues.

8 Version 1.6.2.1 (11/12/2014)

8.1 General

- This is an enhancement and bug fix release.

8.2 New Features

- No new features.

8.3 Enhancements

- Added support for AT+CGREG in the modem emulator.
- Change the modem emulation default dial out time-out to 10 seconds

8.4 Bug Fixes

- Fixed Serial Server so that Phone Book is correctly read from the configuration file.
- Return the correct value when emulating AT+CREG.

8.5 Known Issues

- No known issues.

9 Version 1.6.2.0 (16/09/2014)

9.1 General

- This is a feature and enhancement release.

9.2 New Features

- Added huntgroup support to Serial Server Modem Emulator:
 - Allow the phone book to try multiple endpoints per phone book entry.
 - Extended the number of phone book entries supported.
 - Allow the phone book to be uploaded and downloaded in a CSV file format.
- Accept via the LAN interface any packet that custom NAT accepts.

9.3 Enhancements

- Allow port forwarding from the LAN interface.
- The web server no longer supports SSLv2 connections.
- Changed "Signal on answer" to "Cybertec modem emulation protocol" (CMEP).

9.4 Bug Fixes

- No bug fixes.

9.5 Known Issues

- No known issues.

10 Version 1.6.1.7 (12/12/2014)

10.1 General

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

10.2 New Features

- No new features.

10.3 Enhancements

- Added support for revised hardware.

10.4 Bug Fixes

- No bug fixes.

10.5 Known Issues

- No known issues.

11 Version 1.6.1.6 (05/12/2014)

11.1 General

- This is an enhancement and bug fix release.

11.2 New Features

- No new features.

11.3 Enhancements

- Added support for emulation of AT+CGREG

11.4 Bug Fixes

- Return the correct value when emulating AT+CREG.

11.5 Known Issues

- No known issues.

12 Version 1.6.1.5 (03/12/2014)

12.1 General

- This is a bug fix release.

12.2 New Features

- No new features.

12.3 Enhancements

- No enhancements.

12.4 Bug Fixes

- Fix issue of packet and byte counters having an incorrect large jump in value.

12.5 Known Issues

- No known issues.

13 Version 1.6.1.4 (28/08/2014)

13.1 General

- This is an enhancement and bug fix release.

13.2 New Features

- No new features.

13.3 Enhancements

- Web server no longer supports SSLv2 connections.

13.4 Bug Fixes

- Fixed IPsec where loosing the WLS or DSL connection prevented the tunnel starting up again.
- Fixed IPsec issue where enabling an individual IPsec tunnel when IPsec is enabled did not always starts up the tunnel.
- Fixed issue ADSL issue where the gateway could not be pinged over IPoA.
- Return the correct DNP3 entry for DSL Connected.

13.5 Known Issues

- No known issues.

14 Version 1.6.1.3 (30/01/2014)

14.1 General

- This is a bug fix release.
- Once installed firmware cannot be downgraded to a previous version.

14.2 New Features

- No new features.

14.3 Enhancements

- Hardware controller firmware update.

14.4 Bug Fixes

- Fixed RADIUS user authentication error.

14.5 Known Issues

- No known issues.

15 Version 1.6.1.2 (19/12/2013)

15.1 General

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

15.2 New Features

- No new features.

15.3 Enhancements

- Hardware controller firmware update.

15.4 Bug Fixes

- No bug fixes

15.5 Known Issues

- No known issues.

16 Version 1.6.1.1 (16/12/2013)

16.1 General

- This is an enhancement and bug fix release.

16.2 New Features

- No new features.

16.3 Enhancements

- Various security enhancements.
- Connection establishment integrated into connection management.
 - Valid packet connection required for link to be declared established.
- User Management
 - Guest user can now be explicitly disabled.
- - IPsec
 - Added support for DH Group 768 and DES.
 - Both added for backward compatibility.
 - Due to security concerns neither of these options are recommended.

16.4 Bug Fixes

- Packet Counters
 - Fixed received and transmit packet counter roll-over.
- DHCP issues fixed.
- Resolved issue with IPsec and CA certificates not loading correctly.

16.5 Known Issues

- No known issues.

17 Version 1.6.1.0 (01/11/2013)

17.1 General

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

17.2 New Features

- Simple Certificate Enrolment Protocol (SCEP) supported added.

17.3 Enhancements

- Various security enhancements.
- VRRP
 - Added the ability for a wireless packet session to be enabled when the unit became the master VRRP device and disabled when it lost the master status.
- Certificates
 - Added the ability to require the remote certificate to be of nsCertType Server.
- IPsec
 - Added the ability to configure redundant tunnels. Tunnel groups may be created containing up to two tunnels within each group.
- Time
 - Added the ability to sync clock to network time.
- Improved AT command support
 - SMS delivery report:
 - The +CNMI command determines how to forward/generate notifications:
 - The +CSMP command determines aspects of a outbound SMS.
 - AT+CMGD Command: Optional second parameter of interpreted as follows:
 - 0** Delete the message specified by first parameter
 - 1** Delete all read messages
 - 2** Delete all read messages.
 - 3** Delete all read messages.
 - 4** Delete all messages.
 - AT+CNMI Command: Changed behaviour as follows:
 - Command format:** +CNMI [<mode>[,<mt>[,<bm>[,<ds>[,<bfr>]]]]]
 - mode:** Accept 0, 1, or 2.
 - mt:** Accept 0, 1, 2 or 3.
 - bm:** Accept 0, 2, or 3.
 - ds:** Accept 0 or 1.
 - bfr:** Accept 0 or 1.
- Added the ability to add a secondary default route.
- Support for latest version of Astaro configuration import.
- Change year format in configuration file-name to use 4 digits.
- The maximum number of IPsec tunnels has been increased to 25.

17.4 Bug Fixes

- Web Interface
 - Fixed various IE8 rendering errors.
 - Removed additional characters on some pages.
 - Fixed spelling errors.
- AT Commands
 - SMS commands improved.
- SNMP
 - Fixed issue whereby the DNP3 Tx and Rx packet counters were not updating correctly.
- PPTP
 - Fixed issue with Windows server not connecting.
- DNS
 - Fixed issue with DNS not resolving correctly when a VPN tunnel re-establishes.
- IPsec
 - Allow the local traffic map to specify all traffic.
 - Display the total time the tunnel has been up as well as the time since the last re-key.
 - Removed the ability to configure the default route to be Any IPsec tunnel. The correct way to configure this is to use IPsec traffic maps.
- SSL VPN
 - Fixed issue where an Astaro file input containing an unknown element would cause the application to terminate.
 - Fixed issue where an Astaro file was parsed and configuration applied when the certificate handler was full. New behaviour is when uploading an Astaro file a warning will be issued if the certificate handler is full and the file will not be parsed.
- VRRP
 - Status now shown correctly.
- Serial Server
 - Serial Ports (Model 2250 Only)
 - Fixed issue with setting baud rates below 19K2 on serial ports 2 & 3.
 - PPP Server and Client
 - Fixed failure of PPP server and client to start.
- Ethernet
 - LAN port is no longer shown as fault when cable is not connected.
- Power down
 - Fixed issue where power down would fail to occur.
- Re-Boot
 - Fixed issue where the unit would fail to start up following a re-boot command.

17.5 Known Issues

- No known issues.

18 Version 1.6.0.7 (17/05/2013)

18.1 General

- Bug fix release.

18.2 New Features

- No new features.

18.3 Enhancements

- No Enhancements.

18.4 Bug Fixes

- Fixed issue where serial ports 2 and 3 on the Model 2250 fail to initialise.

18.5 Known Issues

- No known issues.

19 Version 1.6.0.6 (12/05/2013)

19.1 General

- Bug fix release.
- It is not possible to downgrade to previous version once a unit has been upgraded to the version.

19.2 New Features

- No new features.

19.3 Enhancements

- No enhancements.

19.4 Bug Fixes

- No bug fixes.

19.5 Known Issues

- Fixed Circuit Switched Data (CSD) stability issue.

20 Version 1.6.0.5 (07/11/2012)

20.1 General

- This release includes enhancements and bug fixes.

20.2 New Features

- No new features.

20.3 Enhancements

- PPTP
 - Allow PPTP to connect to Windows servers.

20.4 Bug Fixes

- IPsec
 - Delay tunnel initialisation to ensure correct starting order.
 - Ensure tunnel is only initialised once.
- PPTP
 - Prevent the repeated re-starting of PPTP service.

20.5 Known Issues

- No known issues.

21 Version 1.6.0.4 (28/09/2012)

21.1 General

- Initial release for Model 2250.

21.2 New Features

- No new features.

21.3 Enhancements

- Support added for the additional serial ports and I/O on the model 2250.

21.4 Bug Fixes

- No bug fixes.

21.5 Known Issues

- No known issues.

22 Version 1.6.0.3 (25/09/2012)

22.1 General

- Bug fix release.

22.2 New Features

- No new features.

22.3 Enhancements

- No enhancements.

22.4 Bug Fixes

- Fix an issue with CTS/RTS handshaking lines on primary serial port.

22.5 Known Issues

- No known issues.

23 Version 1.6.0.2 (25/09/2012)

23.1 General

- Initial release for Model 2150.

23.2 New Features

- No new features.

23.3 Enhancements

- No enhancements.

23.4 Bug Fixes

- No bug fixes.

23.5 Known Issues

- No known issues.

24 Firmware Upgrade Procedure

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

24.1 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.

24.2 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.

24.2.1 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.

24.2.2 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 ?? on page ?? 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"/> 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	
Serial Number	
Application Version	1.40
Bootloader Version	1.00

Hardware Addresses	
LAN MAC	
Wireless IMEI	
Wireless IMSI	
Wireless Software Version	1.000

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Figure 7: The System Information page after the upgrade.

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