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 v1.5.7.0.

The firmware files for the current release are:

- **Series 2000 :** S2000-v1.5.7.0.upg

3 Applicability

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

- Series 2000

  - Model 2100W & 2100E
  - Model 2220W & 2220E

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

4 Version 1.5.7.0 (04/05/2016)

4.1 General

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

4.2 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.

- Accept via the LAN interface any packet that custom NAT accepts.

4.3 Enhancements

- Updated SNMP engine.

- 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.

- Allow a backup DNP3 master to be specified.

- Add connection management functionality to IPSec tunnels.

- Add support for AT+CMEE and AT+CSMS.

- Allow SysName to be set in SNMP.

4.4 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 Dynamic DNS poll 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.

- WEB: Fix an issue with authentication settings being incorrectly decoded.

- Fixed issue where long hostnames were being truncated.

- Resolved an issue with policy routing via GRE interfaces

- SNMP SysDescription OID now returns the correct description.

4.5 Known Issues

- No known issues.

5 Version 1.5.6.0 (28/01/2015)

5.1 General

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

5.2 New Features

- Added support for SNMP V3

- 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.

5.3 Enhancements

- Various security enhancements.

- Improved system entropy.

- Updated the Dynamic DNS engine.

- Allow port forwarding from the LAN interface.

- Added a loopback interface option to the Network->Diagnostic page.

- The web server no longer supports SSLv2 & SSLv3 connections.

- Allow packet mode to come up on a mobile network without circuit switched capability.

- Added the command AT+CGREG to the modem emulator.

- Extend the command AT+CGREG to show roaming correctly

- Increased number IPsec traffic maps per tunnel to 10.

- Changed "Signal on answer" to "Cybertec modem emulation protocol" (CMEP).

- Added command line upgrader.

- Added static IP address to OpenVPN.

- Added the ability to clear the DHCP server leases.

- Connection management to change the ICMP identifier.

- Added IPSec connection management.

5.4 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
  - ○ ParitytErrors - 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 is WLS.

- 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

- Correctly emulate AT+CPIN.

- Fixed the Reset button on the Routing->Default & Static page.

- No longer allow invalid characters to be used in DSL authentication passwords.

5.5   Known Issues

- No known issues.

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6 Version 1.5.5.2 (15/05/2014)

6.1 General

- This is an enhancement and bug fix release.

6.2 New Features

- No new features.

6.3 Enhancements

- Improve the power initialisation procedure for ADSL units.

6.4 Bug Fixes

- Correctly set the Status LED if the DSL module is not responsive.

6.5 Known Issues

- No known issues.

7 Version 1.5.5.1 (14/01/2014)

7.1 General

- This is an enhancement and bug fix release.

7.2 New Features

- No new features.

7.3 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.

7.4 Bug Fixes

- Packet Counters

  ○ Fixed received and transmit packet counter roll-over.

- AT Commands

  ○ +CPIN Command returns correct response of "READY".

7.5 Known Issues

- No known issues.

8 Version 1.55 (03/05/2013)

8.1 General

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

8.2 New Features

- Simple Certificate Enrollment Protocol (SCEP) supported added.

8.3 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.

- Added the ability to add a secondary default route.

- Support for latest version of Astaro configuration import.

8.4 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.

8.5   Known Issues

- No known issues.

9 Version 1.54 (24/07/2012)

9.1 General

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

- Support for the Series 1000 has been discontinued.

9.2 New Features

- GPS location

  ○ The location of the unit can be determined using GPS.
  ○ An GPS antenna is required to be connected to the AUX port.
  ○ The location details are on the System ▷ Location page
  ○ Note that received diversity is suspended while a GPS is active.

9.3 Enhancements

- Serial Server

  ○ Added the ability for the Raw UDP mode to send data to the last IP address from which data was received.

- IPsec

  ○ Added an option to allow the routing information to be added to the routing table only once the tunnel has been established.

- GPIO (Model 2220 Only)

  ○ Added the ability to add additional text to email generated by an GPIO event.

9.4 Bug Fixes

- SNMP

  ○ Interface status is correctly reported. Previously all interfaces were reported as down.
  ○ Default contact email address is no longer set.
  ○ Warning messages are no longer generated when some configuration fields are left blank. Note that the warning messages did not affect SNMP operation.

- Serial Server

  ○ When Raw UDP mode send IP address is set to 0.0.0.0 any data received is dropped.

- SSL VPN

  ○ MDEX Certificate failed to be read. Fixed.

- Ethernet

  ○ The interface did not always power off correctly. Fixed.

- User Management

  ○ The default configuration incorrectly included a valid guest password. Fixed.
  ○ When upgrading devices if the guest password is the default, the guest user will be disabled. No other passwords will be affected.
  ○ To enable the guest user click on "Edit users and passwords" on System ▷ Administration page and and set a password for the "guest" user.

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9.5   Known Issues

- No known issues.

10   sVersion 1.49 (24/01/2012)

10.1   General

- This is a bug fix release.

10.2   New Features

- Loopback Interface

  ○ The interface is a virtual interface which may be assigned an IP address that is independant of the physical interface addresses.

  ○ This interface allows applications to send or receive data using the address assigned to the virtual interface as opposed to the address on the physical interface through which the traffic passes.

  ○ The Loopback Interface configuration can be found in the Network ▷ Loopback page.

10.3   Enhancements

- Routing Type & Metric

  ○ The route type and metric can be set when configuring a route.

- SMS

  ○ A unique sequence number can be added to each SMS sent from the unit.

    • The sequence number starts from 1 and is reset at boot.
    • The setting is access on the Management ▷ SMS page

  ○ Send re-try on error:

    • If an error occures when attempting to send an SMS the firmware will re-try to send it.
    • If 3 consective errors occur no further attempts to send the message will be attempted.

- IPsec

  ○ If IPsec is configured to terminate at the LAN interface and the LAN address is changed IPsec will re-start.

- GPIO

  ○ The state of the GPIO Outputs can be set from the System ▷ GPIO page. Previously only the initial state could be set on the System ▷ GPIO page.

  ○ The output state of the GPIO Outputs can no longer be changed on the Status ▷ GPIO page. This page is for reporting of the GPIO status only and makes this page consistent with other Status pages.

  ○ At start-up if an GPIO input is set to generate an event and the input is in that state the event will be triggered. Previous behaviour was the event was not triggered.

    • For example if a closed input is set to trigger an SMS to be sent and the input is closed at start-up the SMS will be sent.

- MAC Address Filters

  ○ Two actions now provided:

    • Local is for restricting or allowing access to router services based on source MAC address.
    • Passthrough is for restricting or allowing access to the WAN port based on source MAC address.

- Connection Management

  ○ When connection management terminates a connection the reason for the termination is written to the log.

10.4   Bug Fixes

- LAN IP Address

    ○ When changing the LAN IP address the user is only redirected to the new address if connected via the LAN interface. Previously the user was redirected to the new address irrespective of the connected interface.

    ○ When accessing via HTTPS the redirect page is returned HTTPS. Previously the redirect page was returned HTTP.

- Serial Server

    ○ When all serial ports are set to disabled the status page lists the Serial Server as Disabled. Previously it indicated No Fault which was ambiguous. The fault status of the Serial Server will only be indicated when at least one port is configured.

    ○ Fully Qualified Domain Names (FQDN) can now be configured rather than fixed IP Addresses.

- IPsec

    ○ The web server response time for an IPsec configuration has been reduced.

    ○ Issue with loading certificates resolved.

- DNS Lookup

    ○ When Fully Qualified Domain Names (FQDN) are entered in IP address fields the FQDN is stored and DNS lookup occurs are time of connection.

    ○ Previous behaviour was DNS loopup occured at time of configuration and the returned IP address was stored.

    ○ Using FQDN and DNS lookup allows for dynamic IP address connections.

- NAT

    ○ Configuration issue of 1:1 NAT resolved.

    ○ Cache flush on firewall rule change.

    ○ Custom NAT protocol setting error resolved.

- Telnet Client

    ○ Extended characters including arrows keys work correctly.

- Circuit Switched Data (CSD)

    ○ The DCD settings were not correctly applied. Fixed.

- SSL VPN

    ○ Issue with loading P12 certificates resolved.

10.5   Known Issues

- No known issues.

11   Version 1.48 (16/08/2011)

11.1   General

- This is a bug fix release.

11.2   New Features

- Telnet client
  - The command telnet has been added to command line interface.

11.3   Enhancements

- SMS
  - Support for full GSM character set.
  - AT Commands - Modified
    - +CMGL
      - the return SMS text will be coded using the character set specified by +CSCS
    - +CMGR
      - the return SMS text will be coded using the character set specified by +CSCS
    - +CPMS
      - the first parameter (location to read SMS from) now affects only the serial port that issued the command. The second and third parameters (location to send SMS, and location to receive SMS) affect the whole device.
  - AT Command - Added
    - +CSCS
      - sets the SMS character set (either IRA or UTF-8). The default is UTF-8.
  - Commands - Modified
    - sms send
      - the SMS message accepts UTF-8 characters.
    - sms location - the command has been deleted.
    - sms memory
      - set the device's location to send SMS and the location to receive SMS.
    - sms list
      - the location to read the SMS from must be specified. The SMS text is displayed using UTF-8.
    - sms read
      - the location to read the SMS from must be specified. The SMS text is displayed using UTF-8.
    - sms delete
      - the location to delete the SMS from must be specified
- Command Line Interface
  - Interface can now handle quotes and the slash character.
    - The following substitutions occur when the backslash ('\') character is used.
      \n New Line
      \r Carriage Return
      \\ The backslash character
      \$ the dollar character
      \" the double quote character
      \' the single quote character
      \SPACE the space character

- The dollar ('\$') character has been reserved for future use.
- Text within a double quote allows backslash and dollar substitution.
- Text within a single quote does not allow backslash or dollar substitutions.

- AT Commands

  ○ Allow white space between the tokens of an AT command.

- VRRP

  ○ Introduced the concept of a Keep-alive Condition. This allows VRRP to respond quickly to the loss of the remote host.

11.4 Bug Fixes

- Route Command

  ○ The route function in craft does not always output the full result. Fixed

- Serial Server

  ○ The serial server does not recover when telnet is closed before the device is connected to the associated serial port. Fixed.

- IPsec

  ○ IPsec modified so that large changes in the time/date can be handled correctly.

11.5 Known Issues

- No known issues.

12   Version 1.47 (11/07/2011)

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

- Wireless firmware upgrade fails. Fixed.

12.5   Known Issues

- No known issues.

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13   Version 1.46 (11/05/2011)

13.1   General

- This is a bug fix release.

13.2   New Features

- No new features.

13.3   Enhancements

- No enhancements.

13.4   Bug Fixes

- L2TP/IPsec

    ○ An L2TP/IPsec tunnel was not correctly established. Fixed.
    ○ L2TP connection was requesting mppe encryption incorrectly. Fixed

13.5   Known Issues

- No known issues.

14 Version 1.45 (14/04/2011)

14.1 General

- This is an enhancement release.

14.2 New Features

- Parse Astaro Generated OpenVPN configurations.

  ○ Added the ability to read Astaro OpenVPN configuration files & automatically configure an OpenVPN tunnel. Certificates included in the Astarto configuration will also be read and uploaded into the Certificate management system.

14.3 Enhancements

- SMS

  ○ Unhandled SMS Control

    • Option added to Wirless ▷ SMS web page to direct unhandled SMS to serial port.
      ○ If selected any SMS that is not bound for the modem, is directed to all serial ports which are in modem emulation mode.
      ○ If not selected, then all SMS that are not bound for the modem are discarded.

  ○ SMS Command

    • The command "sms location" has been added. It tells "sms list" and "sms read" to act on either the SIM or Modem.
    • Syntax:
      sms location [<read> [<write> [<receive>]]]

      <read> the location to read SMS from.
      <write> the location to write SMS to.
      <receive> the location that received SMS are written to.

      Use SM for SIM, and ME for modem.

  ○ AT Commands - Modified

    • +CNMI - New message indications
      ○ Command now only acts on a single serial port, instead of all ports on the modem.
    • AT&W - write configuration
      ○ Modified to save the following extra fields: +CNMI, +IPR
    • AT&F - restore configuration
      ○ Modified to restore the following extra fields: +CNMI, +IPR
    • AT+CMGS - send a SMS
      ○ After a SMS is accepted, the following is replied
        +CMGS: <mr>
        Where <mr> is the message reference, a cyclic 8 bit number (0..255)
      ○ UTF-8 characters are accepted but not all may be included in the SMS.
      ○ The following characters may be included in an SMS:
        abcdefghijklmnopqrstuvwxyz
        ABCDEFGHIJKLMNOPQRSTUVWXYZ
        @ $!"#%&'()*+,-./:;<=>?_
        0123456789
        and ' ', '\r', '\n'

- ○ Unrecognised characters are mapped to the '?' character.
  - ○ AT Commands - Added
    - • +IPR
      - ○ Set the serial port speed
      - ○ AT+IPR=?
        AT+IPR: (0),(300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 230400)
    - • AT+CSCA
      - ○ Set the SMS service centre
      - ○ +CSCA=<address>[,<address_type>]

        <address>=specifies the service centre address, usually a phone number

        <address_type>: 129 means use a typical ISDN/telephony numbering plan, but not an international number (ie does not start with a '+'). 145 means use a typical ISDN/telephony numbering plan starting with a '+'.
    - • AT+CPMS
      - ○ Preferred message storage
      - ○ +CPMS <mem1>,<mem2>,<mem3>
        <mem1> = location to list, read, & deleting messages
        <mem2> = location to send messages
        <mem3> = location to receive messages

        Locations - "SM" SIM - "ME" Modem
    - • +GMM
      - ○ Return the product information
    - • +GMI
      - ○ request manufacturer identification
    - • +GMR
      - ○ request revision identification
    - • +GCAP
      - ○ overall capabilities
    - • +GSN
      - ○ serial number
    - • +CGMM
      - ○ model identification
    - • +FCLASS?
      - ○ modem mode (Only data mode accepted)
    - • #CLS?
      - ○ modem mode (Only data mode accepted)
    - • +GCI
      - ○ country code (Command accepted, but ignored) The set command accepts any 2 digit hex value, but ignores it
    - • Ix
      - ○ Identification information.
        Where x is a digit in the range 0..9.
      - ○ All commands return the string "Serial Modem"
- • Serial Port Configuration
  - ○ Circuit Switch Data (CSD) serial port reset.
    - • When the operating mode of a serial port is "Direct to single port", a "reset Port" button is presented on the web page.

- Pressing the button restores the port to its default configured parameters.
  ○ Modem Emulation serial port parameter reset.
    - When the operating mode of a serial port is "Modem Emulation", then a "reset port <x>" (<x> is {1,2,3}) button is presented on the web page.
    - Pressing the button restores the port to its default configured parameters.

- Upgraded to HSO driver

  ○ Improved IPv4 frame syncronisation and faster recovery when syncronisation is lost.

14.4 Bug Fixes

- GRE

  ○ Keep-alive to be sent at start-up. Fixed.

14.5 Known Issues

- No known issues.

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15 Version 1.43 (23/11/2010)

15.1 General

- This is a bug fix release.

15.2 New Features

- No new features.

15.3 Enhancements

- No enhancements.

15.4 Bug Fixes

- DHCP Server

  ○ The DHCP server now includes the DNS search domain (DSN Suffix) in its DHCP information.

- VRRP

  ○ Configuration changes not correctly applied. Fixed.

- GRE

  ○ tunnels do not bring up static routes correctly. Fixed.
  ○ tunnels may change interface id when the device is rebooted. Fixed

15.5 Known Issues

- No known issues.

16 Version 1.42 (25/10/2010)

16.1 General

- This release includes several enhancements and bug fixes.

16.2 New Features

- No new features.

16.3 Enhancements

- GRE Tunnels

  ○ Support for keep-alives added.

- VRRP and GRE integration

  ○ GRE tunnel status integrated with VRRP to allow for tunnel switch-over.

- Serial server

  ○ Enable TCP No Delay option has been added to the Serial Server.

16.4 Bug Fixes

- Time change reboot.

  ○ A change in the system time of more than 100 seconds causes the unit to reboot. Fixed.

- Wireless mode.

  ○ On the web page config/ifaces-wls.asp, when disabling CSD mode and then pressing Cancel, the web page incorrectly sets the option to Packet Mode. Fixed.

- Negative temperatures displayed incorrectly.

  ○ Negative temperature incorrectly displayed, eg -1.4C was displayed as -1.-40. Fixed.

- Web server

  ○ The IPsec configuration page is slow to update. Fixed.
  ○ Web pages do not display correctly on webkit browsers. Fixed.

- PPP over CSD

  ○ Kernel crash when disabling PPPD Dialout over 3G when call active. Fixed

- Configuration reset

  ○ Early 2000 Series hardware does not respond to the config reset switch. Fixed

16.5 Known Issues

- No known issues.

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17 Version 1.41 (25/06/2010)

17.1 General

- This release is a bug fix release.

17.2 New Features

- No new features.

17.3 Enhancements

- IPsec

  ○ Allow IPSec to be configured with XAUTH and rekeying at the same time.

17.4 Bug Fixes

- Management

  ○ SMS rate limit cannot be configured. Fixed.

- Serial Server

  ○ The pulldown options for Serial Server's (config/serial-server.asp) Immediate send character matching field were incorrect. The options presented:

    - Override
    - Follow carrier

      changed to:

    - Off
    - Match any character
    - Match all characters

17.5 Known Issues

- No known issues.

18 Version 1.40 (23/04/2010)

18.1 General

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

18.2 New Features

- Circuit Switched Data (CSD) PPP Dial-In / Dial-Out capability.

    ○ This functionality allows a PPP connection to be established between two devices over a CSD connection.

- Capability to establish a PPP connection using an external modem added to Serial Server.

    ○ This feature allows a unit to establish a PPP connection using an external modem connected to a serial port.

- Ethernet MAC Address filter.

    ○ Filter allows MAC addresses to be accepted or rejected.
    ○ Default policy can be set to allow or deny.

- Alias IP address can be enabled using configuration reset switch.

    ○ Pressing the configuration reset switch for approximately 2 seconds will enable an aliased IP at the default IP address setting.
    ○ This feature enables access to the unit when the IP is not known.
    ○ The Ethernet ports must be enabled for this feature to work.

- Unit can be powered down using configuration reset switch.

    ○ Pressing and holding the configuration reset switch will cause the unit to disconnect from the network and power down.
    ○ This feature is provided to shutdown the network connection prior to removing power.
    ○ If the power is not removed from the unit it will power on again after 60 seconds. This provides a recovery mechanism should the power down be accidentally activated.

- Generic Routing Encapsulation (GRE) support added.

    ○ Up to 5 GRE tunnels can be configured.

18.3 Enhancements

- Power on/off sequence improved

    ○ The power on/off sequence has been enhanced.
    ○ Power on sequence changes improves boot time.
    ○ Improved power off sequence allows for faster network connection on next boot.

- Power controller power off maximum offset added.

    ○ An off time offset has been added to the power controller. This value only has meaning if the unit has been powered off by the power controller and then during the off time the power to the unit is removed and then re-applied. When the power is re-applied the unit will re-boot and then check if the current time indicates the unit should be off. The previous behaviour was to shutdown if the current time was prior to the "on" time. The option adds an offset time which be default is 5 minutes. If the "on" time will be within the offset time then the modem will not turn off but will remain on.

- Web Pages

  ○ Status alarms for non active services are now shown in the background colour. The previous colour was to display the background in green which could indicate the service was active thus causing confusion.

- System log automatically scrolls to last entry.

  ○ The system log web page now automatically scrolls to the last entry. It is common for a user to be interested in the last file entries. This saves the user from scrolling to the end of the log each time it is selected.

- Serial Server

  ○ PPP Dial-out client added.
  ○ Modem emulator - Added support for unsolicited SMS

- System Information

  ○ Model name suffix displayed correctly.
  ○ Wireless firmware version now reported in a more concise manner.

- IPsec Virtual Private Network (VPN) improvements.

  ○ The IPsec "tab" on the web page is now the first tab so it is the default VPN page.
  ○ The name of the IPsec tab has been changed from "IPsec VPN" to "IPsec".
  ○ The default for IPsec was changed from Enabled to Disabled.
  ○ Check-box added to overwrite MTU on General Configuration page.
  ○ General IPsec Configuration defaults set to the following:
    - NAT traversal enabled
    - Overwrite MTU disabled.
  ○ "General Configuration" page added.
  ○ Tunnel can now be configured to be either an Initiator or Responder.
  ○ Phase 1 Encryption - IKE proposal defaults set to AES(128) SHA1 DH Group 2.
  ○ Phase 2 Configuration - Phase 2 Encryption defaults set to the following:
    - ESP proposal: AES(128)-SHA1
    - Perfect forward secrecy & group : Enabled with DH Group 2.
    - Key lifetime: 480 mins.
  ○ Dead Peer Detection (DPD) moved to "Tunnel options" configuration page.
  ○ Dead Peer Detection (DPD) action on failure supports the following:
    - None
    - Hold
    - Clear (Default for Responder)
    - Restart (Default for Initiator)
    - Restart by peer
  ○ Default to not use shared certificates. Previously the default was to use shared certificates.
  ○ Tunnel Network configuration moved from Phase 2 page to a separate page.
  ○ Tunnel Networks - Network option "None (Host only)" removed and replaced by 2 more explicit options:
    - Host only (WAN IP)
    - Host only (LAN IP)
  ○ Support for Xauth.
    - XAUTH provides an additional level of authentication by allowing the IPSec responder to request extended authentication from remote users. Before being allowed access to the VPN remote users are require respond with their credentials.

- ○ VPN log automatically scrolls to last entry.
  - • The VPN log web page now automatically scrolls to the last entry. It is common for a user to be interested in the last file entries. This saves the user from scrolling to the end of the log each time it is selected. This feature works in the same way as the System log scroll and was added for consistency.

- • Firewall

  - ○ Custom NAT - Added check box to "Drop traffic to original target".

18.4   Bug Fixes

- • IPsec

  - ○ Traffic destined to be sent over the tunnel could block if a transmission attempt was made prior to the tunnel initalisation. This has been fixed for both Initiator and Responder modes.
  - ○ Timeout problems when using Greenbow client have been resolved.

- • Web Server

  - ○ Web Server fails to respond. The Web Server was found to block under certain conditions, this has been fixed.

18.5   Known Issues

- • No known issues.

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Document: 0013-001-000330
Series 2000 Firmware Release Notes

Version: 1.13
04 May , 2016

19   Version 1.32 (24/08/2009)

19.1   General

- This release is a bug fix release.

19.2   New Features

- No new features.

19.3   Enhancements

- No enhancements.

19.4   Bug Fixes

- Serial server

    ○ Serial port 1 not transmitting. Fixed.

- WLS

    ○ Added 10 sec delay before generating packet session connect event.

- IPsec

    ○ Added reject routes to resolve "continuous ping" issue.

19.5   Known Issues

- No known issues.

20   Version 1.30 (29/07/2009)

20.1   General

- This release provides several enhancements and bug fixes.

20.2   New Features

- No new features added

20.3   Enhancements

- IPsec

  ○ Tidy up of web pages, add more steps to make configuration clearer.

- OpenVPN

  ○ Add support for CA-only certificates, username and passwords for MDEX compatibility.
  ○ Made MTU, fragmentation and renegotiation settable.

- Serial server

  ○ Basic framer & Modbus

    - timeouts can now be set in milliseconds.

- GPIO

  ○ Use kernel timer to more strictly control GPIO polling loop.

- Boot

  ○ Restructure start up sequence to speed up by a few seconds.

- Web pages

  ○ All lists now have clickable checkboxes to enable/disable entries.

20.4   Bug Fixes

- WLS

  ○ Serial server inaccessible from WLS port after CSD/PKT mode change fixed.

- Router

  ○ QOS rates not correctly initialised fixed.

20.5   Known Issues

- No known issues.

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Document: 0013-001-000330
Series 2000 Firmware Release Notes

Version: 1.13
04 May , 2016

21 Version 1.23 (16/03/2010)

21.1 General

- This release is a bug fix release.

- This firmware version is for release only with the Beta version of the Cybertec Series 2000 firmware upgrader.

21.2 New Features

- No new features

21.3 Enhancements

- No enhancements.

21.4 Bug Fixes

- Wireless module

  ○ Firmware upgrade reset bug resolved.

21.5 Known Issues

- No known issues.

22   Version 1.22 (15/05/2009)

22.1   General

- This release is for an IPsec enhancement.

22.2   New Features

- No new features

22.3   Enhancements

- IPsec

  ○ Dead Peer Detection (PDP) options made more aggressive.

    - Restart changed to restart-by-peer;
    - hold changed to clear

22.4   Bug Fixes

- No bug fixes.

22.5   Known Issues

- No known issues.

23   Version 1.21 (03/04/2009)

23.1   General

- This release is to provide support for revised hardware.

23.2   New Features

- No new features

23.3   Enhancements

- Support for revised hardware power control.

23.4   Bug Fixes

- No bug fixes.

23.5   Known Issues

- No known issues.

24 Version 1.20 (24/03/2009)

24.1 General

- Internal configuration file format

  - The internal configuration file format has been changed in this version.

    - Existing configuration file will be automatically converted to the new format.
    - The new format is not backward compatible with earlier versions of firmware.
      - After upgrade if the firmware is reverted back to an earlier version all configuration settings will be lost.

  - It is recommended that the current configuration file is backed-up prior to upgrading the firmware. Refer to Section 25 Upgrade Procedure for instructions on saving the configuration of the modem.

24.2 New Features

- PPP Server added to Serial Server.

  - Allows serial devices running PPP to establish an IP connection directly to the modem.
  - The device can then route data across the Wireless interface
  - Can also be used with Modem Emulator

    - When the dial command ATD*99# is issued, the emulator connects to a local PPP session rather than a network connection.

24.3 Enhancements

- Top level menu tab added called Management.

  - The management tab brings together several management related configuration items under the one menu section. The Management tab contains the following sub-menus:

    - Events
    - SNMP
    - DNP3
    - SMS (Outgoing)
    - Email

  - Events

    - The events sub-menu provides a table to enable event reporting via SNMP, DNP3, SMS and email.

  - SNMP

    - Rate limit now a global setting found under Management->Events.
    - Configurations with limits under Sys->GPIO or Wireless->Events must now update the configuration under Management->SNMP.

  - SMS

    - New Distribution list for sending events to multiple numbers.
    - GPIO SMSes now sent to distribution list.
    - Configurations with a destination number under System->GPIO must now add this to the Wireless->SMS distribution list.
    - Rate limit now a global setting found under Management->Events.
    - VPN tunnels can be stopped, started and restarted via an SMS trigger.
    - SMS VPN command is of the form "VPN <start/stop/restart> <ALL/<tunnel name>>"
    - SMS VPN command examples:

- ○ VPN start ALL
- ○ VPN stop SSL
- ○ VPN restart IPsec-1
- ○ Email
  - • Added for event reporting. The modem can now send system or GPIO events to multiple email addresses via an SMTP server.
- ○ System temperature
  - • Added as an event source.

- Serial Server

  - ○ New option in Port Settings called Network congestion back-off signal.
    - • This provides flow control by de-asserting the specified serial port signal when the network queue reaches 75% full. The signal is reasserted when the network queue drains to 50%.
  - ○ Modbus performance improved (Series 2000 Only).
    - • Serial server parses incoming RTU frames to find boundaries and forward to network more quickly (rather than waiting for framing timeout to expire). Will reduce packet errors and timeout errors.

- GPIO

  - ○ Events selection moved to Management section.
  - ○ SMS triggers moved to Wireless->SMS.

- LAN

  - ○ MTU can now be configured under Network->LAN.

- Wireless

  - ○ New option in Connection Maintenance to reset link if registration lost for specified period.
  - ○ Field update of RF module now supported (Series 2000 only).

24.4 Bug Fixes

- Ipsec tunnels 2 & 3 not allowed in firewall filter rules fixed.

- Internal DNP3 outstation not restarting after configuration change fixed.

- RADIUS default group not persistent bug fixed.

- Port forward not validating end of port range fixed.

- UMTS 900Mhz not registering resolved (Model 2000E only).

24.5 Known Issues

- No known issues.

25 Firmware Upgrade Procedure

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

25.1 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 username 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.

25.2 System Backup and Upgrade

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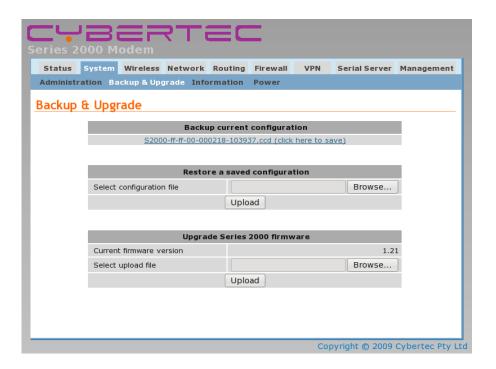

Figure 1: The System Backup & Upgrade page.

25.2.1 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.

Figure 3: System configuration restore.

25.2.2   Firmware Upgrade

- In the section titled "Upgrade SMM 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.

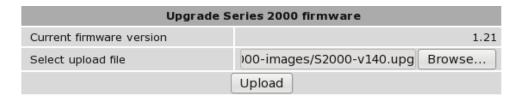- If the incorrect file is selected the upload will fail and report an error.

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.

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.
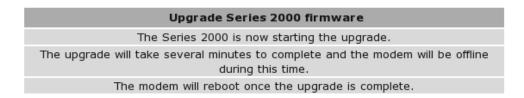
The modem will reboot once the upgrade is complete.

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.

Figure 7: The System Information page after the upgrade.

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