



# **MRX Firmware Release Notes**

*Release 1.14.0*

**Cybertec Pty Ltd**

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Version 1.3.0 - 12/05/2023 - Firmware Version 1.9.4.0 added.

Version 1.4.0 - 15/11/2023 - Firmware Versions 1.9.4.1, 1.9.4.2 & 1.9.5.0 added.

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Version 1.13.0 - 12/03/2025 - Firmware Version 1.9.7.0 added.

Version 1.14.0 - 09/05/2025 - Firmware Version 1.9.7.1 added.

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## INTRODUCTION

This document provides a summary of the changes and details for each MRX firmware release. It also includes the firmware upgrade procedure for the Cybertec Series 2000 of 3G, LTE (4G) & 5G Routers.

### 1.1 Firmware Version

The latest version of the Series 2000 firmware is:

- Version V1.9.7.1

The firmware file appropriate for each model are:

- Model 2155X/2255X
  - Hardware revision 3 - S2155\_HW3\_V1.9.7.1.zip
  - Hardware revisions 1 & 2 - S2155\_HW1-2\_V1.9.7.1.zip
- Model 2455X
  - Hardware revision 3 - S2455\_HW3\_V1.9.7.1.zip
  - Hardware revisions 1 & 2 - S2455\_HW1-2\_V1.9.7.1.zip
- Model 5455
  - Hardware revision 3 - S5455\_HW3\_V1.9.7.1.zip
  - Hardware revisions 1 & 2 - S5455\_HW1-2\_V1.9.7.1.zip
- DMM-450
  - Hardware revision 3 - XMM450\_HW3\_V1.9.7.1.zip
  - Hardware revisions 1 & 2 - XMM450\_HW1-2\_V1.9.7.1.zip

### 1.2 Firmware File Contents

The zip file contains several files, the upgrade file and files containing the hash of the upgrade file.

For example, the S2155\_HW3\_V1.9.7.1.zip file contains the following files:

- S2455\_HW3\_V1.9.7.1.upg
- S2455\_HW3\_V1.9.7.1.upg.md5
- S2455\_HW3\_V1.9.7.1.upg.sha1
- S2455\_HW3\_V1.9.7.1.ipg.sha256

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**Note:** The hardware Rev 1 & Rev 2 upgrade files only include the MD5 hash.

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The upgrade file is the S2455\_HW3\_V1.9.7.1.upg file, this is the file which is used to upgrade the unit.

The hash contained in each of the hash files can be used to verify the upgrade file on the local machine or once it has been uploaded to the unit to be upgraded.

## 1.3 Applicability

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

- Model 2155X
  - Hardware Revision 3 - Firmware versions V1.9.0.0 and above. (All V1.9 series firmware).
  - Hardware Revisions 1 & 2 - Firmware versions V1.9.5.0 and above.
- Model 2255X
  - Hardware Revision 3 - Firmware versions V1.9.0.0 and above. (All V1.9 series firmware).
  - Hardware Revisions 1 & 2 - Firmware versions V1.9.5.0 and above.
- Model 2455X
  - Hardware Revision 3 - Firmware versions V1.9.0.0 and above. (All V1.9 series firmware).
  - Hardware Revisions 1 & 2 - Firmware versions V1.9.5.0 and above.
- Model 2455X
  - Hardware Revision 3 - Firmware versions V1.9.7.0 and above.
- DMM-450
  - Hardware Revision 3 - Firmware versions V1.9.0.0 and above. (All V1.9 series firmware).
  - Hardware Revisions 1 & 2 - Firmware versions V1.9.5.0 and above.

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

## FIRMWARE VERSIONS

Details are listed for each firmware release.

The firmware versions are listed in reverse order so that the latest release appears first.

## 2.1 Version 1.9.7.1

Release Date: 09/05/2025

### 2.1.1 General

- This is an enhancement and bug fix release.

### 2.1.2 New Features

- No new features.

### 2.1.3 Enhancements

- Routing:
  - Policy Routes have been added for DMM-450 Model. This allows specific routing policies to be applied based on criteria such as source/destination IP addresses or ports.
- Modem Emulator:
  - AT+CSQ Command Update: The AT+CSQ command has been modified to only report a Bit Error Rate (BER) value if a valid BER measurement is available.
  - AT+CESQ Command Addition: A new AT+CESQ command has been implemented. This command provides detailed information about the signal quality of 2G, 3G, and 4G cellular connections, offering more comprehensive diagnostic capabilities for wireless connectivity.
- System:
  - Boot Sequence Update (HW Rev1/Rev2): The boot sequence for Hardware Revision 1 and Revision 2 units has been updated. This modification is intended to prevent a rare startup problem that could occur after upgrading the firmware to version 1.9.
  - Firmware Downgrade Lock (DMM-450 Rev2): A firmware downgrade lock has been implemented for DMM-450 Hardware Revision 2 units. Once upgraded these models cannot be downgraded to firmware versions older than V1.9.7.1. This measure is in place to ensure the stability and functionality of these specific hardware revisions.

### 2.1.4 Bug Fixes

- Networking:
  - Resolved an issue where the LAN Maximum Transmission Unit (MTU) was not being configured correctly when the device was operating in switch mode.
- Login:
  - Addressed a problem that prevented the login page from accurately interpreting characters from the UTF-8 character set. This enhancement ensures that passwords containing UTF-8 characters can log in successfully.
- IPSec:
  - Corrected an issue where XAuth passwords with special characters were not correctly escaped. This fix allows XAuth authentication to succeed with a wider range of characters.
- OpenVPN:
  - Resolved an issue that prevented OpenVPN from functioning correctly when configured in bridge mode.



### 2.1.5 Known Issues

- No known issues.

## **2.2 Version 1.9.7.0**

Release Date: 27/02/2025

### **2.2.1 General**

- This is an enhancement and bug fix release.

### **2.2.2 New Features**

- No new features.

### **2.2.3 Enhancements**

- Support added for Model 2555X 5G RedCap router.
- Improvements to the firmware upgrader.
- Technical support file improvements.
- Logging:
  - General improvements to increase clarity.
  - Length of log doubled in size.
  - Now able to export up to 10,000 log lines.
- IPsec XAuth Server now has options for configurable username and password.
- DHCP leases cleared on config reset.
- Improved handling of large numbers of incoming SMS.
- Modem emulator:
  - LATIN1 char set added
  - “Custom” char set option added for GDW11 compatibility mode.
  - Default to ME storage for SMS read and incoming SMS.
  - SM storage has been moved to a virtual SM storage and will no longer be stored directly on the sim.
  - Max ME storage for modem emulator now configurable (1-1000)
  - Faster delete of large number of SMS messages at once.
  - AT command CPMS saves on write of command.

### **2.2.4 Bug Fixes**

- Fix for IPsec XAuth to use configured authentication, which will be local or RADIUS.
- Fix issue with DHCP leases not being shown if only LAN2 DHCP server enabled.
- Fix for AT command CMGL to ensure all messages are listed correctly.

### 2.2.5 Known Issues

- No known issues.

## **2.3 Version 1.9.6.3**

Release Date: 16/01/2025

### **2.3.1 General**

- This is a bug fix release.
- This release only affects Model 2255X (all hardware revisions).

### **2.3.2 New Features**

- No new features.

### **2.3.3 Enhancements**

- No enhancements

### **2.3.4 Bug Fixes**

- Fixed an issue with DNP3 not correctly setting GPIO outputs.

### **2.3.5 Known Issues**

- No known issues.

## 2.4 Version 1.9.6.2

Release Date: 08/01/2025

### 2.4.1 General

- This is an enhancement and bug fix release.

### 2.4.2 New Features

- No new features.

### 2.4.3 Enhancements

- IPsec:
  - Improved startup from boot.
  - Improve startup after boot.
  - Reduced unnecessary restarts
- logging:
  - Improved messages after re-power or re-boot.
  - clean ups to enhance readability.
- Improved handling of PPPoE and PPPoA in 5455 Rev1 Units
- Display the SHA256 hash when using the CLI Upgrader.
- Improved interface event handling for some services.

### 2.4.4 Bug Fixes

- Correctly display the Temperature on all capable models.
- Correctly report IMSI of the active SIM.
- Resolved an SMS issue where invalid UTF8 bytes would result in a blank message.
- Bug fix for independent LAN ports config change sometimes causing a crash on DSL units.
- Fix for LAN gateway sometimes not being applied to routing table
- Fix for Serial port on some models sometimes not starting up properly after firmware upgrade.
- Resolved an issue in modem emulator where, when AT+CSCS was set to PCCP437 or GSM, some characters were being translated to UTF8 characters rather than the correct PCCP437/GSM character.

### 2.4.5 Known Issues

- No known issues.

## 2.5 Version 1.9.6.1

Release Date: 14/11/2024

### 2.5.1 General

- This is a bug fix release.

### 2.5.2 New Features

- No new features.

### 2.5.3 Enhancements

- No enhancements.

### 2.5.4 Bug Fixes

- Fixed issue with incorrect Telstra bearers.
  - Relevant for models 2155X/2255X & DMM450.
  - Bearers originally specified by Telstra did not work correctly after 3G network shutdown.
  - Not all Telstra connections are impacted.

### 2.5.5 Known Issues

- No known issues.

## 2.6 Version 1.9.6.0

Release Date: 25/09/2024

### 2.6.1 General

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

### 2.6.2 New Features

- Added firmware check and download capability.
  - Check will indicate if an firmware update is available.
  - If new firmware is available it can be downloaded and upgrade started.

### 2.6.3 Enhancements

- Serial
  - Improvements to Rev3 Hardware serial port functionality.
  - Equivalent functionality to Rev 2 hardware.
- SNMP
  - New Wireless OIDs:
    - \* wireless band
    - \* wireless packet ip address
    - \* wireless packet MTU
    - \* Roaming status
  - New DSL OIDs:
    - \* DSL modulation type.
    - \* DSL annex
    - \* DSL profile
    - \* DSL framing
    - \* DSL packet MTU
  - Added wireless and DSL packet statistics.
- Added SHA256 HASH of firmware upgrade files on upgrade webpage.
- Improved handling of serial firmware upgrades on Rev3 hardware.



## 2.6.4 Bug Fixes

- Fixed issue with SIMs not rotating correctly on Rev 1 & 2 hardware.
- Fixed issue where a disabled serial port could be reported as a fault on boot.
- DSL Models - Rev 2 & 3 Hardware:
  - Fixed issue with untagged bridged mode.
  - Resolved issue with bridged mode with split Ethernet ports.
  - Resolved untagged IPoE/MER DHCP issue.
  - Resolved untagged packet connections with static ip address issue.
  - Fixed MER not working.
  - Fix untagged PPPoE not working.
  - Fixed issue where old packet IP addresses were sometimes not cleared properly.
- Resolved an issue with the 2155X/2255X Hardware Rev3 units where the system and status LED's would turn off during the boot cycle.

## 2.6.5 Known Issues

- No known issues.

## **2.7 Version 1.9.5.4**

Release Date: 05/07/2024

### **2.7.1 General**

- This is a bug fix release.

### **2.7.2 New Features**

- No new features.

### **2.7.3 Enhancements**

- No enhancements

### **2.7.4 Bug Fixes**

- Fix issue where VRRP sometimes incorrectly triggers to become backup after long periods of being the primary.

### **2.7.5 Known Issues**

- No known issues.

## 2.8 Version 1.9.5.3

Release Date: 28/06/2024

### 2.8.1 General

- This is an enhancement and bug fix release.

### 2.8.2 New Features

- No new features.

### 2.8.3 Enhancements

- Improved wireless interface error detection on Hardware Rev 1 & 2
- Serial port hardware handshaking improvements.
- Added popup on DSL models to warn when an interface firmware upgrade will occur.

### 2.8.4 Bug Fixes

- PPPoA fixed issue with PPPoA Authentication.
- Fixed issue with Hardware Handshaking not working on Serial Ports 2 and 3 (Model 2255X Hardware Rev 3.2).
- Fixed issue with Ethernet ports sometimes not working correctly after boot. (Hardware Rev 1 & 2)

### 2.8.5 Known Issues

- No known issues.

## 2.9 Version 1.9.5.2

Release Date: 29/05/2024

### 2.9.1 General

- This is an enhancement and bug fix release.

### 2.9.2 New Features

- No new features.

### 2.9.3 Enhancements

- **Serial server Modem Emulator:**
  - PCCP437 char set added
  - Hex char set properly added
  - +CSDH support added
  - +CSAS now saves CSMP and CNMI
  - SMSC (+CSCA) improvements
- IPsec key lifetime now has limits
- Reboot improvements

### 2.9.4 Bug Fixes

- DNP3 CSD not reporting fixed.
- PPPoA fixes on DSL models Hardware Rev 1/2
- Network status LED for Sim2 issue fixed.
- Temperature reporting issue fixed for hardware Rev 3 units.
- Fixed issue with DSL interface firmware upgrade.

### 2.9.5 Known Issues

- No known issues.

## 2.10 Version 1.9.5.1

Release Date: 27/02/2024

### 2.10.1 General

- This is an enhancement and bug fix release.

### 2.10.2 New Features

- No new features.

### 2.10.3 Enhancements

- Improved the upgrade process
- Improved logging
- Improved handling of network restarts when connection maintenance fails.
- Added limit to the number SSH connections.

### 2.10.4 Bug Fixes

- Fixed connectivity issues for 2455X Rev1 units.
- Improved handling of 2455X Rev1 GNSS data.
- Serial server:
  - Fixed Serial Port Control line issues on Rev1/2 Hardware.
  - Improved serial throughput and latency in Rev3 hardware.
- IPsec:
  - Fixed issues with IPsec routing.
  - Fixed issues with IPsec startup/restarts
  - General IPsec improvements.
- Fixed issue with email not being sent
- DSL:
  - Fixed an issue with with Rev2/Rev3 hardware upgrades failing causing the DSL interface to fail.
  - Add a configuration setting to allow for Specific incoming subnet routes via PPPoA.
  - Improved Rev2/Rev3 hardware interface handling and stability.
  - Fixed issues with some Rev2 hardware being unable to start up the DSL interface.
  - Fixed issues with the MTU settings in a subset DSL configurations.
- Fixed issues with Policy routes not functioning correctly
- Fixed issue with SNMP load protection.
- LAN2 is now hidden on firewall webpages unless independent lan ports is enabled.
- Correctly display the Loopback interface on status pages when enabled.

### 2.10.5 Known Issues

- No known issues.

## **2.11 Version 1.9.5.0**

Release Date: 15/11/2023

### **2.11.1 General**

- This is an enhancement and bug fix release.

### **2.11.2 New Features**

- No new features.

### **2.11.3 Enhancements**

- Support added for Hardware Rev 1 and 2 models.
- Improved logging
- Roaming:
  - Rotate SIMs when roaming temporary deny list is full and sim rotate is enabled.
  - Timed roaming re-scan capability added.
- SNMP:
  - Added SIM and IMEI information to the MIB.
  - Extended signal quality and strength added to 2155X / 2255X Hardware Rev 1

### **2.11.4 Bug Fixes**

- Fixed issue with Model 5455 not starting up correctly under some circumstances.
- Fixed potential connection poller memory leak.
- LLDP: Chassis ID fix.
- Fixed issue where if LAN gateway was configured it did not appear as a default route option.
- Modem emulator: AT parsing error fix.
- Resolved Firewall connection tracking issue.
- IPsec:
  - Resolved issue with IPsec restarting before wireless/dsl connection is up.
  - Resolved issue with IPsec routes sometimes being dropped.
  - Certificate import improvements.
  - 3DES now works for phase 2 (ESP).

### 2.11.5 Known Issues

- No known issues.



## 2.12 Version 1.9.4.2

Release Date: 15/10/2023

### 2.12.1 General

- This is a bug fix release.

### 2.12.2 New Features

- No new features.

### 2.12.3 Enhancements

- No enhancements

### 2.12.4 Bug Fixes

- Fixed an issue where the 2255X hardware Rev 3.1 may not start up correctly after powering off.
- Fixed an issue where log messages could flood the log file under some error conditions.

### 2.12.5 Known Issues

- No known issues.

## **2.13 Version 1.9.4.1**

Release Date: 09/10/2023

### **2.13.1 General**

- This is an enhancement and bug fix release.

### **2.13.2 New Features**

- No new features.

### **2.13.3 Enhancements**

- Added support for 2255X hardware Rev 3.1

### **2.13.4 Bug Fixes**

- Fixed issue with 2155X / 2255X hardware Rev 3 not monitoring the configuration reset switch correctly after boot.
- Fixed issue with DMM-450 hardware Rev 3 not reading configuration reset switch correctly at boot.

### **2.13.5 Known Issues**

- No known issues.

## 2.14 Version 1.9.4.0

Release Date: 12/05/2023

### 2.14.1 General

- This is an enhancement and bug fix release.

### 2.14.2 New Features

- No new features.

### 2.14.3 Enhancements

- GNSS: Added support for 3V3 Active Power GPS to S2155X and S2455X models.
- SNMP: Improvements to interface consistency.
- Temperature: Added temperature support.
- Dynamic DNS: Added support for DuckDNS
- Hardware: Added support for 2155X Hardware revision 3.1

### 2.14.4 Bug Fixes

- Diagnostics: Fixed issue with being unable to download TCPDump diagnostics.
- IPSEC:
  - Fixed issues with XAuth not authenticating correctly.
  - Fixed an issue with IPSec stability while using AES128.
- TechSupport: Fixed issue where occasionally the technical support file was zero bytes.
- Upgrade: Fix an issue where some upgrades would result in unexpected reboot.
- Logs: Improved logging messages for better readability.
- LLDP:
  - Fixed incorrect start up issue.
  - Improved the information reported via SNMP
- Interfaces: Fix an issue where sometimes routing between LAN ports wasn't enabled when selected.
- LED indicators: Improved the timings for greater consistency across products.
- Dynamic DNS: Fix an issue with EasyDNS interaction

### 2.14.5 Known Issues

- No known issues.

## 2.15 Version 1.9.3.5

Release Date: 06/03/2023

### 2.15.1 General

- This is an enhancement and bug fix release.

### 2.15.2 New Features

- No new features.

### 2.15.3 Enhancements

- Added support for model 2255X Rev3
- Updated OpenReach DSL firmware to version V1.1.1

### 2.15.4 Bug Fixes

- Fixed an issue with excessive and unnecessary logging of marks on the firewall.
- Fixed an issue where certificates could report the wrong date. Mainly relating to certificates handled by scep.

### 2.15.5 Known Issues

- No known issues.

## 2.16 Version 1.9.3.4

Release Date: 06/02/2023

### 2.16.1 General

- This is an enhancement and bug fix release.

### 2.16.2 New Features

- No new features.

### 2.16.3 Enhancements

- IPsec:
  - DES, Blowfish and Twofish support reintroduced.
  - This was done for firmware Version 1.8.x.x compatibility. It should be noted that these encryption methods are considered deprecated.

### 2.16.4 Bug Fixes

- Serial Server:
  - PPP Server and PPP Dialout Client startup fixed.
- SNMP:
  - Issue with selecting v3 fixed.
  - Issue when restarting or reconfiguring fixed.
  - Fixed issue with DSL units without sync not reporting correctly in MIB.
- Logging cleanup.
- Fixed 2155X hardware not correctly reporting hardware revision.

### 2.16.5 Known Issues

- No known issues.

## 2.17 Version 1.9.3.3

Release Date: 18/01/2023

### 2.17.1 General

- This is a bug fix release.

### 2.17.2 New Features

- No new features.

### 2.17.3 Enhancements

- No enhancements

### 2.17.4 Bug Fixes

- Resolved an issue with P12 certificate where there was only a common name entry as the subject.
- Resolved an issue with common names not always being read properly for openvpn configurations that contain certificates.
- Resolved an issue with some MRD415 units sometimes showing a POST fault on startup.
- Resolves an issue with the DSL firmware version not being displayed correctly.

### 2.17.5 Known Issues

- No known issues.

## 2.18 Version 1.9.3.2

Release Date: 04/01/2023

### 2.18.1 General

- This is an enhancement release.

### 2.18.2 New Features

- No new features.

### 2.18.3 Enhancements

- OAM loopback added to Model 5455.

### 2.18.4 Bug Fixes

- No bug fixes.

### 2.18.5 Known Issues

- No known issues.



## 2.19 Version 1.9.3.1

Release Date: 21/12/2022

### 2.19.1 General

- This is an enhancement release.

### 2.19.2 New Features

- No new features.

### 2.19.3 Enhancements

- Added support for model DMM-450 Rev3

### 2.19.4 Bug Fixes

- Ethernet:
  - The correct MAC Address is assigned to LAN and LAN2 when using independent port mode. Previous versions incorrectly had the MAC addresses swapped.
  - The correct MAC Address is assigned when the ports are in standard/switch mode. Previously there was a chance it would use the 2nd MAC address not the first.
  - The switch ports being reversed on the MRD455 units in version 1.9.2.x has been resolved. If the configuration was saved with firmware version 1.9.2.x the “functional config” will persist as the reversal can be detected and the ports assigned correctly.
- Serial Server:
  - Modem emulator: response time improvements.
  - Modem emulator: multi phonebook server disconnect fix.

### 2.19.5 Known Issues

- No known issues.

## 2.20 Version 1.9.3.0

Release Date: 01/12/2022

### 2.20.1 General

- This is an enhancement release.

### 2.20.2 New Features

- No new features.

### 2.20.3 Enhancements

- Added support for model DMM-450 Rev3

### 2.20.4 Bug Fixes

- No bug fixes.

### 2.20.5 Known Issues

- No known issues.

## 2.21 Version 1.9.2.1

Release Date: 12/10/2022

### 2.21.1 General

- This is a bug fix release.

### 2.21.2 New Features

- No new features.

### 2.21.3 Enhancements

- No enhancements.

### 2.21.4 Bug Fixes

- Resolved issue with Remote syslog.
- CLI log fix
- DSL upgrade improvements.
- Fixed configuration reset switch read issue.

### 2.21.5 Known Issues

- No known issues.

## 2.22 Version 1.9.2.0

Release Date: 06/10/2022

### 2.22.1 General

- This is an enhancement release.

### 2.22.2 New Features

- No new features.

### 2.22.3 Enhancements

- Added support for model 2155x Rev3.

### 2.22.4 Bug Fixes

- No bug fixes.

### 2.22.5 Known Issues

- No known issues.

## 2.23 Version 1.9.1.1

Release Date: 05/10/2022

### 2.23.1 General

- This is an enhancement and bug fix release.

### 2.23.2 New Features

- No new features.

### 2.23.3 Enhancements

- Improved importing of certificates into ipsec

### 2.23.4 Bug Fixes

- Removed strict encryption checkbox from ipsec settings.
  - This setting was redundant as IPsec now always behaves strictly.

### 2.23.5 Known Issues

- No known issues.

## 2.24 Version 1.9.1.0

Release Date: 01/09/2022

### 2.24.1 General

- This is an enhancement release.

### 2.24.2 New Features

- No new features.

### 2.24.3 Enhancements

- Added support for model 5455 Rev3.

### 2.24.4 Bug Fixes

- No bug fixes.

### 2.24.5 Known Issues

- No known issues.

## 2.25 Version 1.9.0.1

Release Date: 19/08/2022

### 2.25.1 General

- This is an enhancement and bug fix release.

### 2.25.2 New Features

- No new features.

### 2.25.3 Enhancements

IPsec:

- MODP768 support added.

### 2.25.4 Bug Fixes

- CLI command fixes.
- IPsec:
  - Fixed restart issue.
  - Fixed IKEv2 active redundancy issue.
  - Added fragmentation support.
- OpenVPN certificate fix.
- TechSupport file cleanup.
- Dynamic routing fixes.

### 2.25.5 Known Issues

- No known issues.

## 2.26 Version 1.9.0.0

Release Date: 11/08/2022

### 2.26.1 General

- Initial release in the V1.9 series firmware.
- Provides support for Revision 3 hardware.
- Support for 2455X Rev3 model only.

### 2.26.2 New Features

- No new features.

### 2.26.3 Enhancements

- No enhancements.

### 2.26.4 Bug Fixes

- No bug fixes.

### 2.26.5 Known Issues

- No known issues.



## 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.

### 3.1 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.

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**Note:** The IP address of the modem may be configured differently for each installation. The default IP address is 10.10.10.10

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- 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.

## 3.2 Hardware Revision Check

Before proceeding to the Series V1.9 firmware upgrade a check of the Hardware Revision is required. This is because Hardware Revisions 1 & 2 can only be upgraded to the Series V1.9 firmware from firmware version 1.8.8.9.

**Note:** Attempting to upgrade from a firmware version earlier than V1.8.8.9 will result in the unit rebooting with no change to the installed firmware.

**Warning:** Once upgraded to the V1.9 series firmware the unit cannot be downgraded back to the V1.8 series firmware.

To check the Hardware revision navigate to the *System* → *Information* page. A page similar to that shown in Fig. 3.1. will be displayed.

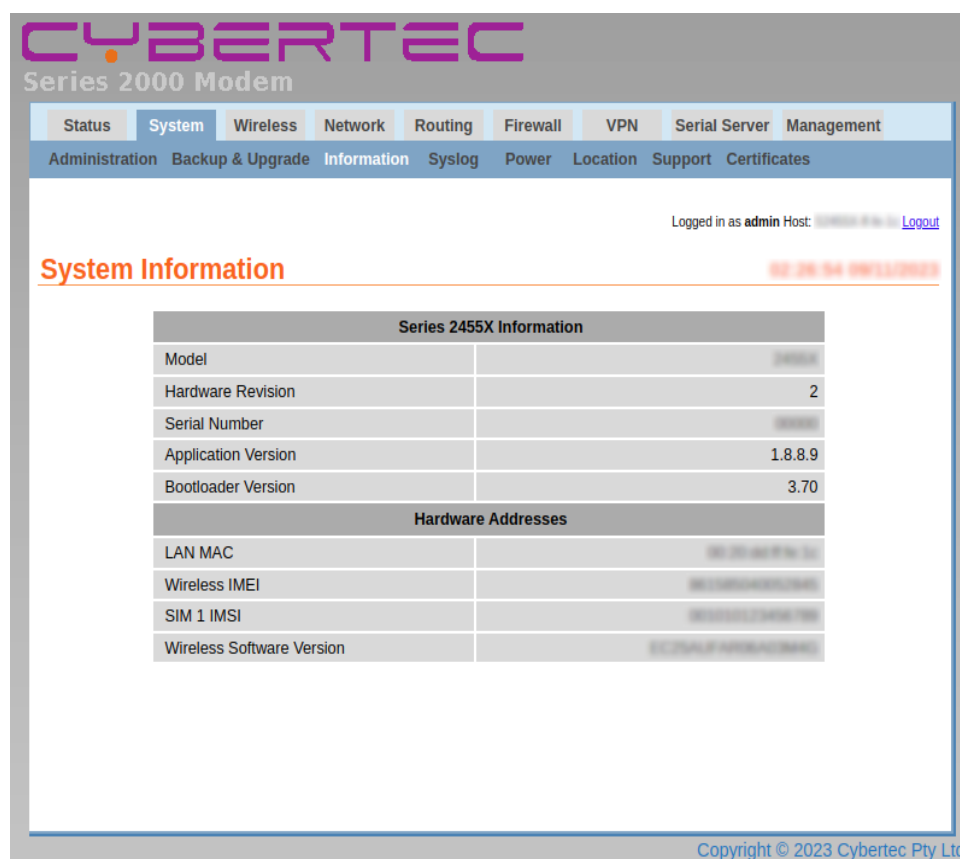


Fig. 3.1: The System Information page.

The Hardware revision is listed in the Model Information table.

If the hardware revision is 3.0 or higher then proceed to the Series V1.9 firmware upgrade.

If the Hardware Revision is 1 or 2 then check the application version. The possibilities are:

- The application version starts with 1.9 and so has already been upgraded to a version of the Series V1.9 firmware.
  - Proceed with the Series V1.9 firmware upgrade.
- The application version is 1.8.8.9

- Proceed to the V1.9 series firmware upgrade.
- The application version is in the 1.8 series or earlier.
  - Upgrade to version 1.8.8.9 before proceeding.
  - The Proceed to upgrade to the Series V1.9 firmware.

In Fig. 3.1 the indicated Hardware Revision is 2 and the Application firmware version is 1.8.8.9 This indicates that this unit can now be upgraded to Series V1.9 firmware.

### 3.3 System Backup and Upgrade

Select the backup & Upgrade page by selecting *System* → *Backup Upgrade*. The System Backup & Upgrade page will be displayed as shown in Fig. 3.2.

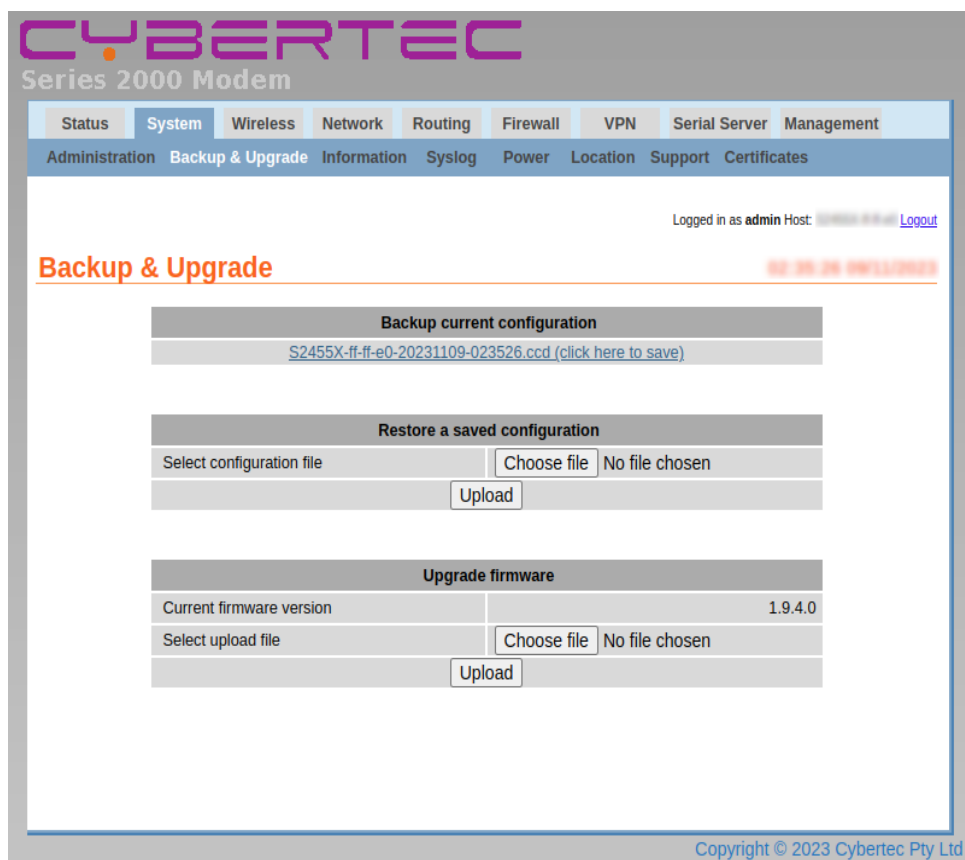


Fig. 3.2: The System Backup & Upgrade page.

### 3.4 Backup Configuration

**Note:** It is strongly recommended to backup the configuration of the unit before proceeding with the up.

**Note:** 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.

**Warning:** The configuration of the modem is not always backward compatible. This means that if the modem firmware is replaced with an earlier version of firmware 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 Fig. 3.3 and save the file to the local machine.



Fig. 3.3: System configuration backup.

To restore a configuration click the *Browse* in the section title “Restore a saved configuration” as shown in Fig. 3.4 then click the *Upload* button.

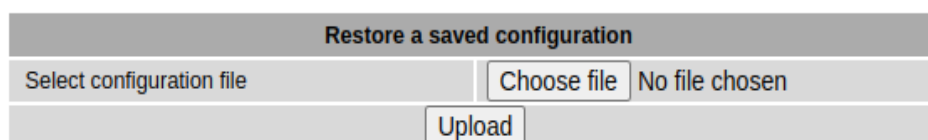


Fig. 3.4: System configuration restore.

## 3.5 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 Fig. 3.5.

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**Note:** Refer to the section *Firmware Version* in the *Introduction* for the firmware filename and version number details.

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

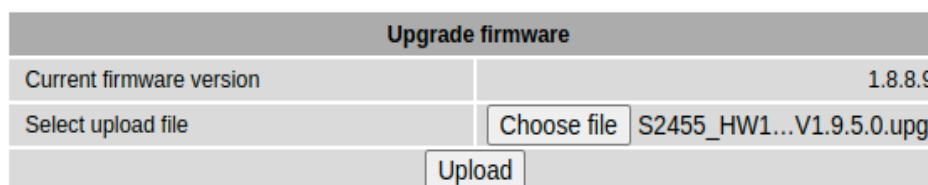


Fig. 3.5: Select the upgrade file.

- Click the *Upload* button. The file will now be transferred to the unit.
- When the upload is complete the Upgrade section of the page will change to be similar to that shown in Fig. 3.6.
- Check that the information shown is correct.
- If the data is correct click the *Upgrade* button.

| Upgrade firmware                       |   |
|--|---|
| Status of uploaded file                | Passed  |
| Filename                               | S2455_HW1-2_V1.9.5.0.img                      |
| Release                                | V1.9.5.0                                      |
| Build date                             | 15/11/2023                                    |
| MD5Sum                                 | edcdce29580fbf1fe8399dbe7b164d37              |
| SHA1Sum                                | a00647925d32f70e0779675a8e299441fe2a4e2a      |
| <input type="button" value="Upgrade"/> | <input type="button" value="Cancel Upgrade"/> |

Fig. 3.6: File has been uploaded to the modem.

**Warning:** 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 Fig. 3.7.

| Upgrade firmware  |
|---|
| The upgrade is now starting.  |
| 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.   |

Fig. 3.7: 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. Fig. 3.8 is an example of the System Information page after the upgrade has completed.

**Note:** Only the Application Version is shown.

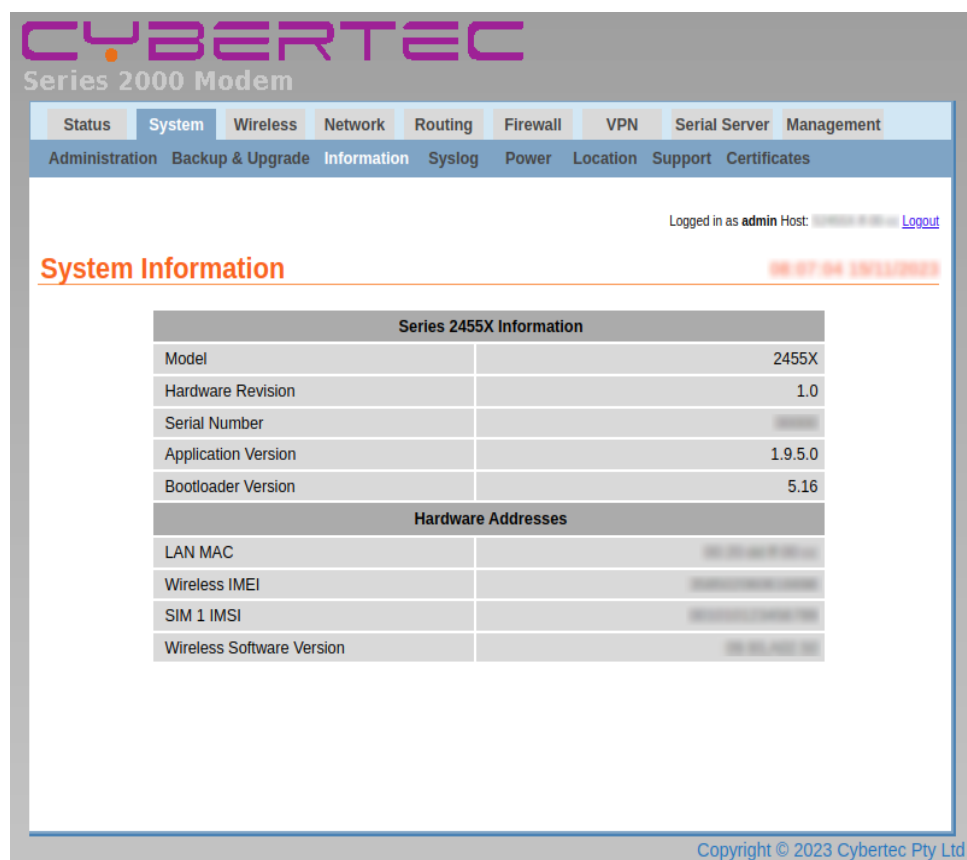


Fig. 3.8: The System Information page after the upgrade.

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