

MRX Firmware Release Notes

Release 1.9.6.0

Cybertec Pty Ltd

Oct 23, 2024

Documentation Control

Document Number: 000-000-00000 Release: 1.9.6.0 Release Date: 25/09/2024 Firmware version: V1.9.6.0 Generation date: 23/10/2024

Release History

V1.0.0 - 18/01/2023 - First release.
V1.1.0 - 07/02/2023 - Firmware Version 1.9.3.4 added.
V1.2.0 - 10/03/2023 - Firmware Version 1.9.3.5 added.
V1.3.0 - 12/05/2023 - Firmware Version 1.9.4.0 added.
V1.4.0 - 15/11/2023 - Firmware Versions 1.9.4.1, 1.9.4.2 & 1.9.5.0 added.
V1.5.0 - 27/02/2024 - Firmware Version 1.9.5.1 added.
V1.6.0 - 29/05/2024 - Firmware Version 1.9.5.2 added.
V1.7.0 - 28/06/2024 - Firmware Version 1.9.5.3 added.
V1.8.0 - 05/07/2024 - Firmware Version 1.9.5.4 added.
V1.9.0 - 25/09/2024 - Firmware Version 1.9.6.0 added.

Copyright © 2024 Cybertec Pty Ltd. All rights Reserved.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of Cybertec Pty Limited.

Cybertec Pty Limited has intellectual property rights covering subject matter in this document. Except as expressly provided in any written license agreement from Cybertec Pty Limited, the furnishing of this document does not give you any license to this intellectual property.

Legal Information

The contents of this document are provided "as is". Except as required by applicable law, no warranties of any kind, either express or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose, are made in relation to the accuracy and reliability or contents of this document. Cybertec Pty Ltd reserves the right to revise this document or withdraw it at any time without prior notice.

Under no circumstances shall Cybertec Pty Ltd be responsible for any loss of data or income or any special, incidental, and consequential or indirect damages howsoever caused.

More information about Cybertec can be found at the following Internet address: http://www.cybertec.com.au

CONTENTS:

1	Intro	duction 1
	1.1	Firmware Version
	1.2	Firmware File Contents
	1.3	Applicability
2	Firm	ware Versions 3
	2.1	Version 1.9.6.0
	2.2	Version 1.9.5.4
	2.3	Version 1.9.5.3
	2.4	Version 1.9.5.2
	2.5	Version 1.9.5.1
	2.6	Version 1.9.5.0
	2.7	Version 1.9.4.2
	2.8	Version 1.9.4.1
	2.9	Version 1.9.4.0
	2.10	Version 1.9.3.5
	2.11	Version 1.9.3.4
	2.12	Version 1.9.3.3
	2.13	Version 1.9.3.2
	2.14	Version 1.9.3.1
	2.15	Version 1.9.3.0
	2.16	Version 1.9.2.1
	2.17	Version 1.9.2.0
	2.18	Version 1.9.1.1
	2.19	Version 1.9.1.0
	2.20	Version 1.9.0.1
	2.21	Version 1.9.0.0
3	Firm	ware Upgrade Procedure 29
•	3.1	Connect to the Web interface
	3.2	Hardware Revision Check
	3.3	System Backup and Upgrade
	3.4	Backup Configuration
	3.5	Firmware upgrade

CHAPTER ONE

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 and 4G Routers.

1.1 Firmware Version

The latest version of the Series 2000 firmware is: 1.9.5.4

The firmware file appropriate for each model are:

- Model 2155X/2255X
 - Hardware revision 3 S2155_HW3_V1.9.6.0.zip
 - Hardware revisions 1 & 2 S2155_HW1-2_V1.9.6.0.zip
- Model 2455X
 - Hardware revision 3 S2455_HW3_V1.9.6.0.zip
 - Hardware revisions 1 & 2 S2455_HW1-2_V1.9.6.0.zip
- Model 5455
 - Hardware revision 3 S5455_HW3_V1.9.6.0.zip
 - Hardware revisions 1 & 2 S5455_HW1-2_V1.9.6.0.zip
- DMM-450
 - Hardware revision 3 XMM450_HW3_V1.9.6.0.zip
 - Hardware revisions 1 & 2 XMM450_HW1-2_V1.9.6.0.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_V1.9.6.0.zip file contains the following files:

- S2155_HW3_V1.9.6.0.upg
- S2155_HW3_V1.9.6.0.upg.md5
- S2155_HW3_V1.9.6.0.upg.sha1
- S2155_HW3_V1.9.6.0.ipg.sha256

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

The upgrade file is the S2155_HW3_V1.9.6.0.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.
- 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.

CHAPTER TWO

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 1.9.6.0

Release Date: 25/09/2024

2.1.1 General

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

2.1.2 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.

2.1.3 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.

2.1.4 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.

2.1.5 Known Issues

2.2 Version 1.9.5.4

Release Date: 05/07/2024

2.2.1 General

• This is a bug fix release.

2.2.2 New Features

• No new features.

2.2.3 Enhancements

• No enhancements

2.2.4 Bug Fixes

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

2.2.5 Known Issues

2.3 Version 1.9.5.3

Release Date: 28/06/2024

2.3.1 General

• This is an enhancement and bug fix release.

2.3.2 New Features

• No new features.

2.3.3 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.

2.3.4 Bug Fixes

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

2.3.5 Known Issues

2.4 Version 1.9.5.2

Release Date: 29/05/2024

2.4.1 General

• This is an enhancement and bug fix release.

2.4.2 New Features

• No new features.

2.4.3 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

2.4.4 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.

2.4.5 Known Issues

2.5 Version 1.9.5.1

Release Date: 27/02/2024

2.5.1 General

• This is an enhancement and bug fix release.

2.5.2 New Features

• No new features.

2.5.3 Enhancements

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

2.5.4 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.

2.5.5 Known Issues

2.6 Version 1.9.5.0

Release Date: 15/11/2023

2.6.1 General

• This is an enhancement and bug fix release.

2.6.2 New Features

• No new features.

2.6.3 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

2.6.4 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).

2.6.5 Known Issues

2.7 Version 1.9.4.2

Release Date: 15/10/2023

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

- 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.

2.7.5 Known Issues

2.8 Version 1.9.4.1

Release Date: 09/10/2023

2.8.1 General

• This is an enhancement and bug fix release.

2.8.2 New Features

• No new features.

2.8.3 Enhancements

• Added support for 2255X hardware Rev 3.1

2.8.4 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.

2.8.5 Known Issues

2.9 Version 1.9.4.0

Release Date: 12/05/2023

2.9.1 General

• This is an enhancement and bug fix release.

2.9.2 New Features

• No new features.

2.9.3 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

2.9.4 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 were 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

2.9.5 Known Issues

2.10 Version 1.9.3.5

Release Date: 06/03/2023

2.10.1 General

• This is an enhancement and bug fix release.

2.10.2 New Features

• No new features.

2.10.3 Enhancements

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

2.10.4 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.

2.10.5 Known Issues

2.11 Version 1.9.3.4

Release Date: 06/02/2023

2.11.1 General

• This is an enhancement and bug fix release.

2.11.2 New Features

• No new features.

2.11.3 Enhancements

- 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.

2.11.4 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.

2.11.5 Known Issues

2.12 Version 1.9.3.3

Release Date: 18/01/2023

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

- 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.

2.12.5 Known Issues

2.13 Version 1.9.3.2

Release Date: 04/01/2023

2.13.1 General

• This is an enhancement release.

2.13.2 New Features

• No new features.

2.13.3 Enhancements

• OAM loopback added to Model 5455.

2.13.4 Bug Fixes

• No bug fixes.

2.13.5 Known Issues

2.14 Version 1.9.3.1

Release Date: 21/12/2022

2.14.1 General

• This is an enhancement release.

2.14.2 New Features

• No new features.

2.14.3 Enhancements

• Added support for model DMM-450 Rev3

2.14.4 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.

2.14.5 Known Issues

2.15 Version 1.9.3.0

Release Date: 01/12/2022

2.15.1 General

• This is an enhancement release.

2.15.2 New Features

• No new features.

2.15.3 Enhancements

• Added support for model DMM-450 Rev3

2.15.4 Bug Fixes

• No bug fixes.

2.15.5 Known Issues

2.16 Version 1.9.2.1

Release Date: 12/10/2022

2.16.1 General

• This is a bug fix release.

2.16.2 New Features

• No new features.

2.16.3 Enhancements

• No enhancements.

2.16.4 Bug Fixes

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

2.16.5 Known Issues

2.17 Version 1.9.2.0

Release Date: 06/10/2022

2.17.1 General

• This is an enhancement release.

2.17.2 New Features

• No new features.

2.17.3 Enhancements

• Added support for model 2155x Rev3.

2.17.4 Bug Fixes

• No bug fixes.

2.17.5 Known Issues

2.18 Version 1.9.1.1

Release Date: 05/10/2022

2.18.1 General

• This is an enhancement and bug fix release.

2.18.2 New Features

• No new features.

2.18.3 Enhancements

• Improved importing of certificates into ipsec

2.18.4 Bug Fixes

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

2.18.5 Known Issues

2.19 Version 1.9.1.0

Release Date: 01/09/2022

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 5455 Rev3.

2.19.4 Bug Fixes

• No bug fixes.

2.19.5 Known Issues

2.20 Version 1.9.0.1

Release Date: 19/08/2022

2.20.1 General

• This is an enhancement and bug fix release.

2.20.2 New Features

• No new features.

2.20.3 Enhancements

IPsec:

• MODP768 support added.

2.20.4 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.

2.20.5 Known Issues

2.21 Version 1.9.0.0

Release Date: 11/08/2022

2.21.1 General

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

2.21.2 New Features

• No new features.

2.21.3 Enhancements

• No enhancements.

2.21.4 Bug Fixes

• No bug fixes.

2.21.5 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.

Note: The IP address of the modern 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.

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 upgade 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* \rightarrow *Information* page. A page similar to that shown in Fig. 3.1. will be displayed.

eries 20 Status	DOO M System	odem ^{Wireless}	Network	Routing	Firewall	VPN	Serial	Server	Mana	gement
Administrati	on Backu	p & Upgrade	Informatio	n Syslog	Power	Location	Support	Certific	ates	
System	Inform	ation					Logged i	in as admin	Host:	Logout
			:	Series 2455	X Informati	on				
	Model							1	1055.0	
	Hardwar	re Revision							2	
	Serial N	umber								
	Applicat	ion Version						1	.8.8.9	
	Bootload	der Version							3.70	
				Hardware	Addresses					
	LAN MA	C						0.70.667	10.24	
	Wireless						811	100400	2545	
	SIM 1 IN								10.799	
	Wireless	s Software Ver	sion							

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 than 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 also 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* \rightarrow *Backup* <u>Upgrade</u>. The System Backup & Upgrade page will be displayed as shown in Fig. 3.2.

Series 20		odem	51		_					
Status	System	Wireless	Network	Routing	Firewall	VPN	Serial	Server I	Managemen	ıt
Administration	1 Backu	p & Upgrade	Information	Syslog	Power	Location	Support	Certificat	tes	
Backup &	ն Upg	rade					Logged	in as admin H	Host:	<u>Logout</u>
			Ba	ckup curren	t configura	ation				
		<u>S24</u>	55X-ff-ff-e0-2				save)			
			Res	tore a save	d configur	ation				
	Select c	onfiguration fil	e		Choose	file No fil	e chosen			
				Upl	oad					
				Upgrade	firmware					
	Current	firmware versi	on					1.9	9.4.0	
	Select u	pload file			Choose	file No fil	e chosen			
				Upl	oad					
							Co	pyright ©	2023 Cybe	ertec Pty Lt

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.

Backup current configuration	
S2455X-ff-ff-e0-20231109-023526.ccd (click here to save)	

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.

Restore a saved configuration								
Select configuration file		Choose file	No file chosen					
	Uplo	ad						

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.

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

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

Upgrad	le firmware
Current firmware version	1.8.8.9
Select upload file	Choose file S2455_HW1V1.9.5.0.upg
U	bload

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.

Upgra	de 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
Upgrade	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.

Logged in as admin Host: System Information Series 2455X Information Model 2455X Hardware Revision 1.0 Serial Number 1.0 Application Version 1.9.5.0 Bootloader Version 5.16 Hardware Addresses LAN MAC Wireless IMEI Image: Market Addresses	Series 2455X Information Model 2455X Hardware Revision 1.0 Serial Number 1.9.5.0 Bootloader Version 5.16 Hardware Addresses LAN MAC 1.0	Administrati	System Wireless Network	J	Firewall Power	VPN			Management
System Information Series 2455X Information Model 2455X Hardware Revision 1.0 Serial Number 1.0 Application Version 1.9.5.0 Bootloader Version 5.16 Hardware Addresses LAN MAC Wireless IMEI 1.0	Series 2455X Information Model 2455X Hardware Revision 1.0 Serial Number 0 Application Version 1.9.5.0 Bootloader Version 5.16 Hardware Addresses LAN MAC 1 Wireless IMEI 1 SIM 1 IMSI 1	Auministrati	оп васкир « ордгайе ппотпай	ion sysiog	Power	Location	Support	Certifica	les
Series 2455X InformationModel2455XHardware Revision1.0Serial Number1.0Application Version1.9.5.0Bootloader Version5.16Hardware AddressesLAN MACVireless IMEI	Series 2455X InformationModel2455XHardware Revision1.0Serial Number1.0Application Version1.9.5.0Bootloader Version5.16Hardware AddressesLAN MACImage: Image: Ima						Logged in	n as admin H	lost: <u>Logo</u>
Series 2455X InformationModel2455XHardware Revision1.0Serial Number1.0Application Version1.9.5.0Bootloader Version5.16Hardware AddressesLAN MACVireless IMEI	Series 2455X InformationModel2455XHardware Revision2455XHardware Revision1.0Serial Number1.0Application Version1.9.5.0Bootloader Version5.16Hardware AddressesLAN MACImage: Image: Ima		1						
Model2455XHardware Revision1.0Serial Number1.0Application Version1.9.5.0Bootloader Version5.16Hardware AddressesLAN MAC1.0Wireless IMEI1.0	Model2455XHardware Revision2455XHardware Revision1.0Serial Number1.0Application Version1.9.5.0Bootloader Version5.16Hardware AddressesLAN MAC1.0Wireless IMEI1.0SIM 1 IMSI1.0	system	Information						07.04 19/11/202
Hardware RevisionLinkHardware Revision1.0Serial Number1.0Application Version1.9.5.0Bootloader Version5.16Hardware AddressesLAN MACVireless IMEI	Hardware RevisionLinkHardware Revision1.0Serial Number1.9.5.0Application Version1.9.5.0Bootloader Version5.16Hardware AddressesLAN MAC1.0Wireless IMEI1.0SIM 1 IMSI1.0			Series 2455	X Informati	on			
Serial Number Image: Serial Number Application Version 1.9.5.0 Bootloader Version 5.16 Hardware Addresses LAN MAC Image: Serial Number Wireless IMEI Image: Serial Number	NameImage: ComparisonSerial NumberImage: ComparisonApplication Version1.9.5.0Bootloader Version5.16Image: ComparisonImage: ComparisonImage: ComparisonImage: ComparisonLAN MACImage: ComparisonWireless IMEIImage: ComparisonSIM 1 IMSIImage: Comparison		Model					24	155X
Application Version 1.9.5.0 Bootloader Version 5.16 Hardware Addresses LAN MAC Vireless IMEI	Application Version 1.9.5.0 Bootloader Version 5.16 Hardware Addresses LAN MAC Vireless IMEI SIM 1 IMSI 5.00		Hardware Revision						1.0
Bootloader Version 5.16 Hardware Addresses LAN MAC Wireless IMEI	Bootloader Version 5.16 Hardware Addresses LAN MAC Wireless IMEI SIM 1 IMSI		Serial Number						
Hardware Addresses LAN MAC Wireless IMEI	Hardware Addresses LAN MAC Wireless IMEI SIM 1 IMSI		Application Version					1.9	9.5.0
LAN MAC Wireless IMEI	LAN MAC Wireless IMEI SIM 1 IMSI		Bootloader Version						5.16
Wireless IMEI	Wireless IMEI SIM 1 IMSI			Hardware	Addresses	;			
	SIM 1 IMSI		LAN MAC						
00144040			Wireless IMEI						
SIMITIMSI	Wireless Software Version		SIM 1 IMSI						
Wireless Software Version			Wireless Software Version						0.000

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



www.cybertec.com.au