



Aprisa XE Software Release Notes

8.4.20

Copyright © 2010

4RF Communications Ltd

Wellington

New Zealand

February 2010

Table of Contents

1.	Introduction	2
2.	Released Files	3
3.	Upgrade Process	5
3.1.	TFTP Upgrade.....	5
4.	Major Changes	7
5.	System Software	8
5.1.	System Software Changes	8
5.2.	System Software Bug Fixes	8
6.	SuperVisor	9
6.1.	SuperVisor Enhancements.....	9
6.2.	SuperVisor Bug Fixes.....	10
7.	Cross connections application	10
7.1.	Cross Connections Application Enhancements	10
7.2.	Cross Connections Application Bug Fixes	10
8.	SNMP	11
8.1.	SNMP Changes.....	11
9.	SETUP MENU	11
9.1.	Setup Menu Changes.....	11
10.	Recommendations	11

1. Introduction

Introduction

The previous Aprisa XE software version release relevant to this release is:

RF Variant	Software version	Release date
All	8.3.41	29 th July 2009

This release of Aprisa XE software is:

RF Variant	Software version	Release date
All	8.4.20	16 th January 2010

This document covers the major changes, product enhancements, new functionality, bug fixes and MIB changes since Aprisa XE software version 8.3.41.

4RF Support

Prior to upgrading Aprisa XE terminals with this software, please contact 4RF Customer Support at support@4rf.com to obtain the upgrade files and upgrade process.

Where possible, the customer should consider upgrading in a controlled environment before upgrading the entire network.

2. Released Files

The following is a list of files released for Aprisa XE software version 8.4.20.

File Name	File Type	File Function
_README.txt	Information	Instructions relating to the software release
Rel_8_4_20_E0a.cfg	TFTP Upgrade	Type '8_3_40_E0a' for a 'full' TFTP upgrade for ETSI variants
Rel_8_4_20_E0.cfg	TFTP Upgrade	Type '8_3_40_E0' for a 'standard' TFTP upgrade for ETSI variants
Rel_8_4_20_E0h.cfg	TFTP Upgrade	Type '8_3_40_E0' for a 'standard' TFTP upgrade for HSD ETSI variants
Rel_8_4_20_E0p.cfg	TFTP Upgrade	Type '8_3_40_E0p' for a 'partial' TFTP upgrade for ETSI variants
Rel_8_4_20_F0a.cfg	TFTP Upgrade	Type '8_3_40_F0a' for a 'full' TFTP upgrade for FCC Part 90 variants
Rel_8_4_20_F0.cfg	TFTP Upgrade	Type '8_3_40_F0' for a 'standard' TFTP upgrade for FCC Part 90 variants
Rel_8_4_20_F0p.cfg	TFTP Upgrade	Type '8_3_40_F0p' for a 'partial' TFTP upgrade for FCC Part 90 variants
Rel_8_4_20_F1.cfg	TFTP Upgrade	Type '8_3_40_F1' for a 'standard' TFTP upgrade for FCC Part 101 variants
Rel_8_4_20_F1a.cfg	TFTP Upgrade	Type '8_3_40_F1a' for a 'full' TFTP upgrade for FCC Part 101 variants
Rel_8_4_20_F1p.cfg	TFTP Upgrade	Type '8_3_40_F1p' for a 'partial' TFTP upgrade for FCC Part 101 variants
F1_8_4_2.cfg	TFTP Upgrade	Used to load images for the newest DFXO and DFXS cards (rev D)
F2_8_4_2.cfg	TFTP Upgrade	Used to load images for all revisions of DFXO and DFXS cards
F3_8_4_2.cfg	TFTP Upgrade	Used to load images for the newest Modem card (rev D)
F_8_4_2.cfg	Control file	Used for TFTP upgrade (FPGA firmware)
FH_8_4_2.cfg	Control file	Used for TFTP upgrade (HSD)
M_8_3_1.cfg	Control file	Used for TFTP upgrade (modem ETSI)
M_7_3_4.cfg	Control file	Used for TFTP upgrade (modem FCC part 90)
M_7_3_5.cfg	Control file	Used for TFTP upgrade (modem FCC part 101)
O_8_4_2.cfg	Control file	Used for TFTP upgrade (FPGA firmware old)
P_8_4_2.cfg	Control file	Used for TFTP upgrade (FPGA firmware partial)
R_8_3_0.cfg	Control file	Used for TFTP upgrade process (RF synth files)
S_8_4_2.cfg	Control file	Used for TFTP upgrade process (software)
X_8_4_2.cfg	Control file	Used for TFTP upgrade process (SNMP)
C-fpga_E1-0-7-0.img	Firmware Image	Motherboard 1 rev C image file
C-fpga_E1-1-7-3.img	Firmware Image	Motherboard 1 rev D image file
C-fpga_E2-0-5-3.img	Firmware Image	Motherboard 2 rev C image file
C-fpga_E2-1-5-4.img	Firmware Image	Motherboard 2 rev D image file
C-fpga_E5-0-8-5.img	Firmware Image	QJET image file
C-fpga_E7-1-3-3.img	Firmware Image	Q4EM image file
C-fpga_E7-2-3-3.img	Firmware Image	Q4EM image file
C-fpga_E7-5-0-1.img	Firmware Image	Q4EM image file
C-fpga_E8-1-4-0.img	Firmware Image	DFXO image file
C-fpga_E8-2-4-0.img	Firmware Image	DFXO image file
C-fpga_E8-3-5-3.img	Firmware Image	DFXO image file
C-fpga_E8-4-5-3.img	Firmware Image	DFXO image file
C-fpga_E9-0-4-1.img	Firmware Image	DFXS image file
C-fpga_E9-1-4-2.img	Firmware Image	DFXS image file
C-fpga_E9-2-4-1.img	Firmware Image	DFXS image file
C-fpga_E9-3-4-1.img	Firmware Image	DFXS image file
C-fpga_EA-0-5-2.img	Firmware Image	Modem image file
C-fpga_EA-1-0-2.img	Firmware Image	Modem image file
C-fpga_EB-0-1-1.img	Firmware Image	QV24 async image file
C-fpga_FB-0-1-2.img	Firmware Image	QV24 sync image file
C-fpga_EC-0-1-4.img	Firmware Image	HSS image file
C-fpga_EC-1-1-7.img	Firmware Image	HSS image file
C-fpga_ED-0-1-0.img	Firmware Image	PSC image file
C-fpga_EE-0-1-0.img	Firmware Image	PIC image file
C-fpga_FA-1-1-0.img	Firmware Image	HSD Modem image file
C-CC-K-6_0_0.img	Kernel Image	Linux Kernel
C-CC-R-8_4_2.img	Software Image	Root File System

Released Files (cont)

File Name	File Type	File Function
modem_8_3_1.cfg	Configuration	Modem Upgrade file (ETSI variants)
modem_7_3_4.cfg	Configuration	Modem Upgrade file (FCC part 90 variants)
modem_7_3_5.cfg	Configuration	Modem Upgrade file (FCC part 101 variants)
compare_oids_8_4_2.cfg	Configuration	List of HSD common parameter OIDs
snmp_exclude_8_4_2.cfg	Configuration	Used by system for Aprisa Mux / Aprisa XE OID exclusion
modem versions.txt	Readme file	List of modem versions vs RF variants
XE_300_400_synth.cfg	Configuration	Synthesizer Upgrade file for 300, 400 MHz frequency bands
XE_600_700_800_900_synth.cfg	Configuration	Synthesizer Upgrade file for 600, 700, 800, 900 MHz frequency bands
XE_1400_synth.cfg	Configuration	Synthesizer Upgrade file for 1400 MHz frequency band
XE_2000_2500_synth.cfg	Configuration	Synthesizer Upgrade file for 2000, 2500 MHz frequency bands
C-crossconnect_8_4_2.cfg	Configuration	Cross Connect upgrade file
C-crossconnect_8_4_2.jar	Java Application	Cross Connect application - used when running 7.1.4 or later
C-ccapp_exe_8_4_2.jar	Java Application	Cross Connect (stand alone application)
C-CC-B-7_1_1.srec	System	Bootloader for rev C motherboard (cannot be uploaded)
C-CC-B-8_1_4.srec	System	Bootloader for rev D motherboard (cannot be uploaded)
C-CC-F-8_4_2.img	System	Flash File System (cannot be uploaded)
C-swi_8_4_20_E0.swi	Inventory File	ETSI variants
C-swi_8_4_20_EA.swi	Inventory File	ETSI variants HSD
C-swi_8_4_20_F0.swi	Inventory File	FCC part 90 variants
C-swi_8_4_20_F1.swi	Inventory File	FCC part 101 variants
I_8_4_20_E0.cfg	Configuration	Inventory Configuration File (ETSI variants)
I_8_4_20_EA.cfg	Configuration	Inventory Configuration File (HSD ETSI variants)
I_8_4_20_F0.cfg	Configuration	Inventory Configuration File (FCC part 90 variants)
I_8_4_20_F1.cfg	Configuration	Inventory Configuration File (FCC part 101 variants)
C-alarm_history_8_4_2.cfg	Configuration	Alarm Logging upgrade file
C-alarm_history_8_4_2.jar	Java Application	Alarm Logging application
4RF-APRISAXE-EVENTS.mib	SNMP MIB file	Aprisa XE Events MIB
4RF-MIB.mib	SNMP MIB file	Top level MIB
4RF-APRISAXE-MIB.mib	SNMP MIB file	Aprisa XE MIB
4RF-COMMON-MIB.mib	SNMP MIB file	Common MIB
4RF-PRODUCTS-MIB.mib	SNMP MIB file	Products MIB
4RF-APRISAXE-TC.mib	SNMP MIB file	Aprisa XE Textual Conventions MIB
4RF-COMMON-TC.mib	SNMP MIB file	Common Textual Conventions MIB

3. Upgrade Process

3.1. TFTP Upgrade

Alarm History File

Software release 8.3.40, and all future software releases, contains an Alarm History application which is used to collect and export the last 13,000 alarms. A special upgrade procedure is required to initiate the Alarm History application.

When upgrading terminals with software prior to 8.3.40:

1. Login to the near end terminal.
2. Upgrade the Root File System with SuperVisor Local > Maintenance > Upload > Software by and browse to the file 'C-CC-R-8_4_2.img'. Click Upload.
3. Activate the 'C-CC-R-8_4_2.img' with SuperVisor Local > Maintenance > Image Table.
4. Reboot the terminal.
5. Perform the TFTP standard upgrade process.
6. Clear the Java and web browser caches (see Aprisa XE User Manual 'TFTP Upgrade Process').

Upgrade File Usage

The following table defines the purpose of the upgrade version files:

Upgrade Version	Upgrade Type	Variant
8_4_20_E0a	Full TFTP upgrade	ETSI
8_4_20_E0	Standard TFTP upgrade	ETSI
8_4_20_E0h	Standard TFTP upgrade	ETSI HSD
8_4_20_E0p	Partial TFTP upgrade	ETSI
8_4_20_F0a	Full TFTP upgrade	FCC Part 90
8_4_20_F0	Standard TFTP upgrade	FCC Part 90
8_4_20_F0p	Partial TFTP upgrade	FCC Part 90
8_4_20_F1a	Full TFTP upgrade	FCC Part 101
8_4_20_F1	Standard TFTP upgrade	FCC Part 101
8_4_20_F1p	Partial TFTP upgrade	FCC Part 101

TFTP Upgrade Process

To run a TFTP upgrade process (example of ETSI upgrade):

Note: Make sure that the SuperVisor Local terminal is the near end terminal. The **Near** end terminal is the terminal that has its ethernet port physically connected to your IP network.

Run the TFTP server program and set the 'Current Directory' to the root directory on the Aprisa CD.

Select the SuperVisor menu item Remote > Maintenance > Upload > TFTP Upgrade

Type the IP address of the TFTP server in the **TFTP Server** field.

Type the version number in the **Upgrade Version** field e.g. '8_4_20_E0'.

Click the Apply button and wait for the upgrade process to complete and report 'success'.

Reboot the remote terminal.

Select the SuperVisor menu item Local > Maintenance > Upload > TFTP Upgrade

Type the IP address of the TFTP server in the **TFTP Server** field.

Type the version number in the **Upgrade Version** field e.g. '8_4_20_E0'.

Click the Apply button and wait for the upgrade process to complete and report 'success'.

Reboot the local terminal.

TFTP Upgrade Process Types

Aprisa XE terminals running the older Bootloader software have a limitation on the number of software images that can be loaded simultaneously into a terminal.

First, determine which Bootloader version your terminal is running by using the SuperVisor menu item Maintenance > Support Summary and look for the 'Bootloader Version' number.

(1) If your terminal is running Bootloader version 1, use the TFTP full upgrade process.

(2) If your terminal is running Bootloader version 0 and running a software version prior to 7.0.6, use the TFTP partial upgrade process.

(3) If your terminal is running Bootloader version 0 and running a software version 7.0.6 or later, use the TFTP standard upgrade process.

TFTP Partial Upgrade Process

Run the TFTP upgrade process by typing 8_4_20_E0p in the Upgrade Version field.

This will perform a partial upgrade which will delete unnecessary image files that might be taking up space in the Image Table (which could prevent a normal upgrade).

Reboot the terminal.

Run a TFTP standard upgrade process on the terminal.

Reboot the terminal again.

TFTP Standard Upgrade Process

This TFTP standard upgrade process excludes FPGA images for the newly introduced revisions of the Modem, DFXO and DFXS cards.

Run the TFTP upgrade process by typing '8_4_20_E0' in the Upgrade Version field.

If the standard upgrade fails, it may be necessary to make space for the new images by manually deleting 'Inactive' firmware image files.

To delete a firmware image file, select the SuperVisor menu item Maintenance > Image Table, select the firmware image and click on Edit. Set the IMAGE DETAILS Command to 'Delete' and click 'Apply'.

Reboot the terminal.

Additional TFTP upgrade options have been provided to load the new images separately. Run the TFTP upgrade process using the file:

- 'F1_8_4_2' to load images for the newer DFXO and DFXS cards (rev D).
- 'F2_8_4_2' to load images for all revisions of DFXO and DFXS cards.
- 'F3_8_4_2' to load images for the newest Modem card (rev D).

Reboot the terminal again.

TFTP Full Upgrade Process

Run the TFTP upgrade process by typing '8_4_20_E0a' in the Upgrade Version field.

Reboot the terminal.

4. Major Changes

Major Enhancements

New QV24S synchronous serial interface

Major Bug Fixes

MHSB Mode External Alarm Input Error

Minor Bug Fixes

Local Cross Connection Failure
HSD Invalid MHSB Option
HSD Interface Summary Bug

5. System Software

5.1. System Software Changes

QV24 Sync Serial Interface

Previously, the QV24 serial interface card supported V.24 asynchronous operation only. In software version 8.4.20, support has been added in for V.24 synchronous operation. When the mode is changed to synchronous operation in SuperVisor, the interface is defined as QV24S.

The QV24S supports synchronous data rates of 300, 600, 1200, 2400, 4800, 9600 and 19200 bit/s.

5.2. System Software Bug Fixes

MHSB Mode External Alarm Input Error

Previously, in MHSB mode, changing the polarity of the external alarm input 1 also changed the polarity of external alarm input 2. The polarity of external alarm input 2 could also be changed.

As the external alarm input 2 is used for MHSB switch control, changing the polarity of this alarm input affected the operation of MHSB switchover control.

In software version 8.4.20, when in MHSB mode, changing the options for external alarm input 1 does not affect external alarm input 2 settings.

Also when in MHSB mode, the external alarm input 2 and external alarm output 4 are no longer displayed on the external alarm setup screens.

Local Cross Connection Failure

Previously, local cross connections failed when the RF link was interrupted by changing the modulation type. This condition was unlikely to occur in service.

In software version 8.4.20, the bug was fixed.

HSD Invalid MHSB Option

Previously, there was an invalid MHSB option on the Link > Maintenance > HSD terminal on the A terminal only.

In software version 8.4.20, this option has been deleted.

HSD Interface Summary Bug

Previously, if the Interface > Interface Summary were clicked on a HSD terminal B radio, the radio would freeze and then watchdog restart.

In software version 8.4.20, this bug has been corrected.

6. SuperVisor

6.1. SuperVisor Enhancements

QV24 Sync

Previously, the QV24 serial interface card supported asynchronous operation only.

In software version 8.4.20, support has been added in for QV24 synchronous operation. When the mode is changed to synchronous operation in SuperVisor, the interface is defined as QV24S. See Aprisa XE User Manual 8.4.20 for setup, configuration and specification information.

Reboot Warning

A reboot message has been added to warn users when a hard reboot is required;

The following conditions trigger the warning message 'A hard reboot is required on the terminal for these changes to take effect':

- The state of a Image Table file is changed
 - A TFTP Upgrade has been completed.
-

External Alarm Test

An External alarm test function for both major and minor alarms has been added to the menu item Alarms > Ext Alarm Outputs > Configure the External Alarm Outputs.

This setting will output an alarm on the selected output but it will not show in the alarm table or on the OK LED of the radio (as it is not a 'real' alarm).

This alarm test will clear if radio reboots.

Slot Summary

In software version 8.4.20, the Slot Summary information has been changed to more accurately display the hardware revision number of the interface card plugged into the slot.

Q4EM Radio Facing Loopback

Previously, the Q4EM provided a Line Facing loopback but did not provide a Radio Facing loopback.

The Line Facing loopback is defined as; Port traffic from the customer is transmitted over the RF link but is also looped back to the customer.

The Radio Facing loopback is defined as; Traffic received from the RF link is passed to the customer port but is also looped back to be transmitted over the RF link.

In software version 8.4.20, the Radio Facing loopback has been added Link > Interface > Interface Summary.

Motherboard Serial Number

In software version 8.4.20, the motherboard serial number has been added to support summary page Link > Maintenance > Support Summary.

Channel Size

Previously, SuperVisor used the term Channel Spacing (also known as channel width / bandwidth).

4RF has standardized on the term Channel Size.

In software version 8.4.20, references to Channel Spacing have been changed to Channel Size.

**External Alarm
Screen Refresh**

Previously, the screen refresh rate for the External Alarm Input/Output web pages was 10 seconds. If the screen refreshed while typing in a name, the typed input was lost.

In software version 8.4.20, the screen refresh rate for the External Alarm Input/Output web pages has been increased to 20 seconds.

**RF Loopback
Radio Clocking**

Previously, enabling an RF loopback on a network clocked terminal caused that terminal to become clocked from the internal source for the duration of the RF loopback.

In software version 8.4.20, during an RF loopback;

- If terminal is clocked from the link, the terminal clocking is changed to clocked internally
 - If the terminal is clocked from the network, the clocking is not changed
-

**Modem
Interleaver
Mode**

Previously, the Modem Interleaver Mode was set by navigating to Local or Remote > Performance > Summary and Quick Links of Modem Performance Settings.

In software version 8.4.20, the Modem Interleaver Mode is now set from Local or Remote > Terminal > Modem > Modem Performance Settings.

The Interleaver Status remains on the Basic Terminal Settings page.

6.2. SuperVisor Bug Fixes

None

7. Cross connections application

7.1. Cross Connections Application Enhancements

None

7.2. Cross Connections Application Bug Fixes

None

8. SNMP

8.1. SNMP Changes

QV24S

There are new OIDs for setting and getting the QV24S parameters:

- aprisaXEBoardChangeType
 - aprisaXESyncV24PortControlTable
 - aprisaXESyncV24PortControlTableEntry
 - AprisaXESyncV24PortControlTableEntry
 - aprisaXESyncV24PortControlSlotIndex
 - aprisaXESyncV24PortIndex
 - aprisaXESyncV24BaudRate
 - aprisaXESyncV24Loopback
 - aprisaXESyncV24ConnectionID
 - aprisaXESyncV24SampleOn
 - aprisaXESyncV24CTSSource
-

9. SETUP MENU

9.1. Setup Menu Changes

None

10. Recommendations

Java 1.6 JRE

That all PCs running the Aprisa XE support software, SuperVisor and the Cross Connections application be upgraded to Java 1.6 JRE (JVM).
