



*Aprisa* **SR**



# Software Release Notes

Version 1.2.0

December 2010

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## 1. Introduction

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### Introduction

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

Software Version	Release Date
1.1.0	17 <sup>th</sup> September 2010

This release of Aprisa SR software is:

Software Version	Release Date
1.2.0	14 <sup>th</sup> December 2010

This document covers the major changes, product enhancements, new functionality, and bug fixes since Aprisa SR software version 1.1.0.

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## 2. Released Files

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### Release Files


The following is a list of files released for Aprisa SR Software Version 1.2.0.

File Name	File Type	File Function
asraduc_u	ADUC Code	Discriminator micro controller code UHF radios
asraduc_v	ADUC Code	Discriminator micro controller code VHF radios
asrapp	Upgrade App Code	Used to initiate radio software upgrade
asrboot	Bootloader	Used to initiate radio software startup
asrmain	Application Code	Main radio system software
asrrootfs	Root File System	Catalog of system files
asrver	Version File	Release build version
version.txt	Public Version File	Release information

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### 3. Radio Software Upgrade

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**Upgrade Method** The Aprisa SR radio software is upgraded simply by plugging a USB flash drive containing the new software into the USB A host port  on the Aprisa SR front panel and power cycling the radio.

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**Procedure** To minimize disruption of link traffic and prevent your radios from being rendered inoperative, please follow the procedures described in this section together with any additional information or instructions supplied with the upgrade package.



The radio software must be identical on all radios in the FAN (Field Area Network).

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#### 3.1. Upgrade Process

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**Process Steps**

1. Check that the SuperVisor USB Upgrade setting is set to 'Enabled' (see Possible Upgrade Failure Causes below).
2. Unzip the software release files in to the root directory of a USB flash drive.
3. Power off the Aprisa SR and insert the USB flash drive into the Host Port .
4. Power on the Aprisa SR.
5. The software upgrade process is complete when the OK LED lights solid orange. This can take about 2 minutes.  
The software will have loaded in to the radio Standby SW location.
6. Remove the USB flash drive from the Host Port .
7. Power cycle the Aprisa SR.

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**Upgrade Did Not Start** If the upgrade process did not start, the Aprisa SR could already be operating on the version of software on the USB flash drive. This will be indicated by flashing Display Panel OK LED and then the OK, DATA and CPU will light steady green.

If any Display Panel LED flashes red or is steady red during the upgrade process, it indicates that the upgrade has failed. This could be caused by incorrect files on the USB flash drive or a radio hardware failure.

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**Check the Result** If the upgrade process did complete, you can login in to the radio to view the Active and Standby SW version (see "View the Software Version" below).

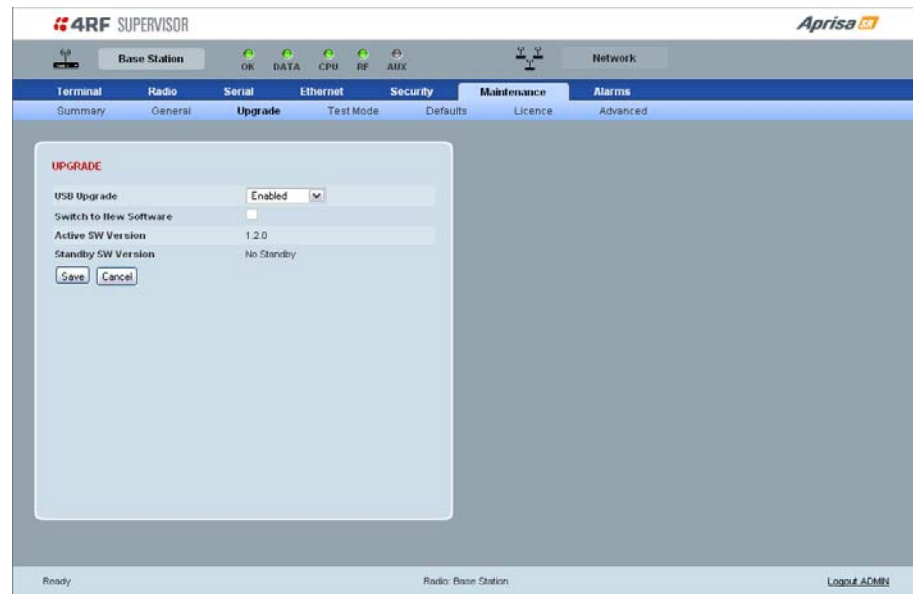
If the upgrade process was successful, the Active SW Version will show the new software version and the Standby SW Version will be shown as 'No Standby'.

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### Possible Upgrade Failure Causes

#### 1. USB Upgrade setting set to 'Disabled'

Check that the SuperVisor USB Upgrade setting is set to 'Enabled'.



#### 2. USB Upgrade setting set to 'Authenticate'

If the radio is not operating on the new software (after the power cycle), it could be caused by the SuperVisor USB Upgrade setting set to 'Authenticate'.

The new software will have uploaded in to the Aprisa SR but will not have activated. The new software version will be displayed in the Standby SW version.

In this case, tick the 'Switch to new Software' checkbox and click 'Save' to apply the changes.


[View the Software Version](#)

To view the uploaded software version:

Select Terminal Settings > Terminal > Summary

If USB Upgrade setting is set to 'enabled', then the version of software uploaded will be displayed in 'Active SW Version' field.

If USB upgrade setting is set to 'Authenticate', then the version of software uploaded will be displayed in 'Standby SW Version' field.



The screenshot shows the 4RF SUPERVISOR web interface. The top navigation bar includes tabs for Terminal, Radio, Serial, Ethernet, Security, Maintenance, and Alarms. The 'Terminal' tab is selected, and the 'Summary' sub-tab is active. The main content area is divided into two columns. The left column contains 'TERMINAL SUMMARY' and 'HARDWARE INFORMATION'. The right column contains 'OPERATING SUMMARY'. The status bar at the bottom shows 'Ready', 'Radio: Base Station', and a 'Logout ADMIN' link.

TERMINAL SUMMARY	
Terminal Name	Base Station
Location	Location
Contact Name	4RF Support
Contact Details	Contact Details
IP Address	172.17.10.2
Subnet Mask	255.255.0.0
Gateway	172.17.0.4
Date and Time	25/10/2010 15:14

HARDWARE INFORMATION	
Radio Serial Number	00C10263113
Sub-Assembly Serial Number	SWC10209972
Active SW Version	1.2.0
Standby SW Version	No Standby

OPERATING SUMMARY	
Operating Mode	Base Station
Interface Mode	Serial and Ethernet
TX Frequency (MHz)	400
TX Power (dBm)	37
RX Frequency (MHz)	400
Channel Width (kHz)	12.5
Network ID (FAH)	CAFE
Node Address	0000
Network Radius	1
Inband Management	Enabled
Inband Management Timeout (sec)	10

4. Software Enhancements

4.1. Major Enhancements

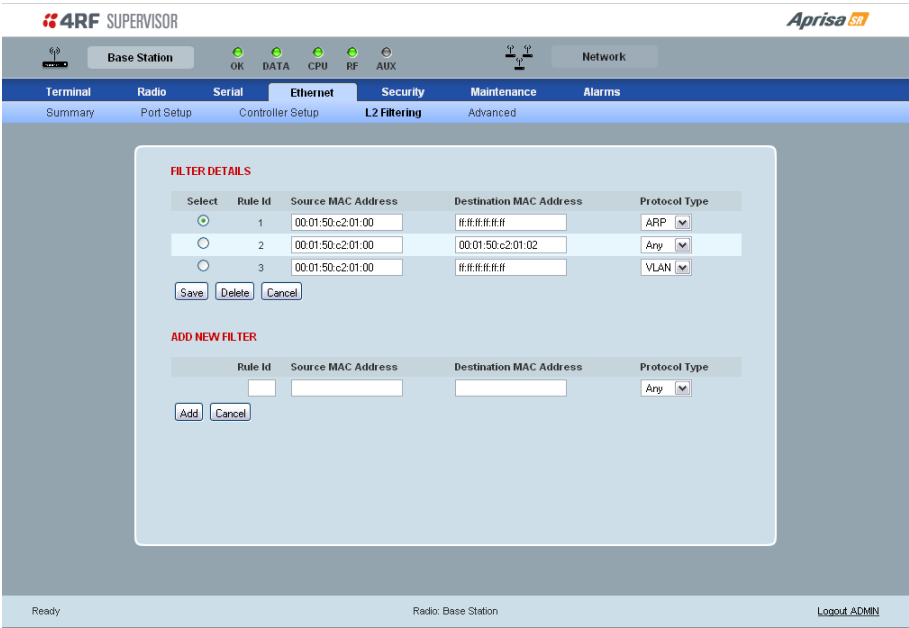
- VHF Frequency Band

In software version 1.2.0, support has been added to the Aprisa SR for the VHF frequency band 136-174 MHz with an initial channel size of 12.5 kHz.
- Wizard Channel Access Settings

In software version 1.2.0, the channel access settings deployed by the Wizard Polled / Exception options have been optimized to enhance the channel performance.

These Wizard Polled / Exception channel access settings will be used in the radios after a software upgrade.
- Ethernet L2 Filtering

In software version 1.2.0, Ethernet L2 Filtering has been added to the Aprisa SR which provides the ability to filter radio link traffic based on specified Layer 2 MAC addresses.



Select	Rule Id	Source MAC Address	Destination MAC Address	Protocol Type
<input checked="" type="radio"/>	1	00:01:50:c2:01:00	#####	ARP
<input type="radio"/>	2	00:01:50:c2:01:00	00:01:50:c2:01:02	Any
<input type="radio"/>	3	00:01:50:c2:01:00	#####	VLAN

Save Delete Cancel

**ADD NEW FILTER**

Rule Id	Source MAC Address	Destination MAC Address	Protocol Type
			Any

Add Cancel

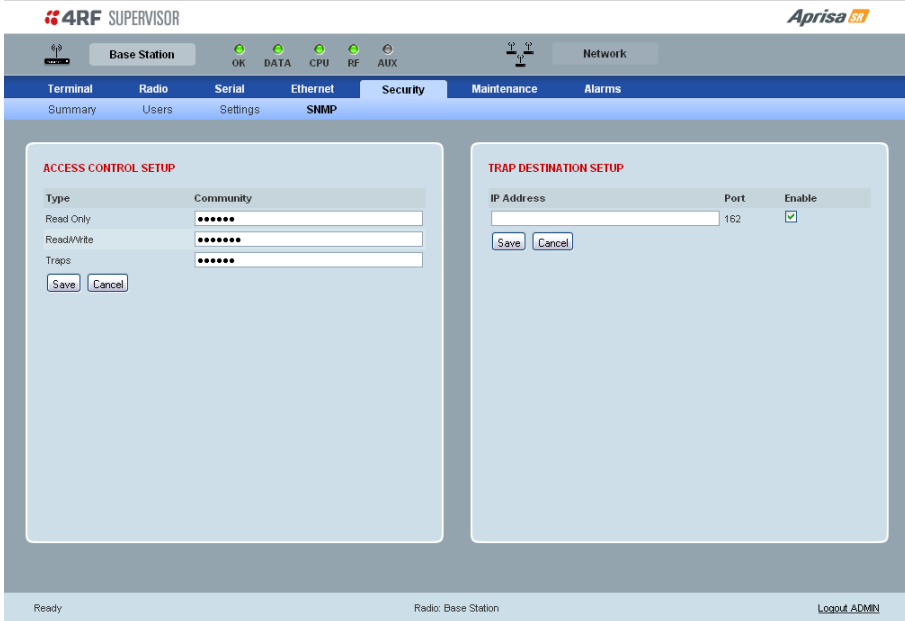
Traffic originating from specified Source MAC Addresses destined for specified Destination MAC Addresses that meets the protocol type criteria will be transmitted over the radio link.

Traffic that does not meet the filtering criteria will not be transmitted over the radio link.

See Aprisa SR User Manual 1.2.0 for more information.

## SNMP Management

In software version 1.2.0, SNMP Management has been added to the Aprisa SR which provides the ability of the Aprisa SR to be managed using the Simple Network Management Protocol.



**4RF SUPERVISOR** **Aprisa SR**

Base Station OK DATA CPU RF AUX Network

Terminal Radio Serial Ethernet **Security** Maintenance Alarms

Summary Users Settings **SNMP**

**ACCESS CONTROL SETUP**

Type	Community
Read Only	*****
Read/Write	*****
Traps	*****

Save Cancel

**TRAP DESTINATION SETUP**

IP Address	Port	Enable
	162	<input checked="" type="checkbox"/>

Save Cancel

Ready Radio: Base Station Logout ADMIN

MIB files are supplied which can be used by a dedicated SNMP Manager, such as Castle Rock's SNMPc, to access most of the radio's configurable parameters.

For communication between the SNMP manager and the radio, Access Controls, Trap Destination, and Community strings must be set up using SuperVisor > Security > SNMP.

See Aprisa SR User Manual 1.2.0 for more information.



## 4.2. Minor Enhancements

Ethernet Ingress Rate	<p>Previously, the maximum Ethernet ingress rate was limited to 128 kbit/s. In software version 1.2.0, this maximum Ethernet ingress rate has been increased to 2 Mbit/s.</p>
Encryption Password	<p>Previously, the Encryption Password was limited to Alpha Numeric characters. In software version 1.2.0, any printable ASCII character can be used in the password.</p>
Broadcast Time	<p>In software version 1.2.0, a feature has been added which when activated sends the Base Station Date / Time setting to all the Remote and Repeater Stations in the FAN and sets their Date / Time. This option is in SuperVisor &gt; Maintenance &gt; Advanced &gt; Broadcast Time.</p> <p>This option applies to the Base Station.</p>
Radio Software Downgrade	<p>In software version 1.2.0, radio software can also be downgraded if required. This may be required if a new radio is purchased for an existing network which is operating on an earlier software release.</p> <p>The downgrade process is the same as the upgrade process.</p>
Alarm File Name Format	<p>Previously, the Write Alarm History to USB feature generated a filename 'alarm.txt'.</p> <p>In software version 1.2.0, this filename format has been changed to include the IP Address and the Date / Time.</p> <p>The file name format is now 'alarm_ipaddress_date,time.txt'.</p> <p>e.g. 'alarm_172.17.10.17_2000-01-13,17.13.45.txt'.</p>
Alarm Severity	<p>Previously, in the Alarm Table, the alarm Severity was part of the alarm name e.g. 'txTempLoMaj'.</p> <p>In software version 1.2.0, the alarm severity has been separated from the name e.g. 'txTempLo' with severity Major.</p>

## 5. Software Bug Fixes

### 5.1. Major Bug Fixes

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None.

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### 5.2. Minor Bug Fixes

#### Radio Advanced Settings Error

Previously, changing the SuperVisor > Radio > Channel Access > Network Type parameter also changed any previously entered Radio > Advanced Settings 'ACK' or 'Packet Size' settings.

For example, if the Packet Size was set to 46, and then the Network Type was changed to Polled, the Packet Size was changed back to the default setting of 247.

In software version 1.2.0, this bug has been corrected.

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#### Software Upgrade Reboot Error

Previously, if the software had been upgraded on a radio and the flash drive was not removed from the radio, the radio would reboot after about 5 minutes and the radio would enter normal operational mode.

In software version 1.2.0, the radio will not reboot until it is power cycled.

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## 6. Hardware Enhancements

### 6.1. Product Options

#### Dual Antenna

The standard Aprisa SR uses a one or two frequency  $\frac{1}{2}$  duplex transmission mode which eliminates the need for a duplexer. However, a Dual Antenna option is available for separate transmit and receive antenna connection to support external duplexers or filters. The transmission remains half duplex.



#### Antenna Option

Single Antenna

Dual Antenna

#### Part Number

APSR-N400-012-SQ-12-ETAA

APSR-N400-012-DQ-12-ETAA

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