Operations Alert Bulletin Recommended BFS QAM Frequency Rate for Multi-Stream CableCARD Code Download

Background

Multi-Stream CableCARD™ (M-Card™) modules running a software release prior to OS 1.5.2 (all versions of 1.5.2 software) will not recognize a Code Version Table (CVT) message from a BFS QAM whose output frequency is below 204 MHz. The CVT message must be recognized for a download to occur.

Recommendation

Sites that have M-Card modules running a software release prior to OS 1.5.2 and have BFS QAMs with an output frequency below 204 MHz, must change the output frequency to a value above 204 MHz in order to successfully download M-Card software. Once the M-Card module is running a version of OS 1.5.2 or later software, it will recognize a CVT at any operational output frequency.

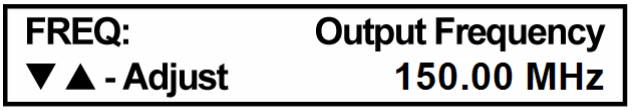
To prepare for a M-Card software update, operators should do the following.

- Determine the BFS QAM output frequency. If it is below the threshold, read on. If not, this Operations Alert Bulletin does not apply to you.
- Determine if all of your M-Card modules are running a version of OS 1.5.2 or later software. If they are, this Operations Alert Bulletin does not apply to you.
- Contact Cisco® Services to obtain the latest release of M-Card software and to schedule their assistance in downloading software to your M-Card modules.
- During a maintenance window, complete the tasks on the following pages to change the output frequencies, and restore them, if necessary, after the download.

  Note: Follow the instructions provided by Cisco Services to download software to M-Card modules.

Determine the BFS QAM Output Frequency

At the BFS QAM front panel, press **FREQ** to display the **Output Frequency** screen.



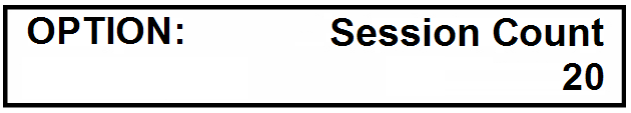
If the output frequency is below 204 MHz, it will be necessary for you to change the output frequency during a maintenance window prior to downloading software to M-Card modules.

Change the BFS QAM Output Frequency

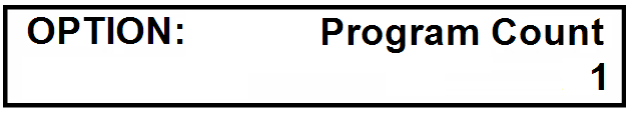
To modify a BFS QAM on your system, complete this procedure during a maintenance window.

Note: This procedure is required for each BFS QAM that you want to change.

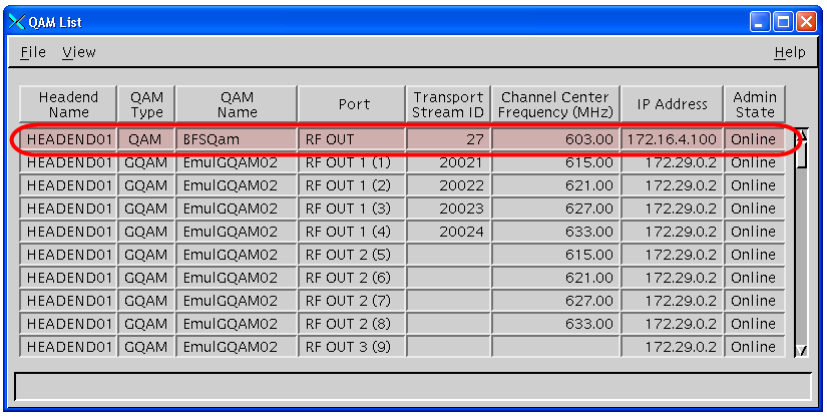
1 At the BFS QAM front panel, press **OPTIONS**, scroll to **Sessions Count**, and record the number of sessions. You will need this number later to verify the restoration of sessions.



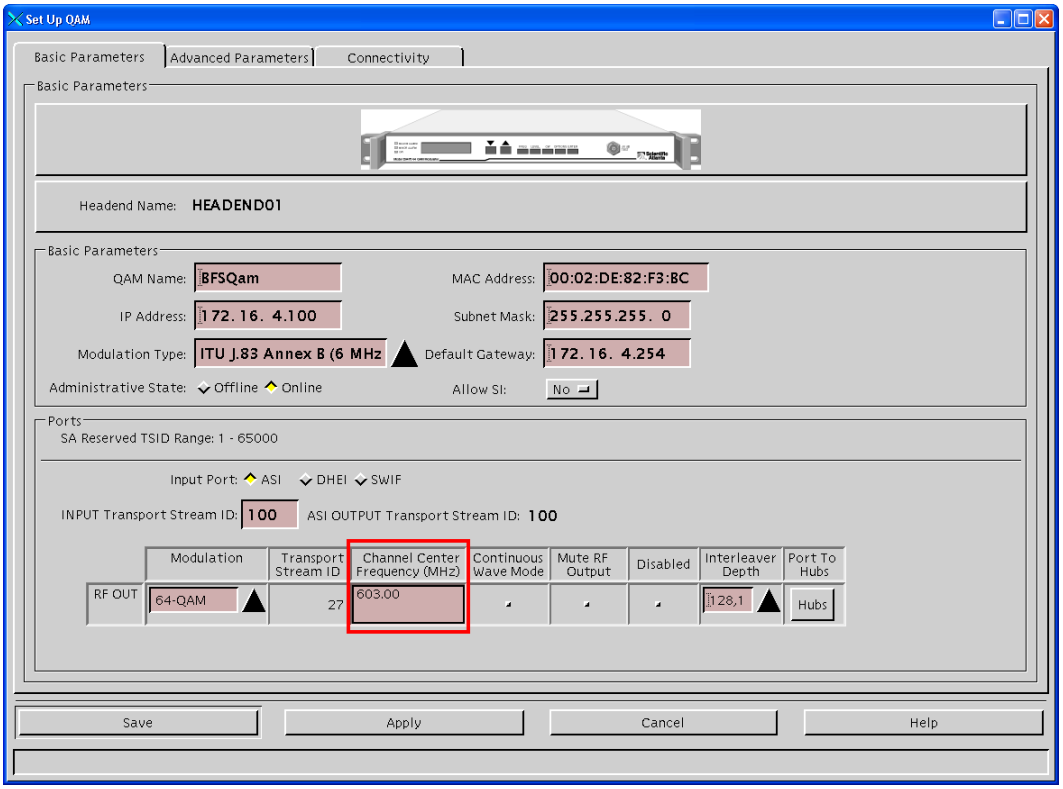
2 Press **OPTIONS** again, scroll to **Program Count**, and record the number of programs (encrypted sessions). You will need this number later to verify the restoration of programs.



3 At the DNCS administrative console, select **DNCS** and **Network Element Provisioning**. Then click the **QAM** button to open the **QAM List** window.



4 Double-click the QAM you want to modify to open the **Set Up QAM** window.



5 Record the Channel Center Frequency (output frequency). You will need this value later, when you restore the output frequency on the BFS QAM.

6 Select the **Channel Center Frequency** field and type in a *unique* frequency from the list below. Then press **Apply** and **Save**. This will save changes and open the **QAM List** window.

Note: If you experience signal interference, try offsetting your BFS QAM output frequency by 250 KHz from the one you have chosen.

207	213	219	225	231	237	243	249	255	261	267	273	279
285	291	297	303	309	315	321	327	333	339	345	351	357
363	369	375	381	387	393	399	405	411	417	423	429	435
441	447	453	459	465	471	477	483	489	495	501	507	513
519	525	531	537	543	549	555	561	566	573	579	585	591
597	603	609	615	621	627	633	639	645	651	657	663	669
675	681	687	693	699	705	711	717	723	729	735	741	747

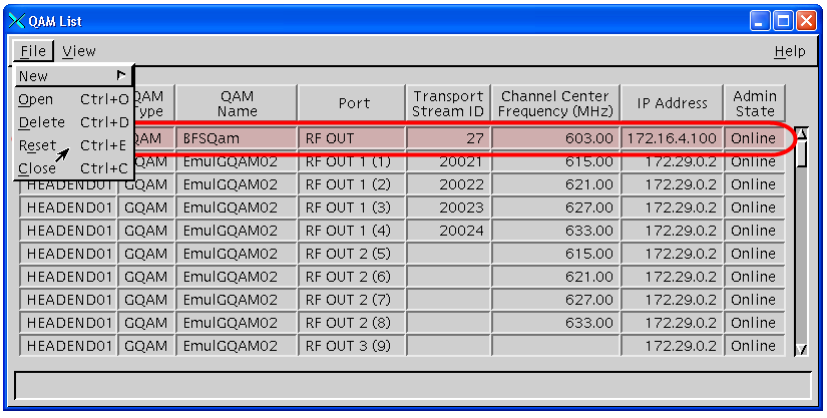
7 Repeat steps 1-6 for the other BFS QAMs on your system.

Reboot the BFS QAM and Verify Counts

Note: At this point in the process, the **QAM List** window should be open. If it is not, retrace the steps you have taken and complete any that were omitted.

1 At the **QAM List** window, select the BFS QAM that you changed.

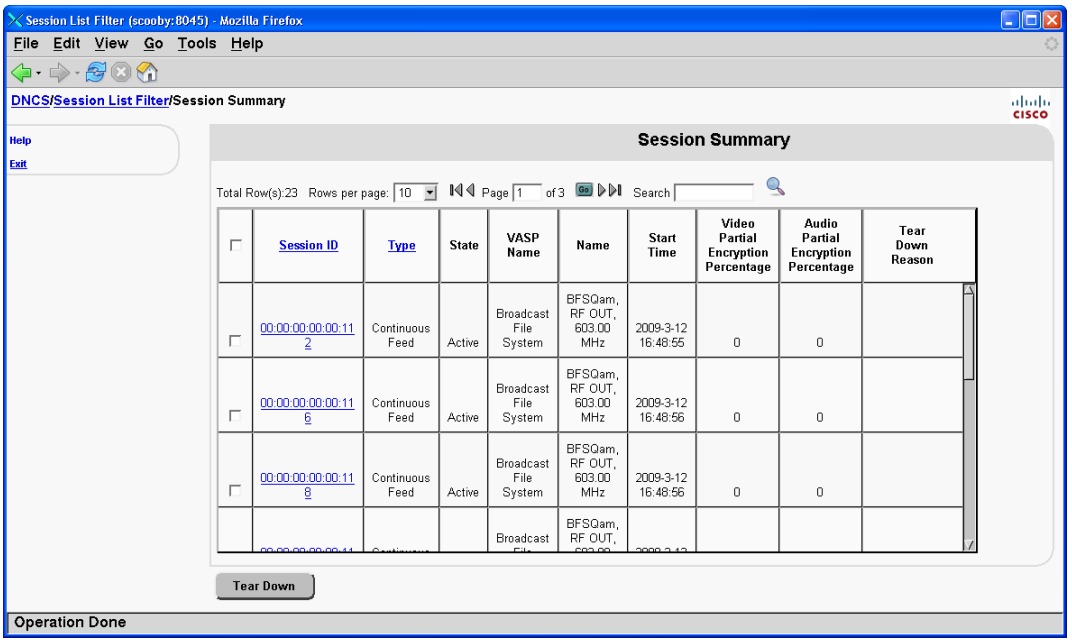
2 To reset this BFS QAM, click **File/Reset**. Resetting the device applies the changes you made to the BFS QAM, which then begins transmitting on the unique frequency you entered previously.



3 At the BFS QAM front panel, verify that the session and program counts match the values you recorded earlier (see ***Change the BFS QAM Output Frequency*** (on page 2)).

Note: If the counts at the BFS QAM front panel do not match the recorded values, stop and refer the matter to Cisco Services.

4 At the DNCS, navigate to the **Session Summary** page and tear down the sessions on the BFS QAM.



5 At the **xterm** window, run **clearDbSessions - c**.

6 Repeat step 3.

7 Repeat steps 1-6 for the other BFS QAMs on your system.

8 Test PPV, xOD, and third-party applications and confirm normal set-top behavior before proceeding.

Download M-Card Code

Note: An M-Card software download should not be attempted without involving Cisco Services.

Before you begin, it is assumed that:

- The output frequency has been changed on all BFS QAMs in your system.
- All sessions and programs have been restored.
- You have previously obtained the latest M-Card software from Cisco Services.
- The software is staged for download to M-Card modules.
- Cisco Services is assisting in the task.

If all of these criteria have been met, download the M-Card software according to the procedures and guidance provided by Cisco Services.

Note: When the software download process is complete, verify that each M-Card module is running the new software, test PPV, xOD, and third-party applications and confirm normal set-top behavior.

Restore the Original Configuration on the BFS QAM

Note: This task is optional. If you allow your BFS QAM output frequency to remain above 204 MHz, you will be able to download software to your M-Card modules, regardless of what software version is running on them. However, if you restore a sub-204 MHz output frequency, it will be necessary to perform the tasks in this Operations Alert Bulletin again, if M-Card modules with software prior to OS 1.5.2 are deployed in your system at a later date.

Before you begin, be sure you have successfully downloaded software to all M-Card modules.

1. See ***Change the BFS QAM Output Frequency*** (on page 2) for instructions and change the BFS QAM output frequency to the original value.
2. Follow the instructions in ***Reboot the BFS QAM and Verify Counts*** (on page 4) to apply the changes to the BFS QAM.
3. Repeat steps 1 and 2 for all BFS QAMs in your system.

About This Bulletin

Audience

This document was written for system operators and Cisco® Services engineers who are planning a code update for M-Card modules.

Related Publications

You may find the following publications useful as resources when you implement the procedures in this document.

- *Changing the QAM Modulator Configuration* (part number 4011343)
- *Explorer Digital Home Communications Terminal Staging Guide* (part number 734375)
- *Gigabit QAM Modulator Model D9479 Hardware Installation and Operation Guide* (part number 745431)
- *MQAM Modulator Models D9477-1, D9477-2, and D9477-3 Installation and Operation Guide* (part number 717866)
- *QAM Modulator Model D9476 Installation and Operation Guide* (part number 568251)

Document Version

This is the second formal release of this document.

For More Information

If you have technical questions, call Cisco Services for assistance. Follow the menu options to speak with a service engineer.

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