MVX/SVX KVM Extender
Firmware Update Guide

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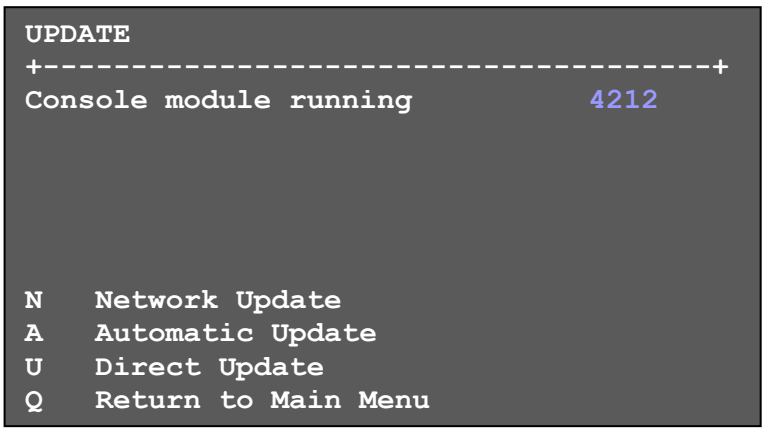
There are currently three methods to update the firmware on your MVX and SVX KVM Extenders: **Direct Update**, **Automatic Update** and **Network Update**. These are all available from the Update Menu (press <U> to access from the main menu):



Also listed is the firmware version that this extender is currently running.

1 Terminology

Active Firmware	This is the firmware that an extender is currently running.
Saved Firmware	This firmware is saved on the extender, but is not currently running. This may or may not be the same version as the *active firmware*. During the update process the new firmware is first stored as *saved firmware* before it is transferred in to *active firmware*.
Bitmap	Firmware updates are provided in the form of a bitmap image. The pixels in the image encode the data required for the update.
Source Extender	The extender from which the update comes.
Target Extender	The extender that you wish to update.

2 Direct Update

This was previously the sole method of updating. It is designed to update a pair (one remote, one local) of extenders. Further details can be found in the document *KVM SVX MVX Firmware Update 2_5*.

3 Automatic Update

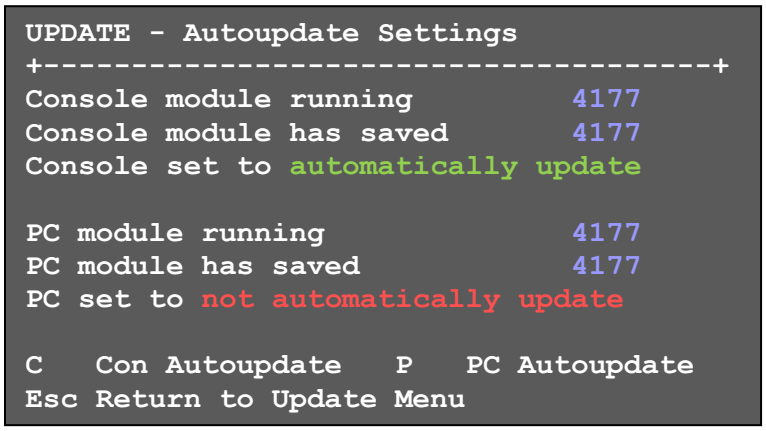
Transfers the firmware from one extender to another.

Requirements:

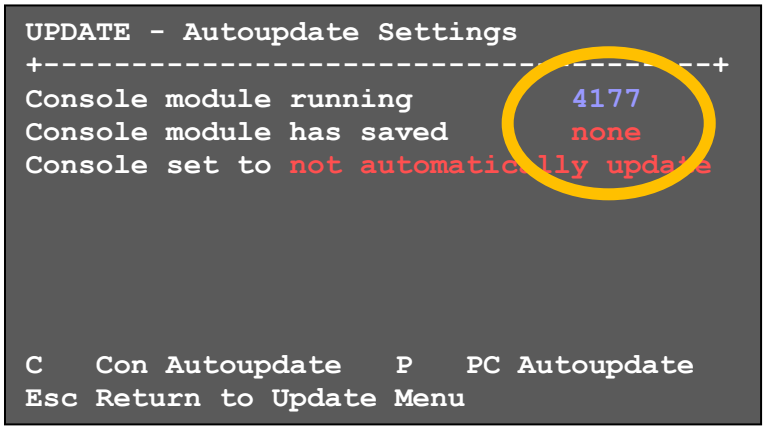
- The *source extender* must have firmware 4180 or above.
- Both extenders must be of the same type (SVX with SVX, or MVX with MVX).
- If using SVX then *target extender* must have firmware 4180 or above.
- If using SVX with *target extender* having firmware below 4180 then the extender cannot be updated by Automatic Update.
- If using MVX then *target extender* may have any firmware version.
- It does not matter if the *source extender* and the *target extender* are both receivers, both transmitters or a mixture.

What happens:
An automatic update will transfer the *saved firmware* of a *source extender* to the *saved firmware* of a *target extender*. The *target extender* will then transfer its new *saved firmware* in to its *active firmware* completing the update.

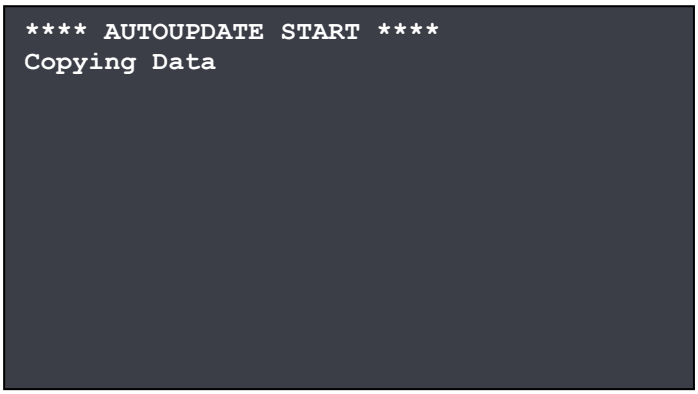
Procedure:
Automatic update is a feature that is disabled by default. It can be disabled or enabled for the receiver (console) or transmitter (PC) via the Automatic Update menu (**It is highly recommended to use a receiver as *source extender***):



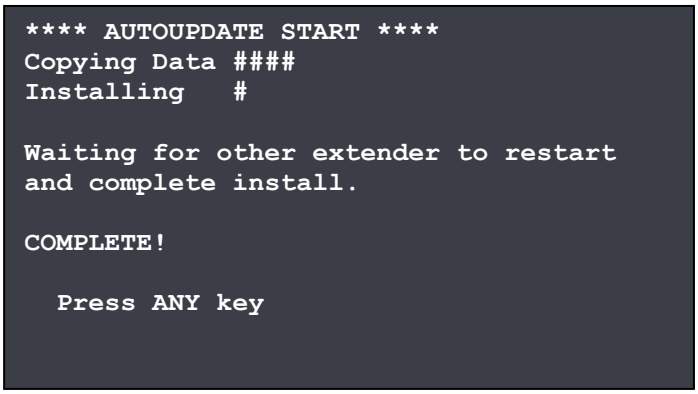
ATTENTION: If the extender has no *Saved Firmware* then you can perform no auto-update. To load firmware in to *Saved Firmware* from a BITMAP follow the instructions for "Load New Version from Bitmap" in section 4.1 below.



- Ensure the *source extender* is connected to a monitor
- Connect the *source extender* to the *target extender* via a CAT cable. The extenders must be connected directly, not via a switch!
- Connect power to the *source extender* and *target extender*.
- Both extenders will initially have a red blinking LED, this will go to solid red on the *source extender*, and to blinking orange on the *target extender*.
- After about 30 seconds the OSD on the monitor will indicate that the autoupdate process has begun (see below). The LED on the *target extender* will now blink very slowly green.



- The *target extender* will take around 2 minutes to update and restart. Once this process is complete the OSD will display COMPLETE:



- The extender has now been updated and may be unplugged.
- IF the monitor returns FAIL, and the LED of the *target extender* is off, then restart the *target extender* and leave for a minute to complete the update.

4 Network Update

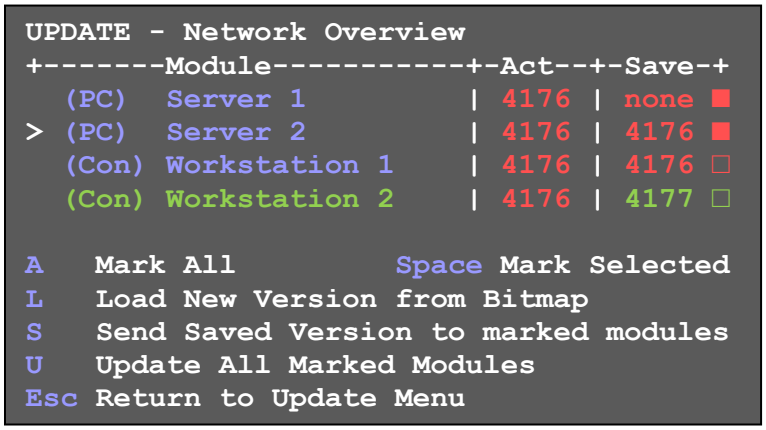
This is the preferred method of updating extenders on a switching network. You may distribute a new update to the extenders on the network with minimal impact on the use of the network.

Requirements:

- The extenders must all be connected to a single GB network switch, and have the Switching Option installed.
- The extenders must all have firmware version 4180 or above.
- The extenders must all be of the same type (all MVX or all SVX).

What happens:
From the *source extender* you can load a firmware update from a bitmap, transfer it to any or all extenders on the network, and tell those extenders to update to the new firmware.

Procedure:
The Network Update menu lists all the extenders currently on the network (you can scroll this list with the up and down arrows). The extender you're using is marked in green. The *active firmware* and *saved firmware* version numbers are listed for each extender.



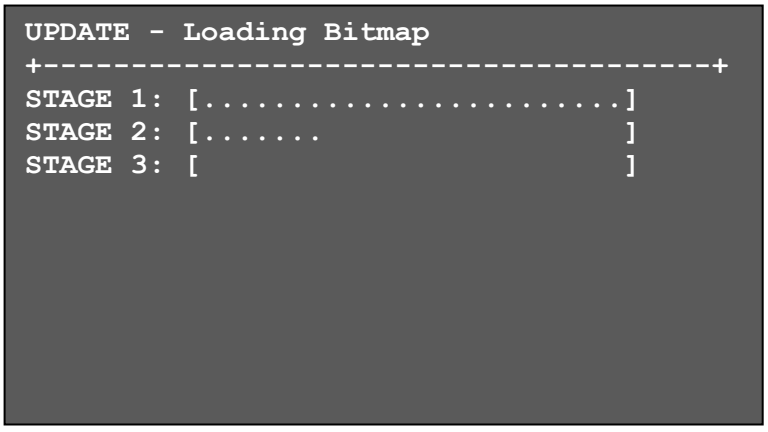
As you scroll up and down the list you may press <space bar> to mark or unmark an extender in the list, or press <A> to mark all extenders in the list. A marked extender has a filled rectangle, an unmarked one has an empty rectangle.

There are three actions that can be performed from this menu. The normal order of operations of an update is first **Load New Version from Bitmap**, then **Send Saved Version to marked modules**, and finally **Update All Marked Modules**.

4.1 Item “L” – Load New Version from Bitmap

This action will transfer firmware from a bitmap file to the *saved firmware* of the remote extender you are using (marked in green). For this to work the bitmap must be open and visible on the monitor.

- It does not matter if the On Screen Display obscures it.
- The bitmap must have zoom level at 100% (i.e. 1 to 1).
- It should be approximately in the middle of the screen and slightly towards the left.
- If “Cannot find Bitmap” error occurs then try moving the image slightly and try again.
- If this error persists then reducing the screen resolution may resolve the issue.



Once this is complete the new firmware version will show in the *saved firmware* of this extender.

4.2 Item “S” – Send Saved Version to marked modules

This will transfer the *saved firmware* from the remote extender you are using to the *saved firmware* of any extenders that have been marked. The extender you are using cannot accept further inputs during this process, but all other extenders on the network, including those to which the firmware is being transferred, can be used and switched as normal.

4.3 Item “U” – Update All Marked Modules

This will transfer the *saved firmware* on any marked extenders to its *active firmware*. Note that this process will disrupt the network: any extenders that are updated will become briefly unusable before restarting in to the new *active firmware*. This process will take several seconds.

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		Starting Firmware Version		
		1100 - 1269	1273	4200+
Target Firmware Version	1100 - 1273	**Direct Update** to new version	**Direct Update** to new version	**Direct Update** to new version
	4200+	*If an extender with 4200+ is available* then use this to perform an **Automatic Update** *else* perform a **Direct Update** to **1273** followed by a **Direct Update** to **4200+**	*If an extender with 4200+ is available* then use this to perform an **Automatic Update** *else* perform a **Direct Update** to new version	*If extenders are in a matrix switch* then use **Network Update** *If updating only one pair of extenders* perform a **Direct Update** *If updating many extenders* then perform a **Direct Update** on one pair and then use them to perform **Automatic Updates** on the others

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Note: SVX extenders with serial numbers **5130xxxxx and above** are **NOT compatible** with firmware versions **2060 and below**.

		Starting Firmware Version		
		2000 - 2061	2066	4200+
Target Firmware Version	2000 - 2066	**Direct Update** to new version	Not possible	Not possible
	4200+	Perform a **Direct Update** to **2066** followed by a **Direct Update** to **4200+**	Perform a **Direct Update** to new version	*If extenders are in a matrix switch* then use **Network Update** *If updating only one pair of extenders* perform a **Direct Update** *If updating many extenders* then perform a **Direct Update** on one pair and then use them to perform **Automatic Updates** on the others