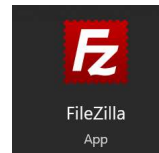
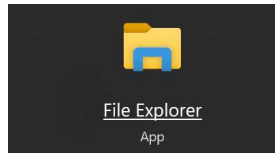




GAM FW Upgrade Procedure

September 12, 2025

1. Use Windows File Explorer app or an FTP client like Filezilla to connect to Positron FTP Server using the link shown below.



<ftp://ftp.positronaccess.com/>

Note: Do not use any Web Browsers due they block ftp downloads.

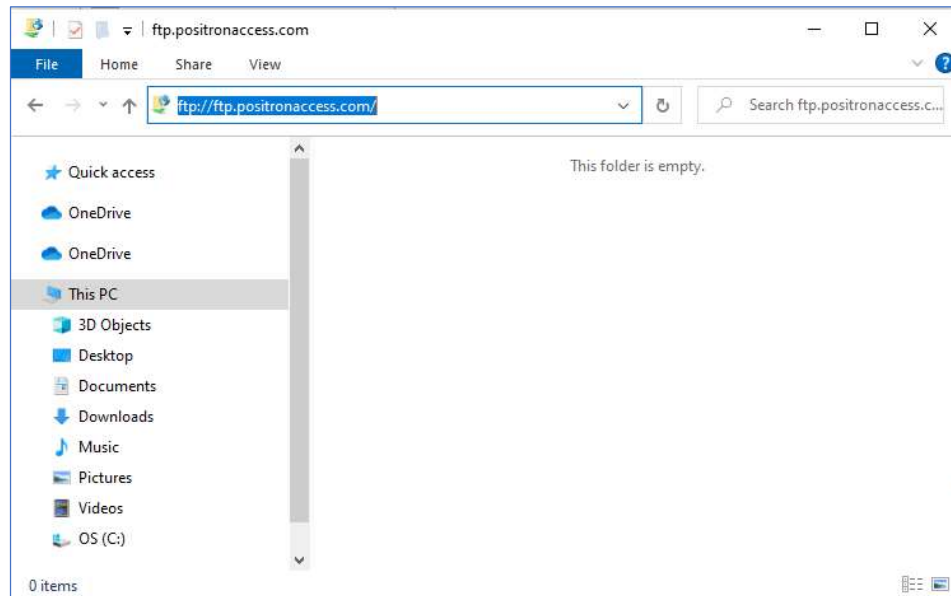


Figure 1 Connecting with Positron FTP Server using File Explorer

2. Once the Log On window be prompted, use the following credentials:

Username: positron

Password: PAS1010!#!

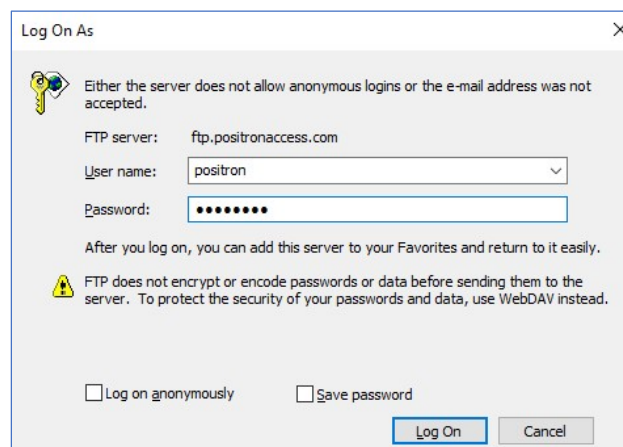


Figure 2 FTP Log On window

3. Select **GAM** folder and open it by double clicking on it.

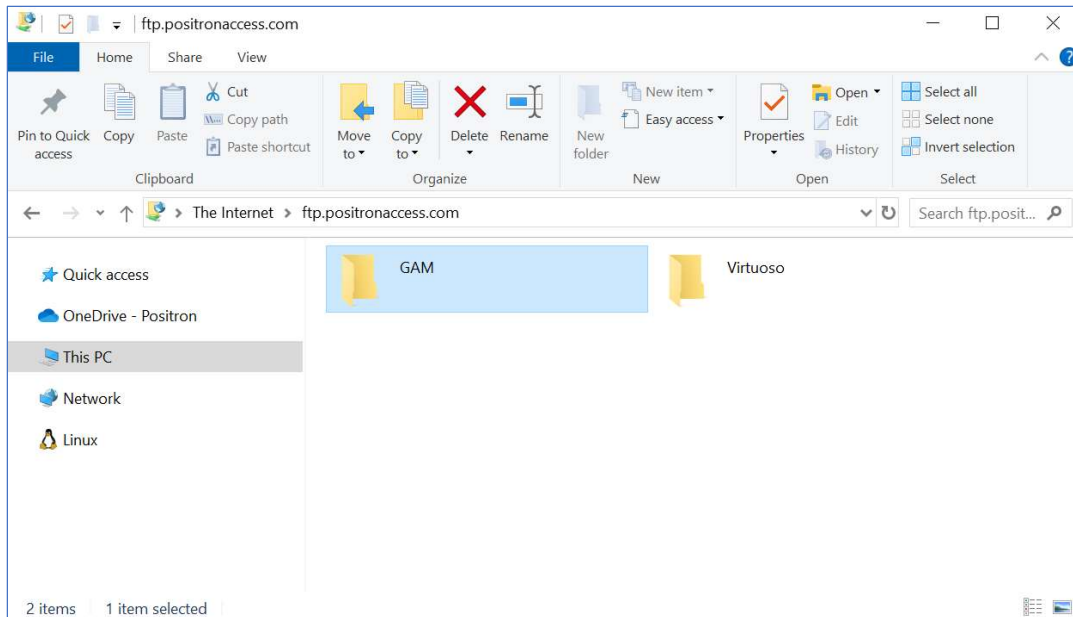


Figure 3 GAM folder in Positron FTP Server

4. For GAMs working with any old **G1000-C** Endpoint it is necessary to upgrade first to **v1.5.1** (see **Figure 4**) before going to latest **v1.8.2**.
Please read **IMPORTANT NOTES A and B** on pages **5** and **6**

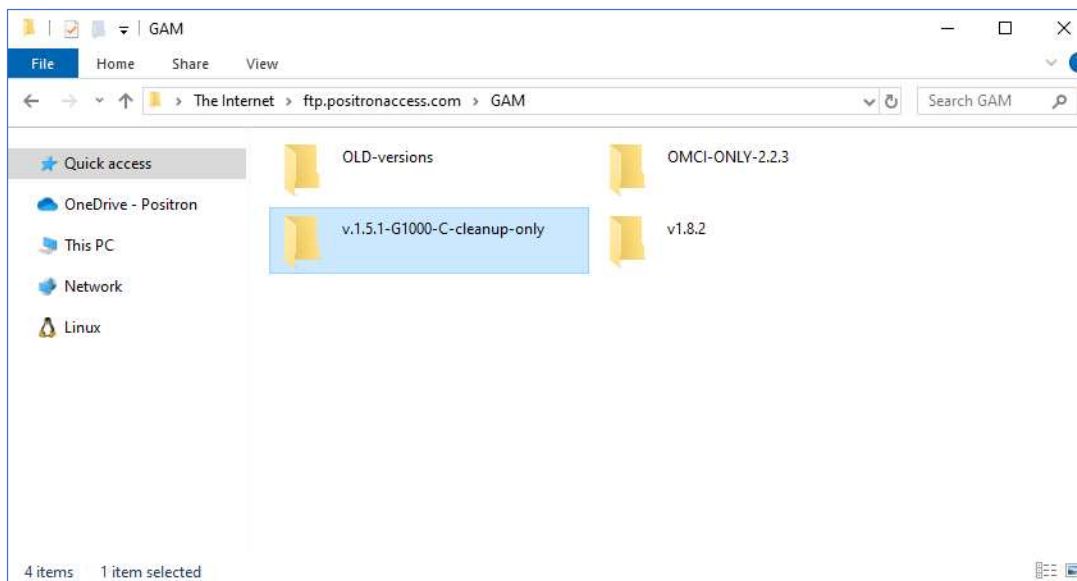


Figure 4 Folder with FW 1.5.1 for GAM working with G1000-C

5. For GAMs working with G1001, G1002, G2002 Endpoint series go to folder **v1.8.2** (see **Figure 5**)

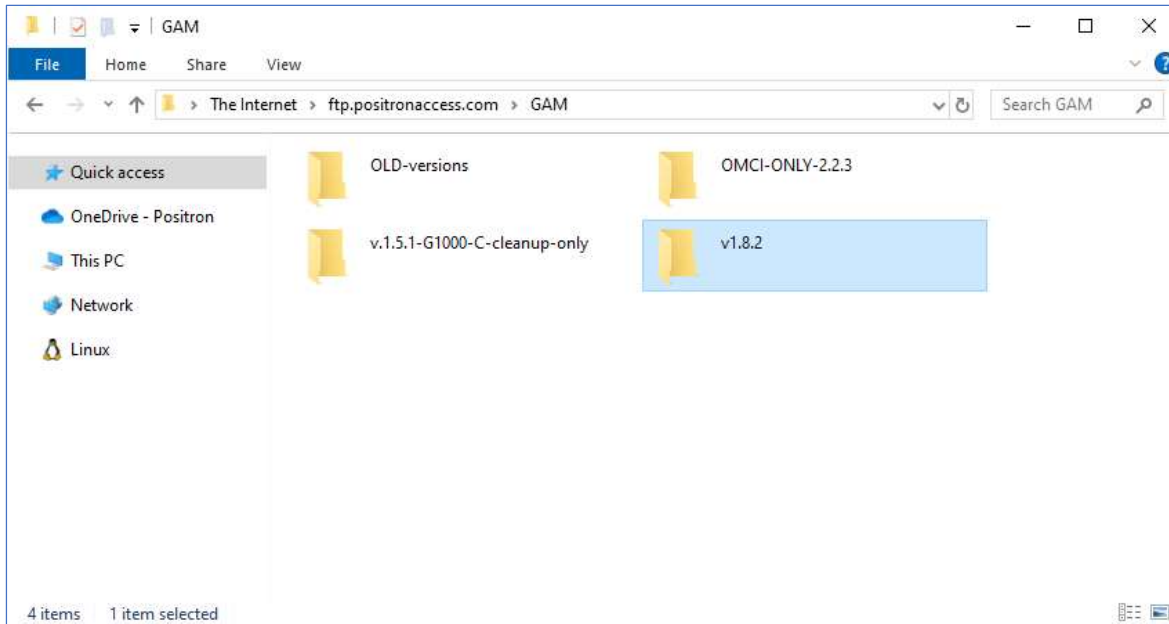


Figure 5 Folder with FW for GAM working with G1001/G1002/G2002

6. Each GAM type, indoor/outdoor/MIMO/Coax has a different folder. (see **Figure 6**),

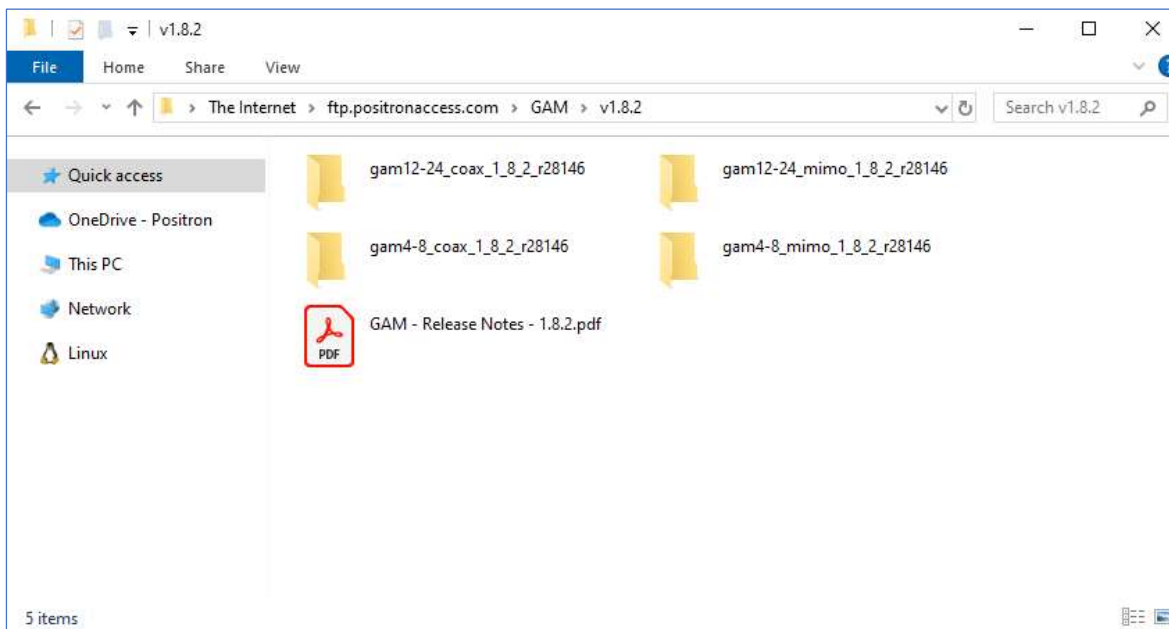


Figure 6 Folders with FW for different models of GAM

- gam12-24_coax_1_X_X_r2XXXX** is for Indoor **GAM-12-C** or **GAM-24-C**
- gam12-24_mimo_1_X_X_r2XXXX** is for Indoor **GAM-12-M** or **GAM-24-M**
- gam4-8_coax_1_X_X_r2XXXX** is for Outdoor **GAM-4-CX** or **GAM-4-CRX**
- gam4-8_mimo_1_X_X_r2XXXX** is for Outdoor **GAM-4-MX** , **GAM-8-MX**, **GAM-4-MRX** or **GAM-8-MRX**

7. Once you locate the right folder, open it and proceed to download the file with “.mfip” extension into your PC, see **Figure 7**. For Example: for a GAM12/24-M the file will be ftp://ftp.positronaccess.com/GAM/v1.8.2/gam12-24_mimo_1_8_2_r28146/

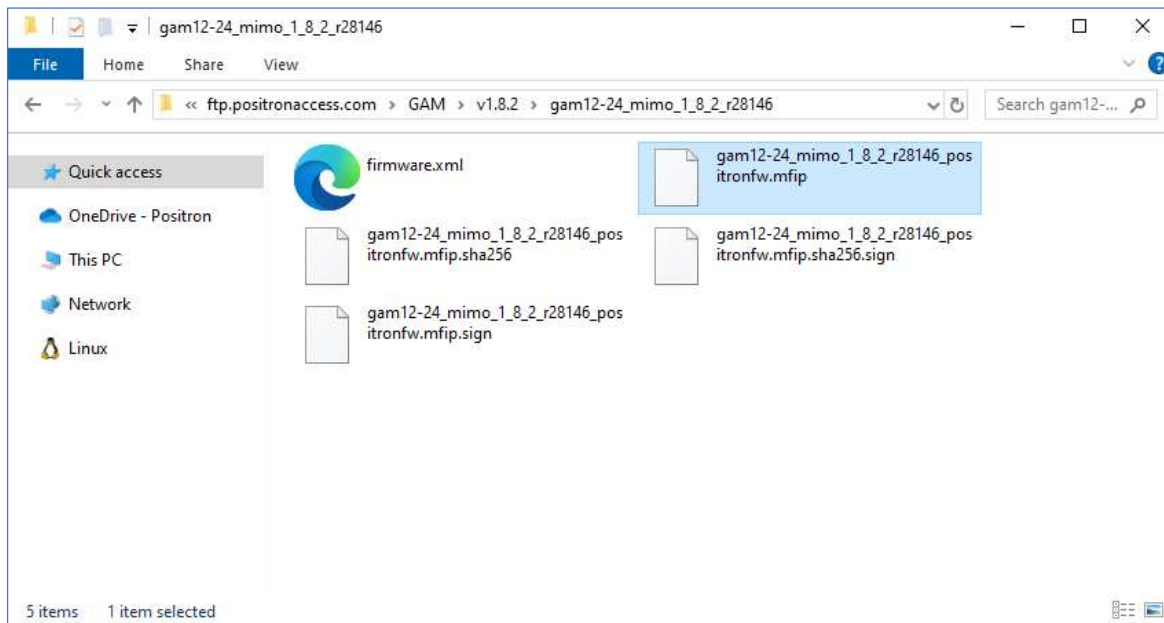


Figure 7 Firmware load for GAM 12/24-M working with G1001/G1002/G2002 series

The GAM doesn't validate if you are using the proper file for the GAM model in older versions, validation was implemented from v1.5.0.r22842, it is important to select the correct file if you are running an older version.

IMPORTANT NOTES:

- A. IF YOU ARE RUNNING A VERSION PRIOR OF **1.5.1** AND HAVE LEGACY **G1000-C** (COAX ONLY) IN YOUR NETWORK, YOU MUST UPGRADE TO **V1.5.1** PRIOR TO UPGRADE TO 1.7.0, IF NOT, YOU WILL BE STUCK WITH ENDPOINTS THAT WILL NEVER UPGRADE.
 VERSION 1.5.1 IS LOCATED IN <ftp://ftp.positronaccess.com/GAM/v.1.5.1-G1000-C-cleanup-only/> AS SHOWN IN **Figure 8** and **Figure 9**

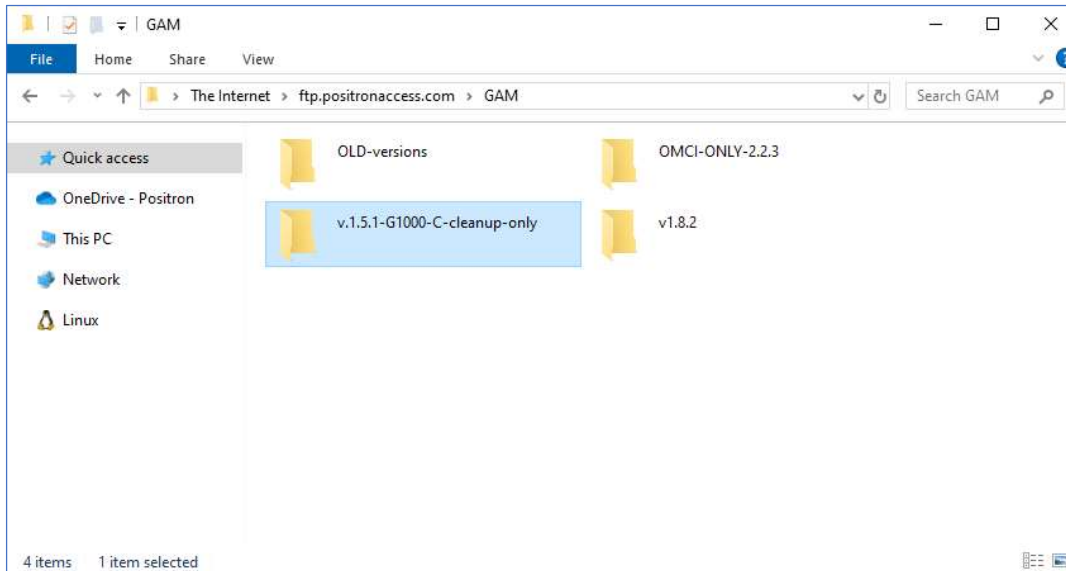


Figure 8 Folder with GAM FW V 1.5.1

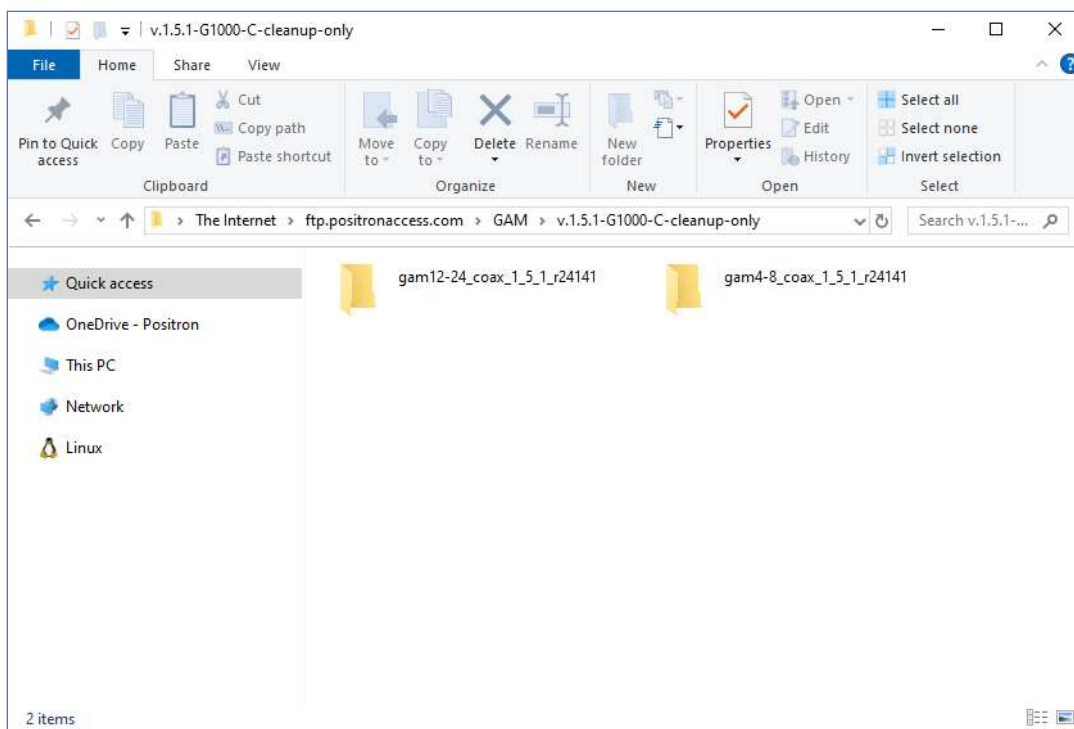


Figure 9 Folders with FW V 1.5.1 for Coax GAMs

B. IF THE GAM IS RUNNING A VERSION OLDER THAN 1.2.0(BUILD r21298), THERE IS A RARE CASE OF FLASH CORUPTION THAT CAN OCCUR DURING THE UPGRADE. CHECK WITH SALES ENGINEERING TEAM FIRST.

8. Download the **.mfip** file to your PC.
9. Open GAM Web GUI on your PC.

10. Copy running-config to startup-config of the GAM by doing click on floppy disk symbol located in top right corner of Web GUI as shown in **Figure 10** or from menu **Maintenance→Configuration→ Save startup-config**



Figure 10 Copy running-config to startup-config button

11. Under **Maintenance→Software** select **Update From File**, see **Figure 11**.
12. Click on **Choose File** button to locate the **.mfip** file downloaded previously in your PC then press **Open** button to confirm, see **Figure 12**.
13. Click the **Upload** button as shown in **Figure 13** to start the update process,



Figure 11 Update From File menu

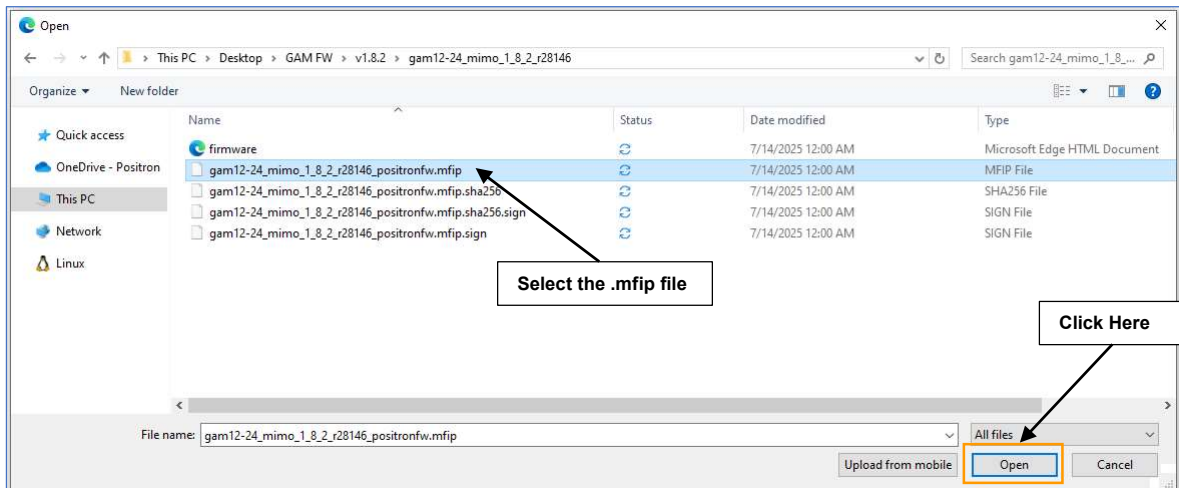


Figure 12 Selecting new GAM Firmware

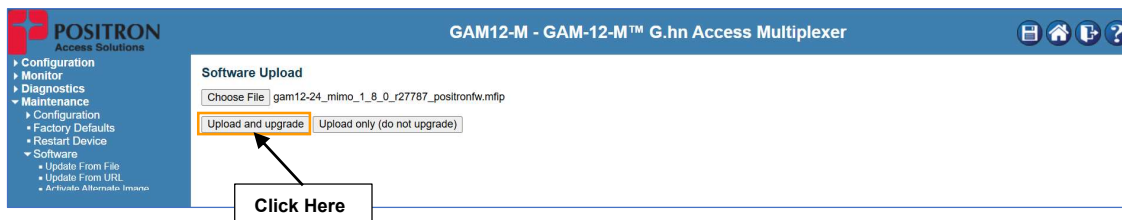


Figure 13 Starting Update Process

14. The GAM will show the status of firmware update process as shown below in **Figure 14**

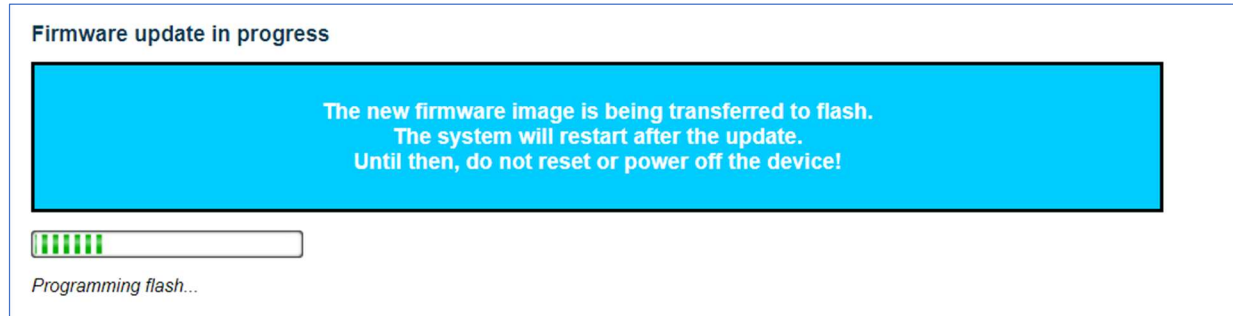


Figure 14 GAM FW update status

15. Firmware update will take a few minutes, the GAM will be rebooted automatically once the new firmware be loaded into the flash. (Approx 7-10 mins)
16. Once GAM FW update is completed, a Completed message will appear in Web GUI confirming it and asking for Login credentials.

Note: Do not Power Off or reboot the GAM immediately after the upgrade, leave it On for at least 10 minutes to allow all G.hn ports be updated to the new version.

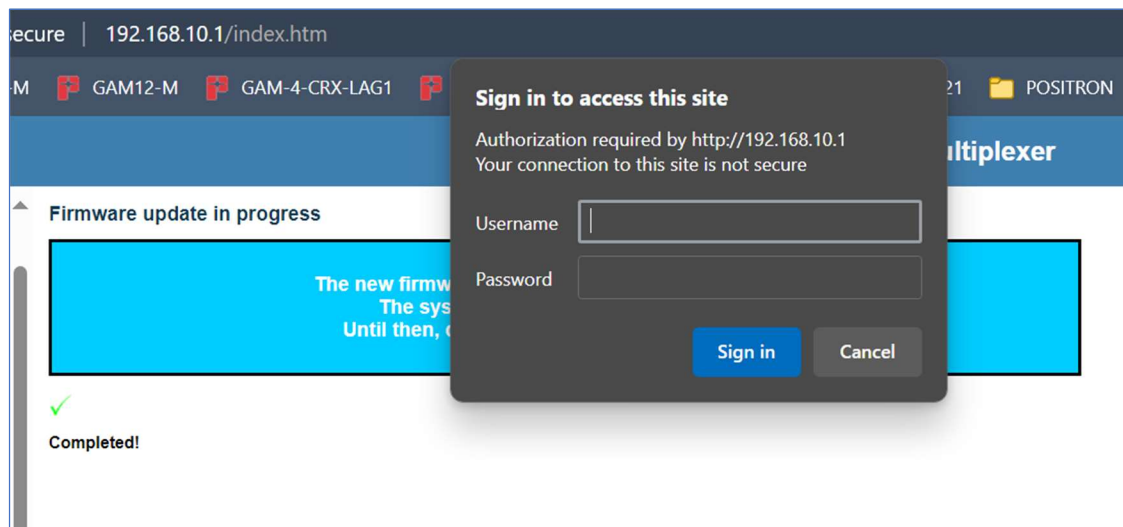
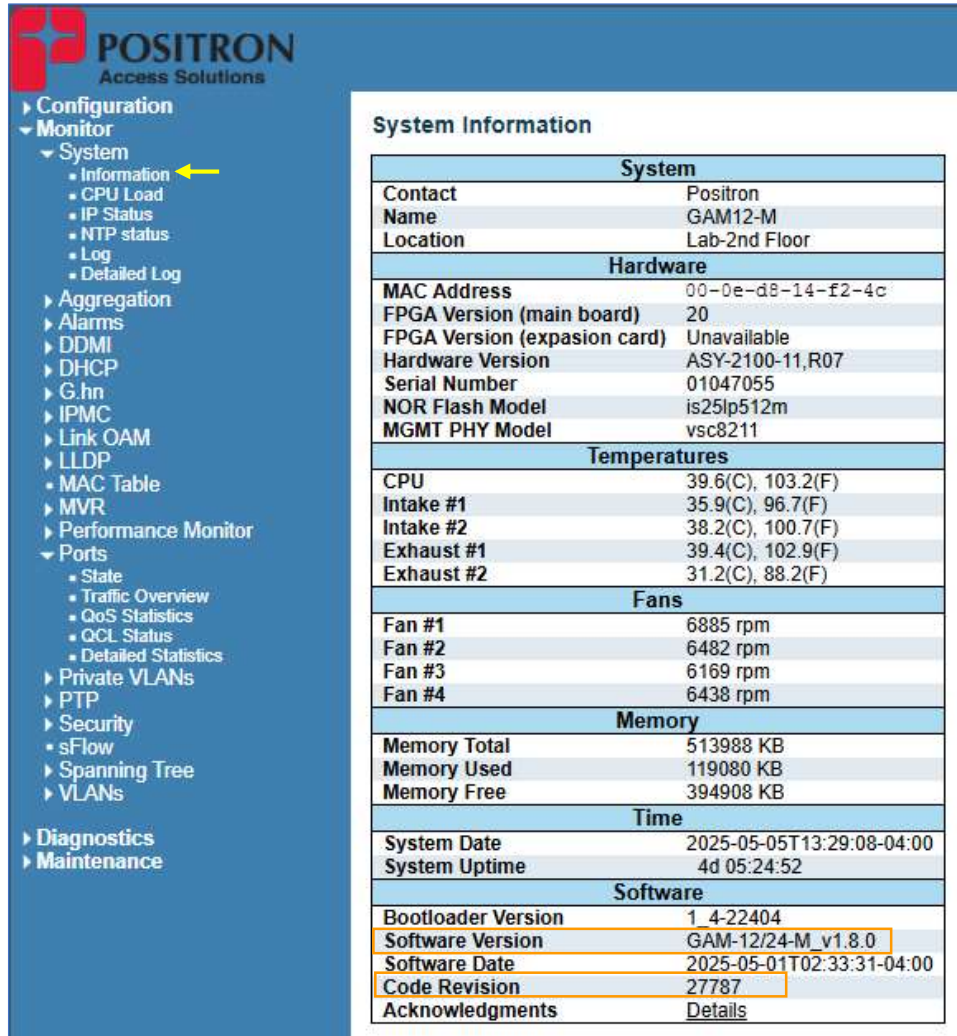


Figure 15 GAM FW update completed

17. To validate new firmware installed in the GAM go to **Monitor→System→Information** to confirm that the GAM is working with new firmware version and release, see **Figure 16**.



System Information

System	
Contact	Positron
Name	GAM12-M
Location	Lab-2nd Floor

Hardware	
MAC Address	00-0e-d8-14-f2-4c
FPGA Version (main board)	20
FPGA Version (expansion card)	Unavailable
Hardware Version	ASY-2100-11,R07
Serial Number	01047055
NOR Flash Model	is25lp512m
MGMT PHY Model	vsc8211

Temperatures	
CPU	39.6(C), 103.2(F)
Intake #1	35.9(C), 96.7(F)
Intake #2	38.2(C), 100.7(F)
Exhaust #1	39.4(C), 102.9(F)
Exhaust #2	31.2(C), 88.2(F)

Fans	
Fan #1	6885 rpm
Fan #2	6482 rpm
Fan #3	6169 rpm
Fan #4	6438 rpm

Memory	
Memory Total	513988 KB
Memory Used	119080 KB
Memory Free	394908 KB

Time	
System Date	2025-05-05T13:29:08-04:00
System Uptime	4d 05:24:52

Software	
Bootloader Version	1_4-22404
Software Version	GAM-12/24-M_v1.8.0
Software Date	2025-05-01T02:33:31-04:00
Code Revision	27787
Acknowledgments	Details

Figure 16 Checking new gam FW version


18. Immediately after the GAM was updated the endpoints could be showing a software mismatch warning  at **Monitor→G.Hn→Overview**.
19. Starting on GAM FW v.1.6.0, **Endpoint Automatic Firmware Upgrade** feature is set to **Enable** by default at **Configuration→G.hn→Global Configuration**, see **Figure 17**. Endpoint will start to update/reboot and then come back online with new FW.
20. Manual update of endpoints firmware is also possible but will be performed one by one, to proceed set **Endpoint Automatic Firmware Upgrade** feature to **Disable**, go to **Monitor→G.hn→Overview**, click on the MAC address of the endpoint and press the “**upgrade endpoint**” button, it will take 1min to complete the upgrade.



Figure 17 Endpoint Automatic Firmware Upgrade Coax GAM

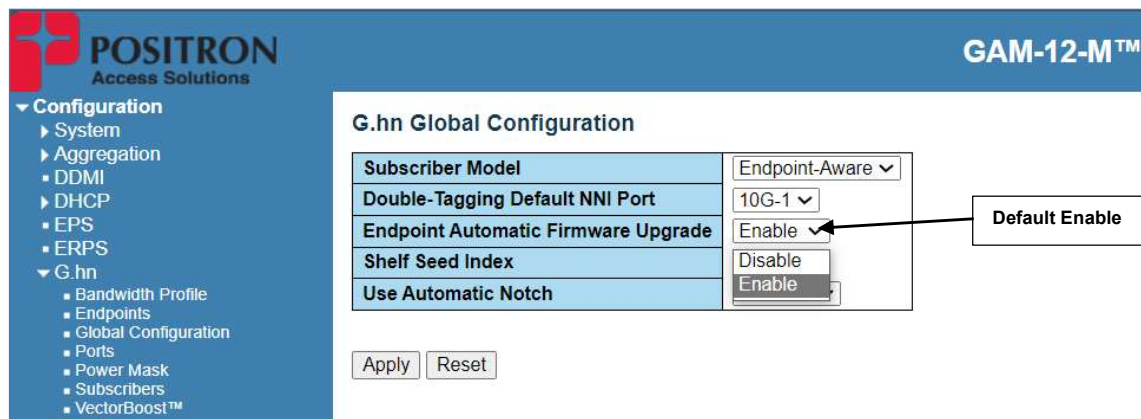


Figure 18 Endpoint Automatic Firmware Upgrade Copper Pairs GAM

21. Sometimes the endpoint doesn't seem to upgrade properly or the g.hn link goes up and down, in that case we recommend to power cycle the endpoint to fix it. If the issue persists, press and hold the reset button on the endpoint for 15 seconds, it will factory default the endpoint and firmware upgrade should be done again (manually or automatically).
22. In case Web GUI of GAM does not display **Monitor→G.hn→overview** information properly after firmware upgrade it is necessary to clear cache of your browser or open a new page in private/incognito mode.