Grandstream Networks, Inc.

GWN76xx Wi-Fi Access Points

Firmware Upgrade Guide

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INTRODUCTION

All Grandstream products' firmware are improved and updated on a regular basis. Latest firmware versions are available in: http://www.grandstream.com/support/firmware under "**Wi-Fi Access Points**" section.

Published firmware versions in Grandstream official website have passed QA tests and included new enhancements implemented, reported issues fixes for better user experience; all changes are logged in Release Notes documents.

Grandstream recommends to read Release Notes document which may include special firmware upgrade notices and always keep your devices up-to-date by upgrading their firmware versions regularly.

GWN76xx can be deployed and used either in Standalone/Master mode or in Slave mode.

This document describes steps needed to upgrade GWN76xx firmware version and covers following scenarios:

- **Upgrade when GWN76xx is used in Standalone/Master Mode**
- **Upgrade when GWN76xx is used in Slave Mode**

GWN76xx IN STANDALONE/MASTER MODE

A GWN76xx model can be upgraded via TFTP/HTTP/HTTPS by configuring the URL/IP Address for the TFTP/HTTP/HTTPS server and selecting a download method. Configure a valid URL for TFTP, HTTP or HTTPS; the server name can be FQDN or IP address.

Follow below steps to successfully upgrade your device:

1. Access GWN76xx web interface and navigate to **System Settings→Maintenance→Upgrade**.
2. In **Upgrade Via** dropdown list, select appropriate protocol (**HTTP, HTTPs** or **TFTP**).
   If using Grandstream server, select *HTTP*.
3. In **Firmware Server** field, enter the URL of the server where the firmware file is located.
   If using Grandstream server, enter "*firmware.grandstream.com*". To upgrade to beta firmware (if available) enter "*firmware.grandstream.com/BETA*".
4. Press **Save** button.
5. To start the upgrade, there are two options:
   a. Press **Upgrade Now** button to start upgrade immediately.
   b. Press **Reboot** button to restart the unit. GWN76xx will contact firmware server to start upgrade if option "*Check/Download New Firmware at Boot*" is enabled.
6. If a new firmware is available, GWN76xx will download the firmware file and start upgrade process.

Please refer to Firmware **Upgrade Settings** for advanced options.

Important:

- Please do not interrupt or power cycle the GWN76xx during upgrading process.
- During upgrade process GWN76xx LEDs will be blinking in green, and turn to solid green indicating successful firmware update. If firmware update fails, GWN76xx LEDs will be solid red.

Notes:

- Service providers should maintain their own firmware upgrade servers. For users who do not have TFTP/HTTP/HTTPS server, some free windows version TFTP servers are available for download from:
  http://www.solarwinds.com/products/freetools/free_tftp_server.aspx
  http://tftpd32.jounin.net
  End users can also choose to download a free HTTP server from http://httpd.apache.org/ or use Microsoft IIS web server.
- The latest firmware is available at http://www.grandstream.com/support/firmware. Unzip downloaded file and make the firmware file (*.bin) available in your firmware server.

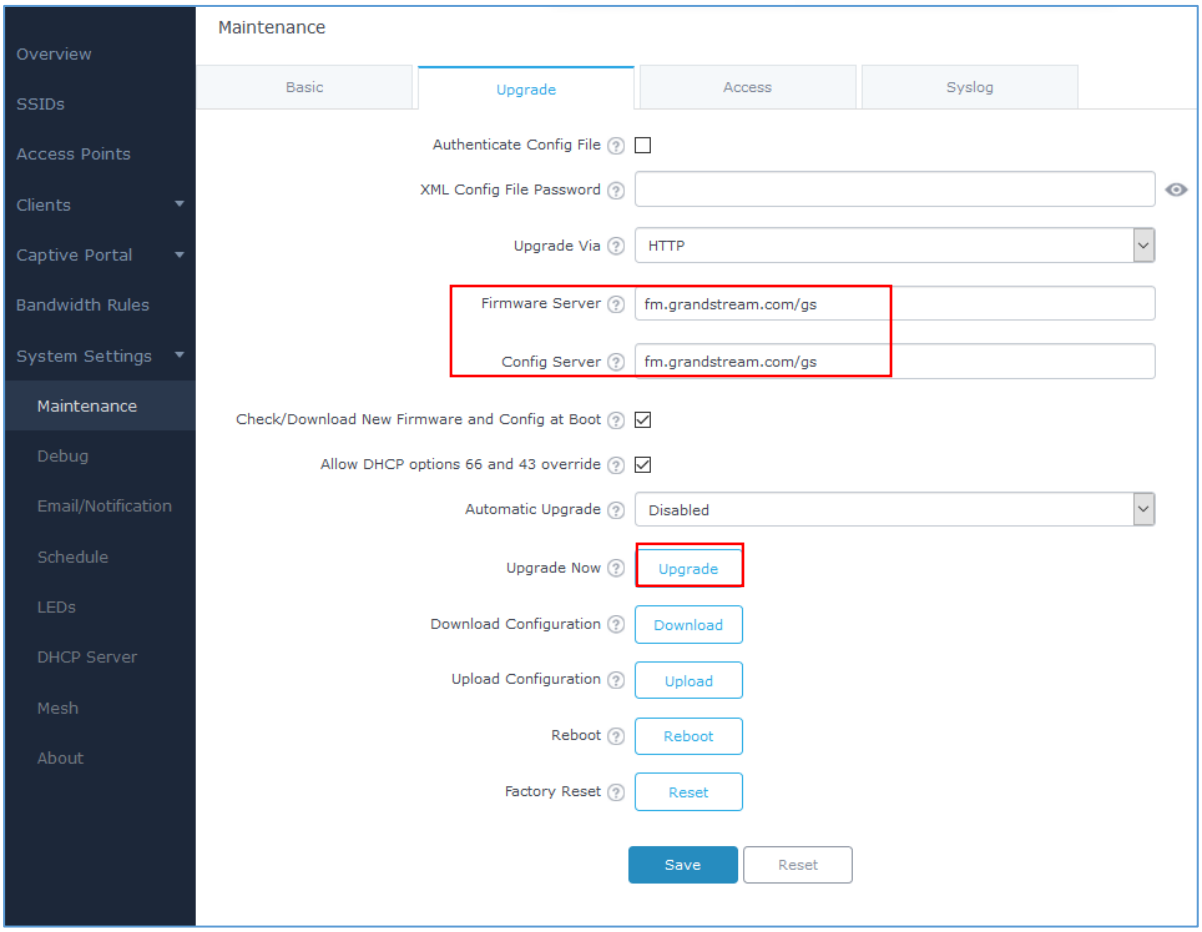


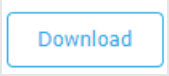
Figure 1: Maintenance Page

Upgrade Settings

Upgrade settings are available at GWN76xx web interface → **System Settings** → **Maintenance** → **Upgrade** and include following parameters:

Table 1: Network Upgrade Configuration

Field	Description
Authenticate Config File	Authenticates configuration file before acceptance. The default setting is No.
XML Config File Password	The password for encrypting the XML configuration file using OpenSSL. The password is to decrypt the XML configuration file is it is encrypted via OpenSSL
Upgrade Via	Allow users to choose the method to load the firmware and config: TFTP, HTTP or HTTPS.

Firmware Server	Define the IP address or URL for the firmware upgrade server. Make sure all files relevant to the firmware are updated completely
Config Server	Configure the IP address of URL for the file server.
Check/Download New Firmware and Config at Boot	Configure whether to enable/disable automatic upgrade and provisioning when reboot.
Allow DHCP options 66 and 43 override	Enable/Disable DHCP options 66 and 43 to override the upgrade and provisioning settings
Automatic Upgrade	Set automatic upgrade every intervals/day/week. The device will request to upgrade automatically according to the setup time. The default setting is Disabled
X Hours	Select the time period to check for firmware upgrade. *This field is available when select "Check every X Hours" in "Automatic Upgrade"*
Hour of Day (0-23)	Defines the hour of the day (0-23) to check the HTTP/TFTP server for firmware upgrade or configuration file changes. *This field is available when select "Check at Hour of Day" and "Check at Day of Week" in "Automatic Upgrade"*
Day of Week	Defines the day of the week to check the HTTP/TFTP server for firmware upgrade or configuration file changes. *This field is available when select "Check at Day of Week" in "Automatic Upgrade"*
Upgrade Now	Click on  button to begin the upgrade. Note that the device will reboot after downloading the firmware.
Download Configuration	Click on  button to download the device configuration file to PC.
Upload Configuration	Click on  to select a compressed config file to restore the config; after succeeding, the device will reboot automatically.
Reboot	Click on  button to reboot device.

Factory Reset	Click on  to restore the device and all online APs to factory default settings.

GWN76xx IN SLAVE MODE

When the GWN76xx is being paired as slave using another GWN76xx access point acting as controller, it is possible to upgrade paired access points from the controller GWN76xx.

To upgrade a slave access point, log in to the GWN76xx acting as Master Controller and go to **Access Points.** User can then upgrade slave GWN76xx access points in batch mode or upgrade a single slave access point.

Upgrade Steps

When having multiple Paired Access Points, giving the ability to upgrade multiple devices from the same model at once to the same firmware or choose a single device to upgrade it alone, this can be helpful in medium and large deployments where Master/Slave Architecture is used.

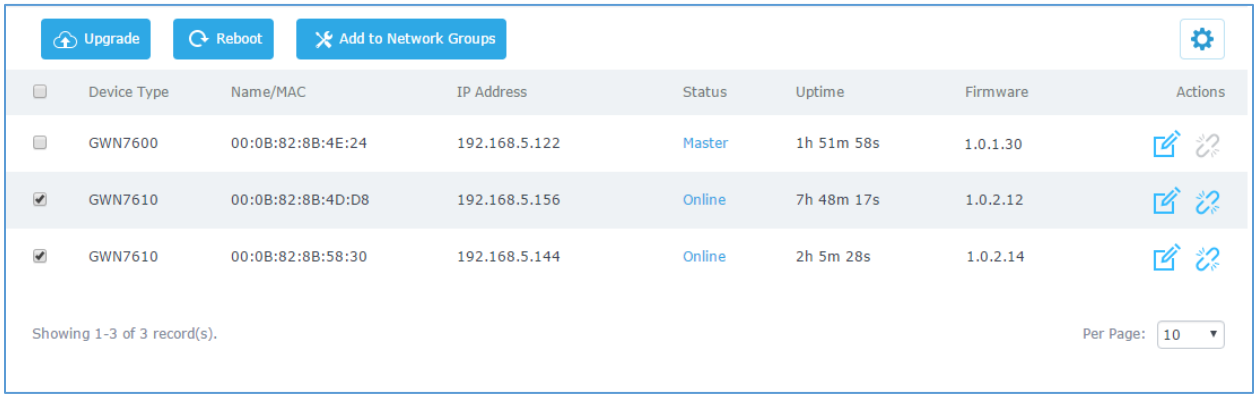


Figure 2: Access Points

Make sure that firmware server path is set correctly under Maintenance, check the desired APs to upgrade, and click on 

button to upgrade the selected paired access points. The units will download automatically the firmware from the configured server path, and reboot afterwards to finish upgrade process.

The status of the devices will show “Upgrading”, wait until it finishes and reboots, then they will appear online again.

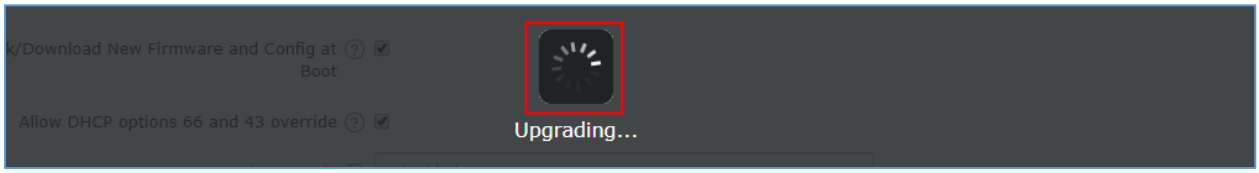


Figure 3: Upgrading Status

Important:

- The Master Access Point cannot be upgraded using batch upgrade method even if selected.
- Make sure to select Access Points with the same model when doing batch upgrade, as each model has its own firmware version.
- Please do not interrupt or power cycle the GWN76xx during upgrading process.
- During upgrade process GWN76xx LEDs will be blinking in green, and turn to solid green indicating successful firmware update. If firmware update fails, GWN76xx LEDs will be solid red.