

Grandstream Networks, Inc.

How-to Guide:

Update Grandstream Device Certificate



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SUPPORTED DEVICES

| Model | Supported |
|--|-----------|
| GRP2612/2613/2614/2615/2616 GRP2624/2634/2636/2650/2670 | Yes |
| GRP2601/2602/2603/2604 | Yes |
| GXP2130/2135/2140/2160/2170 | Yes |
| WP810/822/825 | Yes |
| HT801/802/812/814/818 | Yes |
| GXW4216V2/4224V2/4232V2/4248V2 | Yes |
| GXV3450/3470/3480 | Yes |
| WP820 | Yes |
| GDS3710/3712 | Yes |



INTRODUCTION

Grandstream devices support two generations of individual certificate. Many devices deployed in the field support the built-in individual certificate using RSA+SHA256 encryption. For security purpose, the new certificate using ECDSA+SHA384 encryption has implemented on recent firmware for supported models to upgrade to the new certificate.

To assist customers to upgrade devices to the new certificate, Grandstream provide the following website for customers to check certificate status and update certificate for the devices:

<https://upgradecert.grandstream.com:9443/>

This document describes how to check and update device certificate from certificate type RSA+SHA256 to ECDSA+SHA384.

Note:

When deploying devices with new certificate, if the server side requires loading the new root CA from Grandstream for HTTPS or SIP over TLS, please contact [Grandstream Helpdesk](#) for assistance.



CHECK DEVICE CERTIFICATE STATUS

Method 1: Check device packaging and label

To make it easy for end users to check whether the device is already on new certificate with certificate type ECDSA+SHA384, a new certificate icon is added on the device packaging as well as the label on the device itself.



: This is the new certificate icon printed on device packaging and label on the device.

If this icon is presented on the device packaging and label, the device is pre-loaded with ECDSA+SHA384 certificate out of the box already.

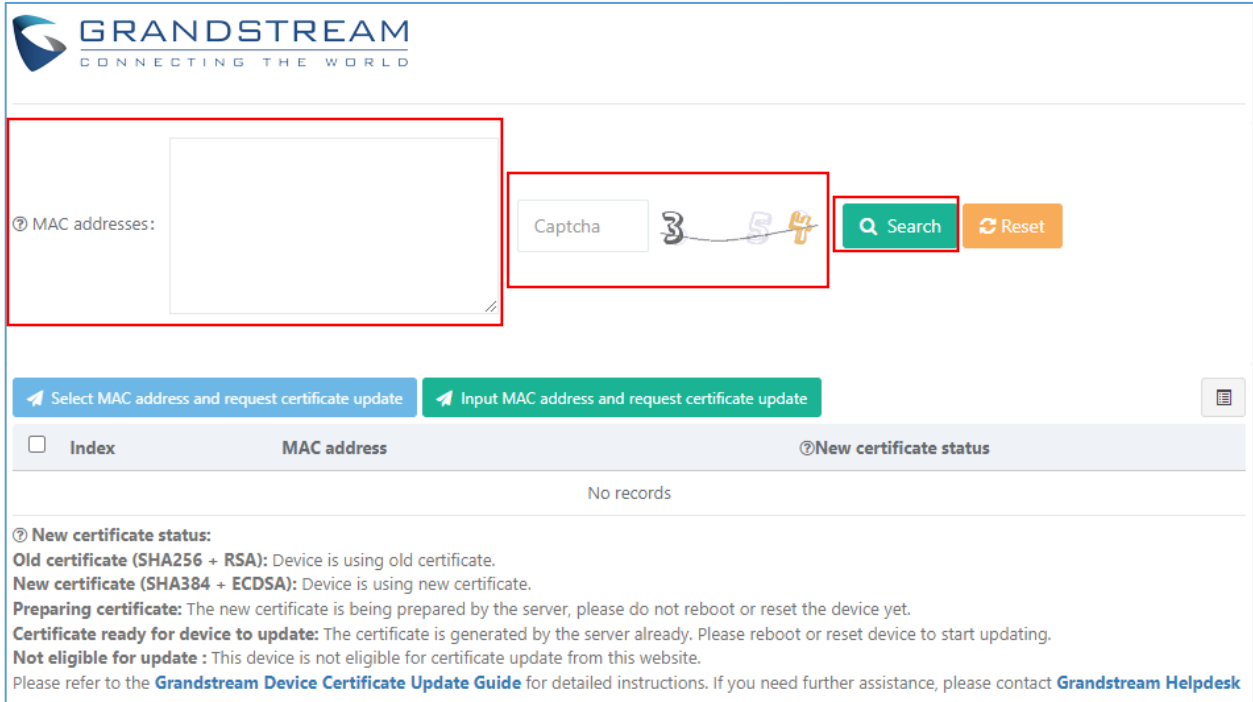
Please note that certain batch of the devices are also pre-loaded with ECDSA+SHA384 certificate but the packaging and label are not updated with the new icon yet. Please refer to method 2 and method 3 below to confirm whether the device has ECDSA+SHA384 certificate or not.

Method 2: Check device certificate status by MAC address

Users can check whether the device is manufactured with ECDSA+SHA384 certificate by using the Grandstream certificate upgrade website.

1. Enter the URL of Grandstream device certificate upgrade website on your web browser:
<https://upgradecert.grandstream.com:9443/>
2. Enter the MAC address of the device. For Multiple MAC addresses, please separate them in different lines. Up to 1000 MAC addresses can be supported.
3. Enter captcha.
4. Click on "Search" button.





⑦ MAC addresses:

Captcha 3 5 4

Search Reset

Select MAC address and request certificate update Input MAC address and request certificate update

| Index | MAC address | ⑦New certificate status |
|------------|-------------|-------------------------|
| No records | | |

⑦ New certificate status:

Old certificate (SHA256 + RSA): Device is using old certificate.

New certificate (SHA384 + ECDSA): Device is using new certificate.

Preparing certificate: The new certificate is being prepared by the server, please do not reboot or reset the device yet.

Certificate ready for device to update: The certificate is generated by the server already. Please reboot or reset device to start updating.

Not eligible for update : This device is not eligible for certificate update from this website.

Please refer to the [Grandstream Device Certificate Update Guide](#) for detailed instructions. If you need further assistance, please contact [Grandstream Helpdesk](#)

Figure 1: Search by Device MAC Addresses

5. The search result is displayed on the web page. “New certificate status” indicates the status of the certificate:
 - (1) New certificate (SHA384 + ECDSA). Device is using new certificate. No update is needed.
 - (2) Old certificate (SHA256 + RSA). Device is using old certificate. Please follow instructions to update to new certificate.
 - (3) Not eligible for update. This device is not eligible for certificate update from this website. Please contact [Grandstream Helpdesk](#) if further assistance is needed.
 - (4) Preparing certificate. The new certificate is being prepared by the server, please do not reboot or reset the device.
 - (5) Certificate ready for device to update. The certificate has been generated by the server already. Please reboot or reset device to start updating the certificate on the device.

| Select MAC address and request certificate update | | Input MAC address and request certificate update | |
|---|-------|--|--|
| <input type="checkbox"/> | Index | MAC address | ②New certificate status |
| <input type="checkbox"/> | 1 | C074AD2776C6 | Device is using old certificate |
| <input type="checkbox"/> | 2 | C074AD277688 | Old certificate (SHA256 + RSA) |
| <input type="checkbox"/> | 3 | 000B82B73848 | Certificate ready for device to update |
| <input type="checkbox"/> | 4 | C074AD5D8DDC | Not eligible for update |
| <input type="checkbox"/> | 5 | C074AD327C1E | Preparing certificate |

② New certificate status:
Old certificate (SHA256 + RSA): Device is using old certificate.
New certificate (SHA384 + ECDSA): Device is using new certificate.
Preparing certificate: The new certificate is being prepared by the server, please do not reboot or reset the device yet.
Certificate ready for device to update: The certificate is generated by the server already. Please reboot or reset device to start updating.
Not eligible for update : This device is not eligible for certificate update from this website.
 Please refer to the [Grandstream Device Certificate Update Guide](#) for detailed instructions. If you need further assistance, please contact [Grandstream Helpdesk](#) .

Figure 2: New Certificate Status in Search Result

Method 3: Check certificate status on device LCD or web UI.

- For GRP/GXP/WP devices with LCD, users can check certificate status on the LCD display. Users can also check the certificate status for these models through web UI if they have web UI access to the device. Below screenshots show LCD menu where the certificate status is displayed.

(1) For GRP261X/262X/263X/26X0/GXP21XX, certificate status is displayed under device LCD menu->Status->System Info. See "Certificate Type" field.

| System Information | |
|--------------------|------------------|
| Hardware | |
| HW | V1.1A |
| P/N | 9620009711A |
| S/N | 20EZ3EXK51021F75 |
| Certificate Type | ECDSA+SHA384 |
| Software Version | |

Figure 3: Certificate Type Display on GRP261x/262x/263x/26x0 LCD

(2) For GRP260X, when device is on idle screen, press UP arrow button to bring up device status prompt. Then press DOWN arrow button to scroll down to Cert Type field.

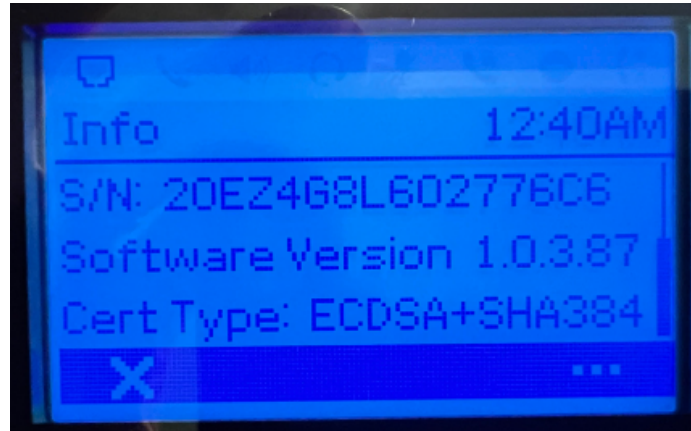


Figure 4: Certificate Type Display on GRP260x LCD

- (3) For WP810/822/825, please check LCD menu->Status->System Status, scroll down to “Certificate Type” field.

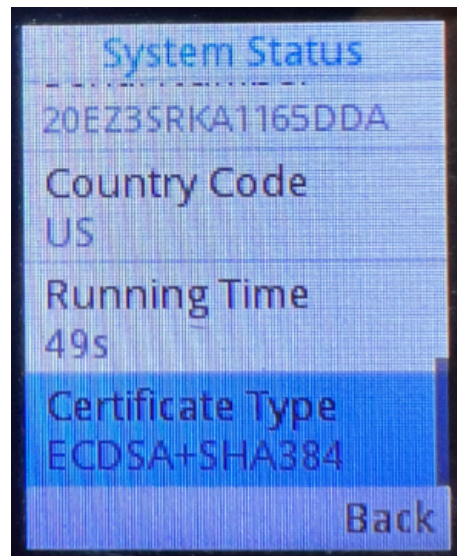


Figure 5: Certificate Type Display on WP810/822/825 LCD

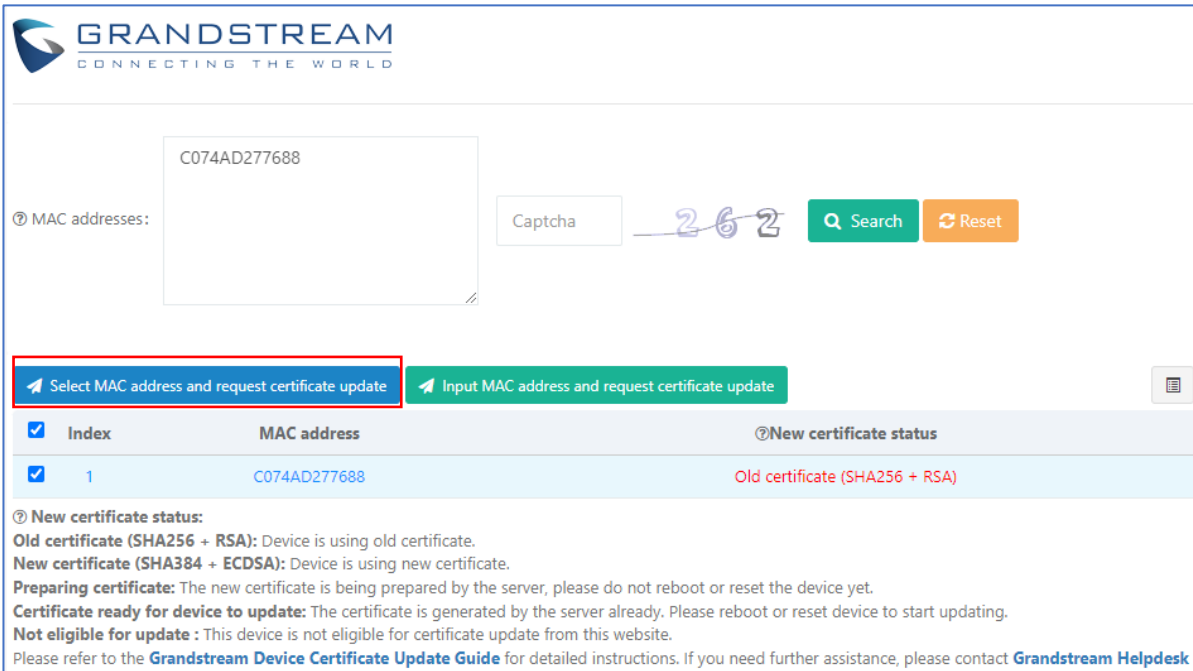
2. For HT8XX models without LCD, please log into device web UI->navigate to status page->check the “Certificate Type” field.

| | |
|------------------------------|---|
| Product Model: | HT802 |
| Serial Number: | 207GHR7N208B12E3 |
| Hardware Version: | V2.5A Part Number -- 9610003725A |
| Software Version: | Boot 1.0.45.1 Core 1.0.45.1 Base 1.0.45.2 Prog 1.0.45.2 CPE 1.0.4.54 |
| Software Status: | Running Mem: 22864 |
| System Up Time: | 04:08:48 up 2 min |
| CPU Load: | 28% |
| Network Cable Status: | Up 100Mbps Full |
| PPPoE Link Up: | Disabled |
| NAT: | Unknown NAT |
| Certification Type: | ECDSA+SHA384 |

Figure 6: Certificate Type Display on HT8xx Web UI

UPDATE CERTIFICATE

1. After search result is listed from previous step, check the boxes for the MAC addresses to select the devices you wish to update from the list.
2. Click on button “Select MAC address and request certificate update”.



The screenshot shows the Grandstream web interface for updating a device certificate. At the top, there's a search bar with the MAC address 'C074AD277688' entered. Below the search bar, there's a table with one row containing the selected MAC address. A red box highlights the 'Select MAC address and request certificate update' button. Below the table, there's a section titled 'New certificate status:' with instructions on how to update the device certificate.

MAC addresses: C074AD277688

Captcha: 262

☒ Select MAC address and request certificate update

| Index | MAC address | New certificate status |
|-------|--------------|--------------------------------|
| 1 | C074AD277688 | Old certificate (SHA256 + RSA) |

New certificate status:
 Old certificate (SHA256 + RSA): Device is using old certificate.
 New certificate (SHA384 + ECDSA): Device is using new certificate.
 Preparing certificate: The new certificate is being prepared by the server, please do not reboot or reset the device yet.
 Certificate ready for device to update: The certificate is generated by the server already. Please reboot or reset device to start updating.
 Not eligible for update: This device is not eligible for certificate update from this website.
 Please refer to the [Grandstream Device Certificate Update Guide](#) for detailed instructions. If you need further assistance, please contact [Grandstream Helpdesk](#)

Figure 7: Select MAC Address and Request Certificate Update

3. A new dialog is prompted for the user to enter email address and captcha.
4. Fill in your email address and captcha and click on “Obtain email verification code”.

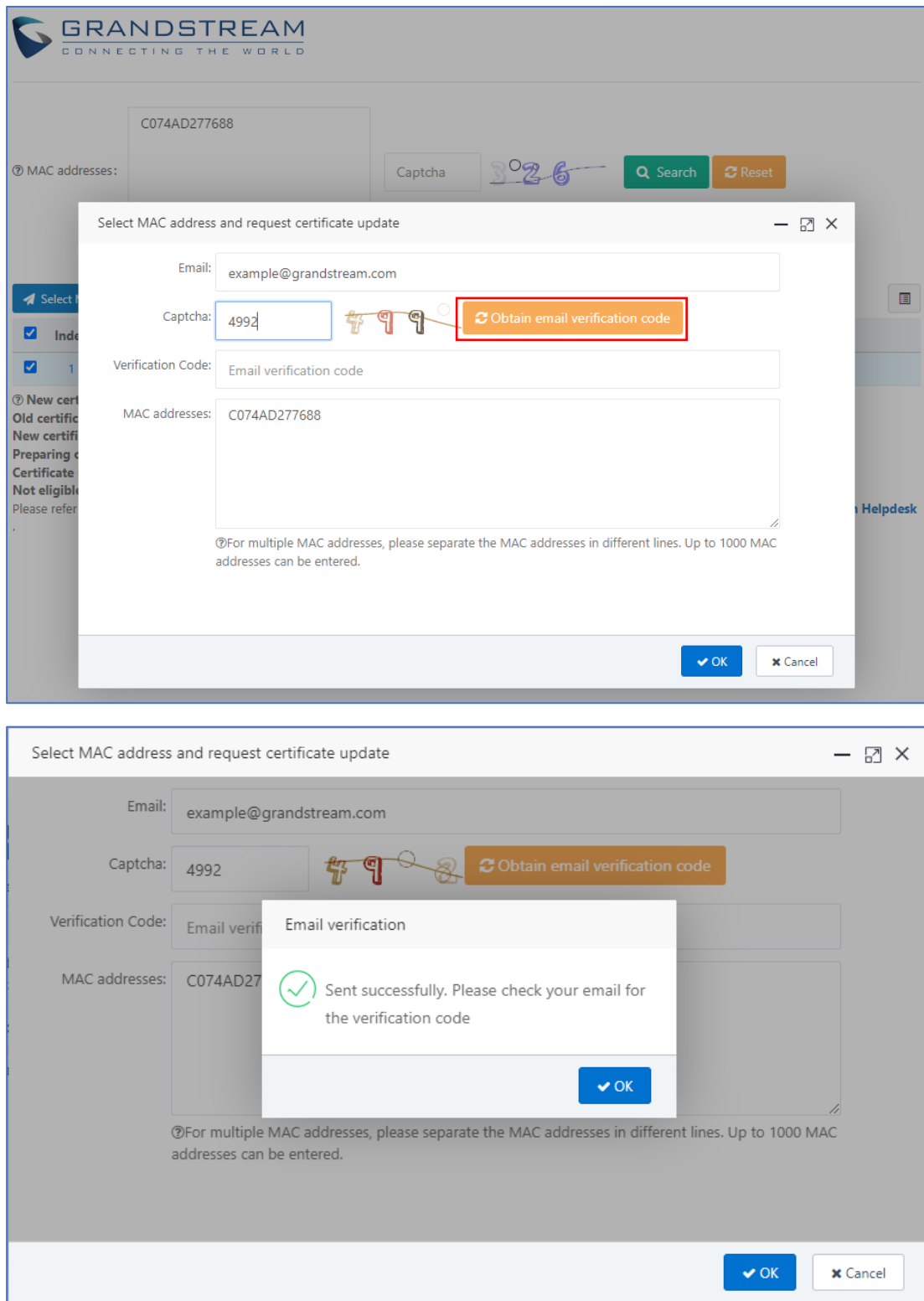


Figure 8: Request Certificate Update Dialog

5. Check the email inbox to obtain the verification code and enter the code in the “Verification Code” field. Then click on “OK” to submit the certificate update request.

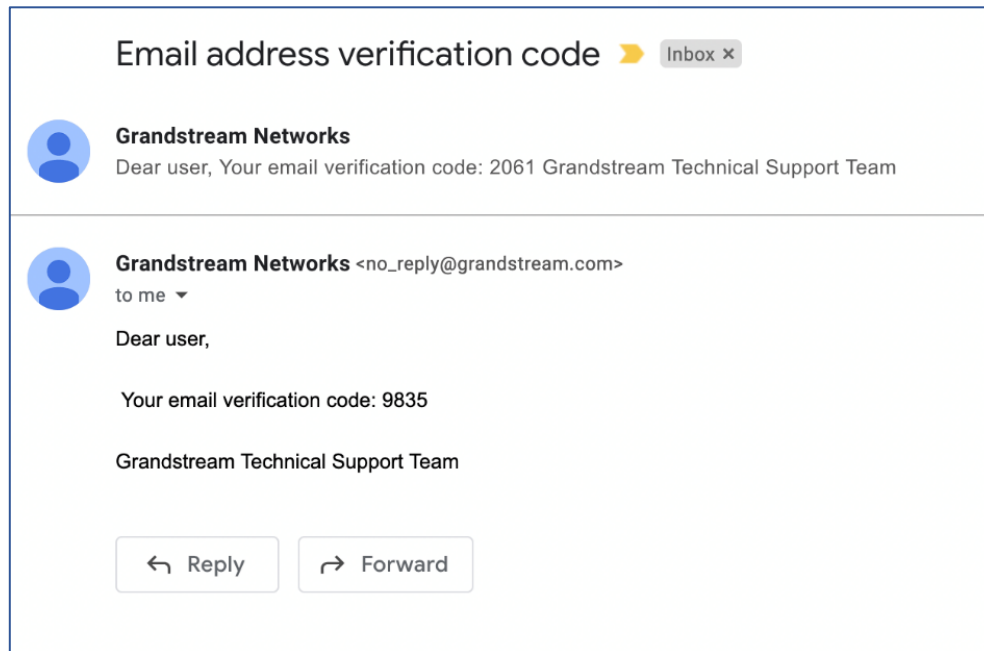
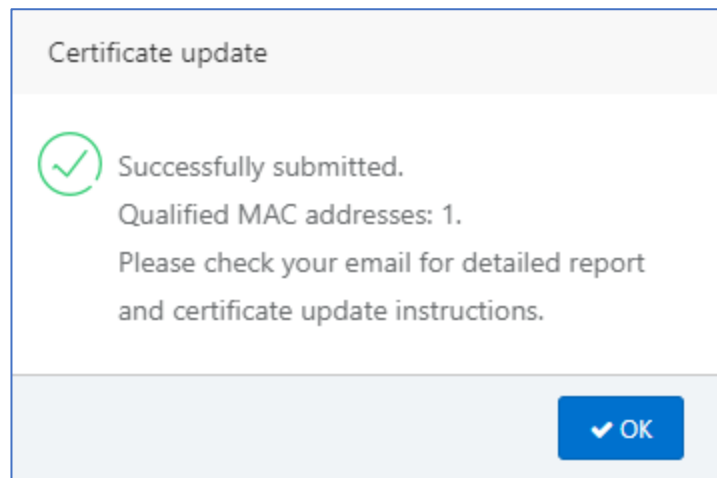


Figure 9: Obtain Email Verification Code

6. The request has been submitted, please check email for certificate update instructions.



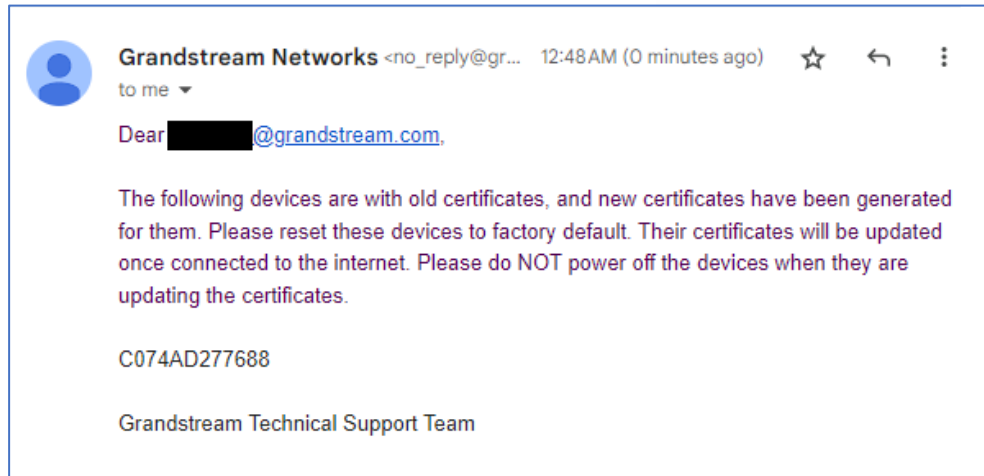


Figure 10: Certificate Update Request Submitted

7. Follow the instructions in the email. Please ensure the device is connected to Internet, then reset your device to factory default settings and wait for the device to reboot.
8. If the device is on an old firmware that does not support certificate update, the device is automatically upgraded to an eligible firmware first. For devices with LCD, the LCD displays upgrading progress. Please do not power cycle or disconnect from Internet during firmware upgrading.
9. The device reboots automatically after firmware upgrading is completed. Then it starts the certificate update process. For devices with LCD, the LCD will display the upgrading progress. Please do not power cycle or disconnect from Internet during certificate upgrading progress.
10. Once the device boots up again, please check certificate type on the device. It should show certificate type as ECDSA+SHA384. Please refer to “**Method 3: Check certificate status on device LCD or web UI**” in section **CHECK DEVICE CERTIFICATE STATUS** for certificate display on different models.


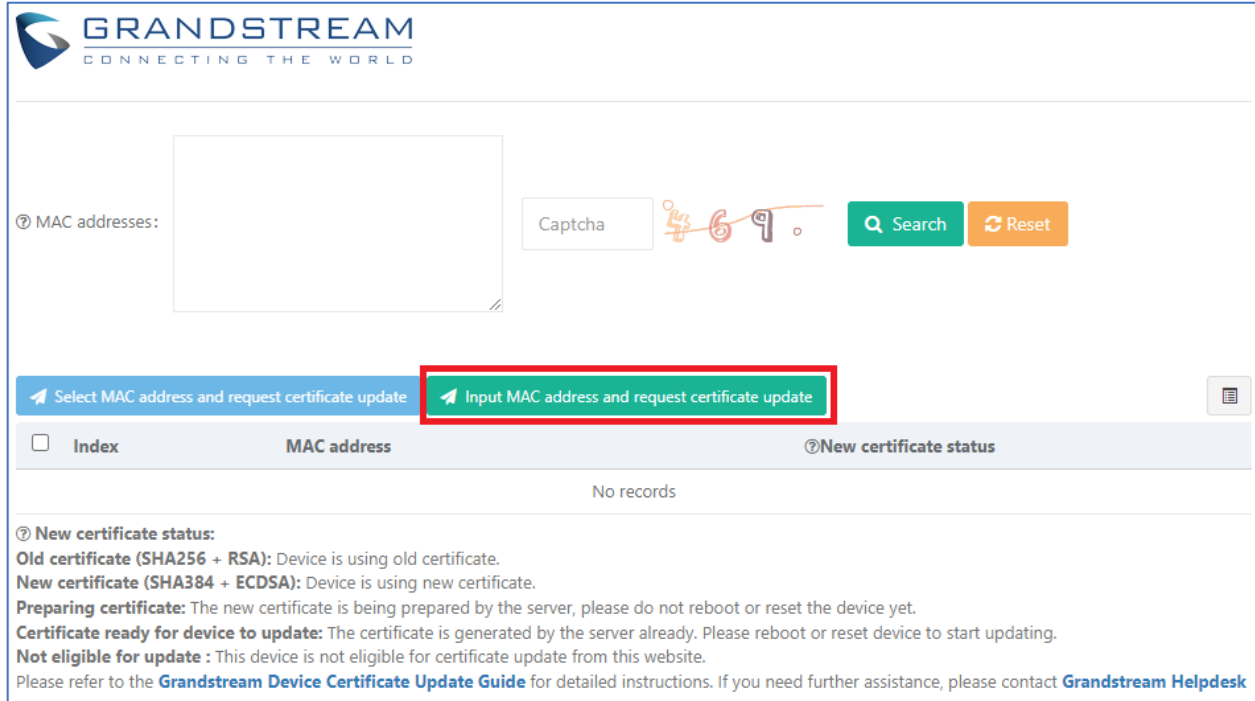
| System Information | |
|---|------------------|
| Hardware | |
| HW | V1.1A |
| P/N | 9620009711A |
| S/N | 20EZ3EXK51021F75 |
| Certificate Type | ECDSA+SHA384 |
| Software Version | |
|  | |

Figure 11: Certificate Type Display on GRP261x LCD

INPUT MAC ADDRESS AND REQUEST CERTIFICATE UPDATE

If users do not need to check certificate status for the device before updating certificate update, please click on “Input MAC Address and Request Certificate Update” to enter MAC address to update their certificate directly.

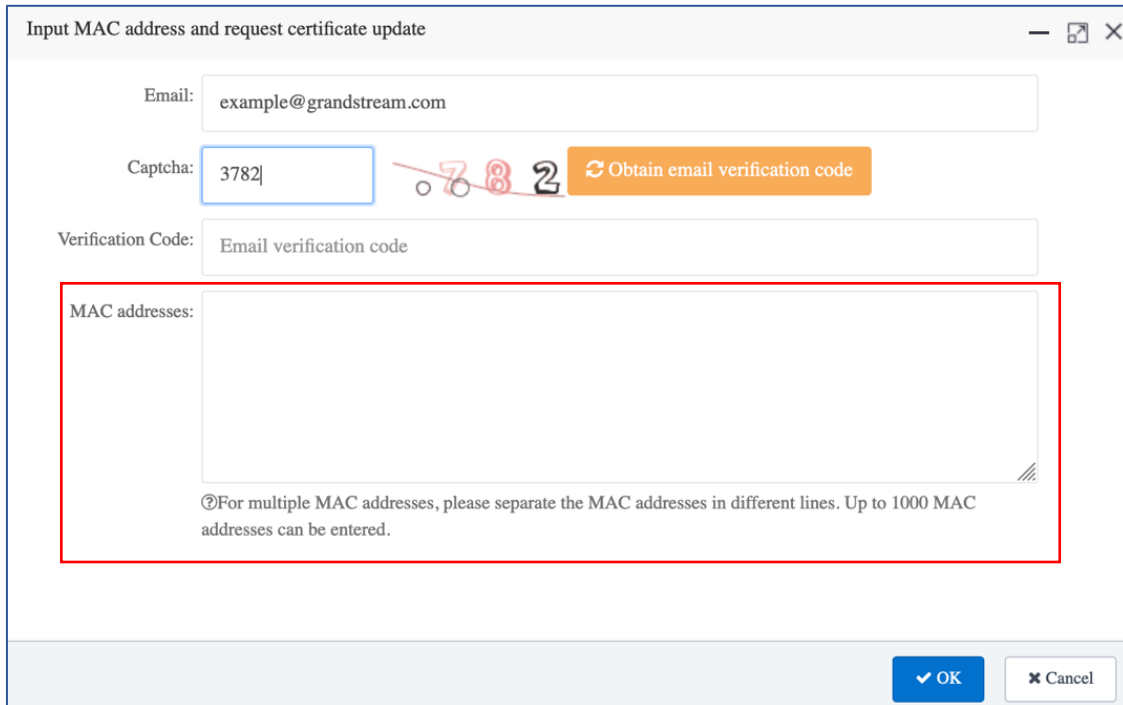
1. Click on “Input MAC Address and Request Certificate Update”.



The screenshot shows the Grandstream web interface. At the top is the Grandstream logo and tagline. Below it is a form with a text area for 'MAC addresses', a 'Captcha' field, and 'Search' and 'Reset' buttons. A navigation bar contains two buttons: 'Select MAC address and request certificate update' and 'Input MAC address and request certificate update', with the latter highlighted by a red box. Below the navigation bar is a table with columns 'Index', 'MAC address', and 'New certificate status'. The table currently shows 'No records'. At the bottom, there is a section for 'New certificate status' with instructions on how to interpret the status (Old certificate, New certificate, Preparing certificate, Certificate ready for device to update, Not eligible for update) and a link to the 'Grandstream Device Certificate Update Guide'.


Figure 12: Input MAC Address and Request Certificate Update

2. Enter the email address, captcha and fill in MAC addresses in the MAC addresses field. Then follow the same steps starting from step 3 in the previous section **UPDATE CERTIFICATE**.



Input MAC address and request certificate update

Email:

Captcha: 

Verification Code:

MAC addresses:

②For multiple MAC addresses, please separate the MAC addresses in different lines. Up to 1000 MAC addresses can be entered.

Figure 13: Dialog to Input MAC Address and Request Certificate Update

Note:

Please contact Grandstream Technical Support for assistance if needed for certificate update:

<https://helpdesk.grandstream.com/>

Your devices MAC addresses may be required during troubleshooting process with Grandstream Technical Support.