



Access level switches,  
industrial switches

## **MES14xx, MES24xx, MES3708P**

Guide for firmware and bootloader version update

## SYSTEM FIRMWARE AND BOOTLOADER UPDATE VIA CLI



**During the process of system firmware or the bootloader update, you should not disable the power or reboot the device. Update should be performed using CLI.**

To update the firmware and bootloader using the CLI, you need to connect to the switch using a terminal program (such as HyperTerminal) via Telnet or SSH, or via the serial port.

Terminal program configuration when connecting to the switch via serial port:

1. Select the corresponding serial port;
2. Set the data transfer rate to 115200 bit/s;
3. Specify the data format: 8 data bits, 1 stop bit, non-parity;
4. Disable hardware and software data flow control;
5. Specify VT100 terminal emulation mode (many terminal applications use this emulation mode by default).



**For switch models MES1428, MES2408, MES2428, MES3708P the mes2400-xxxx-xxxx.iss firmware file and the mes2400-xxxx-xxxx.boot bootloader file are used.**

**For switch model MES2424 the mes2424-xxxx-xxxx.iss firmware file and the mes2424-xxxx-xxxx.boot bootloader file are used.**

## 1. Bootloader file upload to non-volatile switch memory

To upload the bootloader file you need to enter the following command in the CLI:

```
copy tftp://<ip-address>/filename boot,
```

where

- *<ip address>* – IP address of the TFTP server from which the bootloader file will be downloaded;
- *filename* – bootloader file name.

The copying process looks as follows:

```
console# copy tftp://<ip-address>/filename.boot boot
Erasing bootloader sector and starting copy operation...
...Completed: 10 %...
...Completed: 20 %...
...Completed: 30 %...
...Completed: 40 %...
...Completed: 50 %...
...Completed: 60 %...
...Completed: 70 %...
...Completed: 80 %...
...Completed: 90 %...
Copied tftp://<ip-address>/filename.boot ==> boot
```

If the bootloader file upload was successful, the following message will appear:

```
Copied tftp://<ip-address>/filename.boot ==>boot
```

Proceed to the point 2 of the instruction.



**If the update process is interrupted by the %Copied invalid bootloader file message, you need to check the integrity of the bootloader file on the tftp server.**

**If the update process is interrupted by the %Unable to copy remote bootloader file message, you need to check:**

- TFTP server availability
- Availability of the file and its correspondence to the device model.

**After correcting the errors you need to repeat the download of the bootloader file and proceed to the point 2.**

## 2. System firmware file upload to non-volatile switch memory

To upload the system firmware file you need to enter the following command in the CLI:

```
copy tftp://<ip-address>/filename image,
```

where

- *<ip address>* – IP address of the TFTP server from which the system firmware file will be downloaded;
- *filename* – firmware file name.

The copying process looks as follows:

```
console# copy tftp://<ip-adress>/filename.iss image
Erasing image sector and starting copy operation...
...Completed: 10 %...
...Completed: 20 %...
...Completed: 30 %...
...Completed: 40 %...
...Completed: 50 %...
...Completed: 60 %...
...Completed: 70 %...
...Completed: 80 %...
...Completed: 90 %...
Copied tftp://<ip-adress>/filename.iss image ==> image
```

If the firmware file upload was successful, the following message will appear:

```
Copied tftp://<ip-address>/filename.iss ==>image
```

Proceed to the point 3 of the instruction.



**If the update process is interrupted by the %Copied invalid image message, you need to check the integrity of the bootloader file on the tftp server.**

**If the update process is interrupted by the %Unable to copy remote image message, you need to check:**

- TFTP server availability
- Availability of the file and its correspondence to the device model.

**After correcting the errors you need to repeat the download of the firmware file and proceed to the point 3.**

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### **3. *Selecting the system firmware file that will be active after rebooting the switch***

The system firmware file is loaded into an inactive memory area by default (inactive image) and will be active after the switch is rebooted.

### **4. *Switch reboot***

To reboot the device, execute the `reload` command.