

# TS8 firmware update quick reference guide

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## Introduction

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This document is a short overview of the TS8 mobile data terminal firmware update procedure. Firmware recovery procedure is not covered in this document.

Quick reference guide target audience: TS8 administrators.

Users who perform firmware updates have to be familiar with the device and have general knowledge about how to use removable mass storage devices with PC (Personal Computer).

**NB! Please be aware that you cannot change the firmware tree with an update package.** If your device is using PiccoLink emulation firmware ( `ple-fw` ), use only this update package.

## Update package download source and contents

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The latest released default firmware update package `ts8-ple-fw.pkg` can be downloaded from [Vecly public download site](#). See Readme in `doc` folder for the update package contents.

## Configuration update

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TS8's configuration update mass deployment procedure is similar to the firmware update procedure described in this document. See the TS8 configuration quick reference guide for details. If you want to update the configuration file first, make sure that both the configuration file `config.ini` (and directory `etc` if needed) are stored in the memory card directory `_ts8-service` together with firmware update package.

## Prerequisites

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Before you begin the update procedure, please make sure that:

- The TS8 is in working condition.
- User PIN is known.
- Device's battery is fully charged or the TS8 is connected to a power supply. **NB! Failure to provide power during update process might disrupt the process and firmware recovery might be required.**
- You have a formatted microSD (Secure Digital) memory card at hand (see memory card limitations below, in section "Firmware update procedure").

- You have a USB mini-B cable ready, if you plan to save the update package directly to the memory card inserted in the TS8.

## Firmware update procedure

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### TS8 update procedure concept

Firmware is updated via update package stored on a microSD card. You can either prepare this card manually or connect the TS8 to a host PC and use the device's mass storage mode.

**NB! Note that push-push mechanism is used to insert and remove a microSD card.** Please refer to the TS8 User Manual for instructions.

### Memory card limitations

There are known hardware limitations when using SDHC and SDXC cards, specially for cards higher than class 4. Please test compatibility or contact Vecly to purchase a compatible microSD card.

### Memory card preparation

Please make sure that your memory card's "MBR (Master Boot Record) partitioning map" contains **only one partition** with File Allocation Table FAT16 or FAT32.

To copy files directly to a memory card:

- Insert a microSD card to your PC's card reader.
- Create a folder `_ts8-service` to the memory card root.
- Copy the file `ts8-ple-fw.pkg` to this folder (delete or overwrite old file if needed).
- Eject (unmount) the card.

When using TS8 to copy files to a memory card:

- Power down TS8 by selecting `Power off` from the menu.
- Insert a formatted memory card to the TS8's card slot.
- Connect the TS8 to the host PC via mini-USB cable.

Wait until the TS8 boots up to the mass storage mode. You should see the following message:

```
Enter PIN:  
to access configuration
```

At this point, the memory card should be visible on the host PC. If not, see hardware limitations and formatting requirements.

- Proceed with the steps 2 and 3 described in section "To copy files directly to a memory card" (see above).
- Eject (unmount) the card from the host PC operating system.
- Disconnect the mini-USB cable.

Device reboots with the following message:

```
Service files on SD card
Rebooting
```

## Update procedure

- Insert your memory card to the TS8 (if not inserted earlier).
- Start the device by pressing and holding `SCAN/POWER ON` key until the power LED lights up.

If the configuration file `config.ini` is stored on the memory card, the TS8 will update configuration before firmware. The following message indicates that the configuration file is on the memory card:

```
Found configuration update
in memory card

Press OK to enter PIN
and update configuration

Press DEL to delete update

Press any other key to
continue
```

**NB! The following step applies only to the configuration update:**

- Press `OK` to start configuration update after correct PIN is entered.
- `DEL` to delete the configuration file from the memory card.
- Press any other key to continue with firmware update.

If the firmware update package was successfully copied to memory card, the TS8 displays the following message on start-up:

```
Found firmware update
in memory card

Press OK to enter PIN
and update firmware

Press DEL to delete update

Press any other key to
shut down the device
```

- **Make sure that the battery is fully charged or the device connected to a power supply.**
- Press `OK` to initiate the update process after correct PIN is entered.

The TS8 will display status messages during update, such as:

```
Updating firmware:  
Updating splash screen  
Updating kernel  
Updating file system
```

If particular parts are not included in update package following messages are displayed. It is **not** failure condition, but depends from package composition.

```
Bootloader not included  
Bootsplash not included  
Kernel not included  
Filesystem not included
```

If the update has been successfully completed, the device beeps and reboots with the following message:

```
Done. Shutting down.
```

The TS8 remains in the "update mode" until an update package is found on memory card.

- You can delete the update package by pressing `DEL` key.
- You can remove the memory card and use the same card to update other mobile data terminals.

## Verify that the update has been completed

Current firmware version is displayed in the upper right corner during the device's start-up, but you can also check the firmware version from the `Device information` screen, which can be accessed from the Menu.