

History

Version	Data	Changes	Name
1	13/12/2012	Initial version	Jens Geudens
2	7/2/2024	Add PD42-S info	Michel Roks

Boot loader

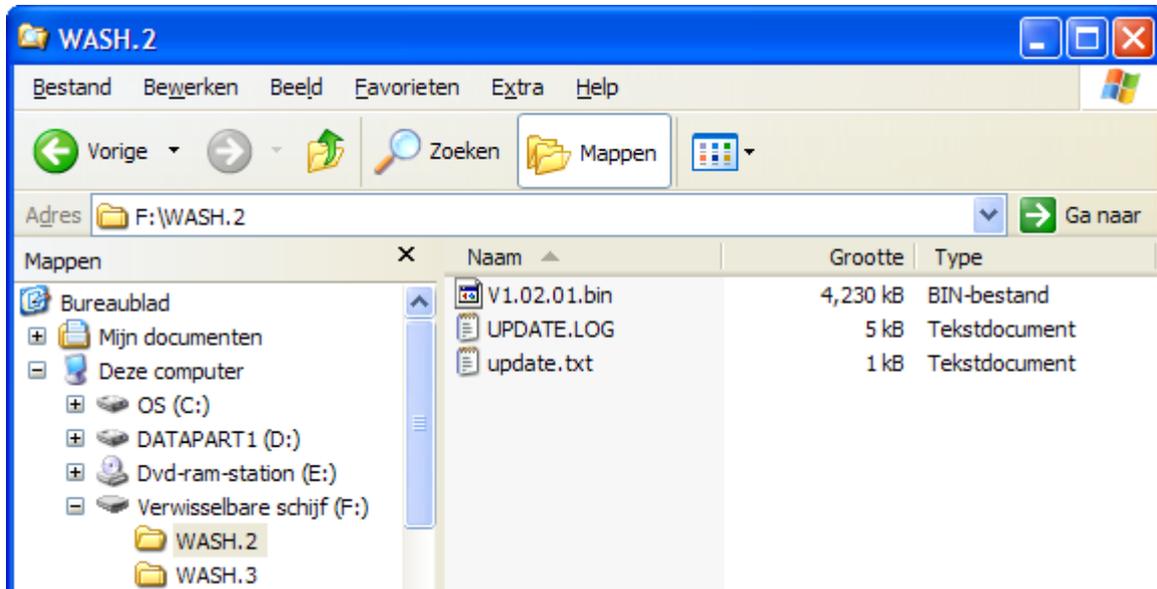
The board is equipped with a bootloader with USB update capabilities. This bootloader is used to start or update the application software. If no usb stick is present during boot, the application software will start. If a usb stick is present, the bootloader will start the update process. The usb stick needs to be prepared for updating the application software on the board.

Preparation of usb stick

On this USB stick, a folder with a specific name must be present on the stick. This name must be the name of the board which will be updated.

Board type	Folder name
LCD	"WASH.1" or "55-CPU"
TFT with 8MB flash	"WASH.2"
TFT with 16MB flash	"WASH.3"
55CPU3-WASH-FULL	"WASH.4"
PD42-S Oven	"42-S_CPU.1"

You can control the update process by adding files in this folder. A file "update.txt" is the command file. You need to put commands in this file. The available commands are explained in the next chapter. The commands and file names in the update.txt file are not case-sensitive. The filenames in the update folder must respect a maximum of 12 characters(including file extension and point).



Command file

The command file is used to control the update process. Note that the commands and filenames are not case-sensitive. There are several commands available:

- crccheck
- copy
- copydata
- nowait
- runonce
- format

These command will be explained in detail. The example command usages are based on the files as shown in the previous screenshot. This means an update folder with following files.

File	Explanation
data.txt	Data file which can be used in the application software
UPDATE.LOG	Log file generated by the bootloader
Update.txt	Command file
V1.02.01.bin	Application software update file

crccheck

This command will check the integrity of the application software on the usb stick. It is recommend that this check is always done before updating.

Example usage: `crccheck V1.02.01.bin`

copy

This command copies the application software update to the internal memory of the board. This command should only be used for updating the application software. For copying data files to the internal memory, use the copydata command.

Example usage: copy V1.02.01.bin

copydata

This command copies a data file to the internal memory of the board. This command shouldn't be used for updating the application software. A data file can never be named firmware.bin.

Example usage: copydata data.txt

nowait

The bootloader will normally wait at the end of the update process until the usb stick is removed. This command will change this default behavior. If the nowait command is present in the command file, the bootloader will start the application software immediately at the end of the update process. This command doesn't need any parameters.

Example usage: nowait

Runonce

This command is used for debugging. The runonce command start the application software from the usb stick in RAM without copying it to the internal memory. This command should not be used together with the copy command.

Example usage: runonce V1.02.01.bin

Format

This command is also used for debugging and should be used with caution. The format command deletes all files from internal memory. The application software will also be removed from internal memory. The internal memory is represented by device0.

Example usage: format device0

Log file

The update process will stop if there is an error during the update. You can find extra information about the update process in the file (UPDATE.LOG) on the usb stick.

Examples

Command file

```
crccheck V1.02.01.bin
copy V1.02.01.bin
nowait
```

Log file

```
23/02/2010 19:14:04 Bootloader version: V1.00.05
23/02/2010 19:14:08 CRC Check passed: V1.02.01.bin
23/02/2010 19:14:09 Correct application signature
23/02/2010 19:14:26 Copy succeeded: V1.02.01.bin
23/02/2010 19:14:26 Updated from version 1.2.0 to 1.2.1
23/02/2010 19:14:29 CRC Check passed: V1.02.01.bin
```