



Installing V40 Boot Image

Manual

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1. Introduction

In this manual several steps are explained in order to fully utilize the boot images of the ARM V40 touch PCs. This includes the steps to prepare the SD card, convert the downloaded image to the SD card and eventually to put the boot image on the faytech touch PC.

2. Version & Revision History

Current manual version 1.0

Date	Version	Revision / remarks
21/11/2019	1.0	Manual created

3. Preparing the Image on the SD card

3.1. Extract image from tar.gz file

After downloading the Image from the faytech website (www.faytech.com/downloads), it is necessarily to extract the tar.gz file in order to transfer it correctly onto the SD card, an example is 7-Zip (see image 1).

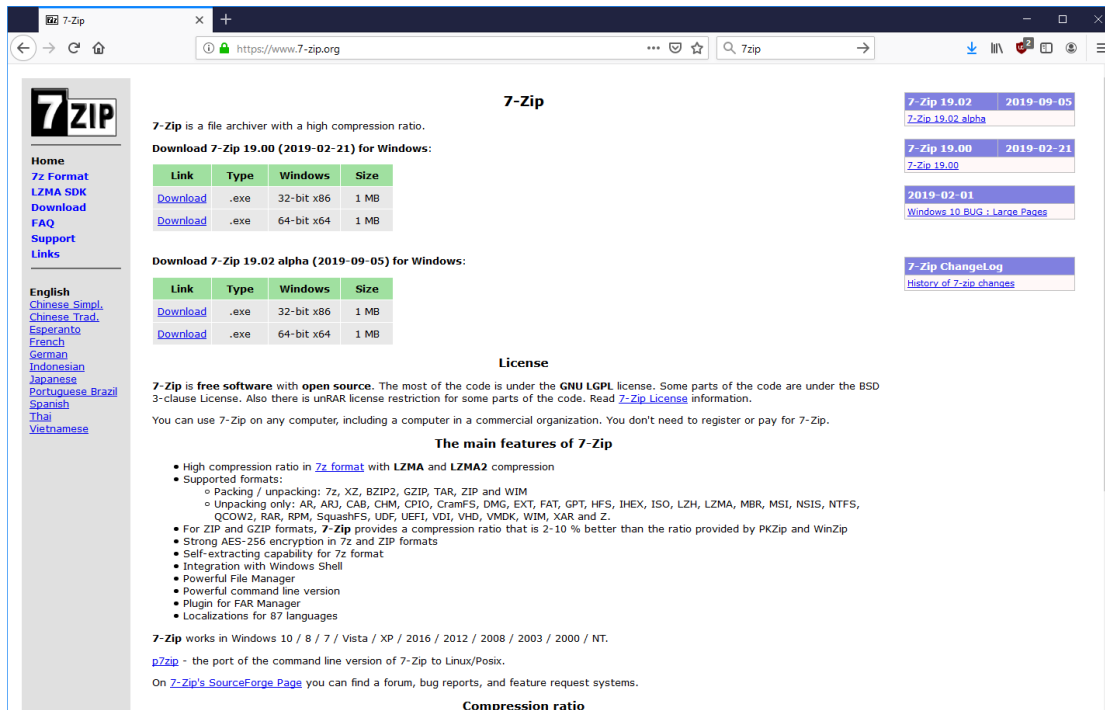




Image 1: Example - 7-Zip software to extract tar.gz files (www.7-zip.org)

 <p>Notice</p>	<p>Please make sure you download the correct image from the faytech website according to the size of your device! Any other size will not work correctly.</p>
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There is a wide range of available (free) software on the internet which allows you to extract these file formats correctly into the image format. Several examples of programs which can extract the specific files are as follows:

- 7-Zip
- WinRAR
- Gnome Archive Manager
- PeaZip


 <p>Notice</p>	<p>Please keep in mind that there are many more programs able to extract the files which are not mentioned in the list above.</p>
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3.2. Burning the image file onto an SD card

In order to continue, the image should be burned onto an SD card. There is (free) software available on the internet to support in this process.

several examples of programs are the following:

- balenaEtcher
- dd
- Win32 Disk Imager

 <p>Notice</p>	<p>Please keep in mind that there are many more programs able to 'burn' the images onto an SD card which are not mentioned in the list above.</p>
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For simplicity purposes we shall continue explaining how it works in the balenaEtcher program, when using different software please refer to the instructions of the software provider.

3.2.1. Downloading the program

Download the program balenaEtcher on their website (see image 2).

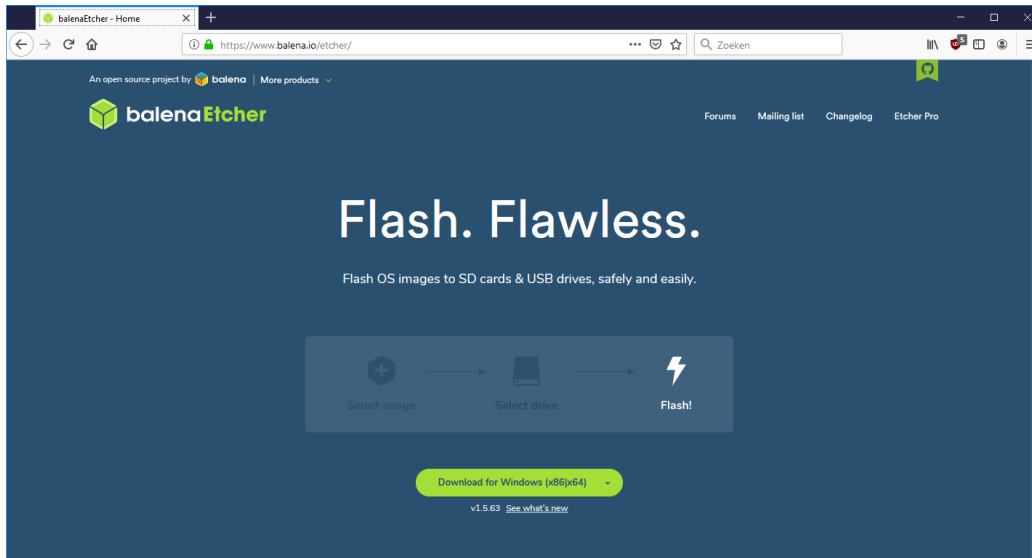


Image 2: Example – balenaEtcher software to 'burn' the img file onto an SD card (www.balena.io/etcher)

3.2.2. Selecting the image

Once on the start screen of Etcher click on 'select image' and select the extracted image file you wish to burn onto the SD card (see image 3)

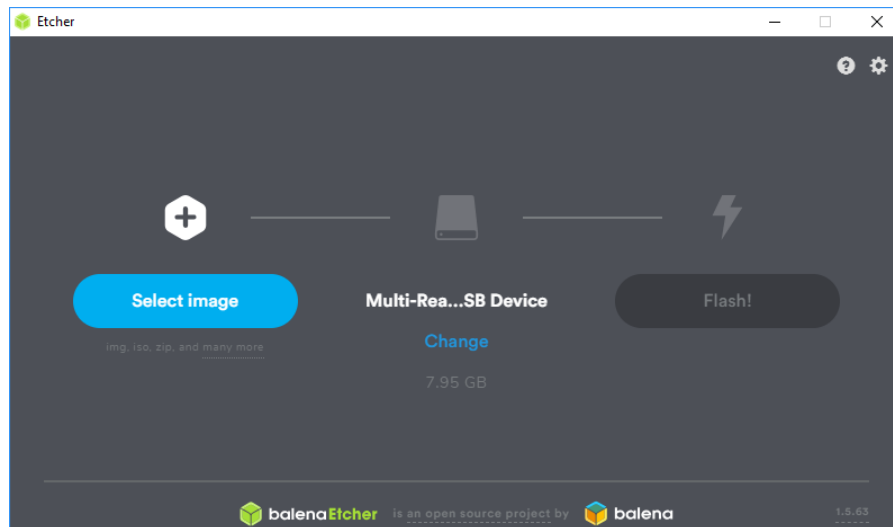


Image 3: Etcher start screen

3.2.3. Selecting the destination

After this, make sure the correct destination device is selected by clicking 'change'. Then proceed by marking the device and pressing 'continue' (see image 4).

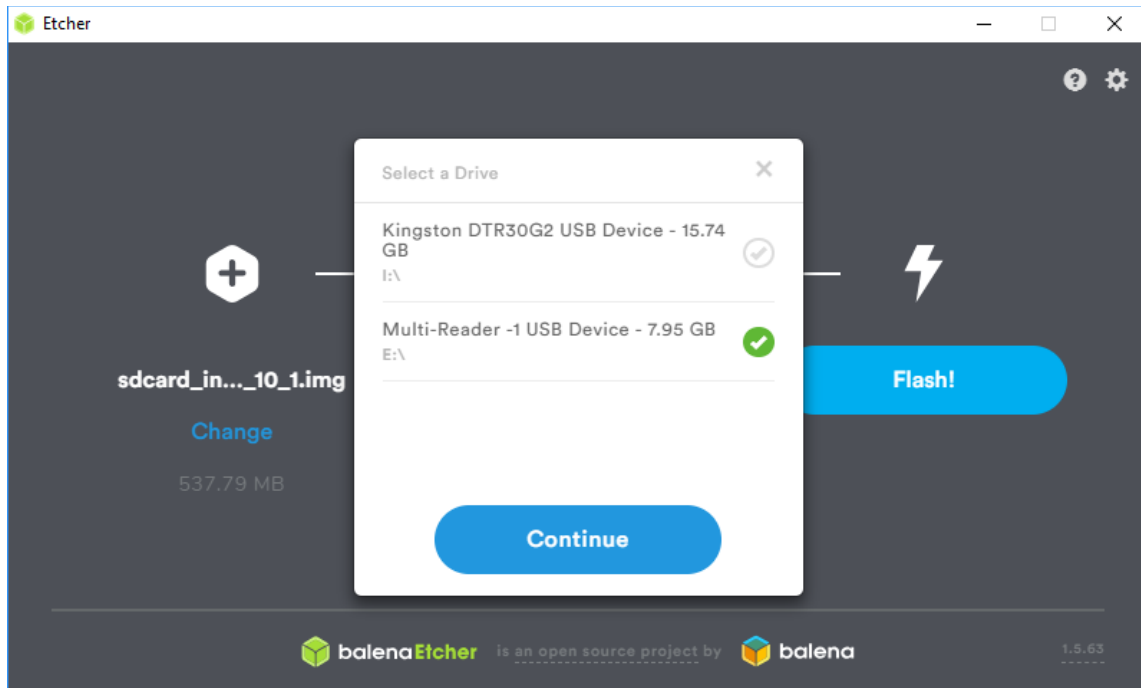



Image 4: Etcher selecting destination device

 <p>WARNING</p>	<p>Selecting the wrong device might corrupt your computer!</p>
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3.2.4. Flashing the image onto the SD card

Click on 'Flash!' to start flashing/burning the image onto the SD card. This might take a moment to complete, however this is indicated by a % bar on the right (see *image 5*).

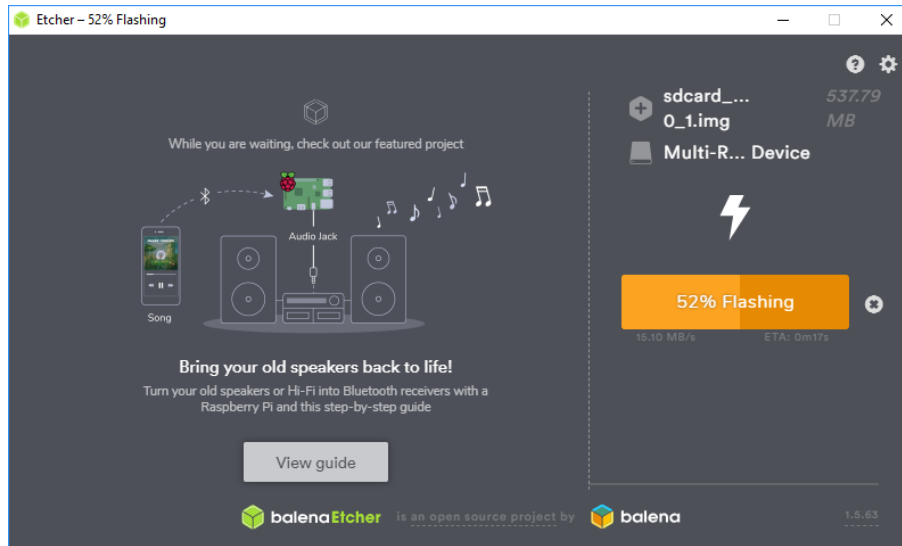


Image 5: etcher flashing/burning screen

3.2.5. Complete flashing the SD card

After some time, the Flashing will be completed (see *image 6*)

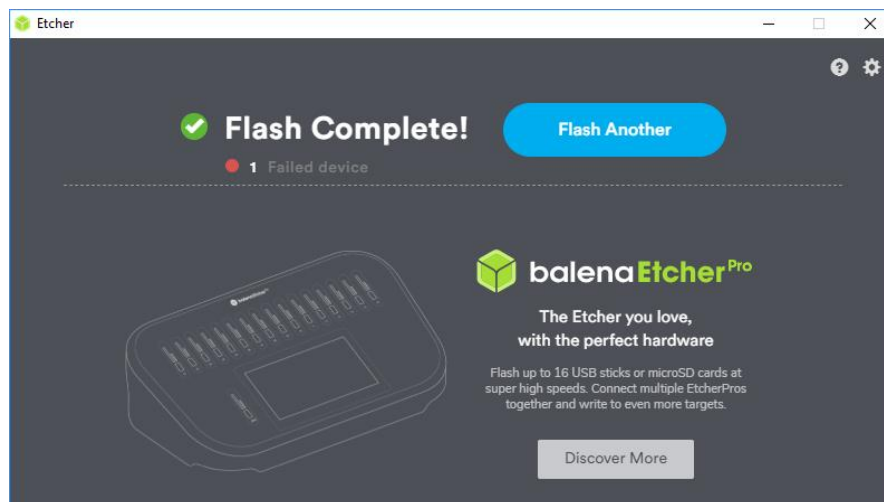


Image 6: Flash is completed screen



Notice

On some machines there might be an error saying '1 failed device'. This usually indicates that Windows touched the filesystem before the checksum was calculated. In this case, the error can be ignored, and SD card can be used.

3.2.6. Preparing the configuration for the new image

The next step is to safely remove and re-insert the SD card into the same PC you used until now. This card should now be visible and have a fat32 partition (*see image 7*)

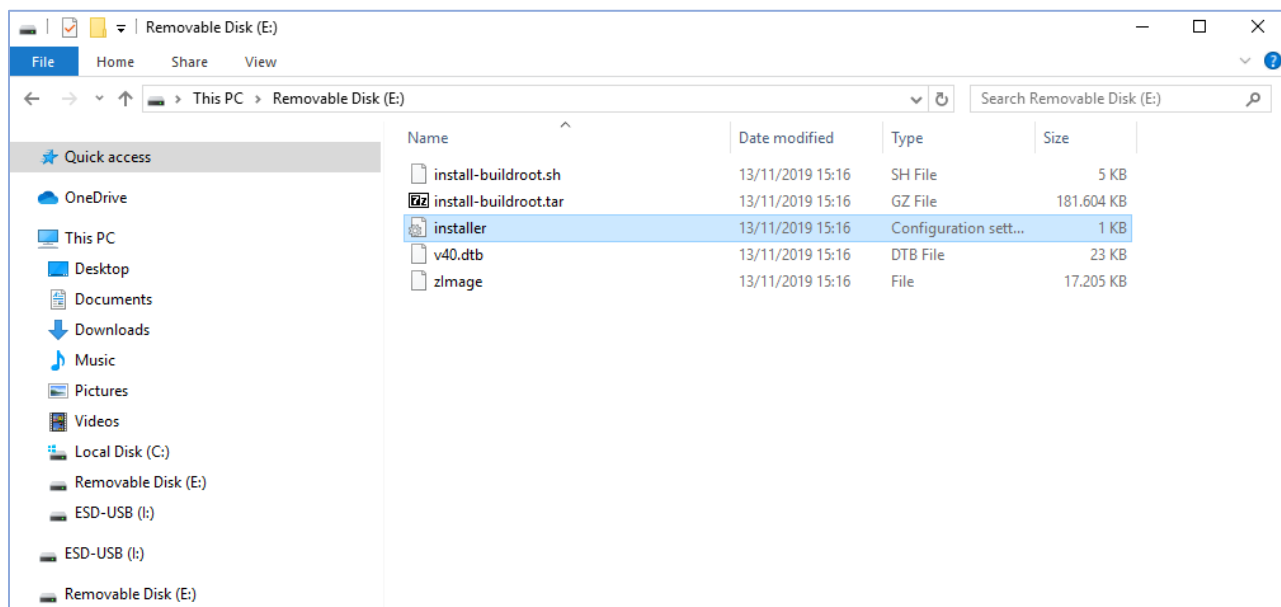


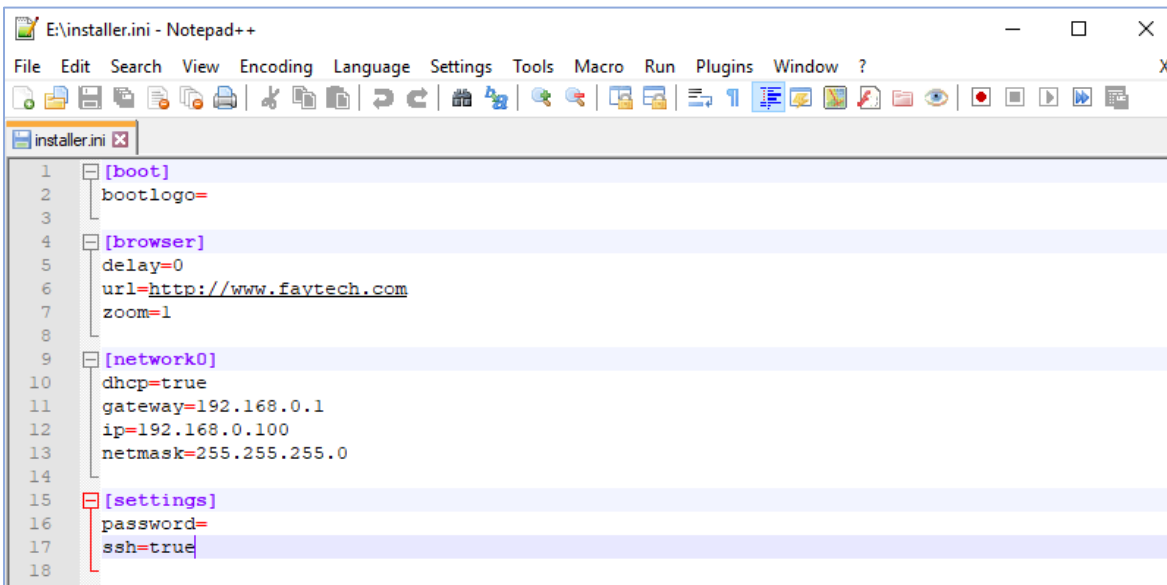
Image 7:SD card file with the not-yet installed image



Notice

Do not remove, rename or replace the files in the folder!

Now the installer.ini file can be opened in order to configure the to-be-installed image. Once this file is opened you will see the following file (see *image 8*).




```
E:\installer.ini - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
installer.ini
1 [boot]
2 bootlogo=
3
4 [browser]
5 delay=0
6 url=http://www.favtech.com
7 zoom=1
8
9 [network0]
10 dhcp=true
11 gateway=192.168.0.1
12 ip=192.168.0.100
13 netmask=255.255.255.0
14
15 [settings]
16 password=
17 ssh=true
18
```

Image 8: Installer.ini interface using Notepad++

Currently the following options/settings are available and explained below in detail:

- **[boot]**
bootlogo=**boot_logo.png**

In this section you can change the default boot logo with another image. Copy the preferred PNG file to the SD card and supply the name to bootlogo. An example would be boot_logo.png

 <p>Notice</p>	<p>Please keep in mind, only PNG files are supported!</p> <p>Also, make sure the PNG file is on the same level as the configuration file (path), else a relative path must be specified.</p>
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- **[browser]**
delay=0
url=http://192.168.4.11
zoom=1.2

These parameters influence the browser settings when the device is turned on.

'delay': Add an amount of startup delay before the browser is started, this parameter accepts any positive value, including 0 (seconds).

'url': The URL that will be automatically accessed when the device is turned on.

'zoom': This states the zoom factor of the browser, this parameter accepts the values 0.25 to 5.00, meaning 25% to 500%.

 <p>Notice</p>	<p>The 'delay' parameter is always measured in seconds!</p> <p>The 'zoom' parameter will change any exceeding value to the nearest threshold, e.g. 0.15 > 0.25, 6.00 > 5.00</p>
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- **[network0]**
dhcp=false
gateway=192.168.4.11
ip=192.168.4.10
netmask=255.255.255.0


These parameters influence the network settings and ethernet (cabled) configuration when the device is turned on.

'dhcp': Either enable (true) or disable (false) dhcp. If enabled (true), the other settings in this group are ignored.

'ip': Set the (static) ip address of the network interface.

'netmask': Set the preferred netmask of the network interface

'gateway': set the preferred gateway of the network interface


 <p>Notice</p>	<p>Please keep in mind that the changes to the 'ip', 'netmask' and 'gateway' are only applied if the 'dhcp' is set to false!</p>
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- **[settings]**
password=**Any123!**
ssh=**true**

These parameters influence the general settings of the device.

'password': This setting specifies the root password. If left empty, the default will be used

'ssh': Run a ssh server on the board (dropbear). This is true by default and can be used to explicitly disable the ssh server.

 Notice	If left empty, the default root password is user123 .
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Once all the settings in the interface has been set up correctly, the SD card can be safely removed from the computer.

4. Installing the image onto the faytech device

Now put the SD card into the SD card slot on your faytech device and then connect it to a power source. After a few seconds the interface of the installer will be shown (see *image 9*).

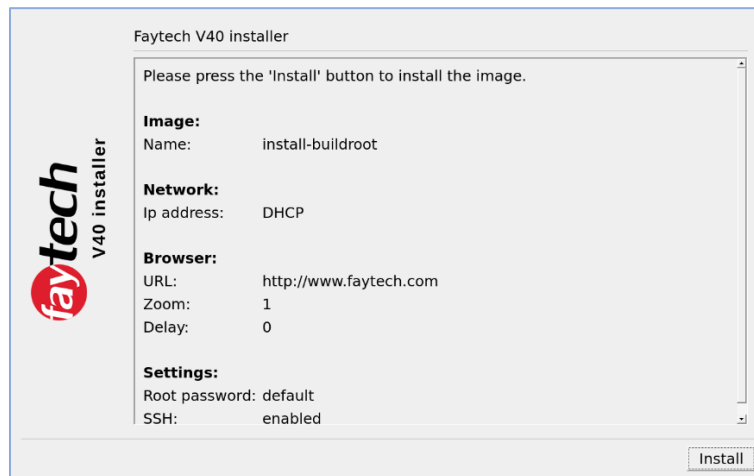


Image 9: Interface of the faytech V40 installer

This interface can be used to check and verify the specific board settings. Once ready, click on the 'Install' button to proceed with the installation. Once clicked, the image will install and a progress bar is shown. The process might take a few minutes (see *image 10*).

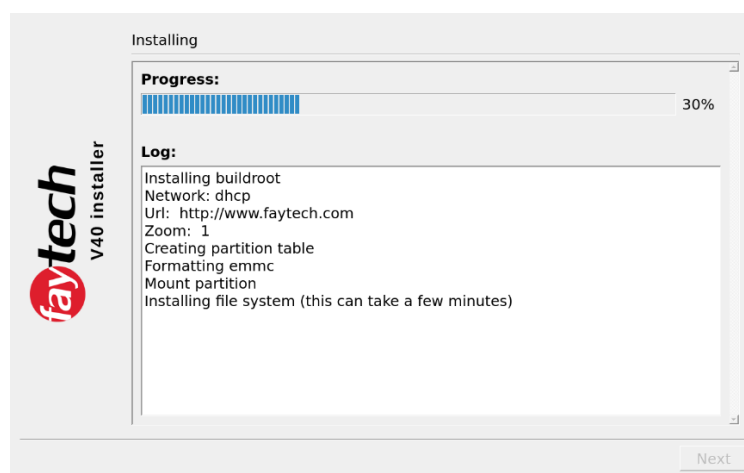


Image 10: Installation in progress

Once the installation is completed, the 'Next' button becomes clickable and you are able to proceed to the final step (see *image 11*).

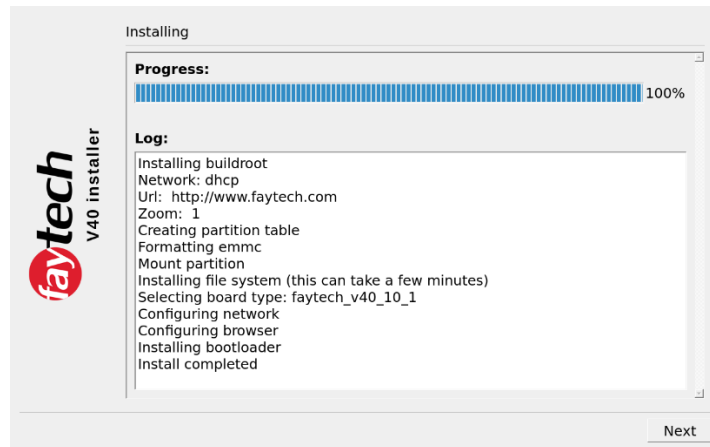


Image 11: Interface when the installer ready

The installation is now completed, in the following interface the information regarding the installation is shown. Proceed to click on finish to close the interface (see *image 12*)

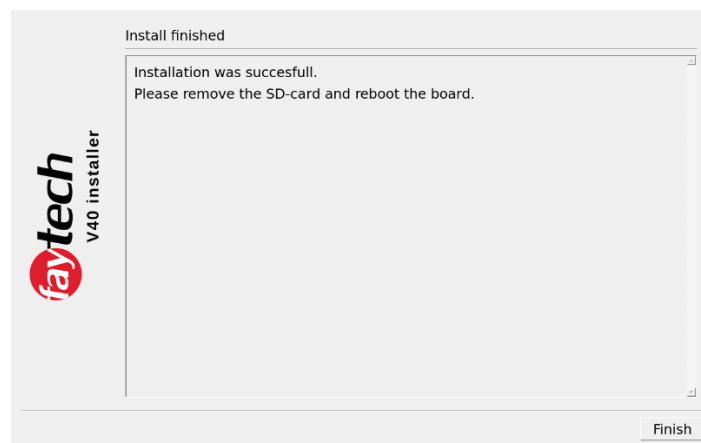



Image 12: Interface when the installation is completed

 <p>Notice</p>	<p>If the installation encountered an error, it will be shown on this interface.</p>
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Now the final step is to remove the SD card and to power the device off. Once this is done, re-insert the SD card into the SD card slot and connect the device to a power source again.

This in turn will boot up the device (with the selected image) and open the requested URL once it is started up (see *image 13 and 14*).



Image 13: Boot image example

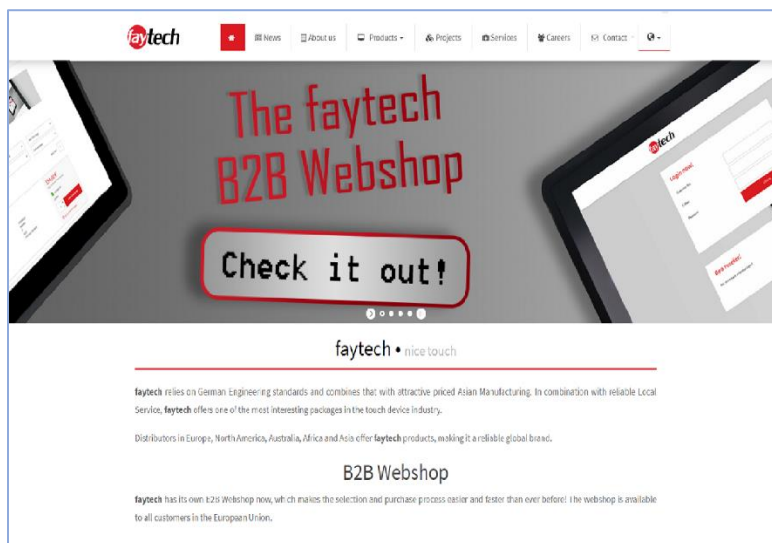


Image 14: URL opened after start-up example