

Aequator Communicator - ACM 2.1

Art. No. : 1003569-002
Edition : 2017/05
Author : KBL

Technical Manual

1. Introduction

This manual includes safe and correct handling of the communicator kit.
The installation and use of "Machine Communication Tool" (MCT) & "Aequator Communicator" (ACM) is supplied only to persons authorised by Aequator AG.

We do not assume any liability for damages caused by non-observance of the instructions or by improper handling.

If you need additional information or support, do not hesitate to contact us at:
support@aequator.ch

1.1 Safety Instructions

The MCT is constructed for safe operation, meeting advanced engineering standards.

The MCT is produced in accordance with the valid CE regulations and ISO 9001.

The following points are to be considered:

- Any change or modification of the MCT kit is prohibited.
AEQUATOR AG does not assume any liability in such a case.
- Store the communicator in dry rooms and never in frosty environment.

1.2 Purpose

The "Aequator Communicator" software and the "Machine Communication Tool" enables communication between a notebook or PC and control board or display board.

Two main usage scenarios are:

- Update software, e.g. install a new software version.
- Download settings from a configured machine and upload settings to other machines.

2. Installation



2.1 General:

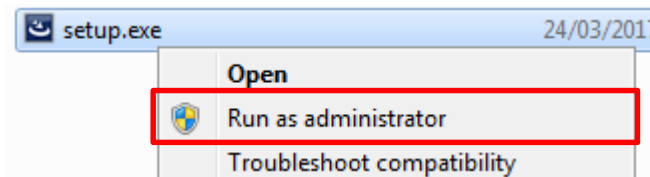
Windows XP, 7 or later

The Software / file can be also downloaded from the Dealers Platform / Login Section:

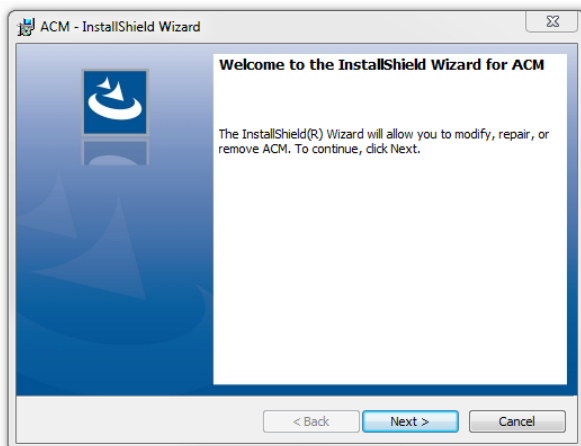
www.aequator.ch

2.2 Software Installation

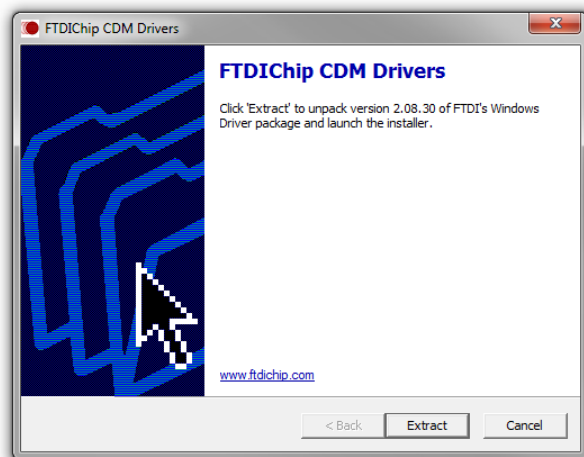
Unzip the "ACM 2.1.xxxx.xxxxx.zip" file and start installation of ACM software with "Right Mouse Click"  on  **setup.exe** and select "Run as administrator".



Follow instructions of InstallShield Wizard for ACM.



After Installation of ACM Software "FTDChip CDM Drivers" installation will be started automatically. Follow instructions of "Device Driver Installation Wizard".



Shortcut of ACM will be added to your desktop automatically.

2.3 Preparation

Firmware & Parameter Containers

ACM2.1 and higher works with ".zip" containers for firmware and parameter which will be unzipped / zipped automatically. In this containers all necessary files are included.

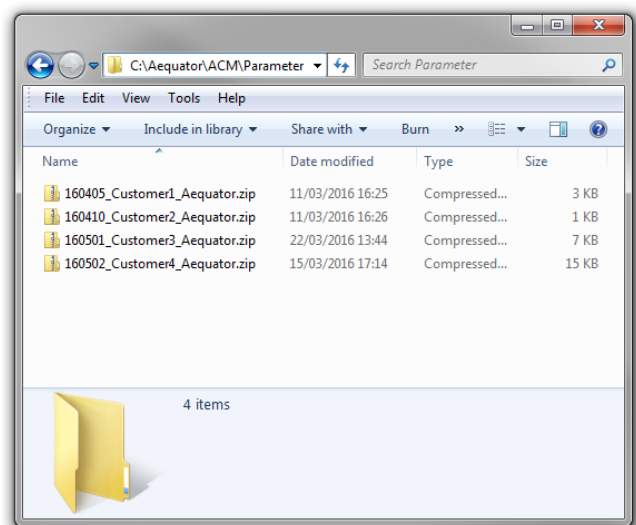
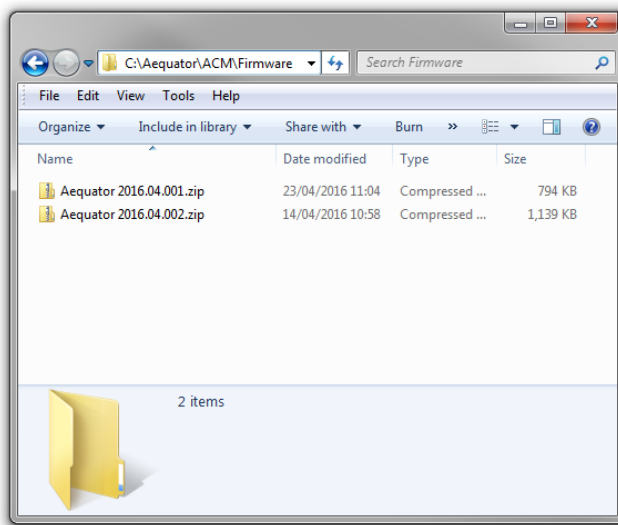
Copy ".zip" containers, e.g. Firmware: "Aequator 20xx.xx.xxx.zip" which is included in ACM Setup folder, into following destination folder:

Path Firmware:

C:\Aequator\ACM\Firmware

Path Parameters:

C:\Aequator\ACM\Parameters



All firmware & parameter file containers need to be saved in these destination folders.

IMPORTANT: Do not unzip the container folders (firmware & parameter).

2.4 Setup Machine Communication Tool (MCT)


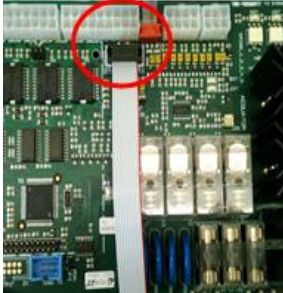



Aequator MCT (Art.No. 1005728)

- ① Machine Communication Tool (MCT)
- ② D-Sub flat cable 1
(Control & Display GII)
- ③ D-Sub flat cable 2
(Control GII)
- ④ D-Sub flat cable 3
(Control GIII)
- ⑤ miniUSB cable

Before you connect or disconnect the MCT make sure the machine is switched off.

- 1) Connect MCT via USB cable to the notebook or PC.
- 2) Connect the "D-Sub Flat Cable" to the respective board as shown below:

Board version	Display-/ & Control board Generation II	Control board only Generation II	Control board Generation III
Machine	AEQ Coffee Machines	AEQ Coffee Machines	Soup, Lattiz, Lima
Cable type	D-Sub flat cable 1	D-Sub flat cable 2	D-Sub flat cable 3
Setup	<p>Connect to Display board:</p> <p>ACM: Display- /& Control board displayed</p> 	<p>Connect to Control board:</p> <p>ACM: Only Control board displayed.</p> 	<p>Connect to Control board:</p> <p>ACM: Only Control board displayed</p> 

3. Aequator Communicator Software (ACM)

3.1 Supported Software versions

Future releases will be always tested and also be supported.

AEQ Coffee machines

Board type	Firmware version	Info – Read out version	Parameter Down-/Upload	Firmware upload
AEQ Control board	607	yes	no	yes
	608	yes	no	yes
	713 (128MB)	yes	yes	yes
	713 (256MB)	yes	yes	yes
	719 (128MB)	yes	yes	yes
	719 (256MB)	yes	yes	yes
	734	yes	yes	yes
	736	yes	yes	yes
	737	yes	yes	yes
	739	yes	yes	yes
	740	yes	yes	yes
AEQ Display board	813	yes	yes	yes
	818	yes	yes	yes
	836	yes	yes	yes
	838	yes	yes	yes
	840	yes	yes	yes

Soup / Lima

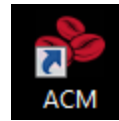
Board type	Firmware version	Info – Read out version	Parameter Down-/Upload	Firmware upload
Soup Control board	1332	yes	yes	yes
	1333	yes	yes	yes
Lima Control board	1313	yes	yes	yes
	1314	yes	yes	yes
	1315	yes	yes	yes
	1317	yes	yes	yes


Lattiz

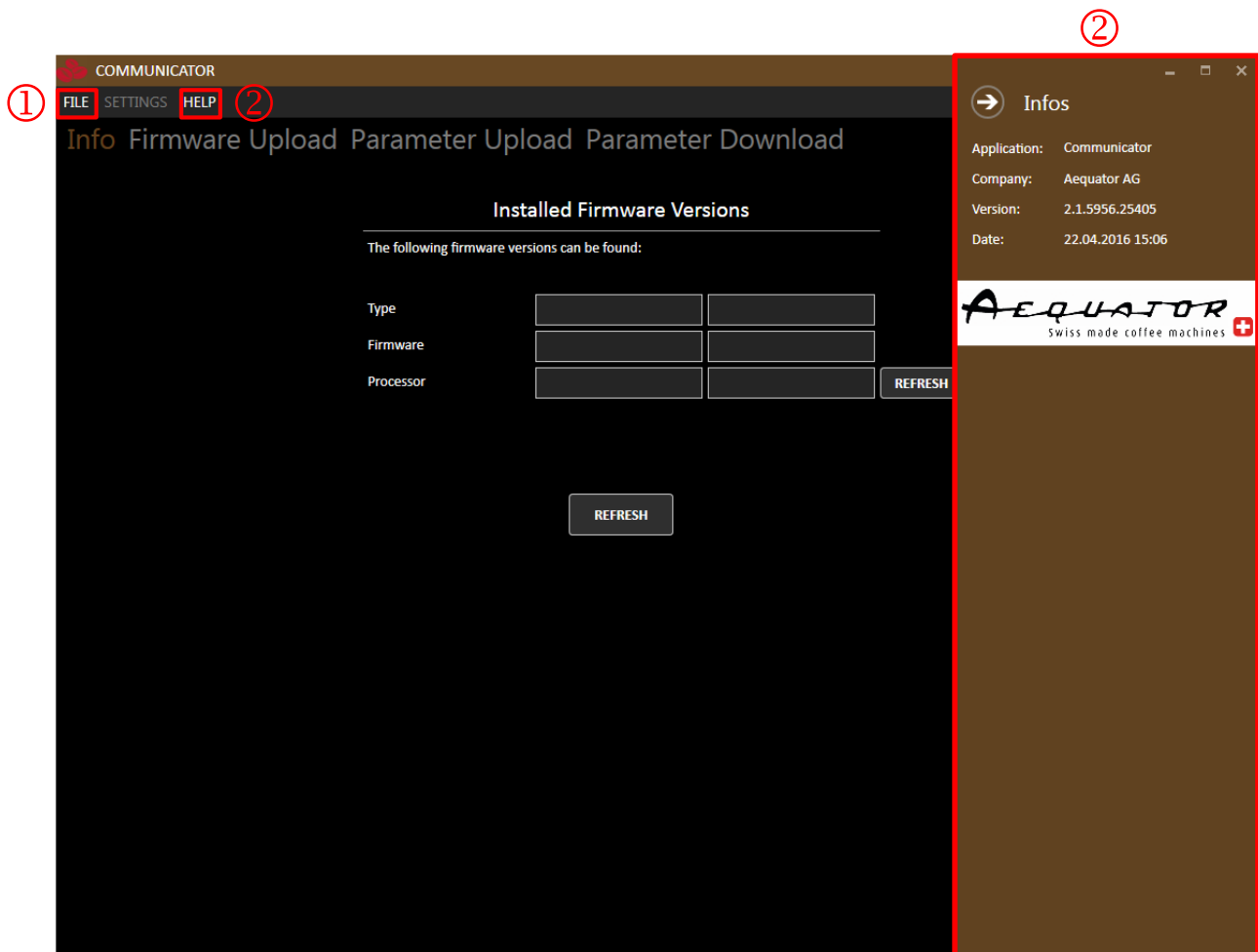
Board type	Firmware version	Info – Read out version	Parameter Down-/Upload	Firmware upload
Lattiz Control board	1406	yes	yes	yes
	1407	yes	yes	yes
	1420	yes	yes	yes

3.2 General:

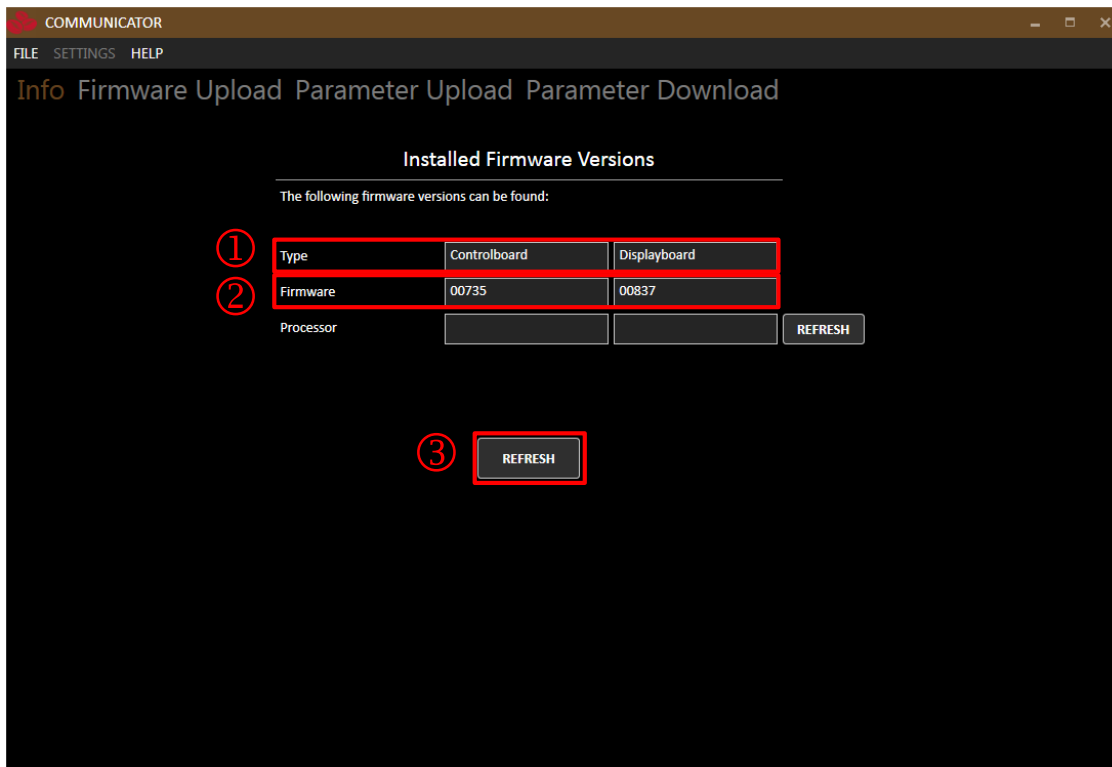
Start Aequator Communicator Software with double click on "ACM" icon:



- 1) **File** : "Close" Communicator Software
- 2) **Help** : Display information about communicator: Version, Date,...
Select  to close help window panel



3.3 Info



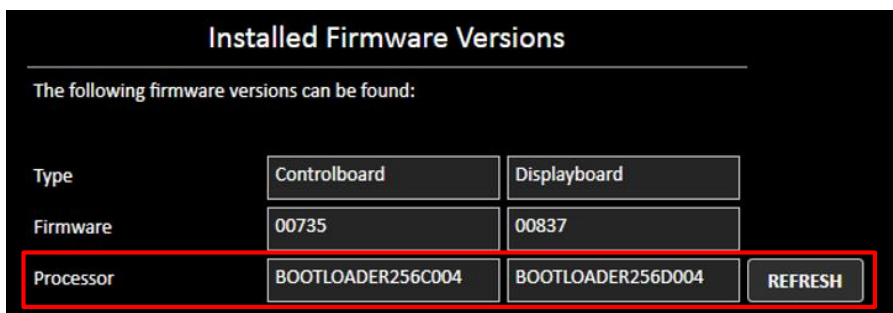
Installed Firmware Versions

- 1) **Type** : Recognized boards will be displayed: Control / Display
- 2) **Firmware** : Installed firmware version
- 3) **"Refresh"** : Connected boards (COM Ports) will be refreshed.
→ After firmware update refresh button needs to be selected to show currently installed version
- 4) **Processor** : Installed bootloader version of processor will be displayed:
e.g.: BOOTLOADER**256**C004

IMPORTANT:

Will be only displayed when no firmware is installed (Bootloader only)
or when "Refresh" (Processor) will be selected.

256 = Processor type : 128MB or 256MB
C004 = Bootloader version



3.4 Firmware Upload

Upload Firmware packages which contain different firmware versions:

- Each package contains : Firmware display board & control board
All Packages guarantee compatibility of display & control board versions.
- Different processor type : 128MB & 256MB Processor

ATMEGA128



ATMEGA2561



IMPORTANT:

Double check processor type before start firmware upload:

- ACM : Processor type, refer to description "Info"
- Visual Check: Check ATMEGA processor on boards

Firmware Package Selection

Firmware container file

Firmware package selection to upload

	PACKAGE NAME	CB-VERSION	CB-VERSION DATE	CB-PROCESSOR	DB-VERSION	DB-VERSION DATE	DB-PROCESSOR
<input type="checkbox"/>	Aequator 713/813 - 128MB	00713	25.06.2012	128	00813	25.06.2012	256
<input type="checkbox"/>	Aequator 713/813 - 256MB	00713	25.06.2012	256	00813	25.06.2012	256
<input type="checkbox"/>	Aequator 719/818 - 128MB	00719	10.07.2014	128	00818	10.07.2014	256
<input type="checkbox"/>	Aequator 719/818 - 256MB	00719	10.07.2014	256	00818	10.07.2014	256
<input checked="" type="checkbox"/>	Aequator 734/836	00734	02.06.2015	256	00836	05.11.2015	256

Board Selection

Board selection to upload

☐ Controlboard
☐ Displayboard
☒ Both

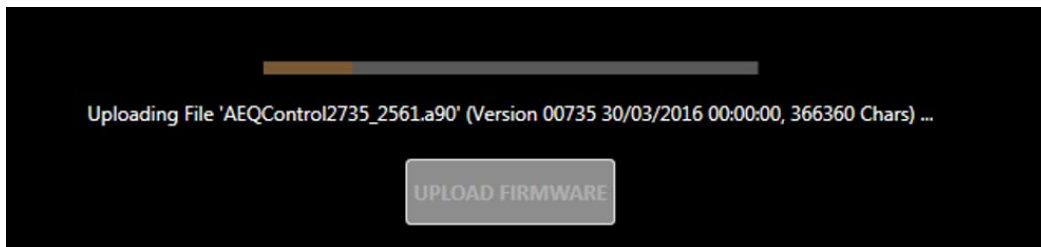
Firmware Package Selection

- 1) **Firmware container file** : Click "SELECT" to browse for firmware container
Path: C:\Aequator\ACM\Firmware
- 2) **Firmware package selection to upload** : "Tick Box" to choose firmware package to be uploaded

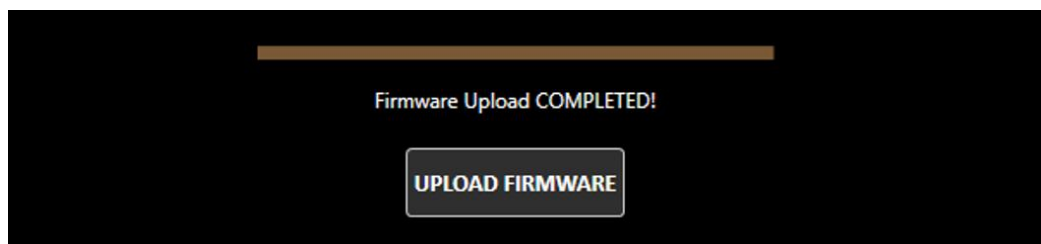
Board Selection

- 3) **Board Selection to upload** : Choose which board(s) should be updated:
Controlboard, Displayboard, Both
- 4) **Upload Firmware** : Select "UPLOAD FIRMWARE" to start upload

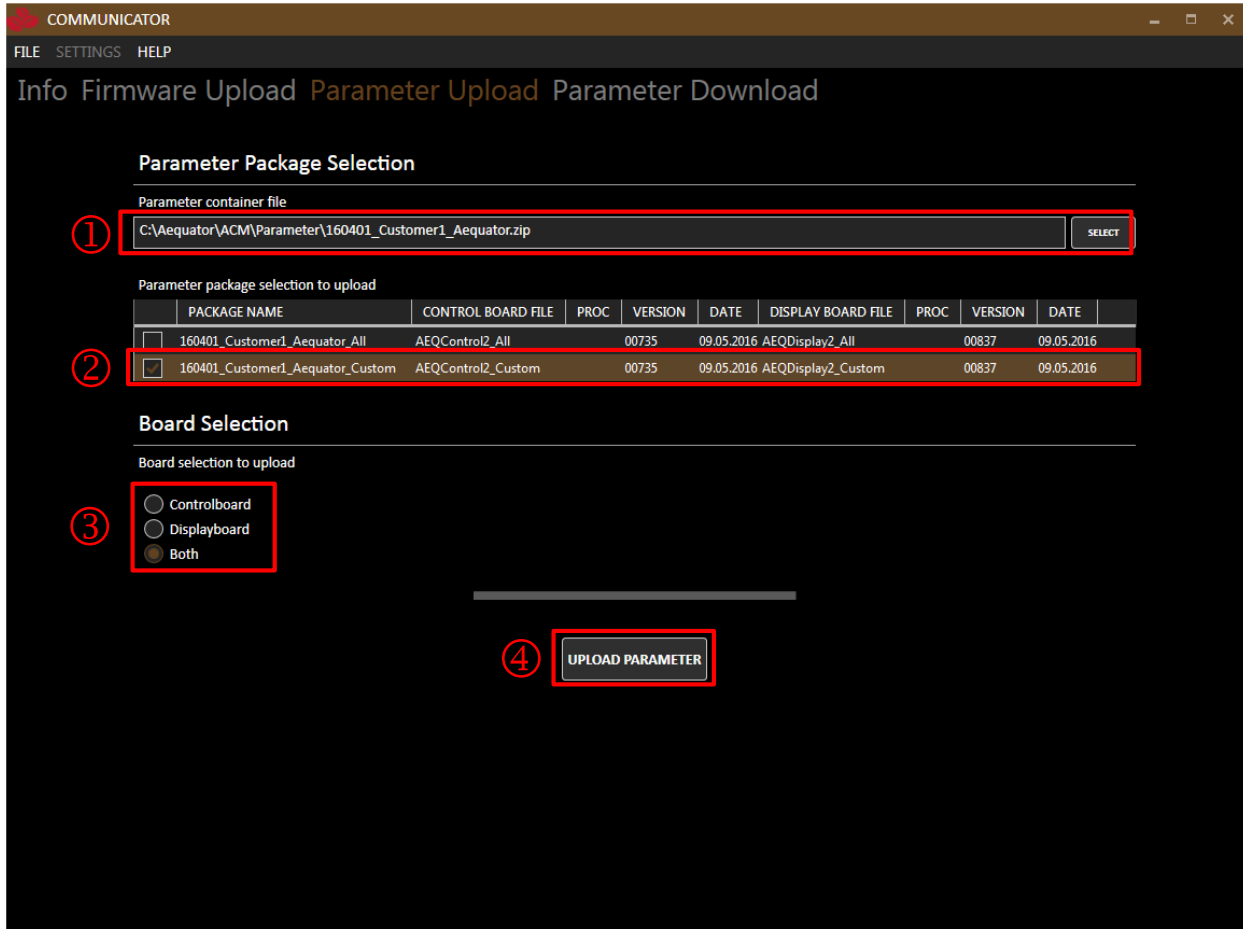
After "UPLOAD FIRMWARE" has started following information will be displayed to show progress of upload.



Following message will be displayed when firmware upload has finished:



3.5 Parameter Upload



COMMUNICATOR

FILE SETTINGS HELP

Info Firmware Upload **Parameter Upload** Parameter Download

Parameter Package Selection

Parameter container file

① C:\Aequator\ACM\Parameter\160401_Customer1_Aequator.zip SELECT

Parameter package selection to upload

	PACKAGE NAME	CONTROL BOARD FILE	PROC	VERSION	DATE	DISPLAY BOARD FILE	PROC	VERSION	DATE
②	160401_Customer1_Aequator_All	AEQControl2_All	00735	09.05.2016	AEQDisplay2_All	00837	09.05.2016		
	<input checked="" type="checkbox"/> 160401_Customer1_Aequator_Custom	AEQControl2_Custom	00735	09.05.2016	AEQDisplay2_Custom	00837	09.05.2016		

Board Selection

Board selection to upload

③ ☐ Controlboard
☐ Displayboard
☒ Both

④ UPLOAD PARAMETER

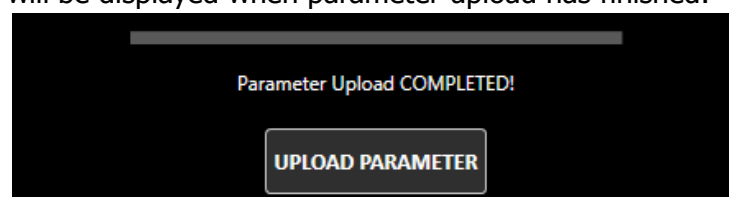
Parameter Package Selection

- 1) **Parameter container file** : Click "SELECT" to browse for parameter container
Path: C:\Aequator\ACM\Parameters
- 2) **Parameter package selection to upload** : "Tick Box" to choose parameter package to be uploaded

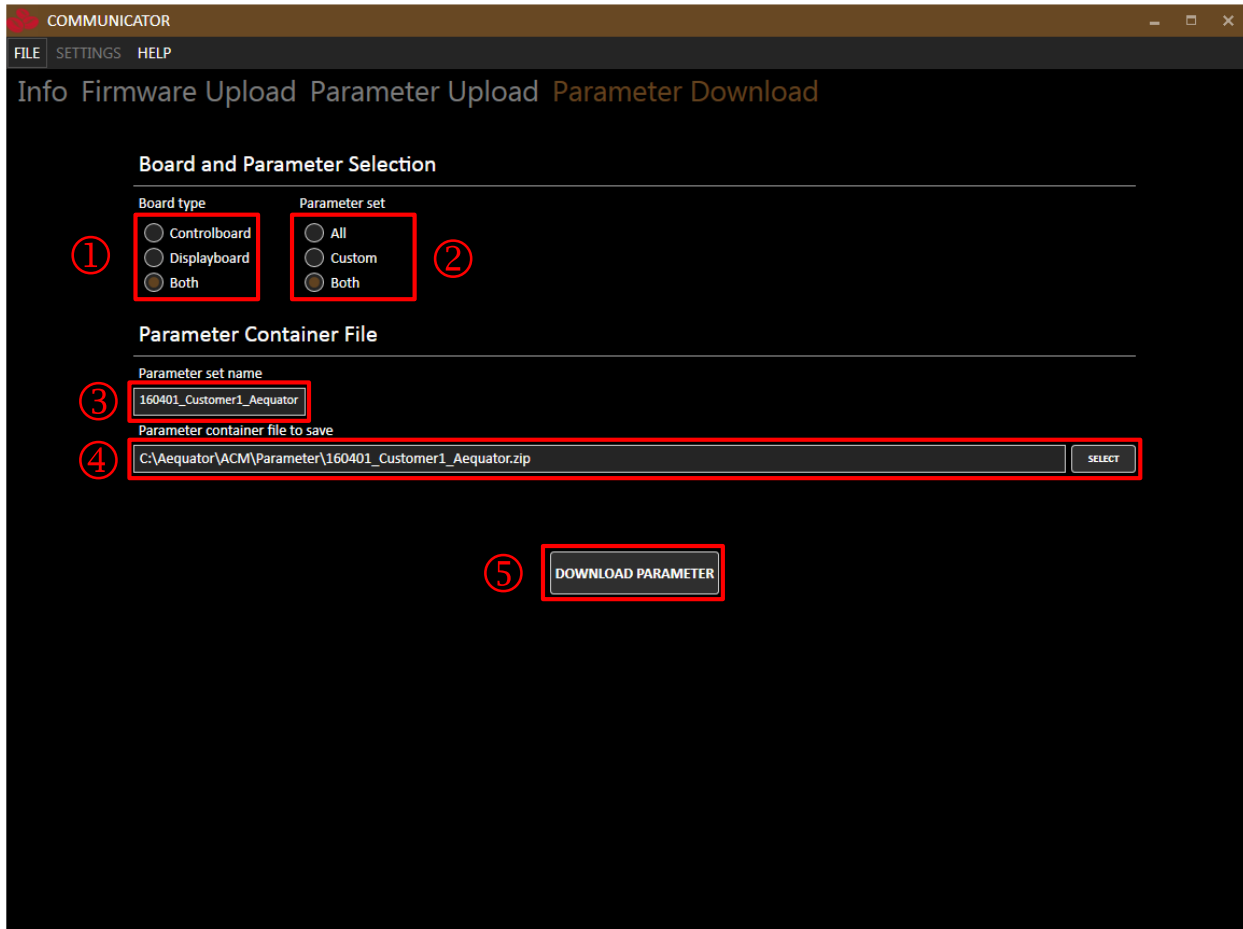
Board Selection:

- 3) **Board Selection to upload** : Choose for which board(s) parameter should be uploaded: Controlboard, Displayboard, Both
- 4) **Upload Parameter** : Select "UPLOAD PARAMETER" to start upload

Following message will be displayed when parameter upload has finished:



3.6 Parameter Download



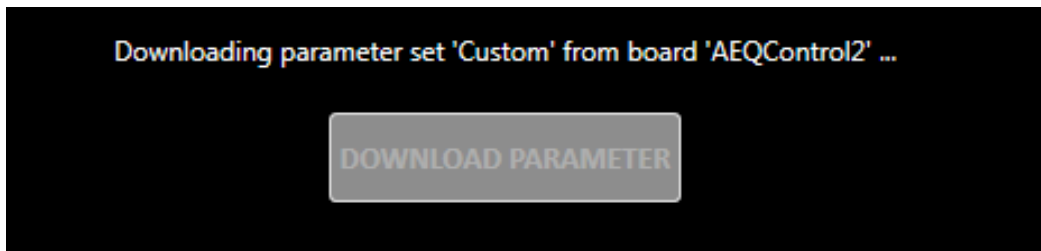
Board and Parameter Selection

- | | |
|-------------------------|---|
| 1) Board type | : Choose for which board(s) parameter should be downloaded: Controlboard, Displayboard, Both |
| 2) Parameter set | <ul style="list-style-type: none"> - All (Machine parameters) - Custom (Customer parameters) - Both (Machine and customer) |

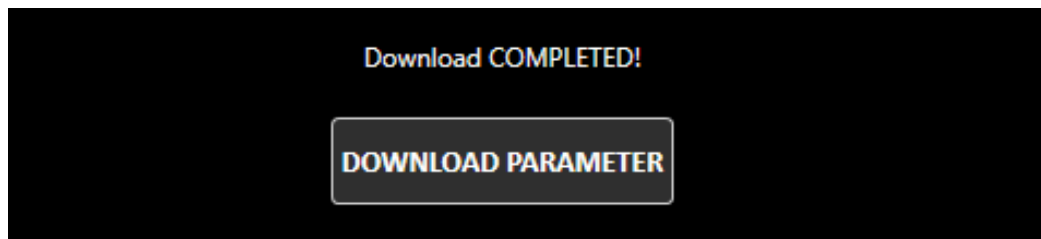
Parameter Container File:

- | | |
|--|---|
| 3) Parameter set name | : Type in "name" of parameter set |
| 4) Parameter container file to save | : Select container file to be saved.
➔ Will be created automatically when parameter name has been filled out |
| 5) Download Parameter | : Select "DOWNLOAD PARAMETER" to start download |

After "DOWNLOAD PARAMETERS" has started following information will be displayed to show progress of upload:



Following message will be displayed when parameter download has finished:



4 Repair Process

Follow these steps if one of the following actions needs to be carried out:

- Upload Firmware (Update / Reload)
- Exchange of display- or control board

Note: Counters will be not saved, needs to be read out manually.

- ① **Software availability**
All necessary software versions available?
- ① **Check / Write down manually:**
 - Drink counters
 - Water filter counter
 - Machine type
- ② **Connect MCT (Aequator Communicator)**
 - Switch OFF machine
 - Connect Machine Communication Tool (MCT)
 - Switch ON machine
- ③ **BOTH - Parameter Download**
Parameter set: "Both" (includes "All" & "Custom")
- ④ **Firmware Upload**
- ⑤ **CUSTOM - Parameter Upload**
Parameter set: "Custom"
(only customer related parameters)
- ⑥ **Check/Set Machine type**
- * **CUSTOM - Parameter Upload again**
(only if Machine type has been changed)
- ⑦ **Enter manually saved settings**
- ⑧ **Disconnect MCT (Aequator Communicator)**
 - Switch OFF machine
 - Disconnect Machine Communication Tool (MCT)
 - Switch ON machine
- ⑨ **Check settings / Prepare Drinks**

IMPORTANT:

Only upload "Custom parameters".

Do not upload "All" (machine parameters) or "Both" (customer & machine parameters).