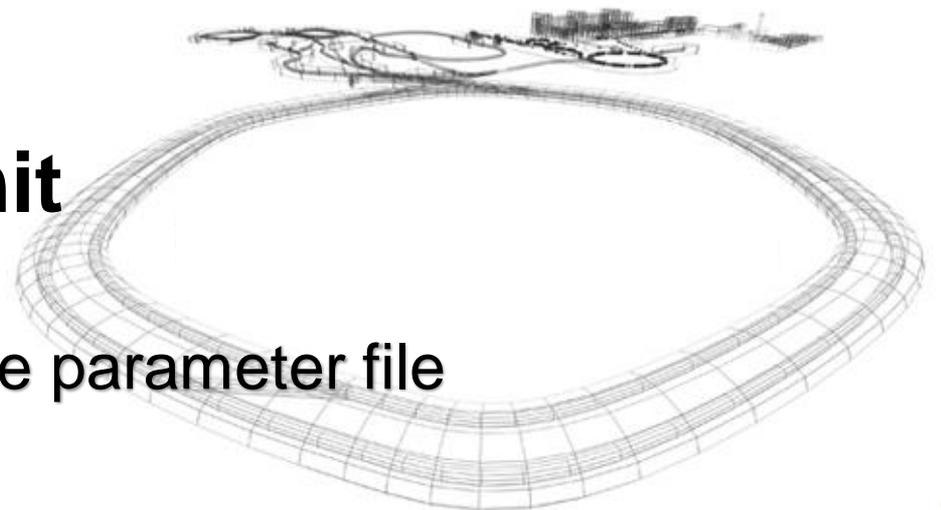


AdaptiveControlUnit

Difference between
configuration file and device parameter file



A short and little bit sarcastic introduction

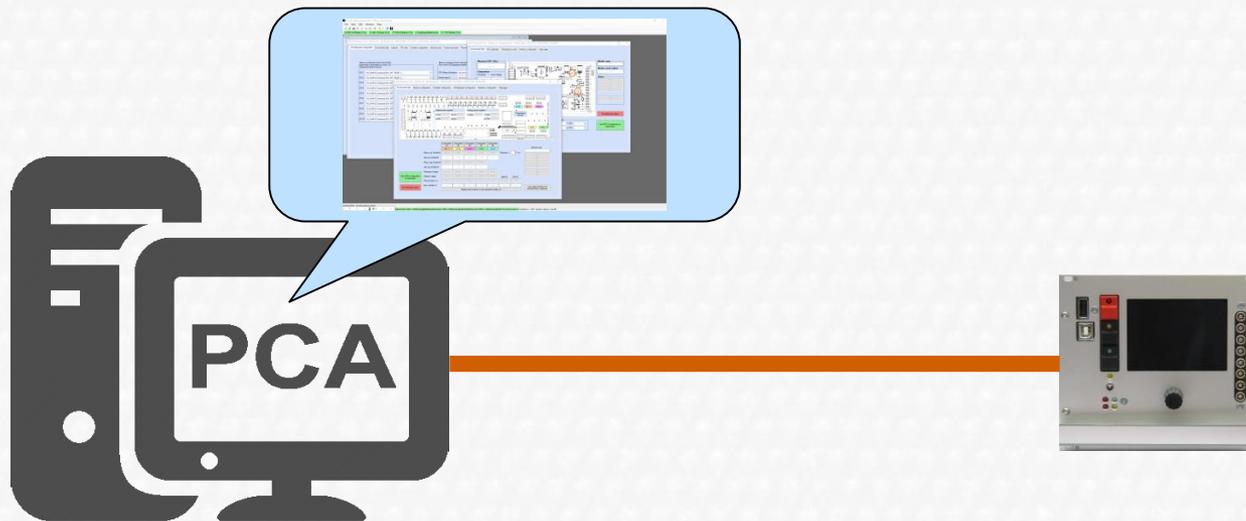
Please always consider the following switch-on sequence for all activities on the power converter using Power Config Advanced:

1. Brain
2. Power Config Advanced
3. Power Converter



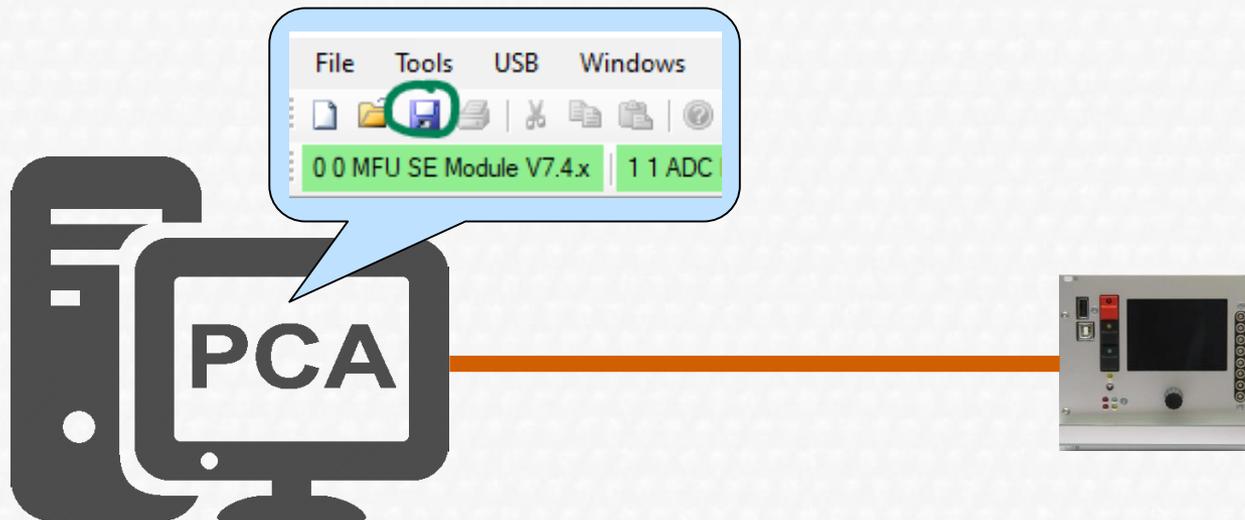
Create configuration

A power supply is configured with PCA.



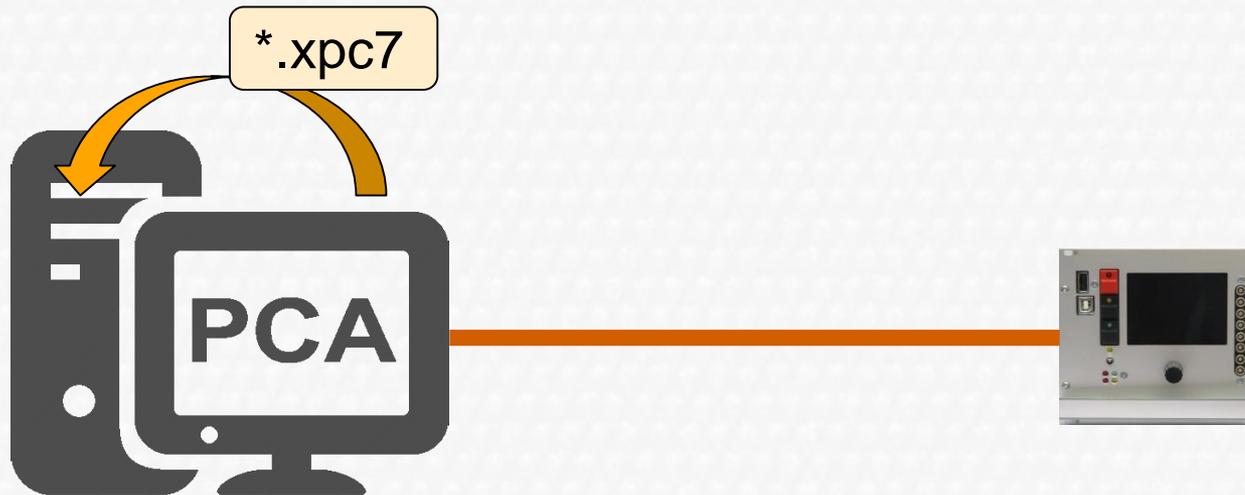
Save configuration

The configuration is saved with PCA.



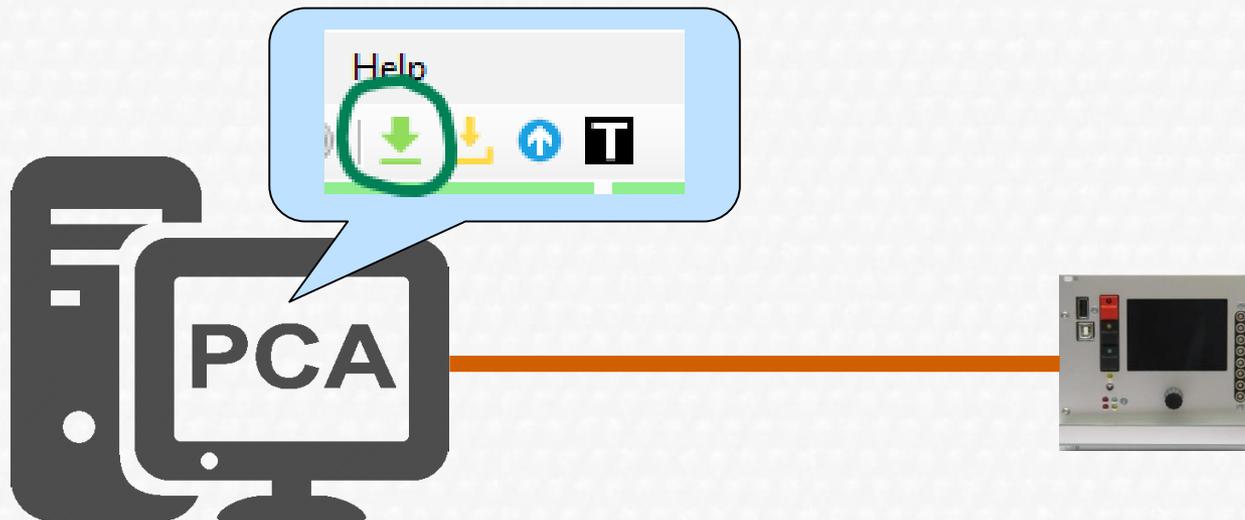
Configuration file *.xpc7

The configuration is saved as *.xpc7 configuration file on the hard disk.



Configuration → as device parameters in the MFU RAM

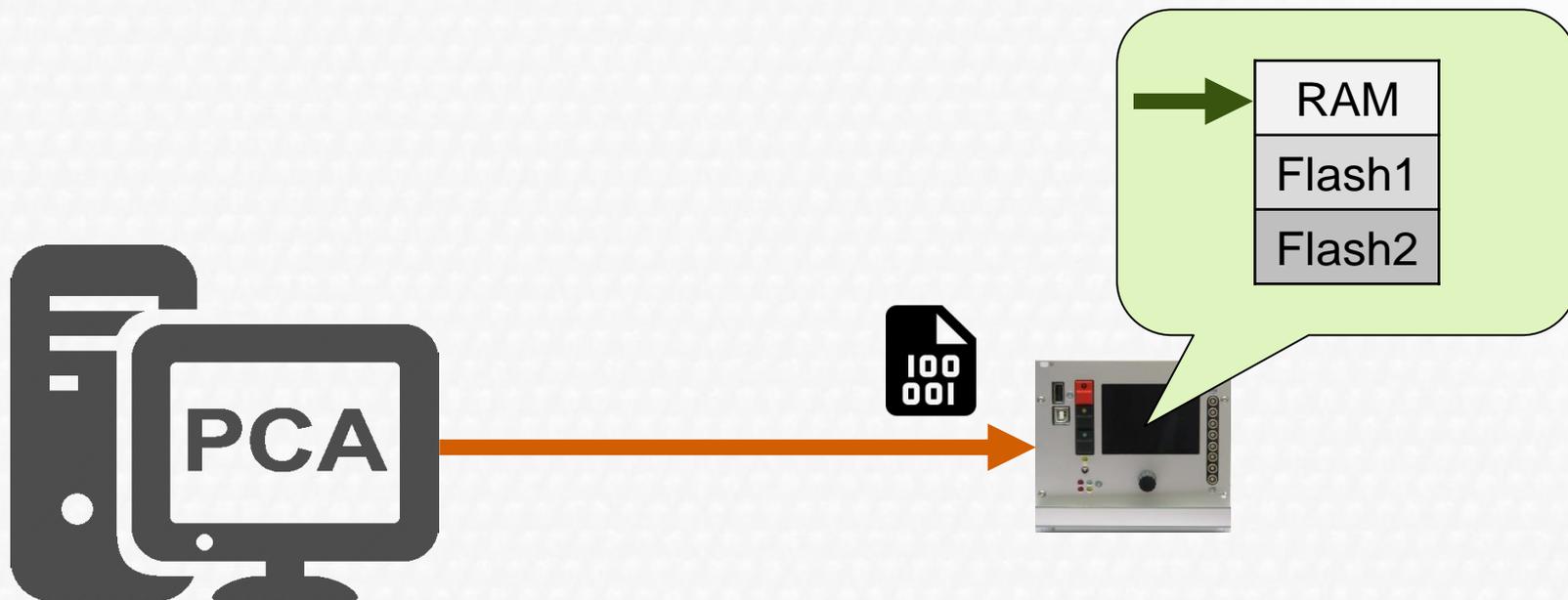
The configuration is sent to the MFU RAM as device parameters.



Configuration → as device parameters in the MFU RAM

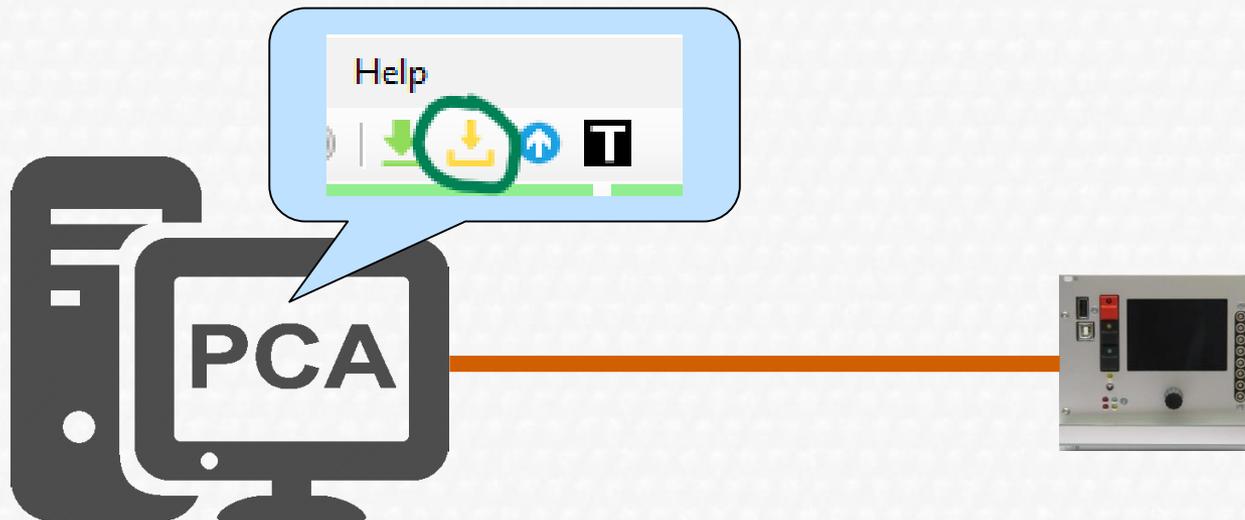
The configuration is converted into binary device parameters and sent to the MFU. The device parameters are only stored in **RAM**.

The power converter can be operated, but they are lost in case the MFU loses supply



Configuration → as device parameters in the MFU Flash

The configuration is sent to the MFU **Flash** as device parameters.

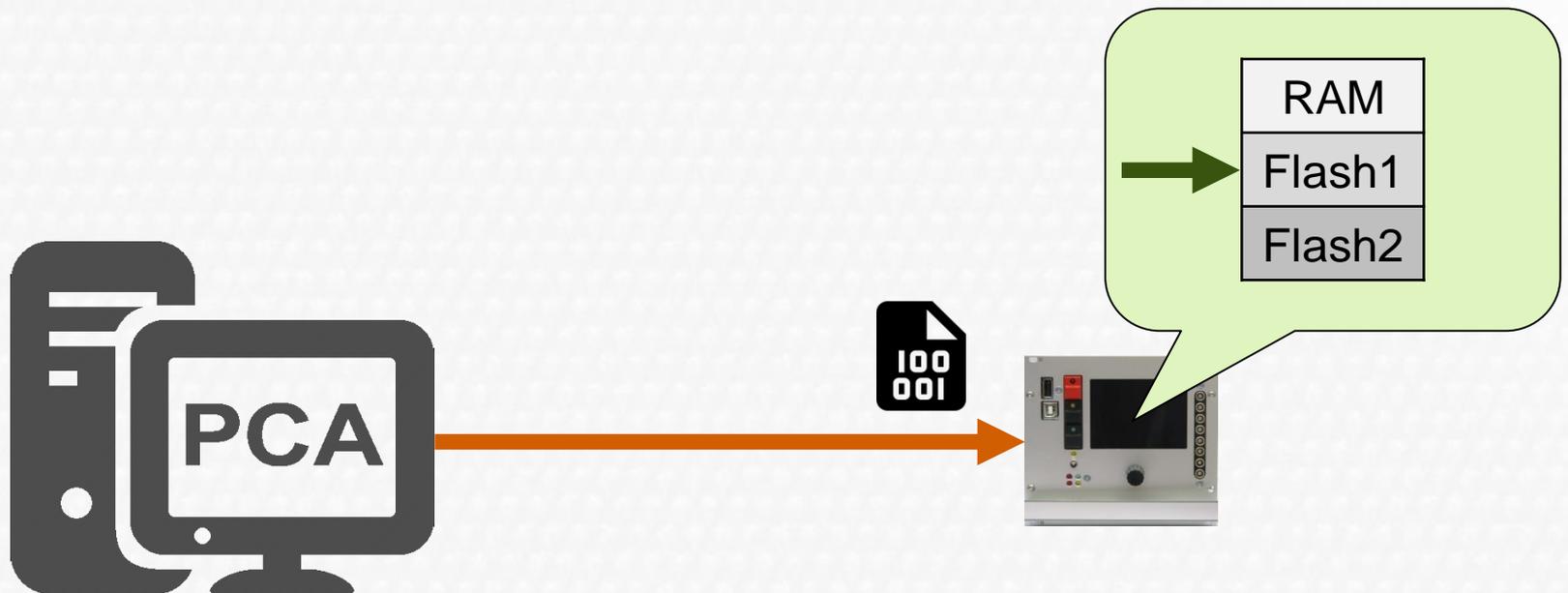


Configuration → as device parameters in the MFU Flash

1. Step

The configuration is converted into binary device parameters and sent to the MFU. The device parameters are saved in **Flash1**.

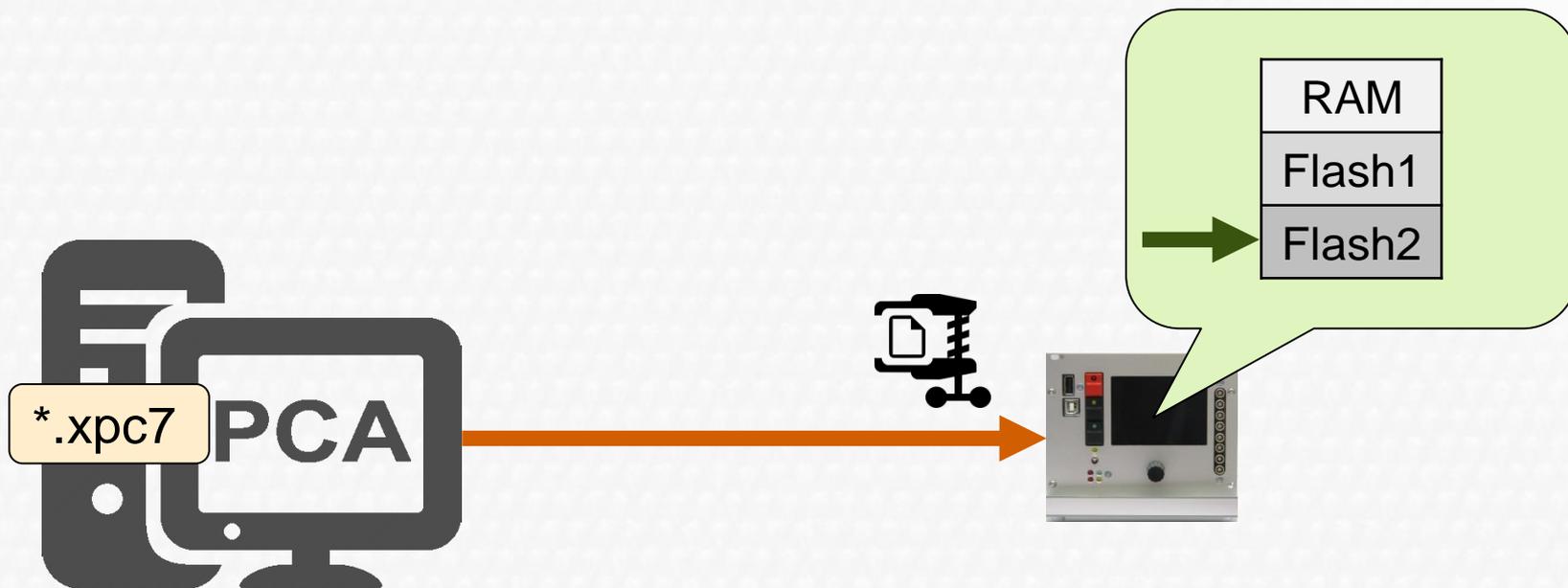
The power converter can be operated even after the MFU lost supply.



Configuration file → into the MFU Flash

2. Step

The configuration file (*.xpc7), which contains the configuration, is compressed and also sent to the MFU. The compressed configuration file is saved in **Flash2** and is still available after a power off.

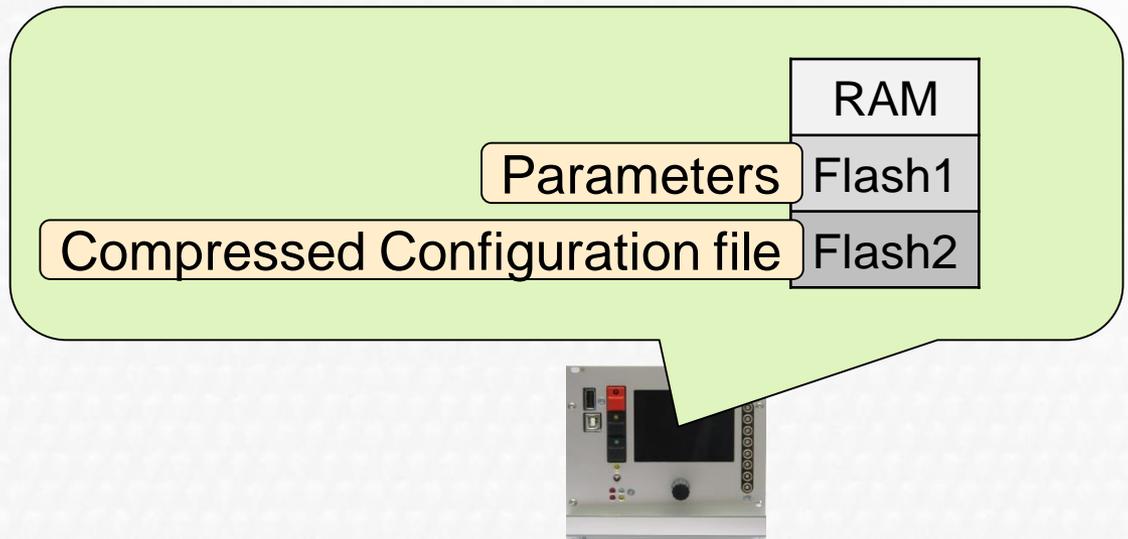


Configuration (file) → in the MFU Flash

The device parameters converted from the configuration are in **Flash1**.

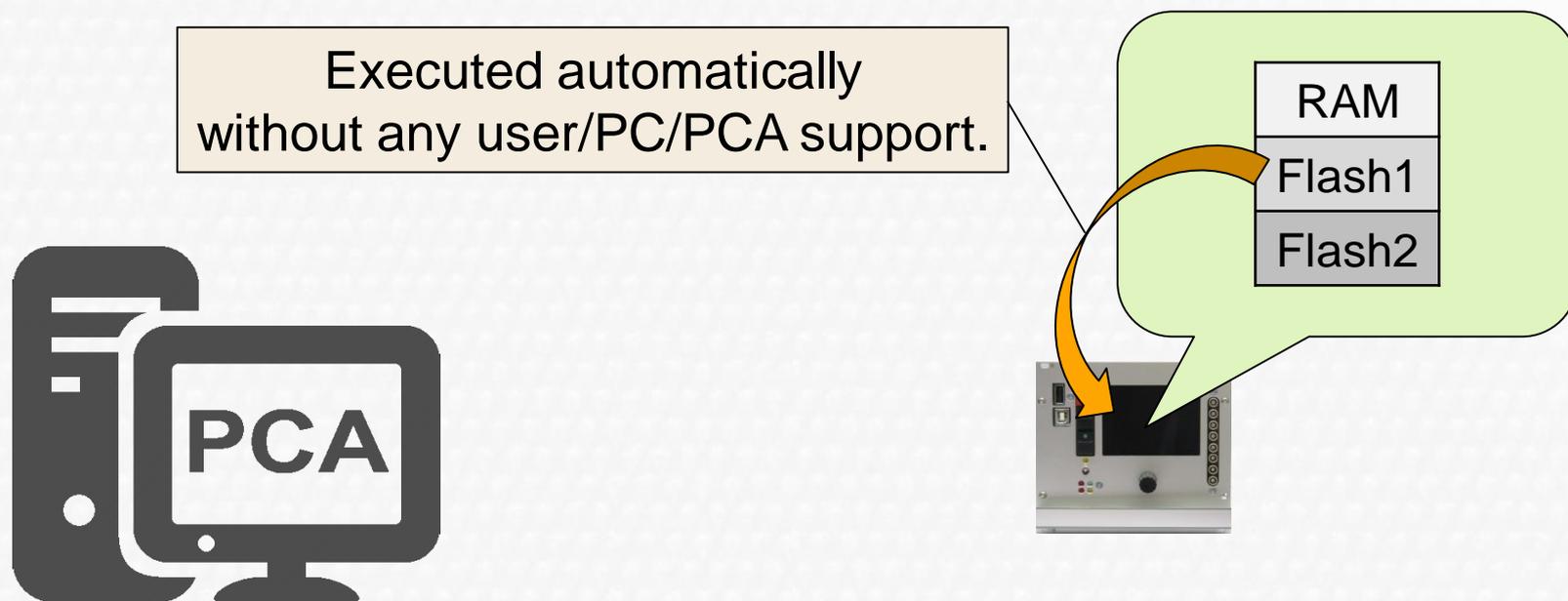
The compressed *.xpc7 configuration file is in **Flash2**.

→ We'll get to the reason for that in a moment.



Load parameters

If the ACU system is restarted, the device parameters are loaded from **Flash1** and used to make the device ready for operation.



Load configuration file

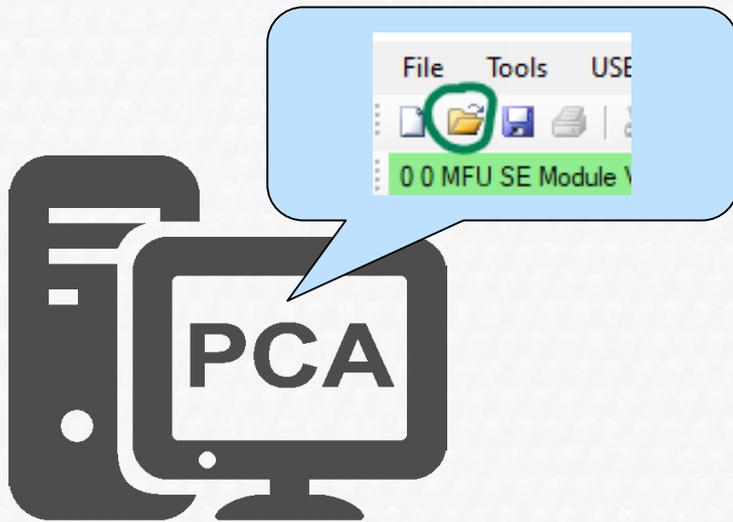
If it is necessary to reconfigure a power supply or to know which device configuration is currently being used, there are two ways to open this configuration in PCA.



Load configuration file

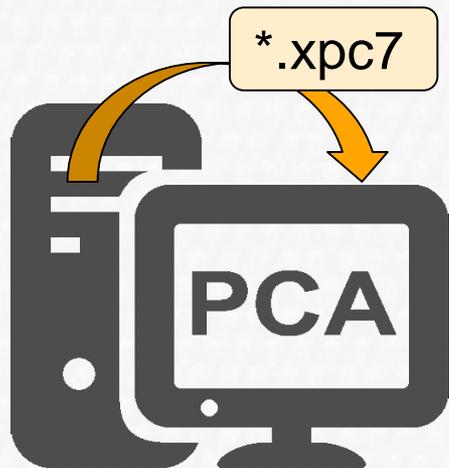
1. Possibility

Open the saved *.xpc7 configuration file.



Load configuration file

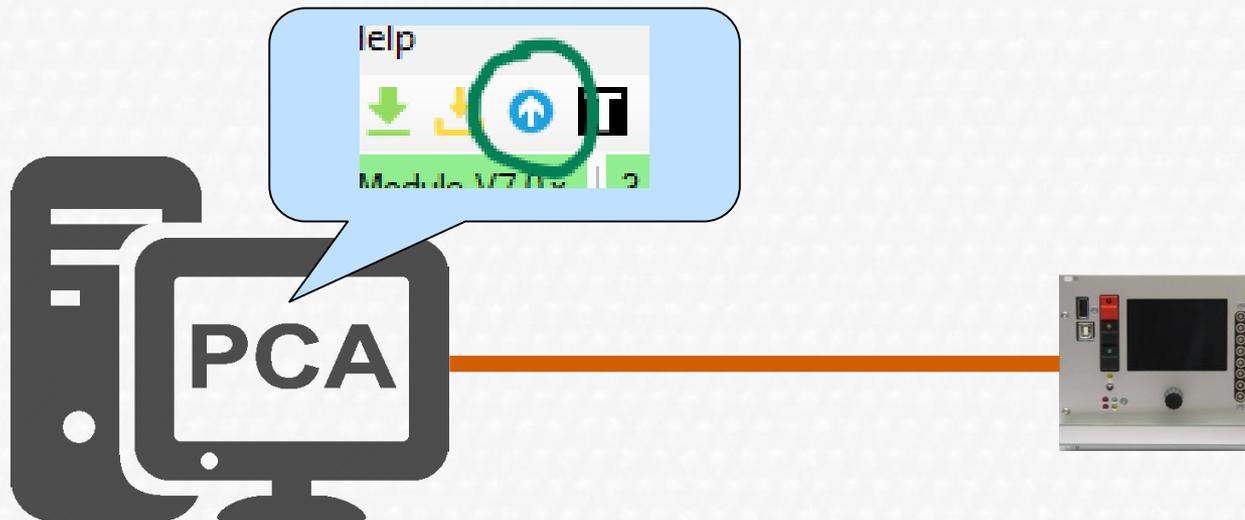
This loads the contents of the `*.xpc7` configuration file into PCA.



Load configuration file

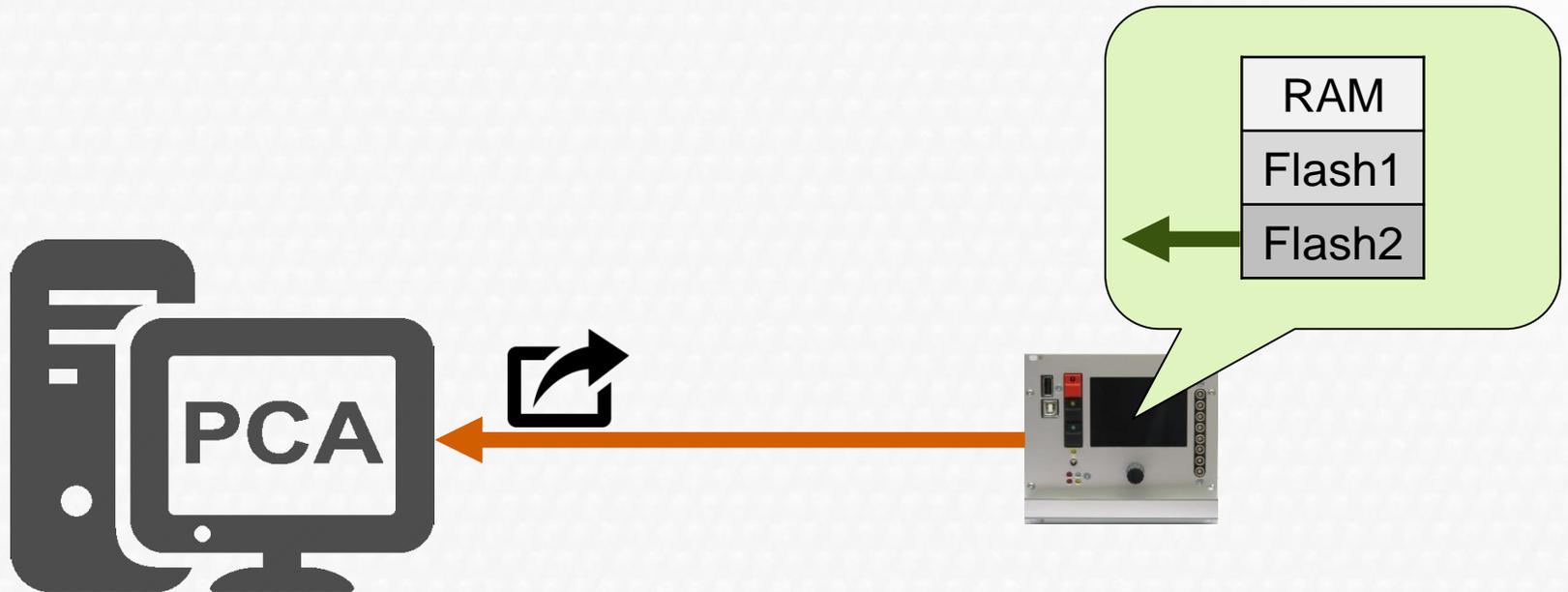
2. Possibility

Open the compressed *.xpc7 configuration file from the flash of the MFU.



Load configuration file

This copies the compressed *.xpc7 configuration file from **Flash2** of the MFU to the computer, decompresses it and loads its contents into PCA.



Copy parameters ↔ device parameter file

There is the possibility to transfer the device parameters without a PC using an USB flash drive.



Copy parameters ↔ device parameter file

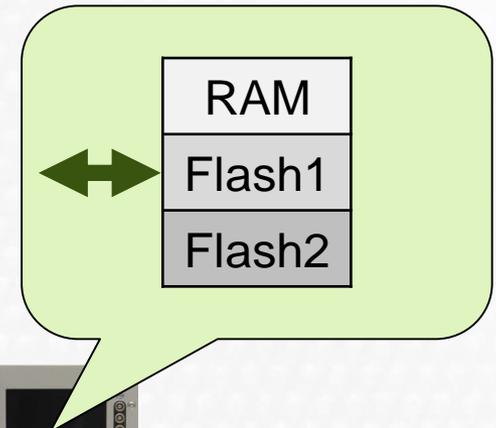
The device parameters are in **Flash1**.

- They can be copied from the MFU to the USB flash drive (an `ACU_PARAM.TXT` parameter file will be the result of that action)
- and also from USB flash drive to MFU. In this last case the parameter file on the USB flash drive (`ACU_PARAM.TXT`) overwrites the content of **Flash1**.

The compressed * `.xpc7` configuration file in **Flash2** remains unaffected.



acu_para.txt



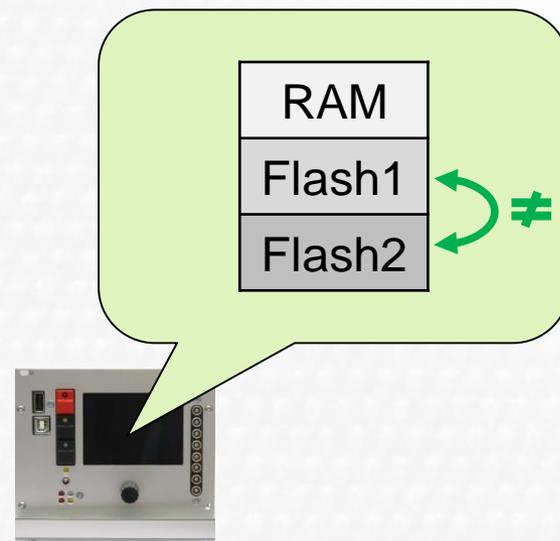
Important when copying parameters

ATTENTION:

If device parameters are transferred to the MFU via USB flash memory, the contents of **Flash1** and **Flash2** may not be consistent afterwards.

Therefore:

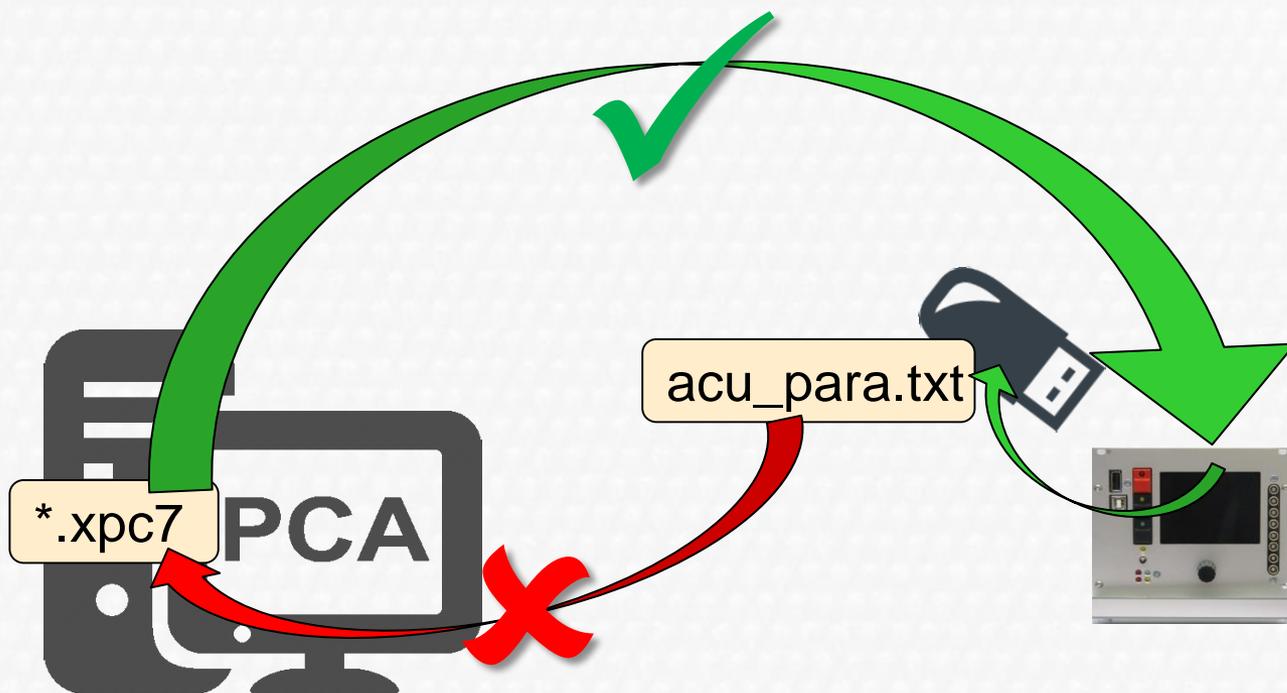
DON'T USE ANYMORE IN ANY CASE THE USB FLASH DRIVE TO WRITE PARAMETERS TO POWER CONVERTERS.



Configuration file ↔ parameter file

It is therefore possible to create device parameters/parameter file from a configuration/device configuration file via the detour MFU.

The opposite is not possible!



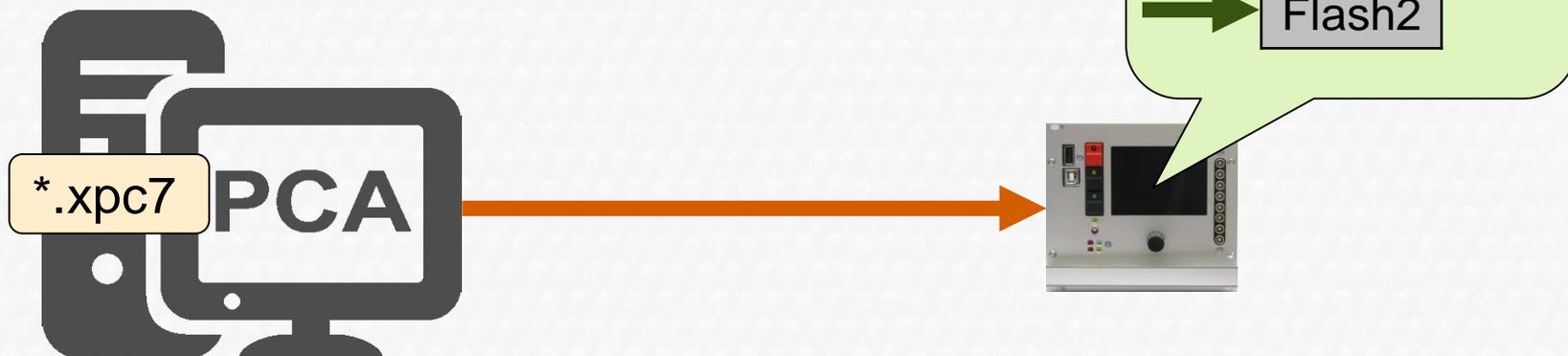
Conclusion

In summary:

The device parameters are derived from the configuration and saved as binary data in Flash1 of the MFU.

The configuration is saved in a *.xpc7 configuration file on the computer.

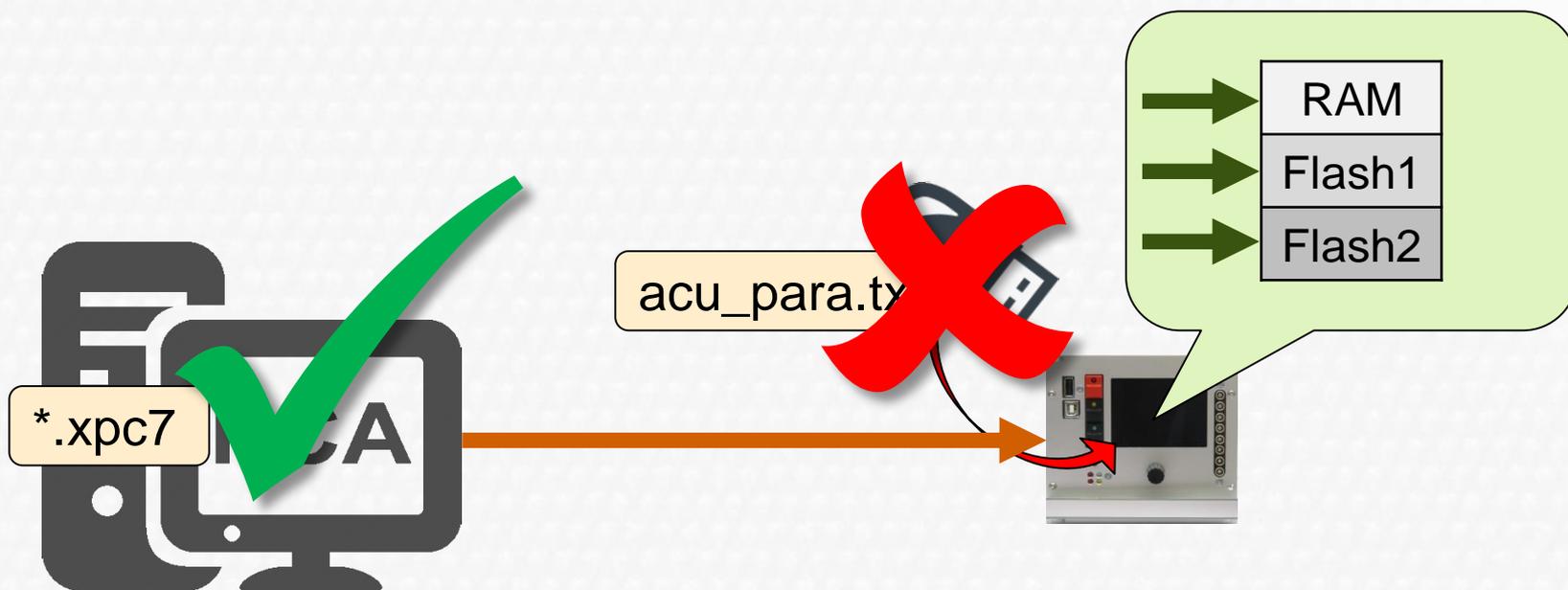
In addition, the *.xpc7 configuration file is saved as compressed file in the Flash2 of the MFU when the device parameters are sent to the MFU Flash.



Conclusion

Because of the risk that the compressed *.xpc7 configuration file in **Flash2** and the device parameters converted from it in **Flash1** cannot be consistent afterwards, it is mandatory:

that the device parameters are always set using PCA.



Thank you

More documents can be found on our wiki

<https://wiki.gsi.de/foswiki/bin/view/EPS/WebHome>

i.a. also an extensive instruction manual!

Further inquiries please

ACU-Support@gsi.de

Thank you for your attention.