SIEMENS
Ingenuity for life

SiPass integrated MP2.75/2.76

Hardware Installation and Configuration V1.2

Siemens AG 2019

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Table of contents

1. SiPass Installation step by step 4
2. Device overview 5
   2.1 Door controller 5
   2.2 FLN units (Field Level Network) 6
3. Connection ACC / RIM / Readers 8
   3.1 Connection of FLN devices to ACC-G2 8
   3.2 Connection DRI - card readers RS485 9
   3.3 Connection of OSDP readers to ACC AP 10
   3.4 Connection of I/Os to ACC AP FLN Bus 10
   3.5 Assa Abloy Aperio Hub AH30 connection (from 2.76) 10
4. ACC and FLN Field Service Tool 11
5. New ACC added 12
6. ACC firmware download 13
7. ACC OS update 14
   7.1 Upgrading ACC-G2 CCP1 to CCP2 Platform via Firmware Download 15
   7.2 Upgrading ACC-G2 CCP2 2.70 to CCP2 2.75 via Firmware Download 15
   7.3 Upgrading ACC-G2 to CCP2 Platform via SD-Card 16
   7.4 ACC AP System/Platform Update 18
   7.5 Verify the CCP2 platform at the ACC-G2 and ACC-AP: 19
8. FLN Configuration 20
   8.1 FLN Configuration search devices 20
   8.2 FLN device firmware download 21
   8.3 FLN Configuration device settings 22
   8.4 Aperio devices search and config via FLN Configuration (from 2.76) 24
   8.5 OSDP reader connection at the ACC FLN Bus (from 2.76) 25
9. Replace a defect RIM 27
10. Manually create devices 28
11. ACC G1 Info (ACC 5100) 30
12. ACC Lite /ACC-X info 31

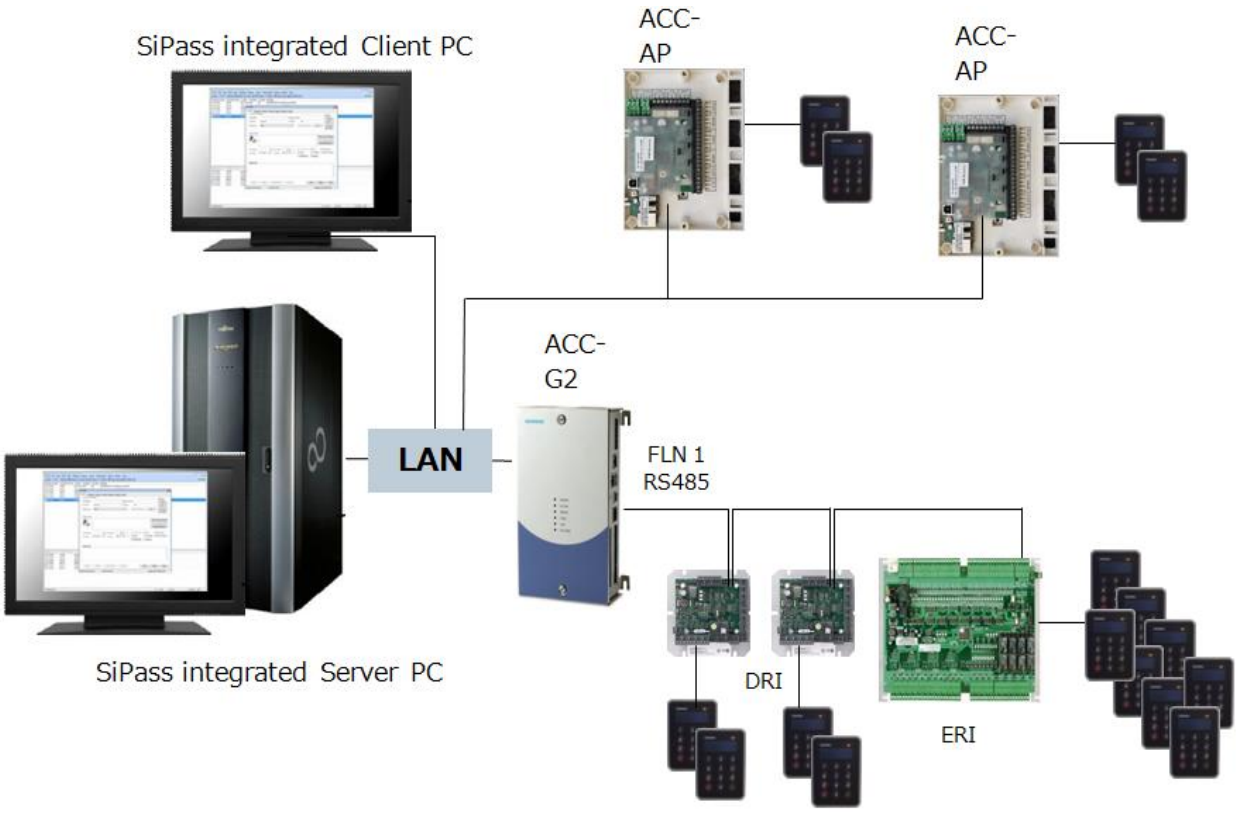
13. Entro Migration 34
14. Additional information 35
14.1 AC5102 (ACC G2) or ACC AP can’t be found 35
14.2 Telnet connection and how to change ACC IP-Addresses 35
14.3 AC5100 (ACC) can’t be found 36
14.4 How to delete the RIM-firmware and ID 37

1. SiPass Installation step by step

To set up a SiPass integrated system the following steps need to be performed:

- Installation of SiPass integrated software (Courseware "SW-Installation & Update")
- Configuration of the ACC´s
- Connect the ACC to SiPass and download the firmware
- Connect the FLN-devices to the ACC
- Search via SiPass "FLN Configuration" for devices connected to the ACC.
- FLN-devices (RIM and IO) will be detected automatically.
- Download the Firmware via the "FLN Configuration" define device-names and configure the devices.
- Enter the customer operators, cardholders and access conditions.

(For the configuration and connection of the readers, please refer to the corresponding Reader Documentation).



2. Device overview

2.1 Door controller

ACC-G2 (AC5102) controller (max 96 doors)
Storage up to 500.000 cardholders
6 FLN-busses, each bus will have up to 16 connection points
Therefore it is possible to connect maximal e.g. 8 DRI per FLN-bus.

ACC AP (AP01P) controller with OSDP reader interface (DRIe)
Storage up to 500.000 cardholders
4 inputs, 2 relay outputs, 4 open collector outputs
1 FLN bus supporting SiPass I/Os (8I/O, IPM, OPM)
No support for external intrusion systems (SPC/Sintony)
No High Elevator support

ACC (AC5100) controller, obsolete (max 96 doors)
Storage up to 500.000 cardholders
6 FLN-busses, each bus will have up to 16 connection points
Therefore it is possible to connect maximal e.g. 8 DRI per FLN-bus.

ACC-Lite (AC5200) controller (max 8 doors)
SiPass integrated or SiPass Entro devices can be connected, no mix.
Storage up to 100,000 cardholders (SR35i based)
1 FLN-bus, the bus will have up to 16 connection points but only
Limited to 8 doors, *no support for external intrusion systems (SPC/Sintony)*.

ACC-x controller (x will stay for the amount of supported doors)
The ACC-x is an upgraded SiPass Entro SR34i/35i.
Example: If a SiPass Entro SR34i/32 will get the ACC-x Firmware loaded, it will be recognized in SiPass integrated as ACC-32.
It is only possible to connect SiPass Entro devices to an ACC-x.
Also take care to enter the ACC-x license in between 30 days.
The SR-35 is hard-coded to a maximum of 100,000 cardholders.
The SR-34 is hard-coded to a maximum of 40,000 cardholders.
Please refer to the original ACC-Lite / ACC-x manual for more information.

2.2 FLN units (Field Level Network)

SRI (ADD5200)
- One reader via clock/data or Wiegand,
- 4 monitored inputs (2 fix assigned for door monitoring)
- 1 relay output, 1 open collector output

DRI (ADD5100, ADD5110, ADD5160, ADD5190)
- Connection for 2 readers via RS485 or clock/data or Wiegand
- 5 monitored inputs (2/4 fix assigned for door monitoring)
- 2 relay outputs
- 2 one door, readers as entry- / exit-reader or
- 2 doors with an entry reader on each door or
- 2 readers for control one turnstile

ERI (ADE5300)
- Connection for up to 8 readers via RS485 or clock/data or Wiegand, 4 up to 8 doors, only one RS485 bus protocol
- 32 monitored inputs (8-16 fix assigned for door monitoring)
- Variable configuration as entry or entry- exit-readers
- No turnstile function.

IPM (AFI5100) Input module
-32 monitored inputs
- 4 relay outputs
- 1 FOR input (FOR = Fire Overwrite)
- 1 FOR output

OPM (AFO5100) Output module
- 16 inputs (not internal powered, not monitored)
- 16 relay outputs
- 2 FOR input
- 2 FOR output
- (In case of elevator control 2 FLN-connection points needed)

8IO (AFO5200) In- / Output module
- 8 monitored inputs
- 8 relay outputs
- 1 FOR input
- 1 FOR output

ATI 5100- Intrusion Arming Terminal
- Terminal to arm, part-arm and disarm SiPass Internal and External Intrusion Areas.

It is also possible to connect the Entro FLN units to SiPass integrated.
The FLN bus type is "Entro FLN Bus"
This is recommended if reader form the Entro system like the PR500 is used.

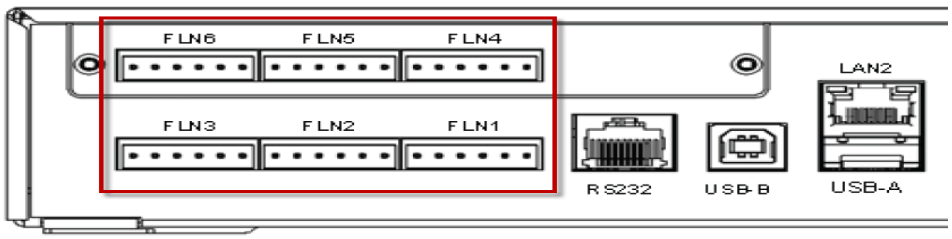
DC12
- Connection for 2 readers via BC-Link
  or 1 reader via clock/data or Wiegand
- 2 readers as entry- / exit-reader (one door)
- 2 inputs fix assigned for door monitoring
- 1 output

DC22
- Connection for 2 readers via BC-Link
- or 1 reader via clock/data or Wiegand
- one door, 2 readers as entry- / exit-reader
- 6 inputs (2 fix assigned for door monitoring)
  6 outputs
  The DC22 inputs/outputs are not assigned to fix function like in SiPass Entro. This means also the functions like the alarm bypass relay isn´t available.

IOR6 In- / Output module
- 4 inputs
- 6 outputs

3. Connection ACC / RIM / Readers

3.1 Connection of FLN devices to ACC-G2



Maximal length of each ACC FLN Bus (RS485) is **1000m**.
No "star" or "branch" wiring to the FLN-devices allowed.
The devices have to be wired in serial (only one line).
One FLN can have a maximum FLN Load of **16**.
Each device that is added to the FLN will supply a fixed FLN Load (see below table).
Please use the FLN Calculator for the FLN Planning.

At the 6 FLN-ports (Field Level Network) following devices can be connected:

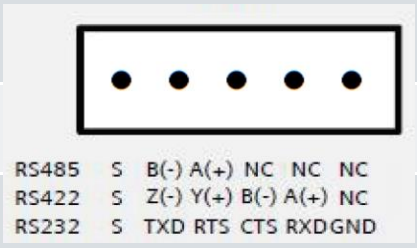
FLN-Unit	FLN load
SRI	1
DRI	2
ERI	8
IPM	4
OPM	4(2)
8IO	2

FLN-Unit	FLN load
DC12	2
DC22	2
IOR6	2
IAT	1

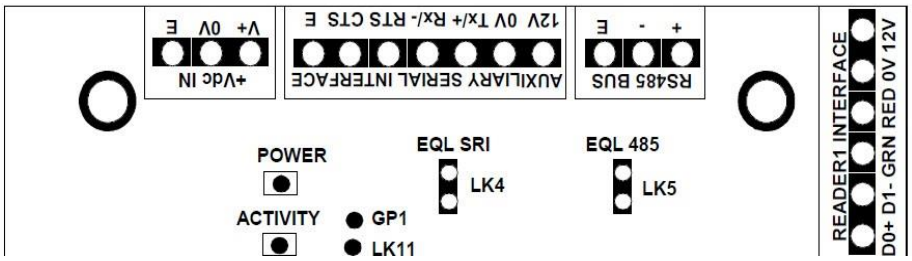
Connection between ACC (FLN) and DRI

ACC G2 FLN connector

ACC FLN 1-6	FLN RS485 bus
A(+)	+
B(-)	-
S(Schild)	S



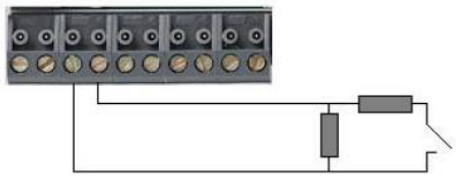
3.2 Connection DRI - card readers RS485



Connection between DRI and Reader:

ADD 51x0 (DRI)	AR40S-MF AR10S-MF	AR618x–RX, -MX, -MT	AR618x-MS
Protokoll	**ARxxS-MF OSDP**	**Siemens RS485**	
12 VDC	+	+ Volt DC	
0V	-	GND	
Tx/+	A	B	A
Rx/-	B	A	B

Please note:
The RIM's will need different voltage: **SRI 12 VDC**
DRI/ERI 24 VDC
! The DRI requires at least 18 VDC, otherwise the 12 VDC output will not work!
Connection for "Monitored" or "Unmonitored" Inputs:
The functionality of the Inputs can be defined in the SiPass "FLN-Configuration".
If the option "Monitored" is selected, all inputs will be monitored.
For monitored inputs the resistors must be wired as shown below.
Monitored Inputs will provide the line states: "Short circuit"; "Break of line" or "line OK".
The DRI-jumpers LK6-10 must be set. Exception is if the inputs triggered by an external power (in this case the inputs not monitored).



Resistor circuit for monitored inputs
(Resistors 22KOhm)
11KOhm Normal
22KOhm Alarm

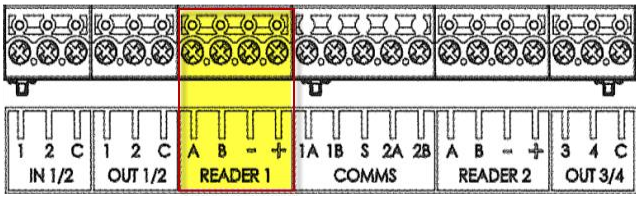
(Please also refer at the „User Manual_DRI.pdf")

3.3 Connection of OSDP readers to ACC AP

The ACC AP is the first SiPass controller hosting a RIM (DRIe = DRI-embedded)).
The DRIe is supporting following door modes:

- Dual Reader Door
- 2 Single reader doors
- Turnstile single door contact
- Turnstile dual door contact

ACC AP



ACC-AP READER 1	ARxxS-MF / OSDP Leser
A	A
B	B
-	-
+	+

Both OSDP readers connected to "READER 1" connector.

The "RIM" configuration is the same as for a DRI. (8. FLN-Configuration)
No RIM firmware need to be downloaded because the ACC AP FW itself containing the RIM functionality.

3.4 Connection of I/Os to ACC AP FLN Bus

The ACC AP is providing one FLN bus with the compatibility for I/O FLN devices (8I/O, IPM and OPM). It is not possible to connect additional RIM devices (SRI, DRI, ERI) or Entro FLN devices.
The I/Os connected to 1A/1B at the COMMS connector.

3.5 Assa Abloy Aperio Hub AH30 connection (from 2.76)

Since 2.76 it is possible to connect a AH30 (RS485 Hub) from the Assa Abloy Aperio system.
This will enable a wireless reader connection, this is no "Data on Card" system like SALTO.
All access decisions will be made by the ACC-AP.
Link to the Assa Abloy Aperio product page: https://secure.assaabloy.de/index.php?key=produktkatalog&lang=de&c=assaabloyberlin&menuID=5711&treeID=165390
SiPass will support this Aperio devices: AH30, C100, E100, L100 (only exit-button).

Support und Konfiguration der Aperio Geräte bitte bei Assa Abloy anfragen.

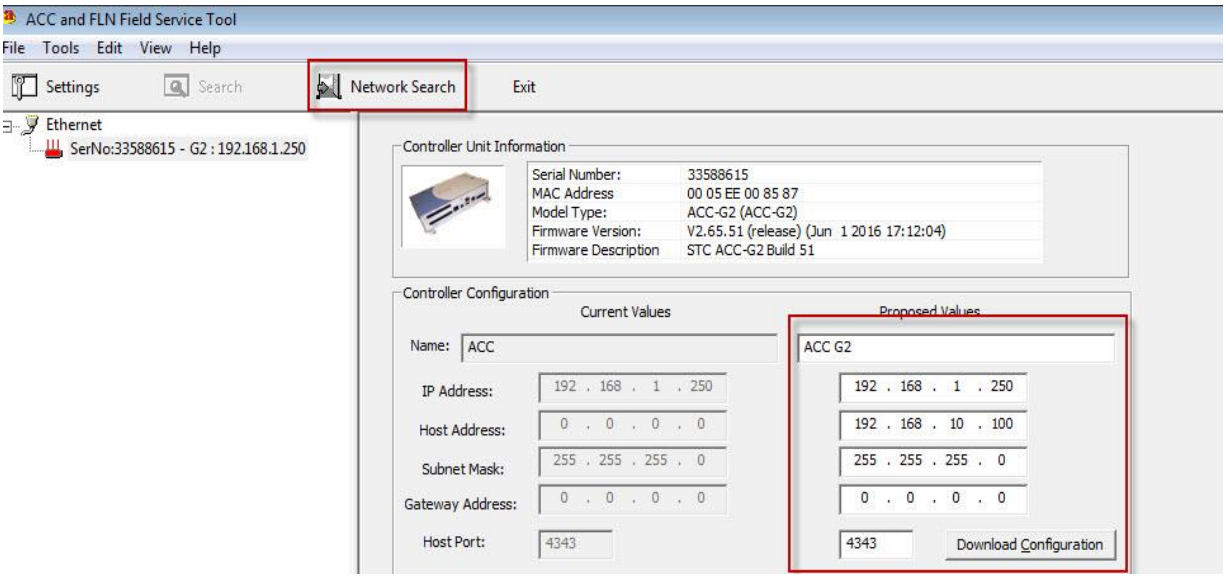
ACC-AP COMMS	AH30
1A	A
1B	B
+ V OUT	8-24 VDC
- V OUT	GND

AH 30 DIP Einstellungen:

1	2	3	4	5	6	7	8	9	10
1	0	0	0	0	0	0	1	0	1

4. ACC and FLN Field Service Tool

The “ACC and FLN Field Service Tool” search via a network broadcast for new ACC’s.
Only for special ACC settings it is needed to log into the ACC via Telnet.
The “ACC and FLN Field Service Tool” has to be installed first, the tool is located at the SiPass integrated DVD image inside the “Tools” folder.
The button “Network Search” of the ACC and FLN Field Service Tool will start a network broadcast to find connected ACC’s. All ACCs inside the same network segment will be found and listed. Also if they have still the same default IP addresses 192.168.1.250 (after update to ACC G2 CCP2 the default IP address is 192.168.251.1, like ACC AP).



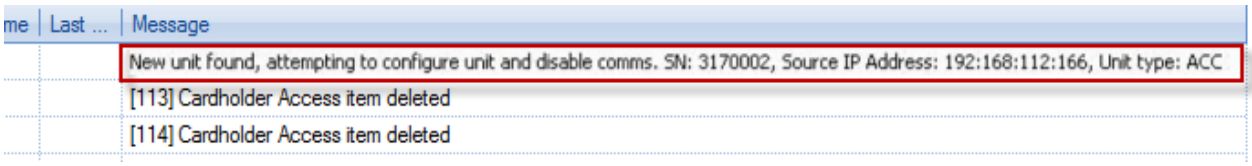
Following values have to be entered / defined:

- Name of the ACC
- IP Address
- Host Address (SiPass Server PC IP address)
- Subnet Mask
- Gateway Address (not necessary if the Host and the ACC are in the same network segment)

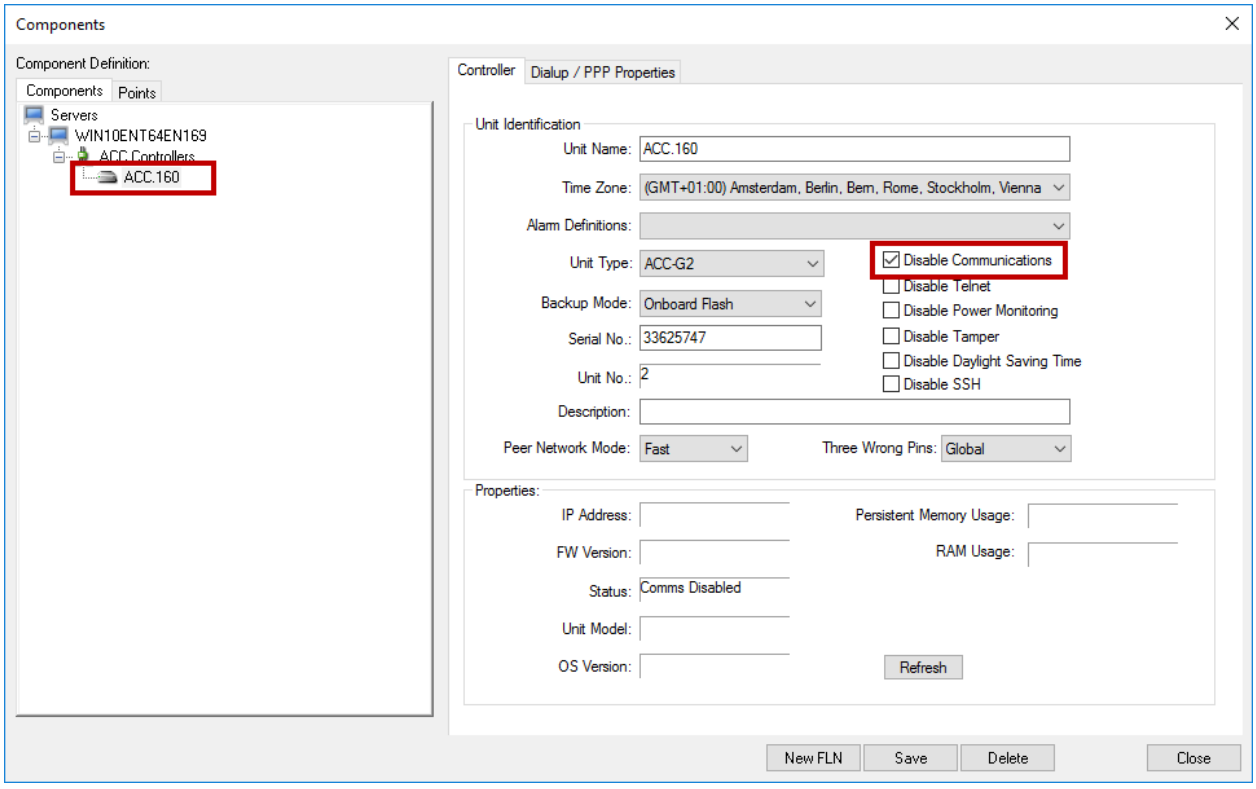
The “Download Configuration” button will send the configuration to the ACC.
If the Server (Host) and ACC IP-Address is entered correct, the ACC will contact his SiPass Server and is entered automatically into the SiPass integrated database.
If this is not happen check if the Windows Firewall is active because they are blocking the incoming port 4343.
Disable the FW or add an exception for the TCP port 4343.

5. New ACC added

The new ACC will be entered automatically into the database and is available at the Components dialog of the Configuration Client. If this is not the case check the Firewall. The example below shows the "Audit Trail" with a found ACC from the Operation Client and the ACC is entered at the SiPass-Components.
To activate the ACC it is sufficient to untick "Disable Communication" and press "Save".



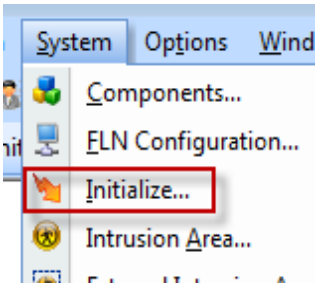
For safety reasons (system updates) the ACC communication is disabled and has to be enabled manually at the Component dialogue of the Configuration Client.



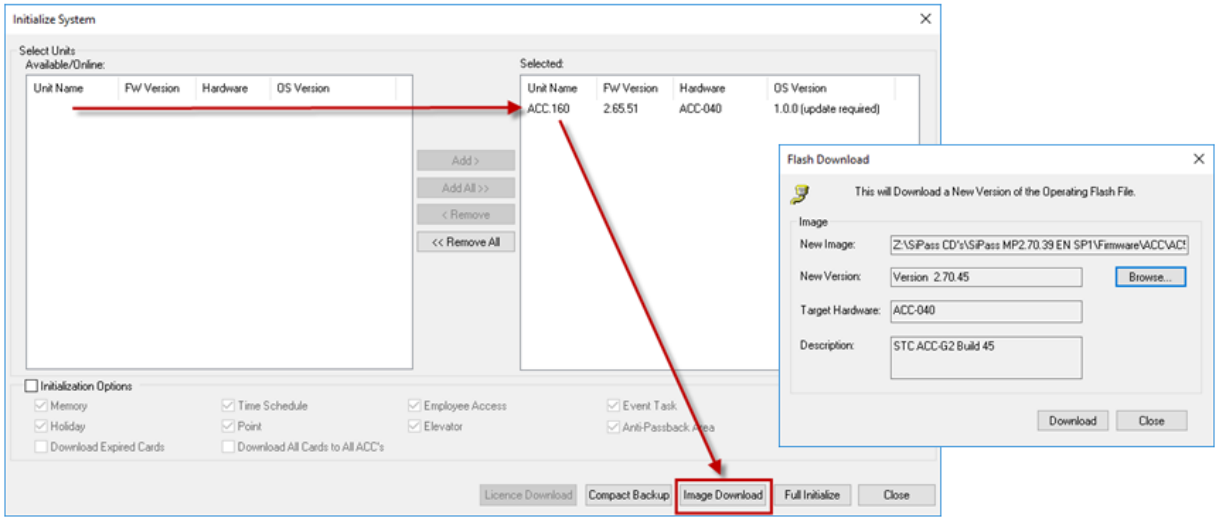
TIP: For security reasons Telnet and SSH communication should be disabled after installation (before over handing the system to the customer).

6. ACC firmware download

Firmware Download via ACC **Initialize**-Dialog:



All ACC's that are online will be listed at the left side of the dialogue.
Add the ACC to the right side and choose "Image Download".
A file explorer will enable now to select the correct firmware for the download.



ACC firmware is located at SiPass integrated DVD image at: \Firmware\ACC
You need to select the correct ACC type:

- ACC-042 => AP01P (ACC AP)
- ACC-040 => AC5102 (G2)
- ACC-010/-020 => AC5100 (ACC)
- ACC Lite => AC5200 (ACC-Lite)

<u>Information for ACC G2:</u>
New delivered ACCs must be updated at first to the firmware version <u>2.65.44.</u>
Additional to the ACC firmware the ACC-G2 platform must be updated to CCP2.
This can be done via SD-card (Point 7.3) or with the *initialize*-dialog (POINT 7.1).
Please have a look tot he following pages. The CCP2 platform will include a new Linux OS for the ACC G2.
Restart the ACC after firmware download. To ensure the systemfunctions it is necessary to download the actual system-configuration as soon as the ACC is online again. To load the system-configuration select the ACC to the right side and press **Download.**

7. ACC OS update

With 2.70 not only the functional firmware will be updated, also the OS will be updated for the ACC G2 controllers.
The new ACC AP is following this rule to keep the security level of the controller operating system as high as possible.

Higher security and comfortable handling is often an opposite, some steps more are needed to update an ACC to the current OS/security level.

ACC G2:
A new ACC G2 is delivered with FW 2.55.24 and CCP version 1.
A CCP (Common Controller Platform) update to CCP2 is required (see 7.1 / 7.2).

For a new ACC it is recommended to use the SD card update (7.3) because this is the fasted way to update the ACC to the latest CCP and FW version.
The housing cover of the G2 has to be removed because of the real time clock battery isolator. So it is a 2 minute job to insert the prepared SD card, set the jumper X120 and power the ACC for a minute. (Update is ready if LEDs stop stepping)
Update done!
After the SD card update the settings lost, the IP address of the ACCs is resented to the new default values (192.168.251.1).

The download way (7.1) is recommended if an existing system should be upgraded to 2.75.
The CCP download takes round about 30 minutes but the ACC G2 is operating as normal.
Only modifications not send to the ACC until the FW download is finished.
After the download the ACC G2 is rebooting and back online.
No IP settings reset happen.

ACC AP:
A new ACC AP is delivered with FW 2.75.14 and Platform 1.1.0
No need performing a platform update until a newer version is released.
If we release in future an ACC AP platform update this can be done via a microSD card (see 7.3) or via download.
Same recommendations as for the above described ACC G2:
-New ACC AP => microSD card update
-Operating ACC AP => download the platform update via Initialize dialogue.

Other ACCs:
No OS/Platform/CCP update possible.
MP2.75 is the first MP where no 2.75 FW is available for these ACCs.

7.1 Upgrading ACC-G2 CCP1 to CCP2 Platform via Firmware Download

Step 1:

1. Check if the ACC FW is equal or higher then 2.65.44
   if not download "acc-g2_2.65.44_release.bin" first.
   located here: \Firmware\ACC\AC5102 (G2)\CCP1_to_CCP2\System_Update_Step0
2. Download now "acc-g2_updatelegacy_2.7x.xx_release.bin"
   located here: \Firmware\ACC\AC5102 (G2)\CCP1_to_CCP2\System_Update_Step1

Each download take round about 5 minutes inclusive a controller reboot.

The "legacy FW" is a fully functional 2.75 ACC FW and is required to process the ACC OS update Step2. The system can be tested before the final update to CCP2 is performed because there is only one way back to CCP1, a downgrade to 2.55.24 with a SD card!
The "legacy FW" will send every hour a reminder to the audit trail until the ACC OS update is performed, see step 2.

Step 2:
Download the OS update "acc-platform_ccp1_to_ccp2.17.2_upgrade.bin" to the ACC.
Located here: \Firmware\ACC\AC5102 (G2)\CCP1_to_CCP2\System_Update_Step2.
This file is approximately 20Mbytes in size and will take at least half an hour to download to the ACC. The ACC is fully functional during the download. Modifications from Host first send to the ACC if the OS FW download is finished.

Once the ACC has received the complete file, the "Image Download Process Completed" message will be reported. After ACC Platform image has been written to flash memory, the "Download Completed. ACC flash programming OK" audit trail message will be reported and the platform upgrade will be initiated.

The platform upgrade procedure will take around 1 minute to complete and the ACC will restart. After the new CCP2 platform has been loaded, database configuration and system settings will be kept.

7.2 Upgrading ACC-G2 CCP2 2.70 to CCP2 2.75 via Firmware Download

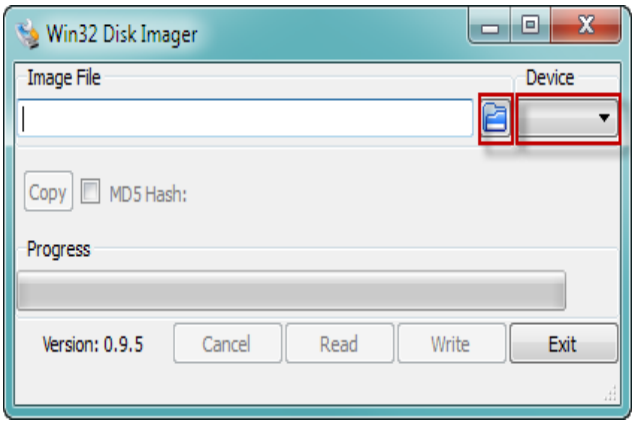
If the ACC G2 is running 2.70.xx and CCP2.17.2 FW following file have to be used to update the controller: "accg2-platform_ccp2.17.3_update_acc2.75.14.bin"
This file is located here: \Firmware\ACC\AC5102 (G2)\CCP2_to_Latest

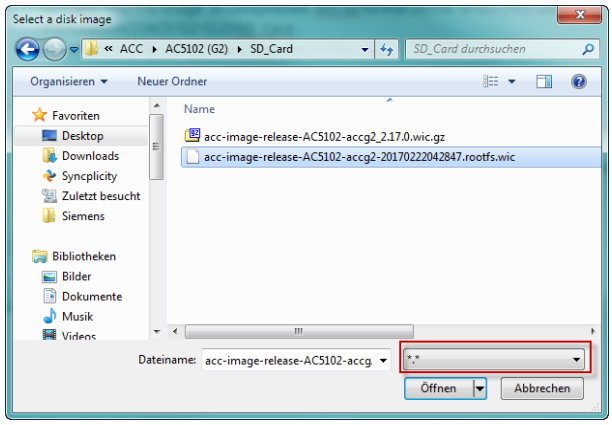
The behavior of the download is the same described as Step 2 above.

7.3 Upgrading ACC-G2 to CCP2 Platform via SD-Card

To Upgrade the ACC-G2 OS to CCP2 you needed to prepare bootable SD-Card. Find the image in compressed .wic.gz format on the SiPass DVD under \Firmware\ACC\AC5102 (G2)\SD_Card .
Uncompress it by using 7-zip or another similar tool.

The .wic image file has to be written to the SD Card with the Win32DiskImager.
You find it on the SiPass DVD image under \Tools\ACC-G2 SD-Card Creator Tool
Install the Tool and start it with Administrator rights. Add the FW file by clicking on the blue Folder icon and select the SD Card in the Device pull down.
Win32DiskImager defaults to open a file of extension type *.img, so select *.*, browse to the location of the .wic file and load it, then click the "Write" button.

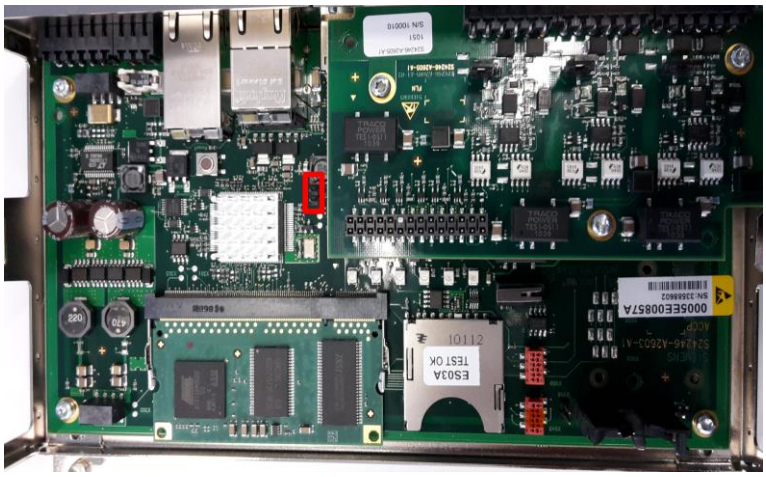




Currently, the CCP build produces a .wic image for a **512MB SD Card**, so an SD-Card of this size should be used. The maximum SD-Card size that can be used is 2GB, no SD High Capacity (SDHC) cards supported.

ACC G2 Revision 1 will not boot from SD-Cards of 1 or 2 GB in size, so 512MB cards are the preferred ones to use.

1. Power off the ACC G2 and remove the housing cover
2. Insert the SD Card into the G2's SD-Card slot
3. Set the X120 jumper, which tells the boot loader to boot from the SD Card
4. Power up the ACC



5. The LEDs will stop blinking after about 30s, which indicates that programming has completed. If the ACC was manufactured pre-2012, you might need to press the reset switch between the CPU and Ethernet connector.
6. Power off the G2 and remove the SD Card and Jumper X120.
7. Power up the ACC and check if the new CCP2 platform has been installed (8.5).

Since 2.70 SP1 the OS Version is listed at the Initialize and Component dialogue of the Configuration Client.

If the ACC has not been upgraded, repeat the SD-Card update procedure. This may be necessary as some versions of the ACC have a single-boot UBOOT installed in them, which requires the SD-Card Upgrade Procedure to be performed twice for the upgrade to take effect.

NOTE:
SD Card upgrade will reset the network parameters to the following values:

- IP address: 192.168.251.1
- Subnet mask: 255.255.255.0
- Gateway address : 0.0.0.0
- Host IP address: 0.0.0.0
- TCP Port: 4343

7.4 ACC AP System/Platform Update

The ACC AP is delivered with a SiPass 2.75 compatible firmware.
The following described steps are only necessary if a SD Card firmware update has to be performed.
Alternative the System Update can be downloaded like a normal ACC AP FW.
The download takes 30 minutes like the CCP update of an ACC G2.
Same task with two different names.

4.1 Preparing the microSD Card

1. Insert the microSD (2 GB minimum) card into the computer.
2. Unzip the file “acc-ap-sdcard_x.x.x.7z” (Firmware\ACC\AP01P (AP)\SD_Card) to extract the "xyz.img " file.
3. Use Win32DiskImager (Tools\ACC-G2 SD-Card Creator Tool) to write the “img” file to the SD Card.

Note: The disk imager program must be installed on your computer first.

4.2 Updating the AP Controller with Micro SD Card

1. Power off the ACC AP
2. Insert the microSD Card
3. Press the “Factory setting” button and power on the ACC AP
4. The “Factory setting” button can be released after 5 seconds
5. The LED will show the following states as the controller is booting and updating:
   - red – the controller is starting up
   - the LED color will flash ORANGE or GREEN depending on different stages of the update
   - when the LED turns to steady ORANGE, wait 7 seconds till update is finalized
6. remove power from the controller, remove the SD card and restart

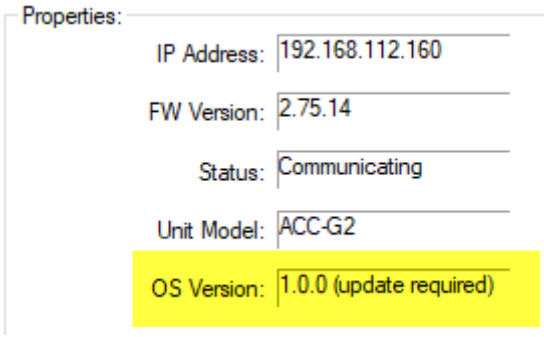
Note: LED flashing RED at any stage indicates an error in the update process. In this case, repeat the steps above to begin update again.

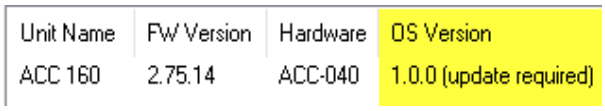
TIP:
The microSD card can be handled easier if you prepare them with a sticky tape.

7.5 Verify the CCP2 platform at the ACC-G2 and ACC-AP:

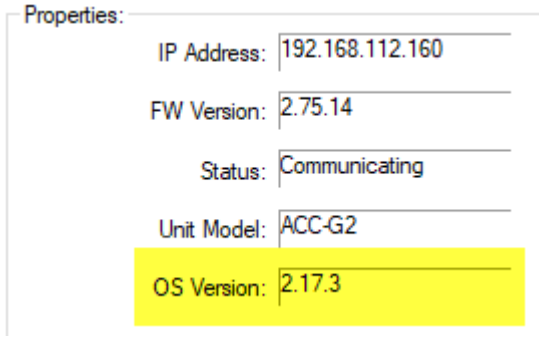
After the update to the latest CCP / Platform you can verify that it was installed properly with help of the SiPass Config Client.
At the “Component” or “Initialize” Dialogue the OS version is displayed.

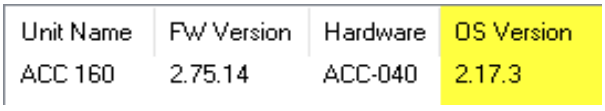
ACC G2 before CCP update:



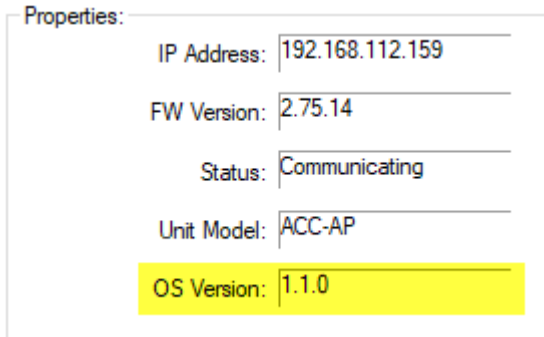


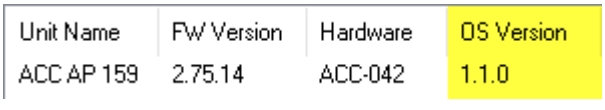
ACC G2 after CCP update:





ACC AP:



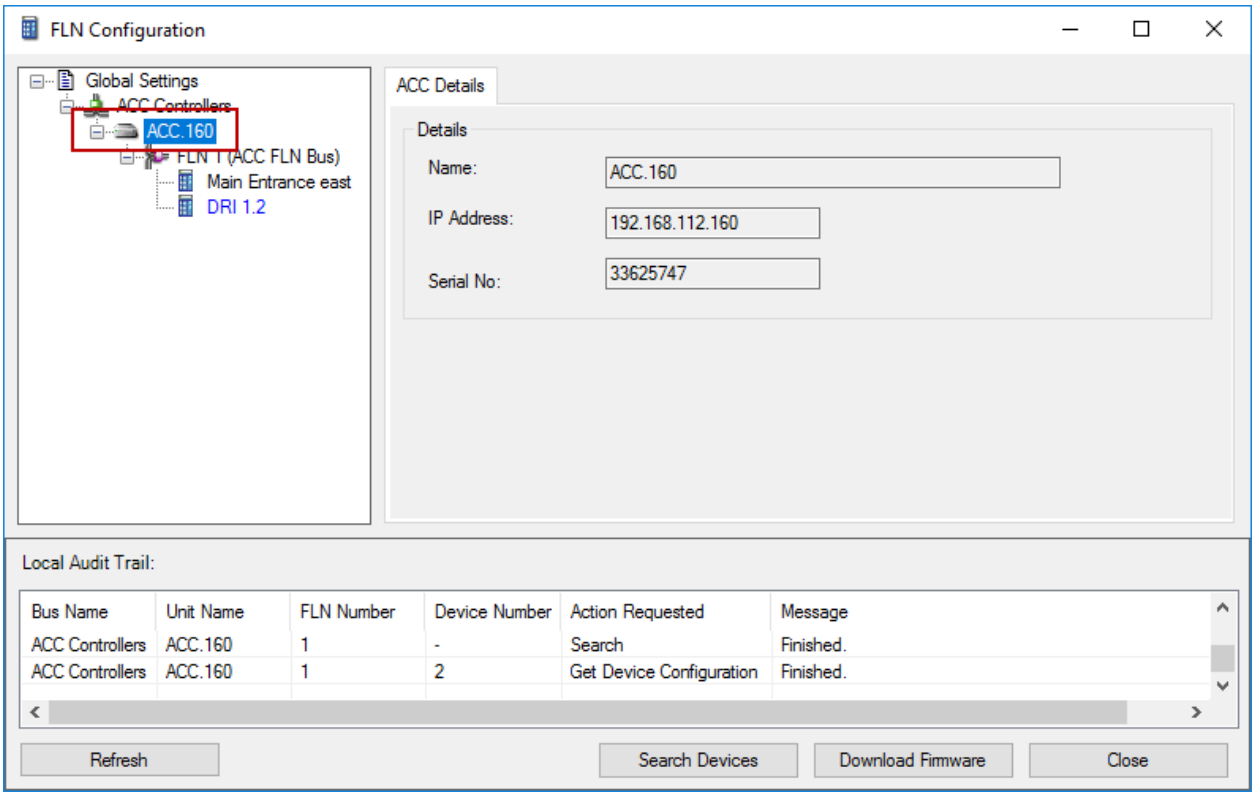


8. FLN Configuration

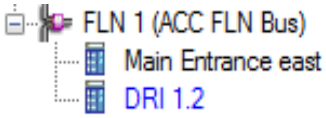
The SiPass FLN-Configuration will provide the possibility to search for connected FLN-devices like SRI, DRI, DRIe (embedded at the ACC AP), ERI, OPM, etc.
The “FLN Configuration” will be found at the Config Client: **System / FLN Configuration**.

8.1 FLN Configuration search devices

Select the ACC which should search for new connected devices.

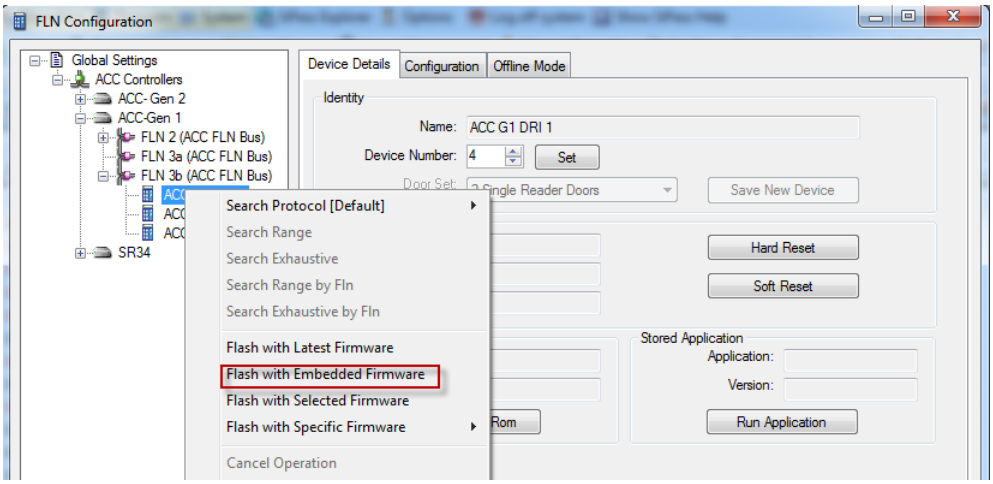


The search function will be started with the button “Search Devices”.
New found FLN-Devices will be displayed in blue color.
The blue color displays that this device is new found but not saved.
Saved devices displayed in black color.

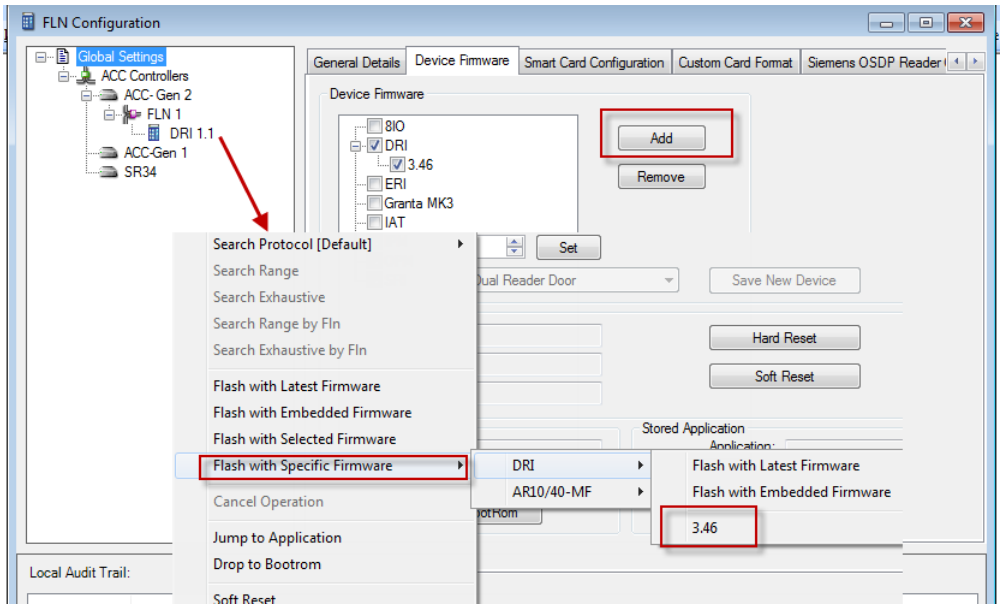


8.2 FLN device firmware download

The easiest way to download the firmware into the FLN devices is to use the embedded firmware. FLN-device firmware included in the ACC FW
ACC Lite does not offer this embedded firmware download possibility.
The ACC AP on board DRIe not require a FW download.
Select the FLN devices and click right mouse button.
Click on “Flash with embedded Firmware”.
The ACC will download the firmware into the FLN device.

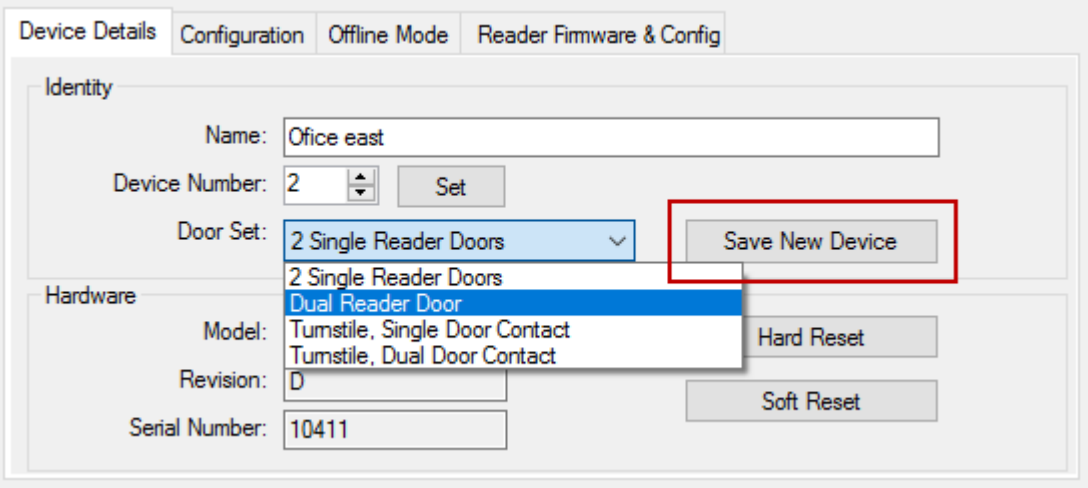


If the ACC Lite is used, the FW that has to be downloaded need to be defined before.
In “Global Settings”- “Device Firmware” it is possible to add the firmware for the FLN-devices (located at the SiPass DVD: \Firmware).
Select the FLN devices and click right mouse button.
Click on “Flash with Specific Firmware” and select the Firmware you added.



8.3 FLN Configuration device settings

Select the **"Device Details"** tab: The unique **"Name"** can be entered here
The next free **"Device Number"** has been assigned automatically (keep it as it is).
The **"Door Set"** has to be defined.
(DRI offers: 2 Single Reader Doors, Dual Reader Door or Turnstile mode)
If all entries correct, press **"Save New Device"**.
The blue color will change into black and the assigned name is displayed.



"Door Set" Info:
The **"Door Set"** can only be defined at **new found RIM!**
If the button **"Save New Device"** is pressed, the "Door Set" can't be changed.
To choose another "Door Set" you have to delete the device and search again.
The device can be deleted at "Components".

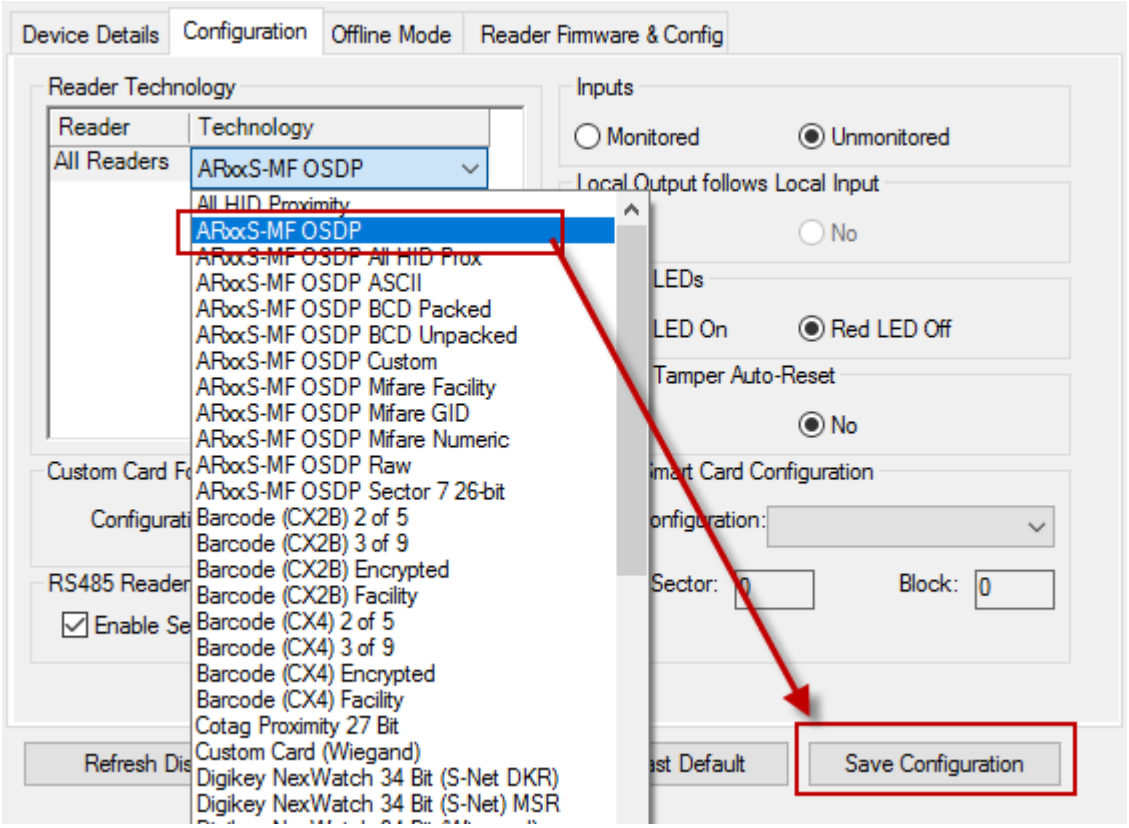
Configuration tab:

- **Reader Technology,** select "ARxxS-MF OSDP" for an ARxxS-MF reader or "Siemens RS485" if an AR6181 MX is connected.

- **Inputs** behavior "Monitored" need a resistor-circuit (Example page 8).
  "Unmonitored" just a switch.

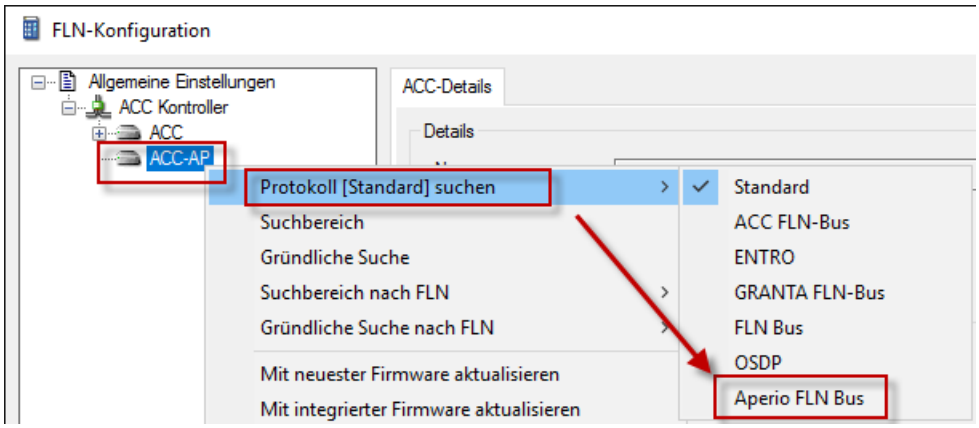
- **Local Output will follow Local Input** is only used for devices with tamper input (e.g. OPM, IPM, 8IO)
-
- **Reader LED** Red LED On: LED color red and green (Asia Pacific and USA)
  Red LED Off: LED color yellow, red and green (Europe)

- **Reader Tamper Auto-Reset** If the tamper contact is closed again, the reader will work again immediately.
-
- **Reader Technology,** select "ARxxS-MF OSDP" for an ARxxS-MF reader or "Siemens RS485" if an AR6181 MX is connected.

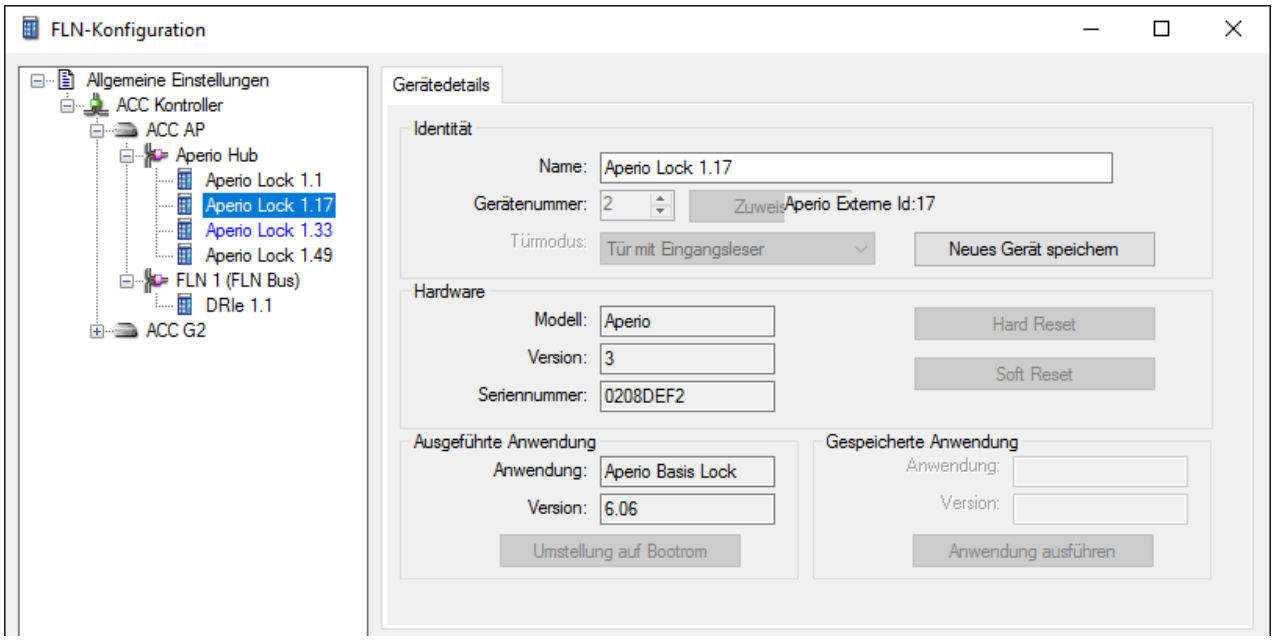


8.4 Aperio devices search and config via FLN Configuration (from 2.76)

Connect the AH30 to COMMS 1A/1B connector, at the ACC-AP select the FLN protocol *Aperio FLN Bus*. Afterwards start the *Search Device*-function.



All Aperio-devices linked with the AH30 will listed now. (Up to 8 devices)
If a unique name has been given to the Aperio-devices they can be saved.
The wireless readers can be used now with SiPass.



The Operation Mode *Card* and *Card and Pin* is available.
Also the Additional Access Method Options *Daily Code* and *Pin as Card* is available.
The relay of the wireless reader can be controlled via Manual Control like a DRI-relay.
Therefore a relay-control via time-plan is possible.

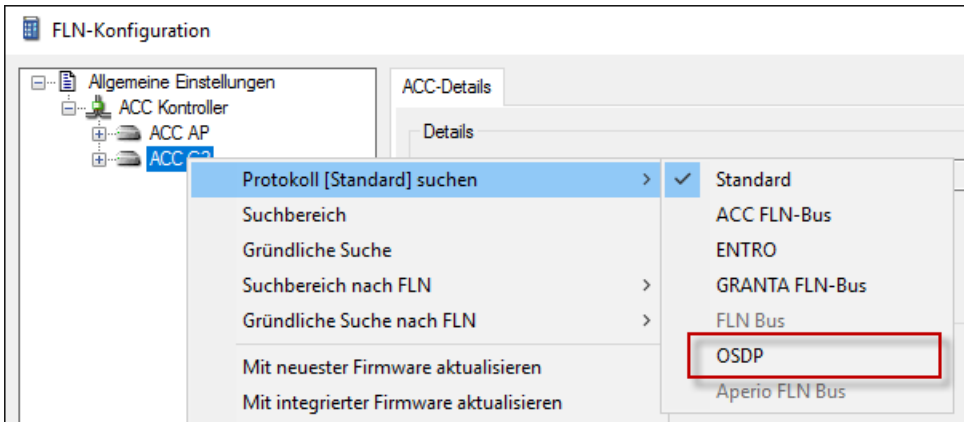
8.5 OSDP reader connection at the ACC FLN Bus (from 2.76)

Normally the OSDP-readers connected to the DRI or ERI.
Because the ERI can't handle the OSDP-V2 encryption the solution is to connect the OSDP-readers direct to the ACC-FLN.
These OSDP-readers can be linked later to the original ERI where they have been connected before.
Up to 8 OSDP-readers can be connected to an ACC-FLN.
It is not possible to mix devices at this ACC-FLN, so only OSDP-readers allowed.

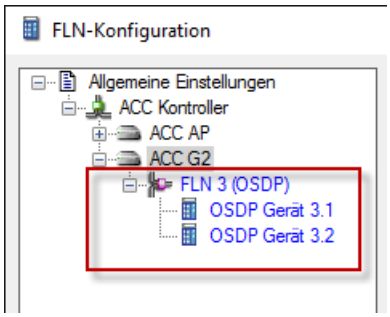
How to:

- Connect reader to the Acc FLN Bus (reader A=>FLN A(+), reader B => FLN B(-))

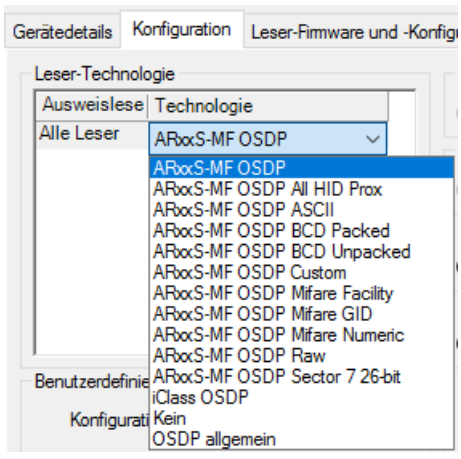
- In the FLN-Configurator select the ACC and select the OSDP-protocol.



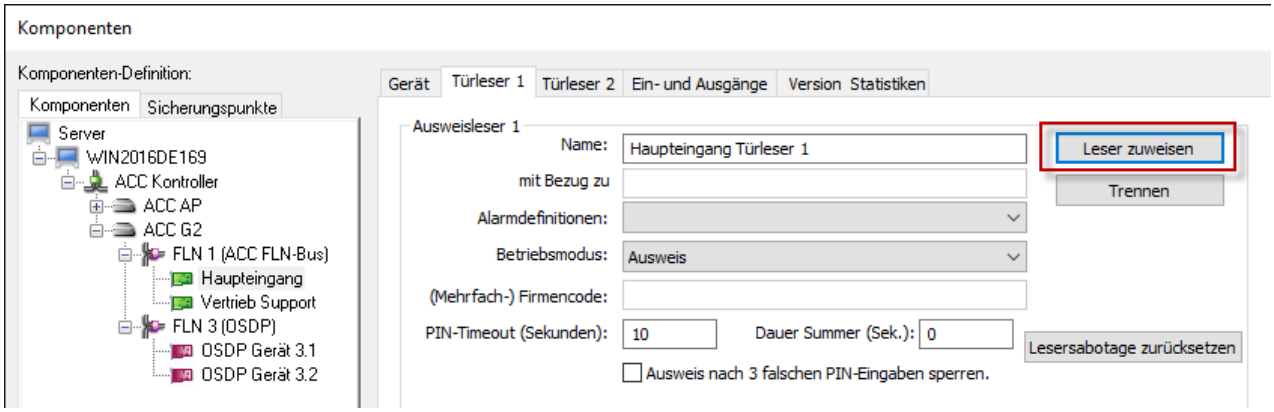
- Afterwards press *Search Devices*

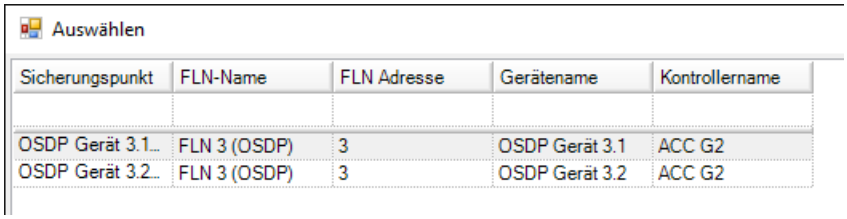


- Save new device, select the reader technology in the Configuration-tab and save the configuration.



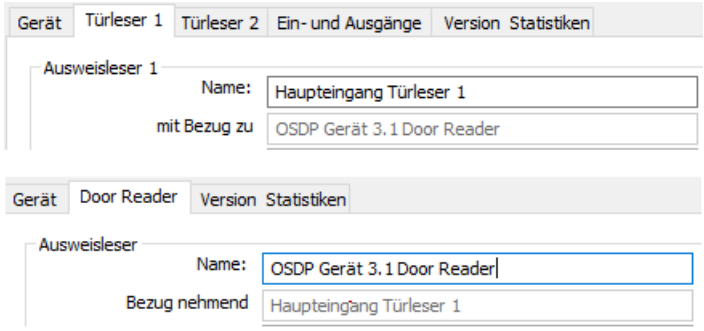
Now the OSDP-reader can be added to the belonging door. (e.g. at the ERI)
This will be done at Components.





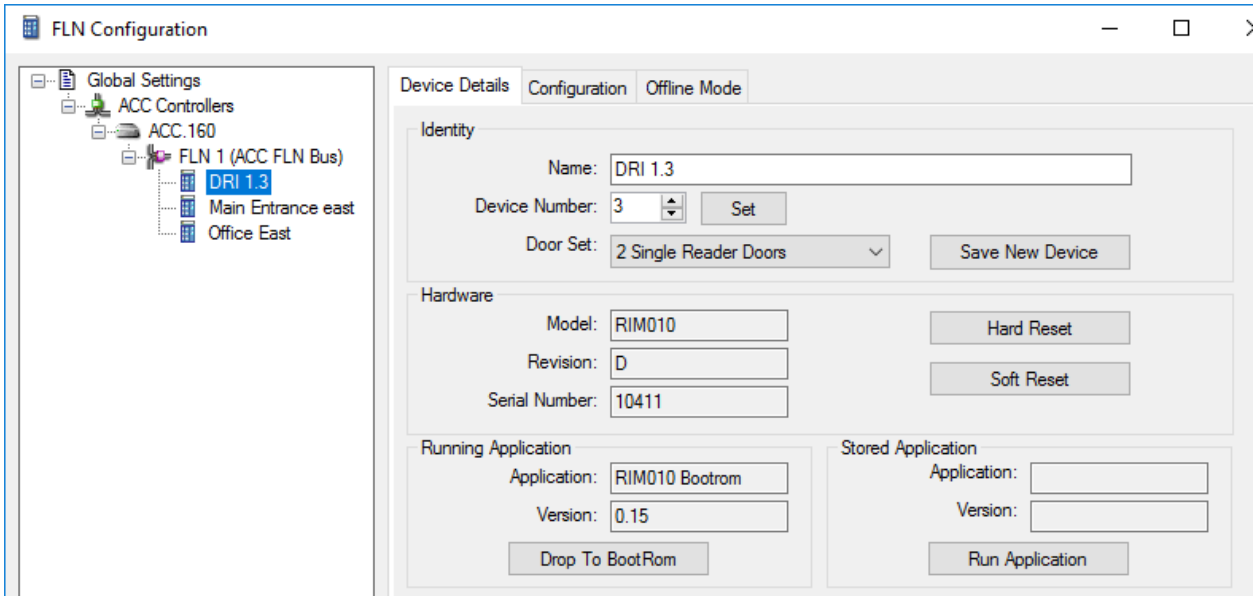
- and save.

Now the link to the OSDP-reader will be shown.



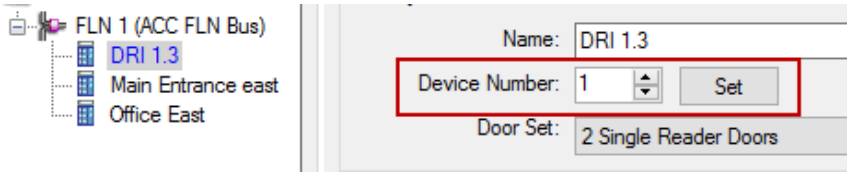
9. Replace a defect RIM

If a FLN device is defect and has to be replaced, the FLN Configuration dialog will help to replace the defect device.



Example: The DRI at the Main Entrance east (Device Number 1) is defect.
The FLN search has found the new DRI (DRI 1.3).
The new DRI will get automatically the next free Device Number. (e.g. 3)

- Defect unit has Device Number 1
- New found unit got Device Number 3
- Enter the Device number 1 at the new found unit and press “Set”



- The new found Device will disappear (has been moved to Main Entr. east)
- Select the unit Main entrance east
- Download firmware
- Configure the unit **re-save the reader technology, select another, save, select the correct and save**

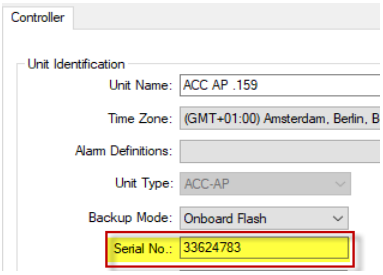
Any configuration (access rights, event tasks, etc.) are assigned to the new unit.
No further steps required.

10. Manually create devices

The devices can also be created manually in SiPass.
At the SiPass “Components” dialog, it is possible to create ACCs the FLN-Buses and FLN devices.
With this feature all devices of the site can be predefined without hardware.
Cardholders and access rights can already be configured.

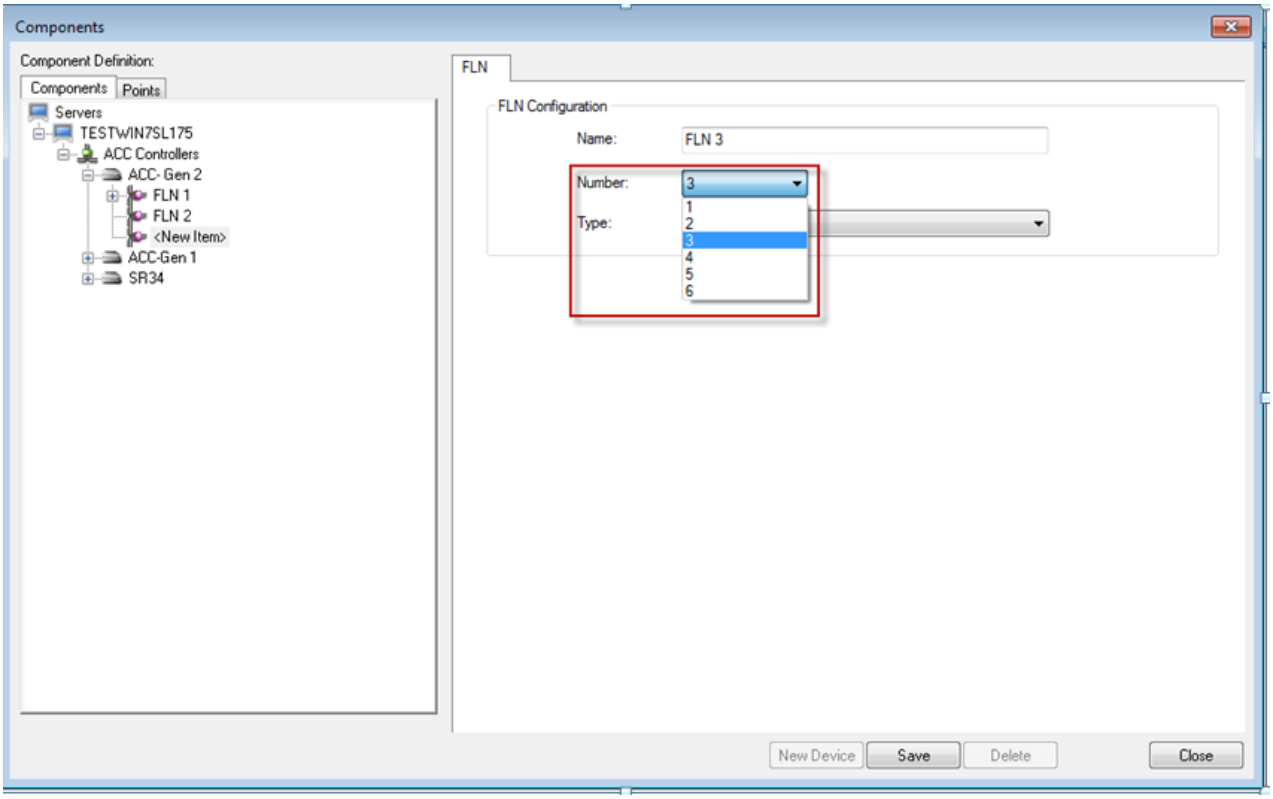
If the hardware will be delivered:
The FLN-devices just have to be set to the correct
Device-Number (Refer to: Replace a defect RIM Page 19).

The ACC serial number should be added before the ACC will be connected. If the ACC will be connected now he will take the correct place where his serial number is located.

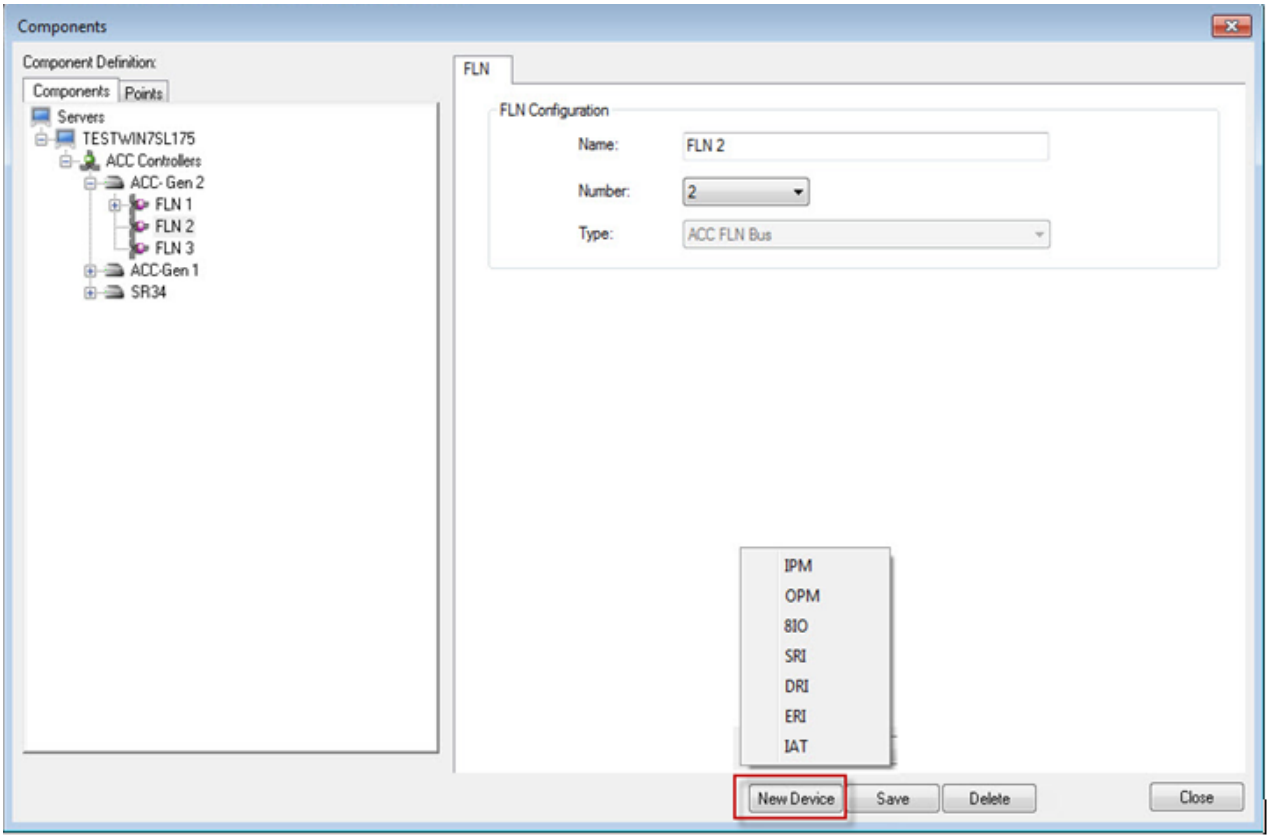


How to manually create devices:

Select the ACC and click on “New FLN”. Enter the Name, select the FLN number and click save.



Select the FLN and click on “new Device”.

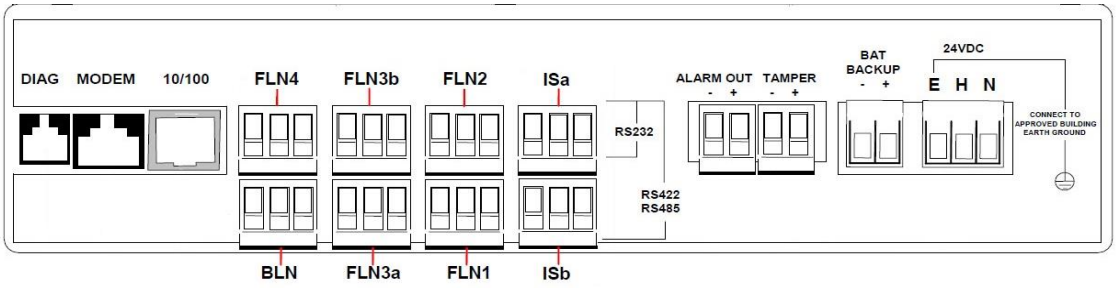


Following FLN units are available if the FLN bus is an ACC FLN Bus:

- **IPM** Input Module 32 monitored inputs
- **OPM** Output Module 16 outputs, 16 inputs (not monitored)
- **8IO** 8 Outputs, 8 Inputs monitored
- **SRI** Single Reader Interface
- **DRI** Dual Reader Interface (2 Single reader doors or one Dual reader doors or two Turnstile modes)
- **DRIe** on board ACC AP Dual Reader Interface (2 Single reader doors or one Dual reader doors or two Turnstile modes)
- **ERI** 8 Reader Interface (8 readers, different door modes possible)

11. ACC G1 Info (ACC 5100)

Connection DRI (RIM) to ACC

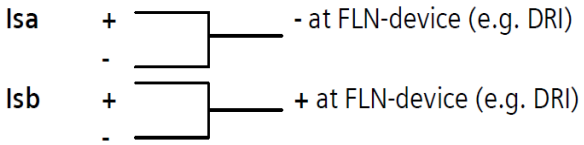


Connection between ACC G1 (FLN) and DRI:

ACC FLN 1, 2, 3a, 3b, 4, BLN, Isa Isb	FLN RS485 bus
A(+)	+
B(-)	-
E(shield)	

3a and **3b** is one FLN-Bus->16 connection points

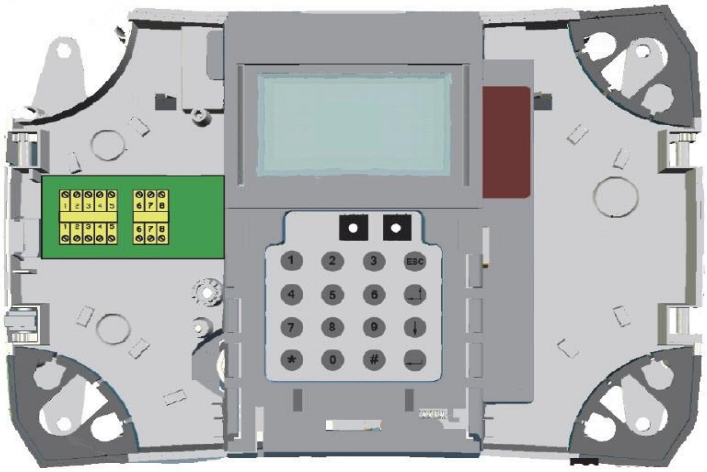
Advantage of this Bus: 3a maximal connection length 1000m, 3b also 1000m.
Isa and **Isb** will be one FLN-Bus, the wiring is shown below:



Maximal length of each ACC FLN Bus (RS485) is **1000m**.
No “star” or “branch” wiring to the FLN-devices allowed.
The devices have to be wired in serial (only one line).
One FLN can have a maximum FLN Load of **16**.
Each device that is added to the FLN will supply a fixed FLN Load (see above table).
Please use the FLN Calculator for the FLN Planning.

12. ACC Lite /ACC-X info

Connection DRI (RIM) to ACC Lite / ACC X



At the FLN-port (Field Level Network) following devices * can be connected.

FLN-device	FLN Load
DC12	2
DC22	2
IOR6	2
IAT	1

***ACC-X Only Support ENTRO devices:**
DC12, DC22 & IOR6

Connection between ACC (FLN) and DRI:

ACC FLN	FLN RS485 Bus
COM A (4)	+
COM B (3)	-

Maximal length of the ACC FLN Bus (RS485) is **1000m**.
No "star" or "branch" wiring to the FLN-devices allowed.
The devices have to be wired in serial (only one line).

! Mandatory for ACC-Lite is an End Of Line resistor 120 Ohm connected direct at the ACC FLN connection!

The FLN Bus of the ACC Lite can have a maximum FLN Load of **16**.
But the Lite is Limited to 8 doors. SINTONY or SPC are not supported.

ACC-X only support Entro Devices!

The FLN Bus of the ACC-4 can have a maximum FLN Load of **8.**
But it is Limited to 4 doors.

The FLN Bus of the ACC-8 can have a maximum FLN Load of **16.**
But it is Limited to 8 doors.

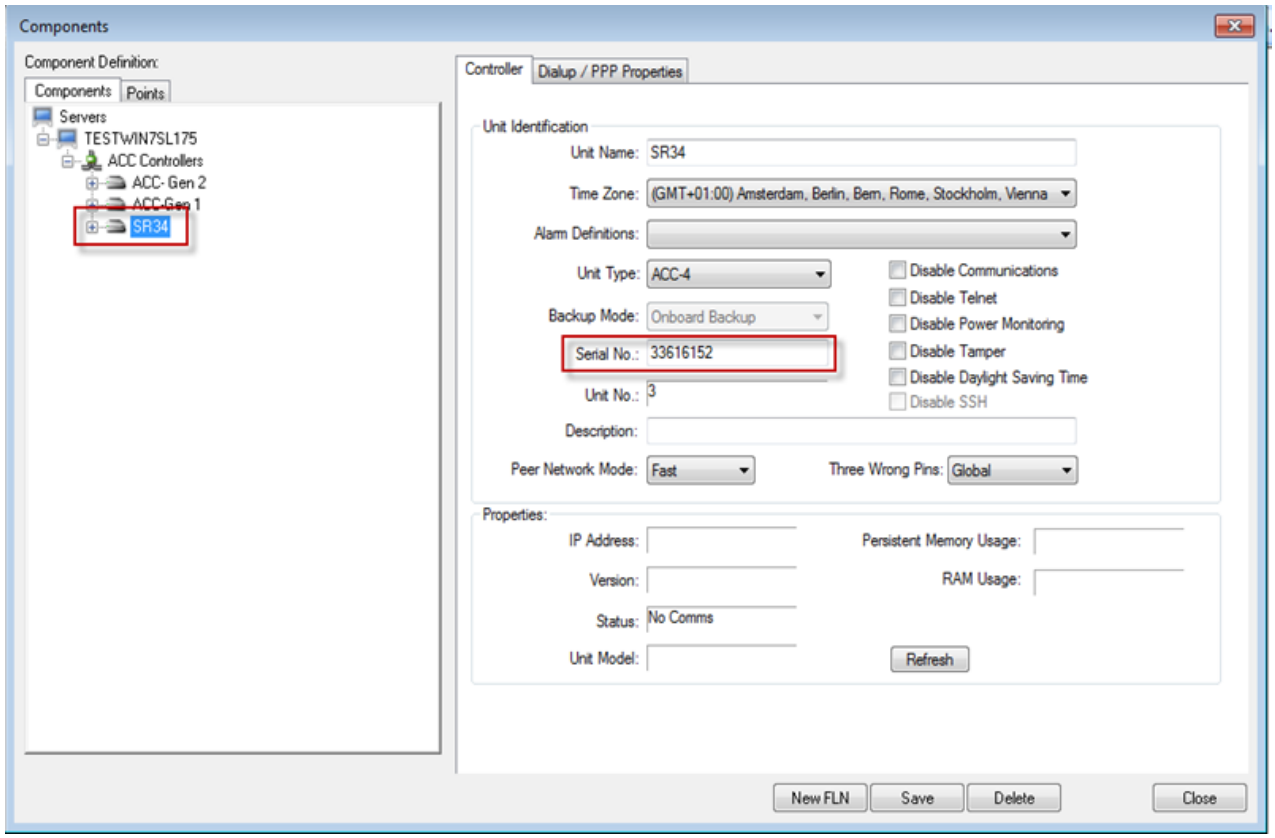
The FLN Bus of the ACC-16 can have a maximum FLN Load of **32.**
But it is Limited to 16 doors.

The FLN Bus of the ACC-32 can have a maximum FLN Load of **64**.
But it is Limited to 32 doors.

Each device that is added to the FLN will supply a fixed FLN Load (see table on Page 8).
Please use the FLN Calculator for the FLN Planning.

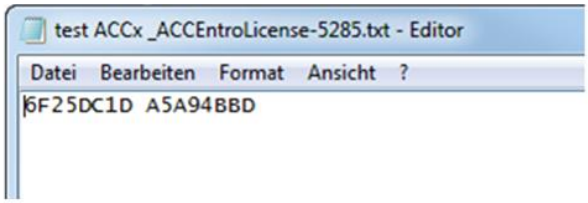
To migrate the SiPass Entro SR34i/35i i to SiPass integrated, a new firmware has to be loaded via CF-card into the SR34i/35i.
If an Entro SR34i/35i will get the ACC-x firmware loaded, it will be possible to connect the controller to SiPass integrated.

ACC-x License:
After the ACC-x firmware is loaded a license number must be downloaded in between 30 days. To create the license the serial number of the ACC is needed.



Without license the ACC stop to work after 30 days!! The license number has to be copied to a Text file and then downloaded via the initialization dialog.

Below you find an example for the license file.



13. Entro Migration

For migration purpose it is possible to connect SiPass Entro devices to SiPass integrated.
The Entro devices like DC12 / DC22 can be connected via the ACC FLN.
Entro specific features not available in SiPass integrated e.g. alarm bypass.
The DC12 and DC22 can both handle one door.
It is possible to connect only entry- or entry- and exit- readers (e.g. PR500).
Two readers can be connected via BC-link. Only one reader via Clk/Data.

It is not possible to mix SiPass Entro and SiPass integrated devices at the same FLN-Bus.
Maximal 8 DC12/DC22 can be connected to one FLN-Bus.

Installation:
Select the Card Technology “Siemens Entro” during installation.

Tenant possibility:
It is also possible to select the Card Technology “Siemens Entro” for an additional credential. This will be needed if the integrated and Entro hardware are mixed (not recommended because any cardholder have to be assigned two card numbers).
A corresponding Tenant license have to be ordered.

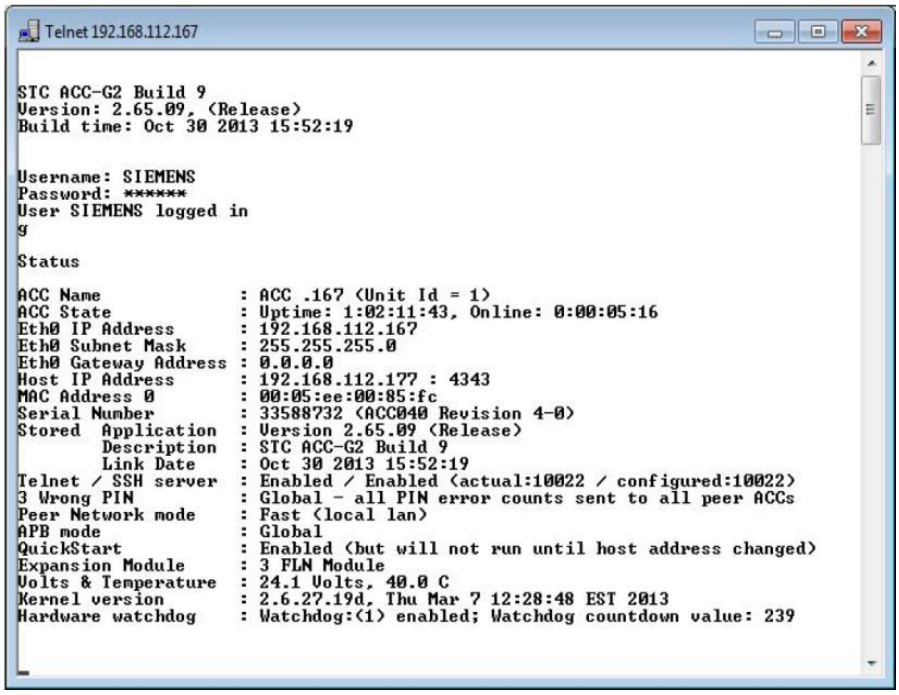
14. Additional information

14.1 AC5102 (ACC G2) or ACC AP can't be found

These ACCs offering a USB config port if the IP address is not known.
The installation and configuration is described at the SiPass integrated Firmware Configuration Guide.pdf, this document is located at the SiPass integrated DVD at:
\Documentation\SiPass integrated Firmware Configuration Guide

14.2 Telnet connection and how to change ACC IP-Addresses

ACC login (Username and password case-sensitive)
Username: SIEMENS
Password: spirit
Due to Security reasons the password must be changed after the first log in
Enter g or get getting the actual settings listed



The following parameters need to be set:

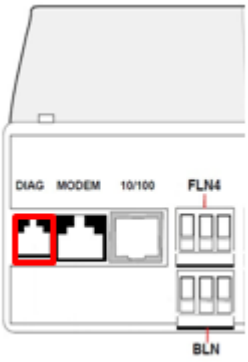
- set h [SiPass server IP address] IP address of the SiPass server
- set i [ACC IP address] for the controller IP address
- set g [gateway IP address] for the gateway, Router of the segment
- set s [subnetmask] for the subnet mask of the segment of the ACCs

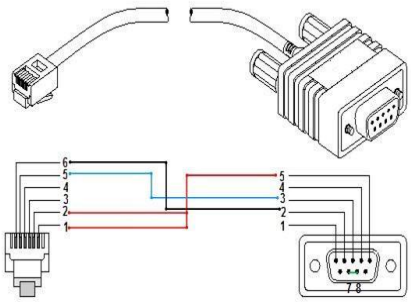
Example: Set the ACC IP-Address of the ACC (set = s): s i 192.168.112.167

14.3 AC5100 (ACC) can't be found

Terminal connection

If the ACC is not found automatically and the ACC settings unknown, it is only possible to get in contact with the ACC via diagnostic cable and e.g Hyper Terminal.
The diagnostic cable is needed to connect the ACC (Diagnostic Port) to an RS232 PC COM port.
DIAG cable (RJ12 / 9-contact), Cable is shown on the below.
If the Diagnostic-cable is connected, it is possible to connect to the ACC via Terminal-program (e.g. Hyper Terminal, settings below)
Baud: 9600, Data Bits: 8, Parity: None, Stop Bits: N



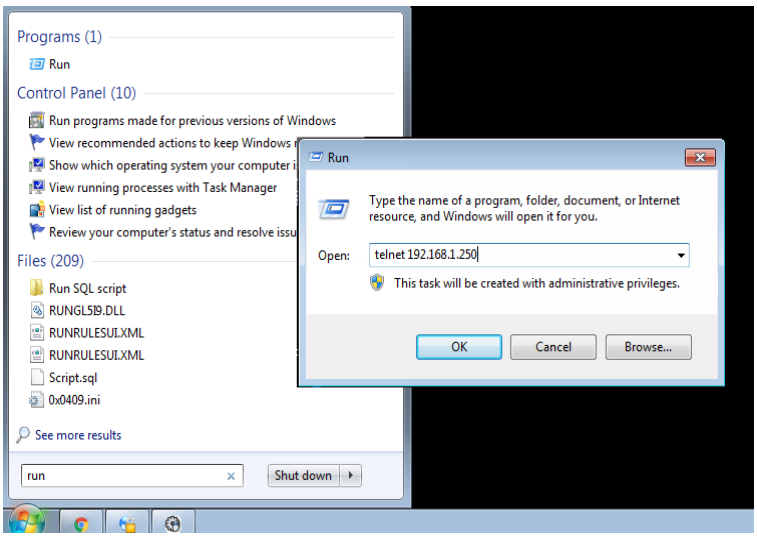


ACC Diagnostic cable RJ12-> DB9

RJ12 PIN	DB9 PIN
6	2
5	3
2	5
1	5
	7->8
	8->7

Telnet connection:

If the ACC IP-Address is known, it is possible to contact the ACC via Telnet.
Select „Start" type „Run" and enter the command "telnet 192.168.1.250":

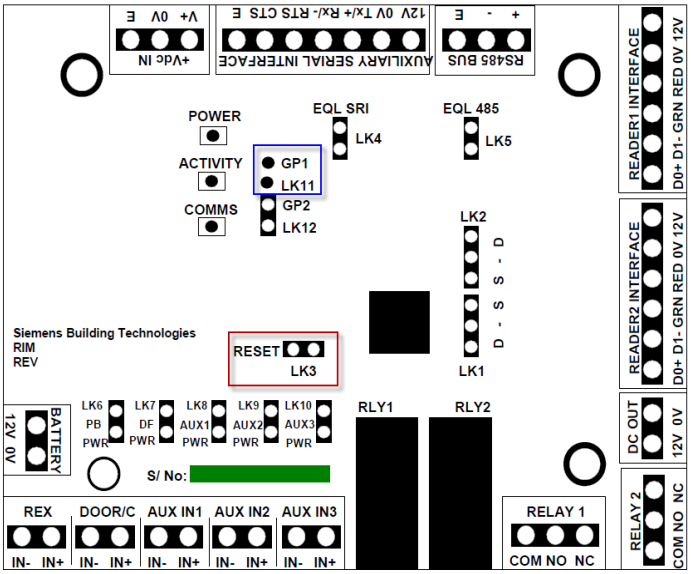


14.4 How to delete the RIM-firmware and ID

The RIM-firmware mustn't be deleted normally.
With the "FLN configuration" the old firmware will be overwritten.
Exception: (very seldom)
If the RIM is loaded with the SiPass networked firmware, it is necessary to delete the DRC firmware (networked) in front. (SiPass networked is 10 years out of order)

How to check if a firmware is loaded in the RIM:
If the **"ACTIVITY"** LED flashes quickly (3-4 times per second),
will show that no firmware is loaded into the RIM.
If the **"ACTIVITY"** LED flashes slowly (once per second),
the firmware is loaded.

How to delete the firmware:
a. Link the pins "GP1" and "LK11" using a jumper
b. Short connection of the „RESET" Pin's with a jumper
c. Leave the Pin "GP1" und "LK11" connected,
If the **"ACTIVITY"** LED will flash quickly (3-4 times per sec.),
"GP1" and "LK11" can be disconnected.
The RIM-firmware is deleted.



This step reset the RIM to factory default, that means that also the ID number is reset and the RIM get the first free ID if a search at the FLN bus is started.
This could be necessary if a used RIM is moved from one to another FLN/ACC.