

# SiPass integrated MP2.75/76 Salto integration V1.1

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# Salto integration V1.1

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# 1. General Function

#### **General function:**

The Salto access control system will provide the possibility to handle so called "Data on Card readers" or also called "Data on Card System". Data on Card readers not wired to a controller. The access conditions is stored on the card itself and the access decision will be made by the Data on Card reader.

To provide the advantages of the offline system it is possible to connect the Salto system to SiPass integrated.

Data on Card reader advantages	Data on Card reader disadvantages
<ul> <li>No wiring needed</li> <li>No problems with historic monuments, marble, glass, etc</li> <li>No distance limitation</li> <li>Quick mounting</li> <li>No power connection needed, battery powered</li> </ul>	<ul> <li>No door monitoring, a forced opened door will not be recognized</li> <li>Access control changes will only be transferred to the access card if the card will be presented to a Salto update reader</li> <li>If a card is lost or stolen it is not possible to block the card immediately. A card can only be blocked via programming unit or via the "Network on card" function, where a "black list" will be forward</li> <li>Access bookings will only be known if the card will be presented to a Salto online reader</li> </ul>

#### Integration SiPass integrated – Salto:

The Salto system connection will provide the possibility to use the advantages of offline and online readers.

The system operator can handle the access conditions for both systems via SiPass integrated.

All readers, online or offline will be handled in SiPass integrated in the same way (access rights).

Note: Site Plan monitoring of Salto readers are not possible.



#### Transfer from SiPass integrated to Salto:

- Cardholder
- Access rights
- Access Groups
- Time schedules

All data transferred to Salto after saving the record. A manual download option is available too at the Salto bus configuration (Config Client / Components).

#### Transfer from Salto to SiPass integrated:

- Cardholder
- Reader
- Locker
- Zones (Group of Salto readers)
- Access rights (can be disabled by a config file change, please contact support)

Data transfer from Salto to SiPass are not dynamic, the upload option at the Salto bus configuration have to be used. The scheduled upload function is not needed after finishing the installation.

#### Note:

Salto can handle up to 96 access rights per card. If more than 96 Data on Card readers are in use the readers have to be grouped to zones. A Salto zone is containing minimum one maximum all Salto readers. For further information please contact the Salto support.

The Salto zones must be transferred via PPD to each Salto Data on Card reader, see Chapter 7.3 Programmer PPD.

Inside SiPass, Salto Zones are listed as "External System Point Groups" and Salto Readers are the "External System Points".





# 2. Salto limitations

If a Salto system is connected to SiPass some limitations must be considered.

The below items are the current known limitations, it could be further limitations that not known now or introduced by a higher Salto version that has not tested with SiPass integrated.

Please refer to the release note getting the information which Salto version is released for the corresponding SiPass integrated version.

#### Known Salto Limitations:

- 1. Salto can't handle equal cardholder names (First and Last name equal). Work around described at section: 5. Salto installation.
- 2. Time schedule names longer than 34 characters
- 3. Access Level names longer than 34 characters
- 4. Access Group names longer than 32 characters
- 5. Time schedules that end not at midnight like below

me Sched Time inten	ule No: val									Search	
Day type:		User									
Start Day:	Monday			Ŧ	End Day:	Friday					•
Time:	08:00			*	Time:	19:00					¥
G	raph View						Add			Remove	
Start Day		Start T	ìme		End Day			End T	îme		
Monday		08:00			Friday			19:00			

6. Salto readers assigned more than one time to an access group. This can happen if the same Salto reader is part of two or more access levels assigned to the same access group.

#### General recommendation:

Do not combine SiPass and Salto readers inside an Access Level or Access Group. Do not combine Access Levels with different assigned Time Schedules inside one Access Group.

<u>As long the Access Group not containing Access Levels with different time</u> Schedules assigned Salto accept double assignment of readers.



# 3. SiPass / Salto license keys

Two SiPass licenses are be needed to enable the Salto function. The SiPass integrated base license must include the "Salto Integration" and the separate Salto Bus license with door count for the offline doors.

Pr	roduct Name: Version:	SiPass ACC 2.75 2.75		Copy and paste is faster than entering it manually:
License Information:				SiPass Base License:
Site Name:	SiPass Traini	ng		
Serial Number:	3723			Site Name: SiPass Training
Licence Key:	W1PXA-YK	2DE-54MAJ-3M	IP5D-VY1A1	Serial Number: <b>3723</b>
Card Technology:	Siemens Rea	ders ClkData/RS48	5	License Key:
Site 1:	0		Facility 1: 0	W1PXA-YK2DE-54MAJ-3MP5D-VY1A1
Worksta HR Interface Cl OPC A&E Cl Card Expan SALTO Integr	tions 20 ients 1 ients 0 asion 50	Number of 0	umber of Buses 0 CCTV Stations 0 Web Clients 20 Door Expansion 500	
		Product Name:	Salto	Salto Bus License:
		Version:	1.0	
License Information:	<i></i>			Serial: <b>S3726</b> Validity: <b>e073</b>
	Site Nam	e: SiPass Training		- Door: <b>50</b>
	Senal Numbe	r: \$3726		-
	Licence Key	7: <u>e073</u>		
Site Serial Num	iber 3723	Number	of Doors/Zones 50	

The SiPass integrated "Salto Bus License" must fit to the SiPass integrated base license. The "Salto Bus License" has to be entered at the Config Client Components dialogue at the Salto Bus dialog.





### 4. Salto devices

#### Salto Online Reader (Wall Reader):

General the Salto system can handle online and Data on Card readers.

The online readers can write and read data from and to the card.

During the read and write procedure the reader is flashing blue.

The online reader write the cardholders access conditions for offline doors access to the card. Bookings stored on the card the will be read out and transferred to Salto by the online reader.

Minimum one online reader per system is required updating the access rights.





#### Salto Data on Card reader:

The Salto Data on Card readers will read the personal access conditions of the card. If the presented card is valid the door will be opened.

Additional the personal bookings can be written on the card.

This additional function must be activated for each door.

Also the "black list" can be read from the cards and stored at the Data on Card reader. If a black listed card will book at the Data on Card reader, the reader will write a blocking flag into the card, now the black listed card can't be used anymore.





#### Portable Programming Device (PPD):

The Data on Card reader parameterization will be done with the PPD. Therefore the PPD will be connected direct at the Data on Card reader.

The PPD will be used to define the Salto settings and to which Salto system the Data on Card reader belongs to.

Via the PPD it is also possible to read out card bookings or battery state from the Data on Card readers.

If the PPD is connected later on to the Salto system via USB, the stored offline information will be uploaded and displayed at the Salto and SiPass system.

It is also possible to transfer the "Black list" or open doors via the PPD.

If the battery is empty via the PPD the door can still be opened.

Salto encoding station: "EC90EN" This is the dongle of the system hosting the keys. The EC90USB can't used.

If Salto is connected to SiPass integrated the EC90EN is used as a dongle. The cardholder access conditions will be written via SiPass Operation Client with a different enrolment reader like HID OMNIKEY 5422 connected via USB to the SiPass Op Client.

The HID OMNIKEY 5022 is a USB connected encoder and works together with SiPass integrated.

Any HID reader we list inside the corresponding release note can be used.











# 5. Salto installation

#### SiPass integrated installation:

First SiPass integrated has to be installed because Salto will use the same SQL database like SiPass integrated (if SiPass and Salto are located at the same PC).

#### Salto installation:

Please consider that the Salto application installation and configuration is explained inside this document on a base level. Please join a Salto training to be able handling Salto as needed on site. Salto related question need to be raised at your local Salto support.

Since SiPass 2.75 it is required to use the Salto Space application. The older SALTO v12.xx is since 2.70 SP1 not compatible anymore.

Salto Space requires any time a valid license entered at the end of the Salto Space setup.

	×
ProAccess SPACE	
activate software	
automatic manual	
Username	
Password	
SPA BASIC - 123456	
note: this requires an available internet connection	
activate or <u>skip</u>	



#### 5.1 Configure the EC90EN

The EC90EN is used a dongle if Salto is connected via the SHIP protocol to SiPass.

SiPass send an encoding request to Salto and the EC90EN will flash and beep short (if activated). This reaction is the confirmation that the encoded card will be written with the correct Salto information.

Without the LED flash / beep the card is not successful encoded also if SiPass report back a success encoding messages.

System => SALTO Network => ADD => Encoder	Add network device	$\otimes$
-	Type	
	· CLOS	Е 🗸 ОК

Assign a name and the IP address and save the unit, now the "Address" button will be enabled.

ENTIFICATION		
Vame	Description	IP address
EC90EN	EC90EN	192.168.112.13

Press and keep the button at the back site of the EC90EN until the LED start to flash. Press the "Address" button.

The unit is now configured.





#### 5.2 Salto connection settings

The following described settings required for the correct operation with SiPass. Several settings need to be performed at: System => General Options

1. Assign the EC90EN as Dongle Encoder



2. Disable PROX\_ANTICLONING at the "Advances" tab

BAS	Notifications	Loca	tions / Functions	Viel		Advanced
General	Devices	Hotel	Security	Acces	Users	SHIP
PARAMETERS				Ż		
PARAMETER	1		VALUE		-	
PROX_ANTI	CLONING		0	1		

Settings for Prox-anti-cloning need to be disabled "PROX ANTICLONING=0"

3. The value EXTID need to be added to the User ID configuration

General	Devices	Hotel	Users
	terv warning on igors to		
User ID configurat	ion		
(\$FirstName) (\$L	astName) <mark>(\$EXTID)</mark>	1 2	
		,	

The EXTID is a unique number and offers an easy workaround for the limitation that Salto can't handle identical cardholder names.



4. To enable the communication to SiPass integrated the SHIP protocol needs to be enabled. (SHIP = Salto Host Interface Protocol)

General	Devices		SHIP
SALTO SERVER (SHIP)		3 -	^
Enable			
TCP/IP port		1	
7878 🗘		*	
Limit communication	ns to one server	ŧ	
IP address			
		1	

#### Enable "SALTO SERVER (SHIP)" option only!

A TCP/IP Port has to be defined e.g. 7878 This TCP/IP port needs to be entered into SiPass, see at section: 6. SiPass connection settings.

Note:

At the "Salto Space Configurator"	
tab "Service Ports" are TCP/IP ports	Advanced
too.	
These TCP/IP ports are used to	
communicate between Salto	outer name
service and the Salto DB.	Verify
It is required that this Service ports	
are <u>different</u> to the SHIP port value SALTO authentication	Verify
defined before! WebSocket Port: 8102 💬	

If the same ports are used the up/download between Salto and SiPass will not work!

SALTO Space is now set up to be able to communicate with SiPass.



#### 5.3 Configuration of a Salto online reader (UBOX or CUxxxx)

The online reader or UBOX will update (write) the offline access rights to the card.

It is recommended to mount the online reader(s) at the main entrance doors or at a central location, to get the offline rights written to the card without the need to visit a special reader/location. Consider the read and write process requires to present the card for longer time in front of the reader.

#### How to enter an online door:

Access points => ADD => enter name and select the correct connection type

Name	Description
UBOX	UBOX
ARTITION	
General 🗸	
ONNECTION TYPE	OPENING MODE AND TIMED PERIODS
	Open mode

Assign the IP=>Address to the online reader:

Configure Connection – enter the IP Address

Peripherals => Monitoring of online locks => Maintenance (only possible if the service is up and running)



#### 5.4 Configuration of a Salto offline access point

Two kind of Salto offline access points are supported by SiPass, Doors (cylinders / door fittings) and Lockers.

#### How to create an access point:

Access points => Door/Locker => Add => Name / Description => connection type "Offline" => Save

Door 1234			•
UPDATE REQUIRED 🖙 ? 🚺 FACTORY DATA			USERS
IDENTIFICATION			
Name	Description	Ext ID	
Door 1234		A60018A1494094CDD58008D4C9F0E866	ZONES
PARTITION			
General			
CONNECTION TYPE	OPENING MODE AND TIMED PERIODS		
⊣e Offline ✓	Open mode Standard		LOCATIONS
PENING TIME	CALENDAR		
Open time         Increased open time           2          seconds         5          seconds	Calendar000		
DOOR OPTIONS	ANTIPASSBACK		
Audit on keys	Enable antipassback		

It is recommended to enable the Door Options "Audit on keys". Please contact Salto for further support.

The "UPDATE REQUIRED" status shows that an update via PPD is needed.



#### 5.5 Programmer PPD

Via System => PPD the new access point config need to be loaded into the PPD.

If the access point update sign will be displayed an update via PPD is required.

PPD PPD					
VERSION 01.38	SERIAL NUMBER 268,43	5,489 FACT. DATE 2010-07-23	ee A& ENGLISH 🗚 (	HANGE LANGUAGE	
ACCESS POINT	rs				ACTIONS TO DO
	POINT ID	O Y NAME	Y VALID UNTIL	T CALENDARS	Allow emergency opening
	1	Clinder	2018-07-10 00:00:0	0 Calendar000	Password
	1	CU42E black	2018-07-10 00:00:0	0 Calendar000	☑ Initialize access points
	1	CU42E0 white	2018-07-10 00:00:0	0 Calendar000	
	1	Door 1234		Calendar000	

How to download the offline access points to the PPD:

- Connect the PPD via USB
- System => PPD
- Select the access points with the update sign
- Enable "initialize access points"
- Download to the PPD
- Connect the PPD to the access point

This is necessary for new access point added to Salto.

Prepare the PPD to download data into the offline access point:

- For new doors select in the PPD menu "Initialize door"
- Press "OK" message "CONNECT TO LOCK" must be displayed
- Connect the PPD to the Data on Card reader. (Via the special 3=>pin plug)
- The successful "Initialization" will be displayed at the PPD

If the PPD will be connected after initialize the access point the status battery state and valid until will be transferred to Salto.



POINT ID	Θ 🛛	NAME	VALID UNTIL	CALENDARS <b>Y</b>
1		Clinder	2018-07-10 00:00:00	Calendar000
1		CU42E black	2018-07-10 00:00:00	Calendar000
1		CU42E0 white	2018-07-10 00:00:00	Calendar000
1		Door 1234	2018-07-12 00:00:00	Calendar000

# 6. SiPass connection settings

In SiPass Configuration Client the Salto Bus needs to be created and defined.

- System => Components => Server Name => New Bus => Salto System
- Enter a Name for the bus like "Salto"
- Enter IP Address or Name of the PC where the Salto service is up and running
- Enter the Port as defined in Salto (see 5.2. Salto connection settings)
- Enter the Salto License details (page 6) and save

Components			x
Component Definition:	SALTO System		
Servers	Configuration Parameters		
wiN7PR064EN168	Name:	Salto	
	Host Name or IP Address:	: 127.0.0.1	
	Port:	7878	
	License		4
	Serial:	\$3554	
	Validity:	f271	
	Door/Zone Count:	50	
	4		
	Alarm Configuration		
	Alarm Definition:	•	
	Upload Scheduler Audit Trail Every 300	Upload Seconds Every 60 - Minutes	
	System Status		
	Connection Status: Online Synchronization Progress:	Upload	
	Completed @ 13.07.2017 14:3	35-28 Download	
		New Unit Save Delete Close	

As soon SiPass is successfully connected with the Salto system the upload of the existing Hardware can be started.

The Salto Service has to be started to establish the connection to SiPass.Upload:from Salto to SiPass integratedDownload:from SiPass integrated to Salto

Modifications inside SiPass that affect Salto parts are downloaded to Salto without a delay. Modification inside Salto, e.g. a new reader or zone, will be uploaded by following the Upload interval or if the upload button is pressed.



<u>Note</u>: By default the Upload interval is deactivated, activation only recommended during system setup and hardware changes. No need after hand over the system to the customer.

**Recommendation:** At Salto only hardware configuration should be performed. Any cardholder related modification should be done via SiPass integrated. So a scheduled upload is not needed after hand over the system to the customer. Customer operator only has to use SiPass as front end for both systems. Offline doors and offline zones (group of Data on Card readers) are listed in SiPass integrated at the Salto bus.

mponents	
Component Definition:	
Components Points	
📃 💻 Servers	
i≘ I WIN7PR064EN168	
Salto	
Door 1234	
📰 Normal Locker	
Free Assignemt Locker	
E- i Free Assignemt Locker ∠one	
CU42E0 white	
CU42E black	
Cylinder	
Door 1234	
······ 📰 Normal Locker	

It is not possible to configure the Salto HW under SiPass. The only possibility is to assign an Alarm class to the Salto units.

**Note:** After the upload it could be necessary to close and reopen the Component dialog before the new added units are listed.

Symbol	Color	Access point type
	Blue	Door (Offline or Wall Reader)
. N	Grey	Locker



	Yellow	Free Assigment Locker
A	White	Zone

# 7. Salto cards

Salto in combination SiPass integrated is compatible with Mifare Classic 1k/4k and Mifare DESFire 2k/4k/8k cards.

If Mifare Classic are used SiPass integrated will allocate minimum 10 sectors. Default Salto encoding profile see: 7.1 Mifare Classic encoding profile.

Proximately 7 sectors used for the offline access conditions. The additional sectors will be used to store the bookings on the card. If 15 sectors will be used for Salto, more space is available to store the bookings.

The sectors for Salto mustn't be contiguous, e.g. Sectors 1=>6 and 8=>15 can be used too.

DESFire EV1 cards can be used and programmed by SiPass integrated since MP2.6. Theses card are available in 2, 4 and 8 KB, see 7.2 Mifare DESFire encoding profile

Minimum 1024 byte should be used for Salto.



#### 7.1 Mifare Classic encoding profile UID

In the SiPass Configuration Client Smartcard Profile Configuration 3 default profiles are available for Salto card encoding. 2x Classic 1x DESFire

System Options Window Help			Profile Configuration	DESFire Profiles
			Profile Name: V	0 11 1
Smartcard Profile Configuration	ø	Mifare <u>C</u> lassic	SALTO 1K	
	RES	Mifare <u>D</u> ESFire	SALTO 4K	<u> </u>

SALTO 1k and 4k profile has by default 10 sectors of the card configured for the Salto offline function.

A trick opens a small wizard and additional sectors can be activated. To open the wizard: Data Column => reselect => "SALTO: Binary Data" The result is the below dialogue:

ofile Definition Profile Name:	SALTO	D 4K			,	<ul> <li>Card Ty</li> </ul>	pe:	Mifare 4K		▼ New
ofile Assignment										
View All Sectors	~	Sector	Block	Offset	Length	Output	Access Cont	rol	Data Type	Data
		0	0	0	8	ASCII	CSN		Database Field	Base:CardNumber
		1	0	0	48	Binary	None		External Field	SALTO: Binary Data
		2	0	0	48	Binary	None		External Field	SALTO: Binary Data
SALTO		3	0	0	48	Binary	None		External Field	SALTO: Binary Data
2	E	4	0	0	48	Binary	None		External Field	SALTO: Binary Data
SALTO		5	0	0	48	Binary	None		External Field	SALTO: Binary Data
- <b>3</b>		6	0	0	48	Binary	None		External Field	SALTO: Binary Data
SALIU		7	0	0	48	Binary	None		External Field	SALTO: Binary Data
		8	0	0	48	Binary	None		External Field	SALTO: Binary Data
		9	0	0	48	Binary	None		External Field	SALTO: Binary Data
SALTO		Ø10	0	0	48	Binary	None		External Field	SALTO: Binary Data
- • 6		*	C							
SALTO				Multipl	e Secto	r Configuratio	on 📃			
🗖 7										
SALTO				select se	ctors wit	nere data will b	e encoded to:			
🗖 8			1	Secto	or 11	Sector 2	1 🗖 Se	ctor 31		
SALTO				Secto	or 12	Sector 2	2 📃 Se	ctor 32		
·· 🗖 9				Sector	or 13	Sector 2	3 📃 Se	ector 33		
SALTO				Secto	or 14	Sector 2	24 <u>S</u> ε	ector 34		
- <b>1</b> 0				Sector	or 15 or 16	Sector 2	10 I Se	ctor 35		
SALTO				Secto	or 17	Sector 2	27 Se	ctor 30		
				Secto	or 18	Sector 2	18 📃 Se	ector 38		
- 12				Secto	or 19	Sector 2	9 🔳 Se	ctor 39		
12				Secto	or 20	Sector 3	10			
🗖 14	-						OK	Cance		
		,								

Now the additional needed sectors can be selected.



This trick can also be used if a new profile has to be created for Salto encoding. This is necessary if the Salto option is added to the license afterwards. No default profiles are created that can be used.

Site dependent, the Salto Mifare Keys must be entered individually. The default listed key "Salto" is only a placeholder, the correct Mifare A and B key hast to be entered.

Each Site will get his individual Salto SAM=>Key (Mifare A and B key). The Sector Keys the same for all Salto Mifare sectors.

Profile Configuration		-	-								- - 	
Profile Configuration												-
Profile Definition Profile Name:	SALTO	1K					Туре:	Mifare 1	IK	•	New	
Profile Assignment												
Sectors		Sector	r Block	Offse	et Length	h Output	Access Co	ntrol	Data Type	Data		-
- <b>0</b>		▶ 0	0	0	8	ASCII	CSN		Database Field	Base:CardNi	ımber	
SALTO		1	0	0	48	Binary	None		External Field	SALTO: Bina	ry Data	
		2	0	0	48	Binary	None		External Field	SALTO: Bina	ry Data	
2		3	0	0	48	Binary	None		External Field	SALTO: Bina	ry Data	
SALTO		4	0		Key Con	figuration						
3		6	0	õ	Key De	efinition						
SALIO		7	0	0								
SALTO		8	0	0	Key Na	ame: S	ALTO		-		New	
<b>5</b>		9	0	0								
SALTO	_	10	0	0	Securit	ty Key						
6 6	=	11	0	0	5							
SALIU		12	0		Sma	rt Card Keys						
SALTO		14	0	0	Kev	Α			Cor	firm Kev A		
🔳 8		15	0	0								
SALTO		*			Key	р			Cor	firm Key B		
9					Ney	<b>U</b> .			CO	mini Ney D.		
SALIO												<ul> <li>12 digits key</li> </ul>
SALTO						Overwrite the	Sector Key					
- <b>1</b> 1					Key	A: ••			Cor	firm Kev A:		
SALTO												
12					Kev	R			Cor	firm Key B		
SALIU					y				Col			
SALTO					A.	Conda:						
- 14	-				ACCE	ess Condition:	s					
					For S	Sectors 1-31 E	Block 0, Sectors	32-39 Blo	ck 0-4:			
Custom Format	<u>K</u> eys	· (	<u>I</u> mport		All	functions with	KA and KB					-
				-	For S	Sectors 1-31 F	Block 1. Sectors	32-39 Blo	ck 5-9:			
					All	functions with	KA and KB					
				For Sectors 1-31 Block 2, Sectors 32-39 Block 10-14:								
					All functions with KA and KB							
					For Sectors 1-31 Block 3, Sectors 32-39 Block 15:							
					Wri	ite KA with KA	A or KB-Read A	C with KA o	or KB-Read/Write with H	(A or KB		•
										Sav	/e Delet	e Close



**Note:** We recommend not modifying the section "Access Conditions". Only for persons that have a good knowledge about the Mifare Classic possibilities.

#### 7.2 Mifare DESFire encoding profile UID

It is possible to use Mifare DESFire cards in combination with Salto too. A default encoding profile is available also for DESFire.

💀 💀 DESFire Profile Configurat	ion			×
Profile Assignment				
DESFire Profiles	Application Details			
<u> </u>	AID:	F48EF1		
	Application Mast	ter Key: Salto AES	File Details	- 1
		Encrypted	File Number:	1 ~
	Keys	<none></none>	File Length:	1024 ~
	Key 2:	<none></none>	Output:	Binary ~
	Key 3:	<none></none>	Access Control:	None ~
	Key 4: Key 5:	<none></none>	Data Type:	External Field $\vee$
	Key 6:	<none></none>	Data:	SALTO: Binary Data V
	Key 7:	<ivone></ivone>	File Key	
If the default Sal	to DESFire pro	ofile is used	Read Key:	<none> ~</none>
keys needs to de	fine.		Write Key:	<none> ~</none>
Open the default	DESEiro kov	with the name	Read/Write Key:	0 <salto aes=""> V</salto>
"SALTO DES" and section DESFire S	enter the key Secure Key – G	y into the Current Key.	Config Change Key:	<none> ~</none>
DESFire Key Configuration			× Th	e kev is delivered bv

DESFIRE Key Configuratio	n		^
Key Definition			
Key Name:	SALTO DES	~ New	
Encryption:	3DES	~	
DESFire Security Key			
Current Key			
Key:		Confirm Key:	*****
	* 16 digits for DES and 32 dig	its for 3DES/AES encryptio	in
Overwrite the Key			
Key:		Confirm Key:	
			Save Delete Close

The key is delivered by Salto (SAM Key).

Salto is supporting 3DES or AES encryption, Salto is suggesting using the 3DES key because of the lower reading distance if AES is used.



<u>Note:</u> Card Master Key (PICC) is the master key of a DESFire card. The PICC is needed to create a new Application. If you only want to read an existing Application File information you do not need the PICC.

#### 7.3 SiPass enrolment reader configuration UID

SiPass/Salto card enrolment requires 2 enrollment devices which must be defined in SiPass integrated Operation Client:

• The EC90EN encoder from Salto must be connected to the PC where the Salto Service is running.

In SiPass the EC90EN will be defined as "Salto Data Configuration".

Enrollment Reader Co	onfiguration	$\times$
Card Reader	SALTO Data Configuration	
Reader Address:	Remove	
Operation Mode: Profile	Reading Encoding	1
Profile Name:	<b>_</b>	
Sector (0-39):	0 Block (0-14): 0	

• The HID OMNIKEY 5422 is connected to a SiPass Operation Client and configured like below shown.

Enrollment Reader	Configuration X
Card Reader Select Type: Reader Address:	Profile Reader - HID OMNIKEY 5422
Operation Mode: Profile	Reading F Encoding
Profile Name:	SALTO DESfire
AID (hex):	000001 File(0-31):



#### 7.4 Further necessary settings for the Salto connection

The Salto download needs to be activated at the Credential Profile. All new cardholders with the dependent credential profile will get the Salto activation automatically.

💶 Cardhol	der's Credential Profile							×
Name 🔺	Card Technology	Facility Code	Validity Code	PIN Mode	PIN Digits	In Use	Download SALTO	
Base	Siemens Readers Clkdata/RS485	0	0	CARD AND PIN	6	🗸 Yes	<b>V</b>	

#### Automatic Encoding => Profile assignment:

Via the Workgroup dialog it is possible to assign which encoding profile will be assigned automatically and used for the cardholders which belongs to the work group.

Work Group	
→ Available Work Groups <none></none>	Work Group Configuration         Contacts         Card Configuration           Smart Card Profile Control         Smart Card Profile:         SALTO DESfire
	Card Range Card Number: From To

With the above setting it is not possible to assign individual encoding profile to cardholder which belongs to the Workgroup containing a Smart Card Profile.

Cardholder "Advanced" tap:

Definition	Advanced	Personal	Vehicle	Tracking	Control	Imaging
Work Gr	oups					
Wor	k Group Nam	e	Partition	Use for		
CS F	S-KHE					
CS F	S-KHE	~ ~				-
CS F	S-KHE	~~~	//			-
CS F	S-KHE	~	~/			
CS F	S-KHE	~~	~/			

If a different Smart Card profile is needed a Work Group without above configuration need to be assigned to the cardholder.

Consider maybe access rights assigned via works group too.



#### 7.5 Card Encoding

The cardholder dialogue offers the possibility to encode the card with the profile assigned to the particular cardholder.

Simple place the Mifare card, that should assign the Cardholder, on the enrolment reader and press "Assign". The UID of the Mifare card will be read and insert into the Card Number field.

Next step is to encode the card, all offline (Salto) access rights that are assigned to the cardholder will be written to the card.

In the background, the cardholder will be downloaded to Salto.

🔊 Cardhol	lder												×
Definition /	Advanced	Personal Vehicle	Tracking	Control I	maging								
Cardholder	Identificatio	n	-										
	<u>م</u> ا	.ast Name	Duck					First Nan	ne	Dona	ld		Reset -
	ء	Employee Number						١	/iew Modifica	ation Histo	ry		Next >
	۱ 📩	Vorkgroup	<none< td=""><td>e&gt;</td><td></td><td>~</td><td></td><td></td><td>Define We</td><td>orkgroup</td><td></td><td></td><td>&lt; Previous</td></none<>	e>		~			Define We	orkgroup			< Previous
Credentials	s												
Card Nun	mber		Credenti	al Profile	PIN	Void	Start	Date	End Date	PI	N Error Disabled		Add
36551234	4234		Base		907337		30.0	1.2020	30.01.212	20			Delete
Start Date End Date	ite te	30.01.2020 30.01.2120			Super Isola	ervisor te Exclusio	on		Void C	Cardholder uthorize ntry Exclus	ion		Credential Profile
	ontrol				- Violo	51				southing			
N	Vame		*	Time Sched	lule		S	itart		End		Control Mo	Access Privileges
- Private	e												, booto , intilogeo
< Read	As	isign Read	& Search	Enc	ode	Can	cel Sal	to Key	Nev	······································	Save	> Delete	Close
Last Name: F			Direct Marcon	Depald		- Collin	Com	d Number	265512242	24	Undeter	0. 20 01 2020	14:27:24
Last Name: L	DUCK	1	rist ivame	Donaid			Caro	a Number:	300012342	34	Updated	1. 30.01.2020	14.37:34

#### Info:

If a card is encoded by SiPass, the EC90EN (connected to Salto) will feedback with a short beep (if activated) and the LED flash short. If this reaction is not occurring the encoding is not successful and the card is not valid encoded and will not work at the Salto access points.



# 8. Black list function for Salto cards

The Salto access rights are stored on card (Data on card), if a card is lost there is no possibility to void the card compared to a reader that connected to SiPass integrated reader interfaces.

Salto offers so called "Blacklist" functionality that using any Salto card as transport layer to transfer the card which should be blocked. Salto call this function "network on card".

Because the validity date defined directly at the card, it is not possible to block the card immediately if the card has been stolen or lost.

Possibilities to block the card:

- The card number have to be overwritten in SiPass with a new card number or deleted, the old/lost card will be deleted once presented at an Salto online reader.
- Network on card If a card is blocked Salto will create a "Black List" All cards (that update on the online reader) will forward the Black List to the data on card readers of Salto. If a Black Listed card is presented, the Data on Card readers will delete the validation of the Black Listed card.

A feedback of the card blocking will be forward to Salto by any presented card. The "Blacklist" will be updated.

Please contact Salto for more detailed information.

#### Note:

If the card is voided in SiPass the corresponding card will not be added to the Salto black list and will not be deleted!

SiPass 🛛 📝 🗸

Void Cardholder => Salto

🎝 🦾 🧏 BANNED (	
----------------	--

It is recommended to overwrite the existing card number or remove the card number from the cardholder.

This step will add the old card to the Salto Blacklist.

Since 2.76 the operator has the possibility to cancel the Salto Key. This is needed because Void a cardholder inside SiPass will not add the Salto Key to the so-called Blacklist.

_	
	Cancel Salto Key
	Card Number: 36



# 9. SiPass Explorer reports

The "Upload Conflicts" report shows the synchronization conflicts.

Not related to the last upload, all conflicts occurred ever listed without a time information.





# **10.** Configuration for encoded card number

In general it is possible to use instead of the UID of the Mifare card an encoded card number like described inside the training document Mifare DESFire Facility MP2.75\_EN or Mifare Classic Facility\_MP2.7x\_EN.

This request further configuration on Salto site and will not described here.

If you plan to combine Mifare Facility (Classic or DESFire) encoding together with Salto please contact technical support center for further information.



# 11. Connection Salto online reader to RIM (via CU500/UBOX)

It is possible to connect Salto online reader via CUxxxx (UBOX) to a RIM (SRI, DRI or ERI) of SiPass integrated.

This is needed if the Salto online reader should be included for Antipasback (APB) for example.

For this connection the Salto devise CUADAP is required. Via Wiegand protocol the data will be transferred to the SiPass DRI.



UBOX	CUADAP	RIM
EXP A	CU A // Rx/D0	DO
EXP B	CU B // Tx/D1	D1
	0V	0V
	+V	12V

The Salto reader will send the Serial Number (UID) to the SiPass RIM.

<u>The correct DIP switch setting for the CUADAP is:</u> Mifare Classic : 11XX1101 for 34 bit Wiegand and or Mifare DESFire : 11XX1000 for ROM 56 or 11XX1001 for ROM 58

The corresponding DRI card technology is Salto. This reader technology is compatible with the above listed Wiegand formats.

[	Device Details	Configuration	Offli	ne Mode	Reade
	Reader Tech	nology		1	
	Reader	Technology			
	All Readers	SALTO			
14			_		



# 12. Connection Salto online reader to RIM (via CU42E0)

Salto introduced a new unit to the marked only compatible with Salto SPACE. The CU42EO is a Wall reader unit too but have the possibility to communicate with the SiPass RIM (DRI/ERI) via RS485 CerPass reader protocol.

How to setup the CU42E0 itself will not described here, please contact Salto support.

Wiring:

CARD STATE OF STATE OF STATE	Model: CU42E0 C € ▲	RIM		CU42E0
	Rever type: UNIX 10 10%- Popel On Rever 14 10%- Opper 104 4 4 4 4 4 4 4 4 4 4 4 4 4	Rx/-	-	B (BUS485)
		Tx/+	-	A (BUS485)
	- 00 • 0.3 C - 00 • 00 • 0.3 C - 00 • 00 • 0.3 C - 00 • 00 • 00 • 00 • 00 • 00 • 00 • 00	0V	-	GND Input
	SALTO			

Configuration:

- The 485 bus communication need to be activated
- Choose "CerPass Wiegand 58"

В	US485		
	ID	TYPE	CONFIGURATION
	BUS485	CUADAP	CerPass - Wiegand 58, Reader #1 & Reader #2

At the General Option User section following need to be enabled
 General options

BAS Notifications PMS Locations / Functions Visitors General Devices Hotel Access points Users Security TRACKS OF USER KEY WIEGAND FORMAT А Enable Track 1 Enable Track 2 Content Size Content Size 1 16 🗘 JUSTIN MOBILE APP SETTIN Default notification mess Viegand code Enable Track 3 Size Content Profile code 
 Constant code 16 🗘

• At the section User => Wiegand Format

☑ Use 485 bus for third party integration



Code		Description	Description		
A		SiPass	SiPass		
Bit order		Number of digits			
● MSB	$\bigcirc$ LSB	0 🗘	$\blacksquare$ Variable number of digits		

• Copy past the below string to the corresponding fields

#### 

Wiega	and forma	at		8
#	DESCRIPTIO	DN DIGIT FORMAT	NUMBER OF DIGITS	BIT ORDER
Α	SiPass	DECIMAL		MSB
Interface	format	A		
Bit comp	osition	MSB Рааааааааааааааааааааааааааааа	алаалалалалалалалала	LSB аалаалалалалааа
Parity ru	le 1	EXXXXXXXXXXXXXXXXXXXXX	xxxxxxxx	
Parity ru	le 2		xxxxxxxxxxx	*****



• Any cardholder transferred from SiPass to Salto SPACE get the card number transferred to the SPACE DB Field *Wiegand code*.

Title First name	Last name BB & BAN USE
Ext ID 448f1a1dc0d14ec28f61bc2c17381c1c	ROM code (Automatic assignment) 1945087022
Wiegand code 1945087022	

If a card is presented to a Salto reader connected to the CU42EO, the Wiegand number is transferred via the RS485 connection to the SiPass RIM.



# 13. Automatic key assignment (UID)

Salto is offering a function called "automatic card assignment".

It is not necessary to encode the card with help of an enrolment reader connected to a SiPass Client.

This function could be helpful if e.g. the Web Client of SiPass integrated is used to create new cardholder.

The UID of the assigned card will be transferred to Salto together with the cardholder details and the assigned Salto access rights.

If the particular Mifare card is shown on any Salto online reader the card will be encoded and is working.

This function must be enabled/configured at Salto.

The dialogs below will be found in: System => General Options => User

The "7-byte ROM Code (Salto Format)" hast to be selected.

🗘 General	options					
BAS General	Notifications Devices	Locati Hotel	ons / Functions Security	Visitors Access points	PMS	Advanced SHIP
AUTOMATIC KEY A Automatic key a ● SALTO user Mode ● # ○ SHIP cardhold	SSIGNMENT assignment enabled	Type of card	holder for automatic key ass	ignment		
		Key UID format	• CARD SERIAL NUMBER 7-bytes ROM Code (SALTO Fi	ormat) 🗸		

Note:

Cards encoded this way <u>can't be re-encoded via SiPass</u> if the before described encoding profile used.

The Mifare key of the site need to be entered to the Smart Card Key section and no Overwrite the Sector Key enabled.

Security Key			
Smart Card Ke	iys		
Key A:	•••••	Confirm Key A:	
Key B:	•••••	Confirm Key B:	•••••
Overwrite	the Sector Key		* 12 digits keys
Overwhite	the Sector ney		
Key A:		Confirm Key A:	
Key B:		Confirm Key B:	

SAM and issuing data:



It is requested to assign the SAM card to the Salto system.

System => SAM & Issuing options

Place the SAM card at the EC90EN and read SAM card, the result should look like the below example.

0 - Siemens SiPass		
TIVE KEYS	SAM Data	
Mifare Classic 🥒	Key A	Key B •••••
Desfire 🧷	SIM emulated cards	
CTIVE KEYS	Issuing Data	
Mifare Plus	Mifare Classic 1K Mifare Classic 4K	
Legic Advant	TRANSPORT KEYS	MAD
HID ICLASS	Key A	MAD key
) Ultralight C ] ICode	Кеу В	Enable MAD reserved sectors
] Tag it	MEMORY	
Flex space	Select sectors	t other sectors if unable to get selected
	0 1 2 3 4 5 6 7	
	8 9 10 11 12 13 14 15	
	assigned memory 704 BYTES	

Last step is to define the numbers of Sectors that should be used for Mifare 1k, 4, and DESFire.

Contact Salto support for further information if required.



### 14. Salto Wireless RF Doors

In general the Wireless RF Doors function of Salto can be used in combination with SiPass.

The only function participating of the RF function is the events of the Data on Card readers are reported to SiPass faster.

No need to present the card to an update reader reading the movement of the cardholder.

Further function, supported by Salto, like control a Salto access point are not implemented into SiPass.

Salto Space need to be operated additional. So the benefit of one user interface for SiPass and Salto is not longer present.

Please contact Salto if you do not have the knowledge how to setup the RF function and which HW are required additional.