CM9680, CM9681-N100 ← → TIA Portal

Profinet IO Communication – Siemens TIA Portal

CONTENT

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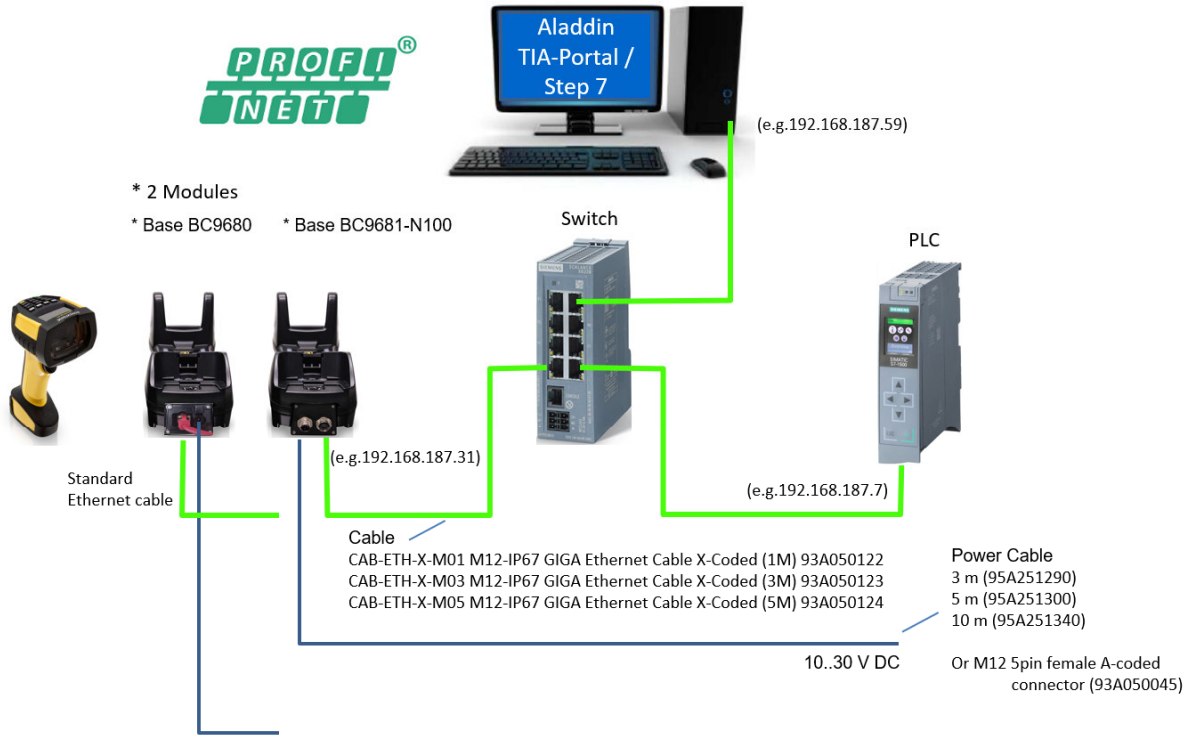
General

This document describes the communication of a CM9680, CM9681-N100 Profinet module and a Siemens S7 PLC.
Load Scanner Manuals and Configuration Software direct from the Datalogic Homepage.
In the following the CM9680 or CM9681-N100 is named CM968x.

Steps to start up

1. Verify that Reader and Base are the same type (433Mhz, 910Mhz, BT)
2. When used as single Module (not installed in the base) set the RS232 interface of your serial device to (115200Bd, 8, N, 1, Terminator (C_R))
3. Assemble the Handheld Scanner and configure the Scanner (appendix A)
4. Check / Configure the CM968X Module with actual Aladdin Software (DAD-Driver function)
5. Install the GSDML file in the PLC Area
6. Setup the PLC (I/O Area, Profinetname, IP-Address)
7. Check the communication with a simple Watchtable
8. Run the example Program

Overview:



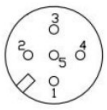
- BC9680- Ethernet/Profinet RJ45 connector
- Power Supply - Power Jack 10..30V DC
  Power Supply
  (12 VDC (8-0935) + Power Cord EU (90ACC1885)

- BC9681-N100- Ethernet/Profinet M12 X-Coded female connector
- Power Supply - M12 5pin male connector A-coded (10..30V DC)
- Or PoE connection (mode A and B)

CM968x-Ethernet Box outside the Base as Gateway

Pinout:

CM9681 External Power Connector

3 CONTACTS	
	1 - BROWN 10-30V
	2 - not used (with hole)
	3 - BLUE GND
	4 - BLACK
	5 - not used (with hole)

Pinout (9 Pin D-Sub male) – Power supply on pin 9

1- NC
2- RX
3- TX
4- GND
5- GND
6- GND
7- RTS
8- CTS
9- V+ *

The pin 9 voltage supplied to the devices depends by the module.

CM9680 -> on pin9 same voltage used to supply the CM module (12V DC with the typical power supply 8-0935)
CM9681-N100 → If supplied with external M12 cable -> on pin 9 you have the same voltage as powered by the M12 cable (10...30V DC (typical 24V DC))
If supplied via POE, a voltage regulator supply 12V DC on the pin 9.

The CM968x module use fixed parameters, set same Parameters on the connected serial device!

CM968X Serial Port	← →	Serial RS232 Device
115200 Baud, 8, N, 1	← →	115200 Baud, 8, N, 1
Terminator $^{C}_{R}$ (carriage return)	← →	Terminator $^{C}_{R}$ (carriage return)

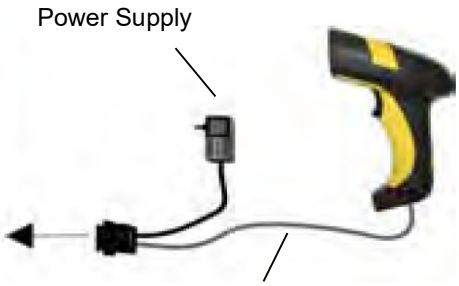
(PD xxxx) Device with direct power from CM968x

Direct connection to CM968x module only with Reader models with a power supply range from 5 to 30V DC)!

Device	→ Cables
(PD91xx,93xx,95xx) (5-30V DC)	→ CAB-434
(PD963x) (5-30V DC)	→ New cables CAB-548,549,557,558 (with power jack)
	→ New cables CAB-559 (without power jack)

HHS Device with separate power supply

Use the correct Power supply for the HHS-Device!
CM968x powered with own separate power.

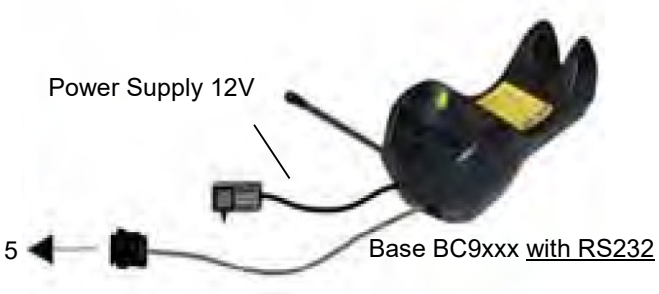


PD 91xx,93xx,95xx → Cable CAB 434
PD 963x → Cable CAB-548,549,557,558
(* or CAB 434 with rubber ring)

Connection of each Scanner with RS232 interface and own power supply. Select correct configuration (115200Bd, 8, N,1), Terminator $^{C}_{R}$.

(PM xxxx) Mobile Hand Scanner with RS232 Base Station

Use a **separate** 12VDC Power supply for the **Base Station with RS232 Interface**!
CM968x powered with own separate power.



BC9030/9130/9160 → Cable CAB-434
BC963x → Cable CAB-548,549,557,558

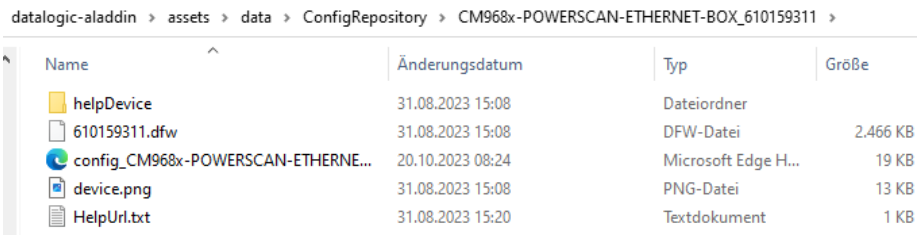
Setup the IP-Address and Device Name (Profinet Name)

Setup the IP-Address and Profinetname with Aladdin or with Profinet Configuration Tool (TIA, Step7) or with configuration codes.

Setup IP-Address and Device Name with Aladdin - connect to CM968x

Use for CM968x a Firmware (610134911.dfw) or newer, included in Aladdin.
Actual rel. 06/2025 Aladdin rel. 3.3.0.10)

If the device contains an older firmware, you can upgrade it with Aladdin (download latest Aladdin Software from the Homepage).
Search the Firmware package of CM968x module under
…resource\ConfigRepository and load it in the device.
Do the firmware upgrade with an Ethernet connection.



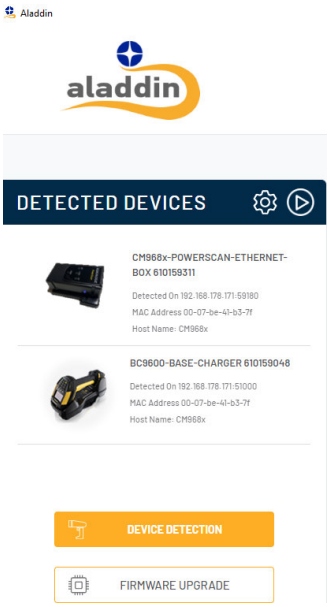
Default IP-Address (Profinet Address) and Device Name (Profinet Name)

IP-Address: 192.168.187.31
Gateway Address: 192.168.187.254
Device Name: cm968x

Set your PC to the same network segment to connect with Aladdin.
Aladdin detects the CM968X when connected on Ethernet. For opening the configuration both, PC and CM968X must be in the same Segment.

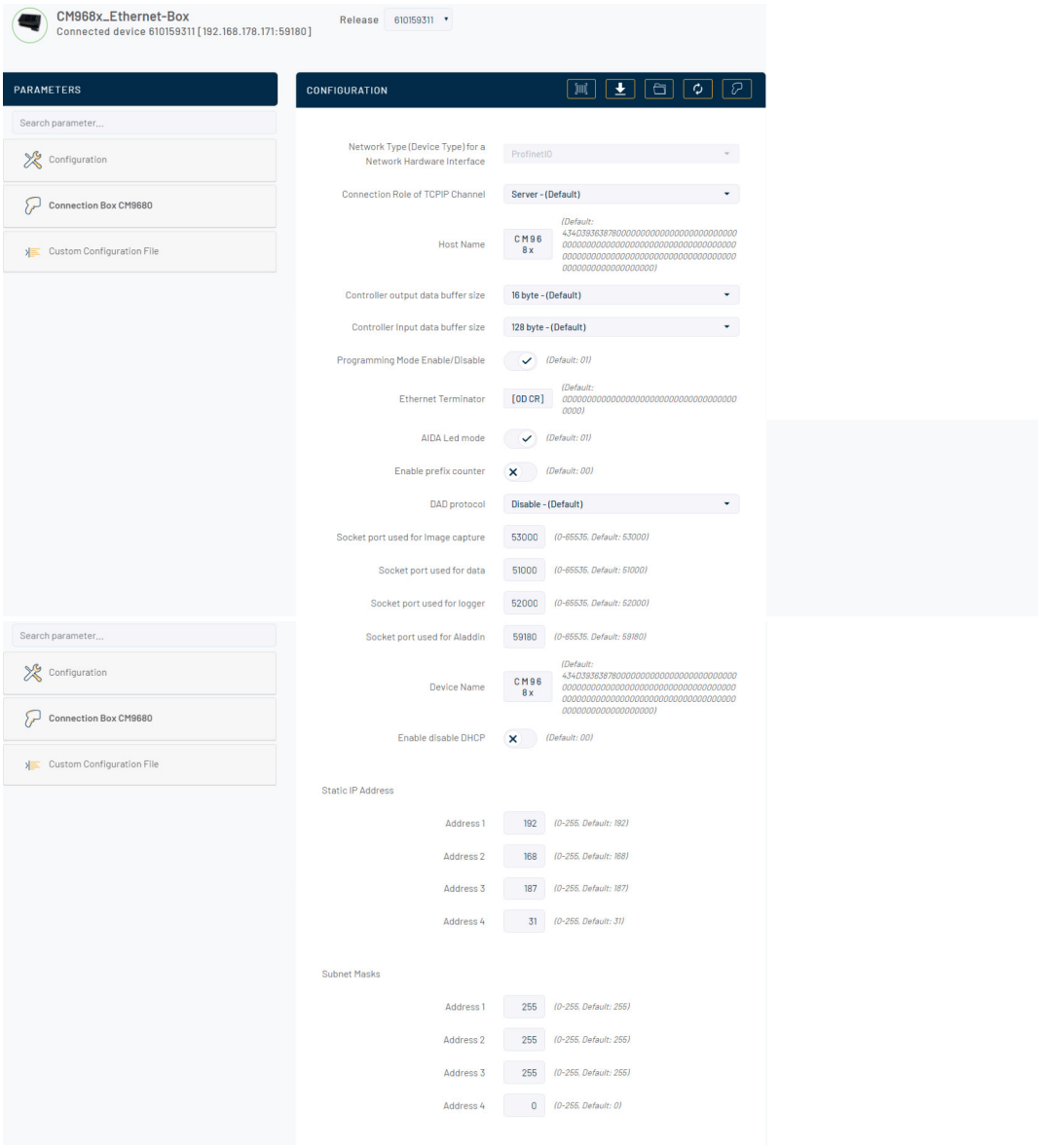
Configure the Handheld Scanner with programming barcodes or do a configuration with Aladdin.

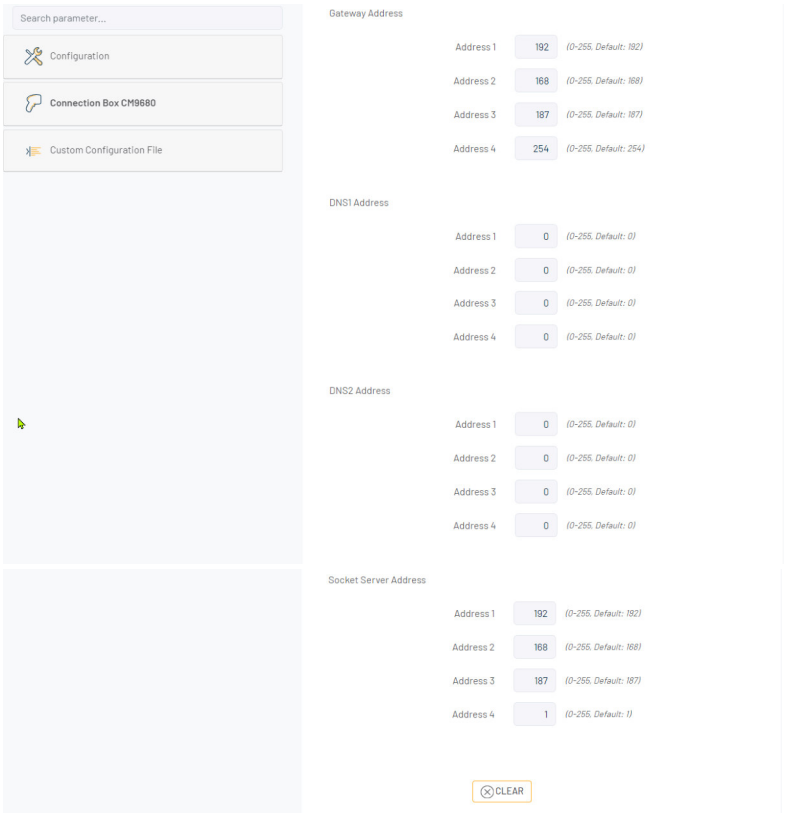
Handheld Scanner have one serial Interface. A configuration with Aladdin over CM968x is possible. Please refer to the Installation manual (powerscan_pd-pm-pbt9600_prg_eng.pdf) for details.
See configuration program codes of HHS Devices in appendix A



Picture: Base BC9600 with CM968x module and Powerscan PM96xx set to a new IP-Address and detected on 192.168.178.171

Defaults:

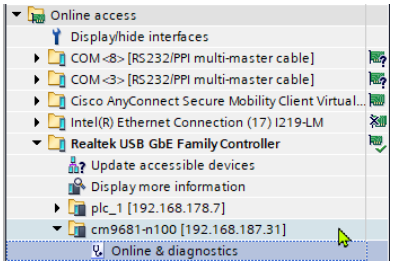

CM968x_Ethernet-Box
Connected device 610159311 [192.168.178.171:59180]
Release 610159311
PARAMETERS
CONFIGURATION
Search parameter...
Configuration
Connection Box CM9680
Custom Configuration File
Network Type (Device Type) for a Network Hardware Interface
ProfinetIO
Connection Role of TCPIP Channel
Server - (Default)
Host Name
CM96 8x
Controller output data buffer size
16 byte - (Default)
Controller Input data buffer size
128 byte - (Default)
Programming Mode Enable/Disable
(Default: 01)
Ethernet Terminator
[0D CR]
AIDA Led mode
(Default: 01)
Enable prefix counter
(Default: 00)
DAD protocol
Disable - (Default)
Socket port used for Image capture
53000
(0-65535. Default: 53000)
Socket port used for data
51000
(0-65535. Default: 51000)
Socket port used for logger
52000
(0-65535. Default: 52000)
Socket port used for Aladdin
59180
(0-65535. Default: 59180)
Device Name
CM96 8x
Enable disable DHCP
(Default: 00)
Static IP Address
Address 1
192
(0-255. Default: 192)
Address 2
168
(0-255. Default: 168)
Address 3
187
(0-255. Default: 187)
Address 4
31
(0-255. Default: 31)
Subnet Masks
Address 1
255
(0-255. Default: 255)
Address 2
255
(0-255. Default: 255)
Address 3
255
(0-255. Default: 255)
Address 4
0
(0-255. Default: 0)

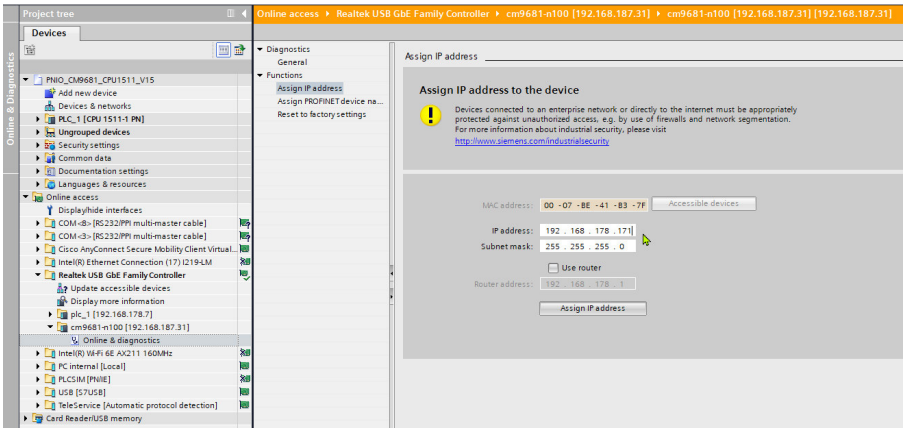

Search parameter...
Configuration
Connection Box CM9680
Custom Configuration File
Gateway Address
Address 1 192 (0-255, Default: 192)
Address 2 168 (0-255, Default: 168)
Address 3 187 (0-255, Default: 187)
Address 4 254 (0-255, Default: 254)
DNS1 Address
Address 1 0 (0-255, Default: 0)
Address 2 0 (0-255, Default: 0)
Address 3 0 (0-255, Default: 0)
Address 4 0 (0-255, Default: 0)
DNS2 Address
Address 1 0 (0-255, Default: 0)
Address 2 0 (0-255, Default: 0)
Address 3 0 (0-255, Default: 0)
Address 4 0 (0-255, Default: 0)
Socket Server Address
Address 1 192 (0-255, Default: 192)
Address 2 168 (0-255, Default: 168)
Address 3 187 (0-255, Default: 187)
Address 4 1 (0-255, Default: 1)
CLEAR

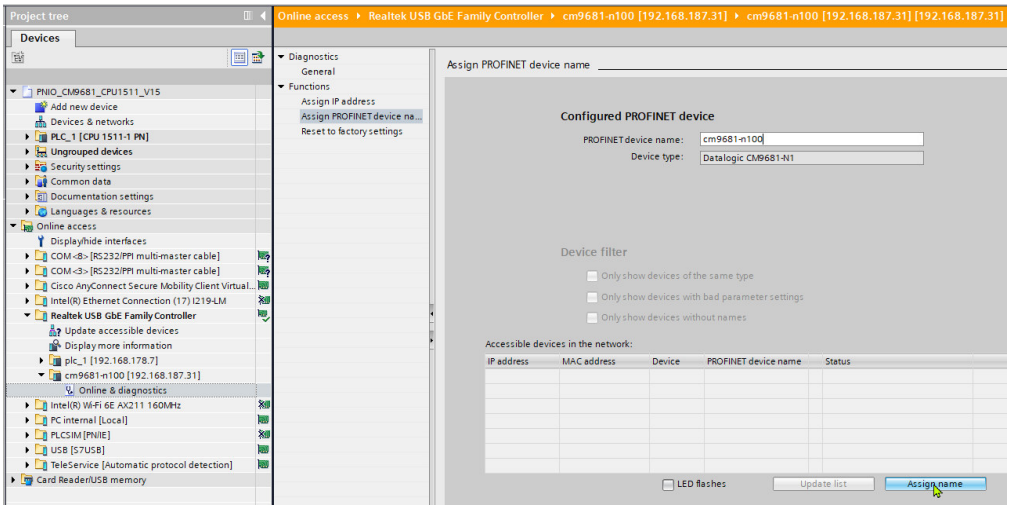
Setup IP-Address and Device Name with Profinet Configuration Tool (TIA, Step7)

You can go direct (or inside a project) to Online and Diagnostics. Set the Type of Interface and click start search. If the accessible device is detected click show. In the Project tree go to the device, when the access is open, assign the new IP-Address and Profinet device name used in the project.

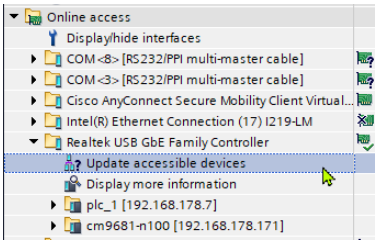
(Picture: Example)



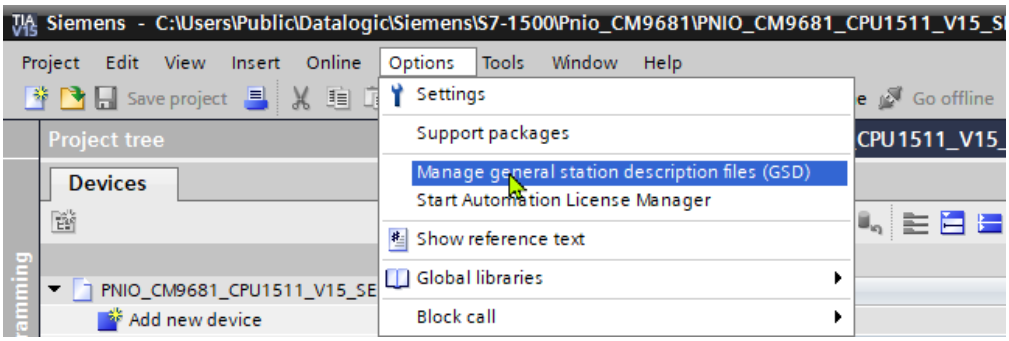




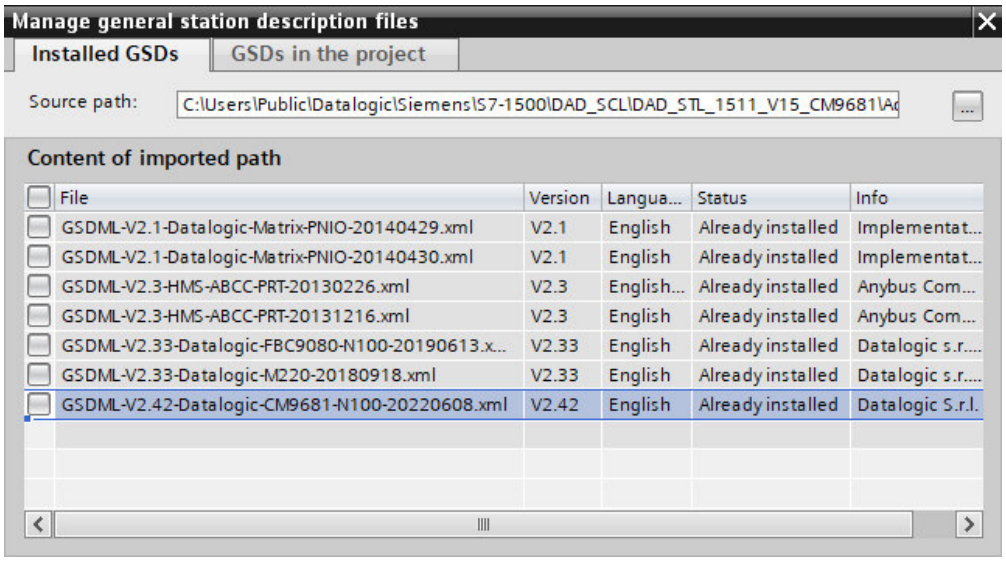
Refresh now the Screen.



Install the CM968x GSDML File on the PLC User Interface.

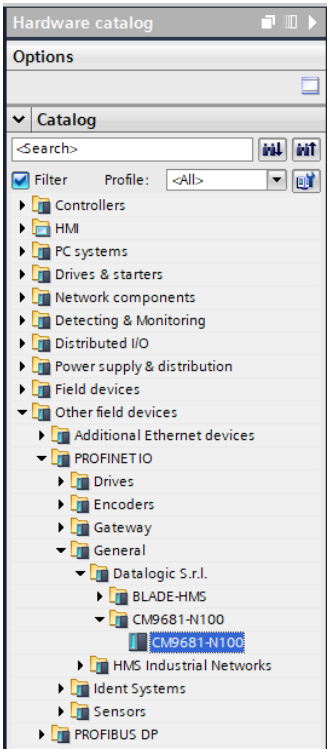


Install the actual GSDML file for “CM968X” Module and update the Catalog.



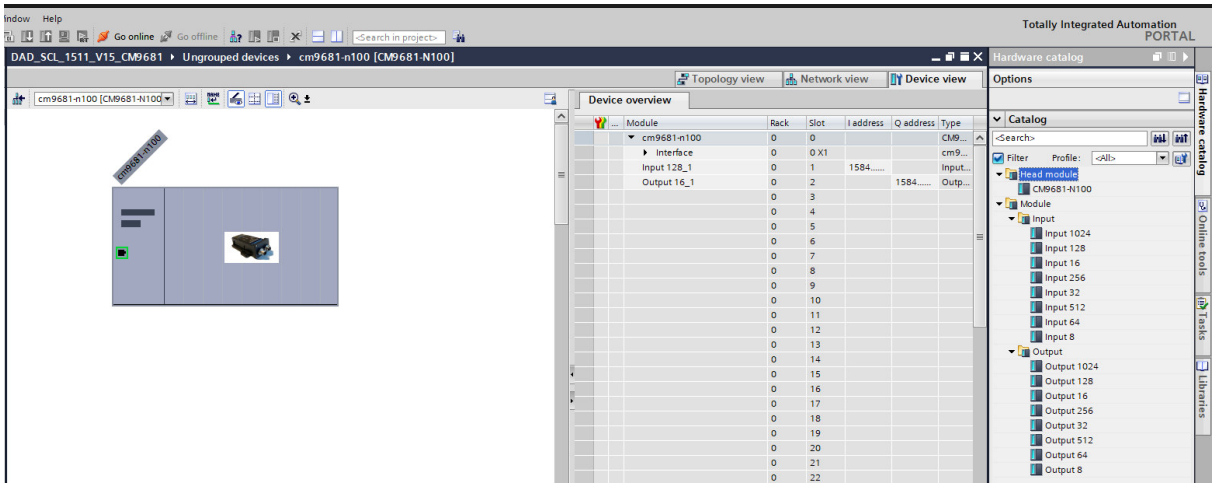
Place Bitmap files in the same local directory of the GSDML file

Select the Profinet Device under the folder → Other Field Devices → PROFINET IO → General → Datalogic S.r.l. → CM9681-N100



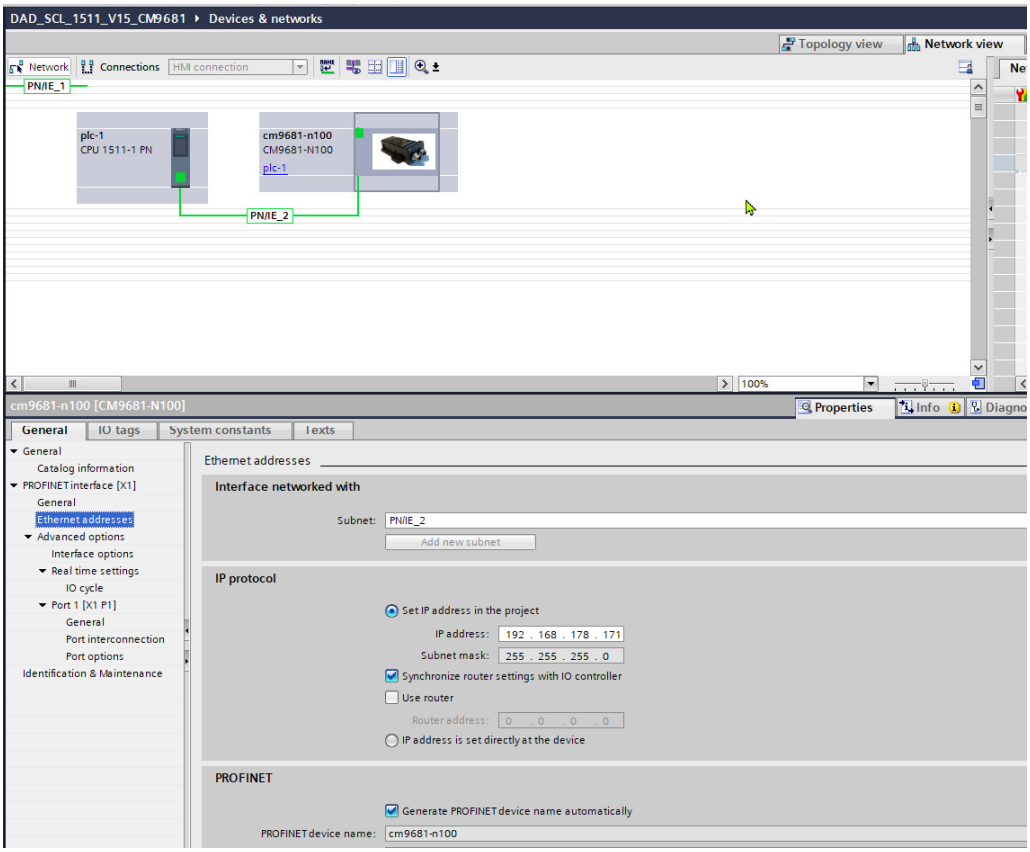
Setup the I/O area

Select always Inputs and Outputs!

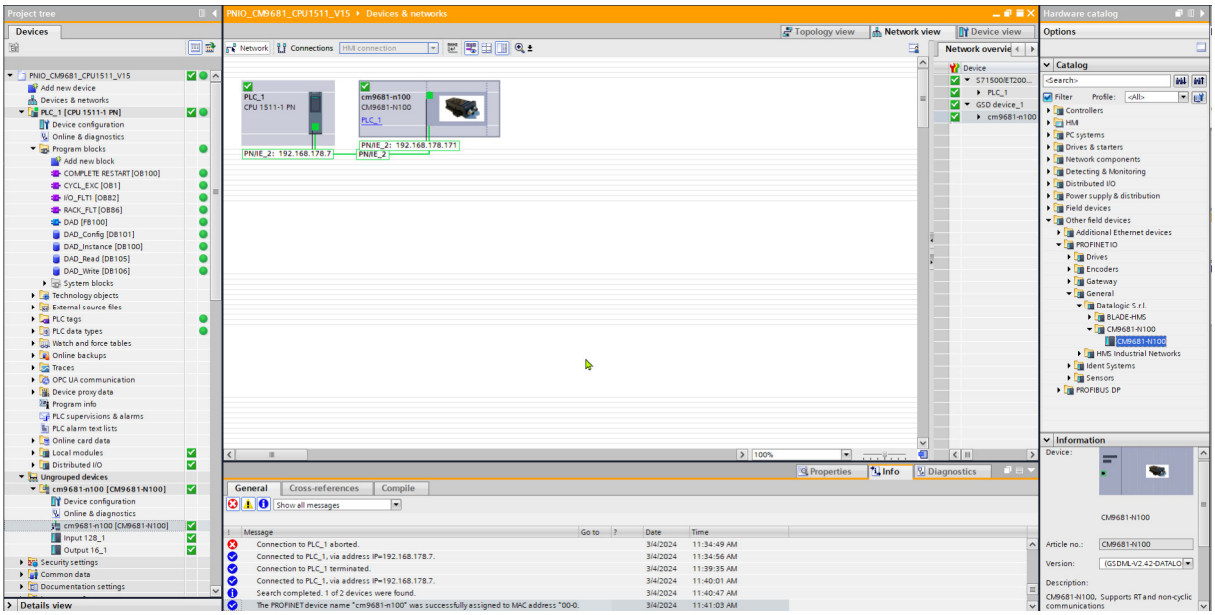


Profinet Naming Convention:

Profinet device name total length (1...240) characters. The following characters are permitted:
Letters "a" to "z"
Numbers "0" to "9"
Hyphen (-) or period (.)
Controllers could have a limit to 127 chars (S7)
One name component in the device name - a character string between two periods - may not be longer than 63 characters.
The device name may not begin or end with a hyphen (-).
The device name may not begin with the character string "port-xyz" (x, y, z = 0 to 9).
The device name may not have the form n.n.n.n (n = 0 to 9).
Only lowercase Letters!



Save and compile the project, download to the PLC.



If there is an error, evaluate the error number in the plc (wrong I/O values, wrong modules, consistency….) and correct it.

CM968x Profinet Transmission Formats to PLC (configured in Aladdin)

Profinet IO use a cyclic communication between the IO Device and the PLC, Inputs and Outputs are cyclic updated, to detect on the PLC side that a new message is transmitted some “flow control” or additional information must be done.
On the CM968x there are two settings possible.

1. Adding a Prefix Counter to the Message. Doing this a 2-Digit counter is placed in front of the Data. The counter is incremented by one on each reading. Counting from 00 up to 99 after that starting again from 00.

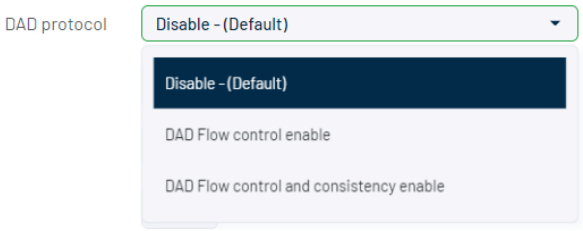
If the message is longer than the programmed Input area the message is truncated to the Input area length!
This Counter is placed in front of the “configured Data”

Picture parameter in Aladdin:

Programming Code:

Enable prefix counter: Enable
$X,CETCE01,X<CR>

Enable prefix counter: Disable
$X,CETCE00,X<CR>



Detailed Information of the DAD flow control mechanism is found in the Document.
“DAD_DPD Driver Reference Manual.pdf (19.07.2017)”

The picture shows the setting (DAD flow control = disabled)

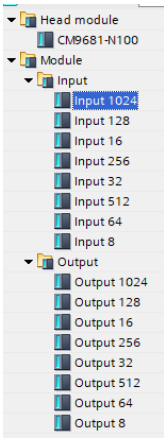
DAD protocol: Disable
$X,CETDD00,X<CR>

DAD protocol: DAD Flow control enable
$X,CETDD01,X<CR>

DAD protocol: DAD Flow control and consistency enable
$X,CETDD03,X<CR>

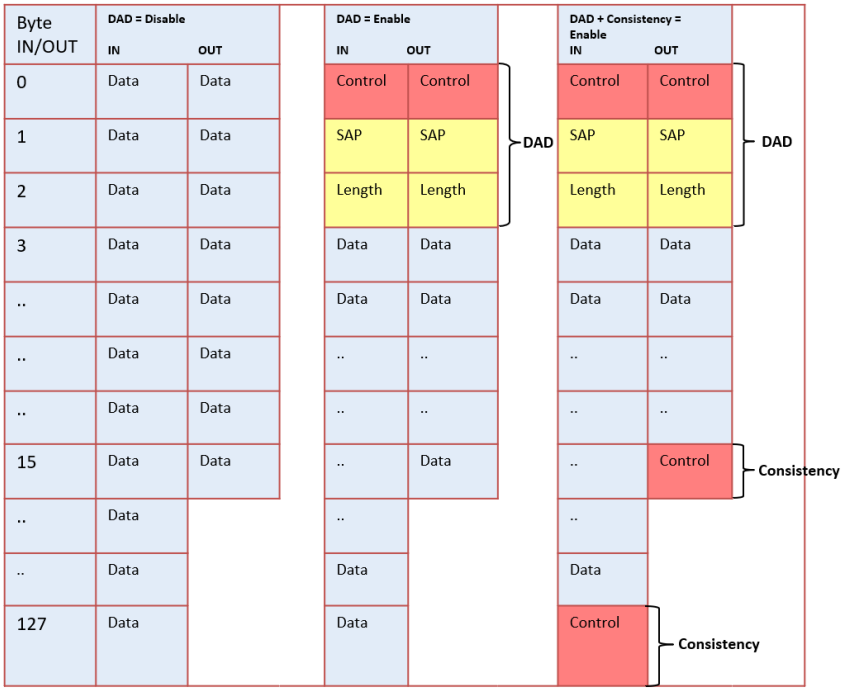
It is recommended to use DAD Flow control handling. Only in this mode it is possible to detect a new reading even it is a code with the same content and a longer message than the programmed Input area is not truncated. The message is then transmitted in Blocks see "DAD_DPD Driver Reference Manual.pdf (19.07.2017)"

DAD Flow control with Input / Output modules 512 and 1024 byte could not be used in the moment!



Data Set Structure with different DAD configuration

Example: 128 Byte In / 16 Byte Out



Example: HHS Device sends DATALOGIC$^{C}_{R}$
PLC 128 IN/16 OUT

DAD = disabled, the message received on RS232 interface is transmitted direct to the Profinet I/O Area. No check of any other control field. If the message length is longer than the configured Input area, the message is truncated, the Rest is lost!
A second reading with exact same contents is not detectable by PLC.
DAD = enabled, DAD Flow control handling is active in the CM968x module.
To enable the DAD flow control function, the control field bit Q x.7 must be set fix to = 1.
Each received message must be acknowledged with the control field bit Q x.0.

DAD flow control handling and consistency, each message must be acknowledged same as before **and** additional in the last projected Input and Output Byte!

	DAD = Disable			DAD = Enable			DAD + Consistency = Enable	
Byte	**IN**	**OUT**		**IN**	**OUT**		**IN**	**OUT**
0	D	00h		81h	81h		81h	81h
1	A	00h		00h	00h		00h	00h
2	T	00h		10	00h		10	00h
3	A	00h		D	00h		D	00h
4	L	00h		A	00h		A	00h
5	O	00h		T	00h		T	00h
6	G	00h		A	00h		A	00h
7	I	00h		L	00h		L	00h
8	C	00h		O	00h		O	00h
9	$^{C}_{R}$	00h		G	00h		G	00h
10	00h	00h		I	00h		I	00h
11	00h	00h		C	00h		C	00h
12	00h	00h		$^{C}_{R}$	00h		$^{C}_{R}$	00h
13	00h	00h		00h	00h		00h	00h
14	00h	00h		00h	00h		00h	00h
15	00h	00h		00h	00h		00h	81h
..	00h			00h			00h	
127	00h			00h			81h	

Data Set Structure with different DAD configuration with added Prefix Counter

Check the system with a watch table.

In this example the HW Config for the CM968x module is set to 128 Byte Input and 16 Byte Output. Starting from Address 1584 (free defined) (**DAD = enabled**). This means each received message must be acknowledged from the PLC. To handle the DAD Driver it is necessary, that bit 7 of the Control Byte (TX) in the PLC is set fix to 1. In our example, Q 1584.7 is set to 1. Below the red arrows are signaling a new reading from the device. (New message is received in the CM968x). To detect this in a plc program, the user compares the Input I 1584.0 with the Output Q1584.0 if it is uneven a new message is written in the input area and the user can handle this new data, at the end of the process the Input I1584.0 is transferred in the Output Q1584.0 → (acknowledge this message, blue arrow in the picture) And so on…compare IB1584.0 with QB1584.0 ….
If I 1584.0 is still even with Q 1584.0 no new message is available.
For deeper information of the data format, please refer to the DAD-DPD flow control driver document. "DAD_DPD Driver Reference Manual.pdf (19.07.2017)"

PLC Examples (Siemens...) are available, watch the Datalogic homepage or contact your local Datalogic dealer.

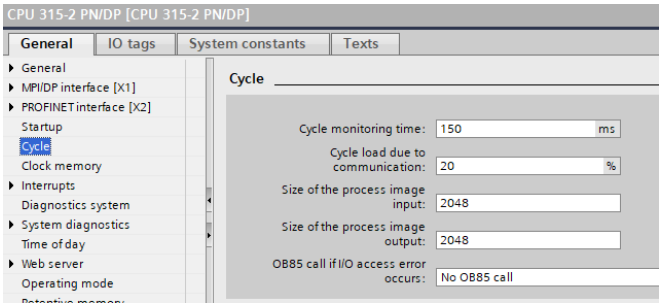
		Time:	1	2	3	....
// Hardware Startadresse I/O 1584						
	%QB1584	Hex	16#80	16#81	16#80	
	%QB1585	Hex	16#00	16#00	16#00	
	%QB1586	Hex	16#00	16#00	16#00	
	%QB1587	Hex	16#00	16#00	16#00	
	%QB1588	Hex	16#00	16#00	16#00	
	%QB1589	Hex	16#00	16#00	16#00	
	%QB1590	Hex	16#00	16#00	16#00	
	%QB1591	Hex	16#00	16#00	16#00	Quit message
			New message	New message		
// Hardware Startadresse I/O 1584						
// Statusbyte bit 7 = 1 –> DAD Format bit 7 = 0 –> DPD Format						
	%IB1584	Hex	16#80	16#81	16#80	
// SAP						
	%IB1585	Hex	16#00	16#00	16#00	
// Datensatz Länge						
	%IB1586	Hex	16#00	16#07	16#07	
// Daten						
	%IB1587	Zeichen	'$00'	'C'	'C'	
	%IB1588	Zeichen	'$00'	'3'	'3'	
	%IB1589	Zeichen	'$00'	'9'	'9'	
	%IB1590	Zeichen	'$00'	'D'	'D'	
	%IB1591	Zeichen	'$00'	'L'	'L'	
	%IB1592	Zeichen	'$00'	'$R'	'$R'	
	%IB1593	Zeichen	'$00'	'$L'	'$L'	
	%IB1594	Zeichen	'$00'	'$00'	'$00'	
	%IB1595	Zeichen	'$00'	'$00'	'$00'	
	%IB1596	Zeichen	'$00'	'$00'	'$00'	

Datalogic Example with (AWL) function Block (FB100)

The function block is usable for all type of Datalogic devices using DAD Flow control.
Detailed instructions of the function block written in the
“DAD FB rev. 2 Instructions Manual.pdf”

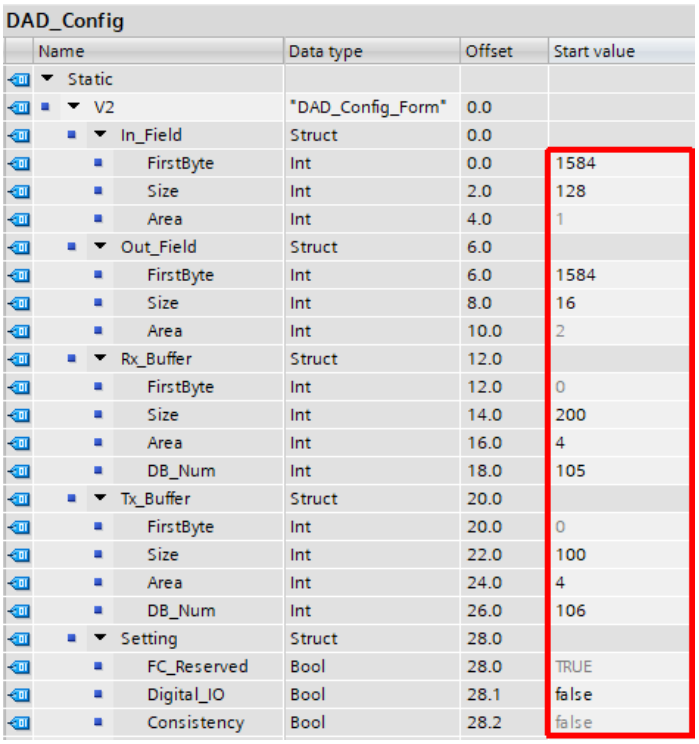
Note:
Different AWL examples (FB100) for different CPU type! (CPU15xx, CPU3xx)
AWL example not usable with CPU12xx!

If you are using a plc with less memory size (for example cpu315…, check the configured process Input/Output size of the PLC, default size setting only (128 byte)).



Setup DAD Config (DB101) with the correct values

HW Config (see example).



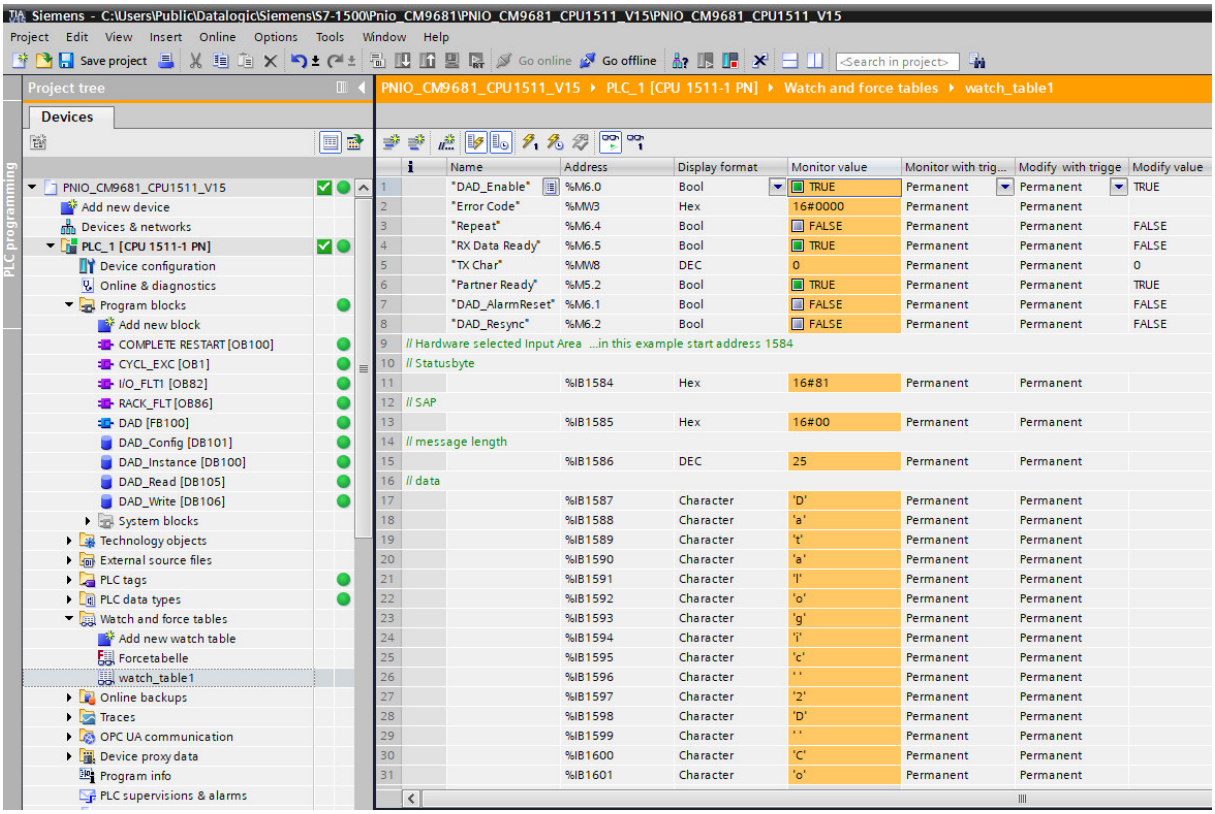
DAD_Config

Name	Data type	Offset	Start value
Static			
V2	"DAD_Config_Form"	0.0	
In_Field	Struct	0.0	
FirstByte	Int	0.0	1584
Size	Int	2.0	128
Area	Int	4.0	1
Out_Field	Struct	6.0	
FirstByte	Int	6.0	1584
Size	Int	8.0	16
Area	Int	10.0	2
Rx_Buffer	Struct	12.0	
FirstByte	Int	12.0	0
Size	Int	14.0	200
Area	Int	16.0	4
DB_Num	Int	18.0	105
Tx_Buffer	Struct	20.0	
FirstByte	Int	20.0	0
Size	Int	22.0	100
Area	Int	24.0	4
DB_Num	Int	26.0	106
Setting	Struct	28.0	
FC_Reserved	Bool	28.0	TRUE
Digital_IO	Bool	28.1	false
Consistency	Bool	28.2	false

In_field → Start address, length (example Start address 1584, length 128 byte)
Out_field → Start address length (example Start address 1584, length 16 byte)
RX_Buffer → DB number, length (DAD_Read, DB105, length 200)
TX_Buffer → DB number, length (DAD_Write, DB106, length 100)
Setting → Digital IO →FALSE no HW IO Byte → (not available CM968x)
Setting → Consistency → FALSE no Control byte at the end of projected I/O Area

Each message is acknowledged direct and transmitted to DB105.

Watchtable (Example)



	Name	Address	Display format	Monitor value	Monitor with trig...	Modify with trigge	Modify value
1	"DAD_Enable"	%M6.0	Bool	TRUE	Permanent	Permanent	TRUE
2	"Error Code"	%MW3	Hex	16#0000	Permanent	Permanent	
3	"Repeat"	%M6.4	Bool	FALSE	Permanent	Permanent	FALSE
4	"RX Data Ready"	%M6.5	Bool	TRUE	Permanent	Permanent	FALSE
5	"TX Char"	%MW8	DEC	0	Permanent	Permanent	0
6	"Partner Ready"	%M5.2	Bool	TRUE	Permanent	Permanent	TRUE
7	"DAD_AlarmReset"	%M6.1	Bool	FALSE	Permanent	Permanent	FALSE
8	"DAD_Resync"	%M6.2	Bool	FALSE	Permanent	Permanent	FALSE
9	// Hardware selected Input Area ...in this example start address 1584						
10	// Statusbyte						
11		%IB1584	Hex	16#81	Permanent	Permanent	
12	// SAP						
13		%IB1585	Hex	16#00	Permanent	Permanent	
14	// message length						
15		%IB1586	DEC	25	Permanent	Permanent	
16	// data						
17		%IB1587	Character	'D'	Permanent	Permanent	
18		%IB1588	Character	'a'	Permanent	Permanent	
19		%IB1589	Character	't'	Permanent	Permanent	
20		%IB1590	Character	'a'	Permanent	Permanent	
21		%IB1591	Character	'l'	Permanent	Permanent	
22		%IB1592	Character	'o'	Permanent	Permanent	
23		%IB1593	Character	'g'	Permanent	Permanent	
24		%IB1594	Character	'i'	Permanent	Permanent	
25		%IB1595	Character	'c'	Permanent	Permanent	
26		%IB1596	Character	' '	Permanent	Permanent	
27		%IB1597	Character	'2'	Permanent	Permanent	
28		%IB1598	Character	'D'	Permanent	Permanent	
29		%IB1599	Character	' '	Permanent	Permanent	
30		%IB1600	Character	'C'	Permanent	Permanent	
31		%IB1601	Character	'o'	Permanent	Permanent	

Datalogic Example with (SCL Structured Control Language) function Block (FB1)

Datalogic SCL example, usable with CPU 15xx, 12xx.

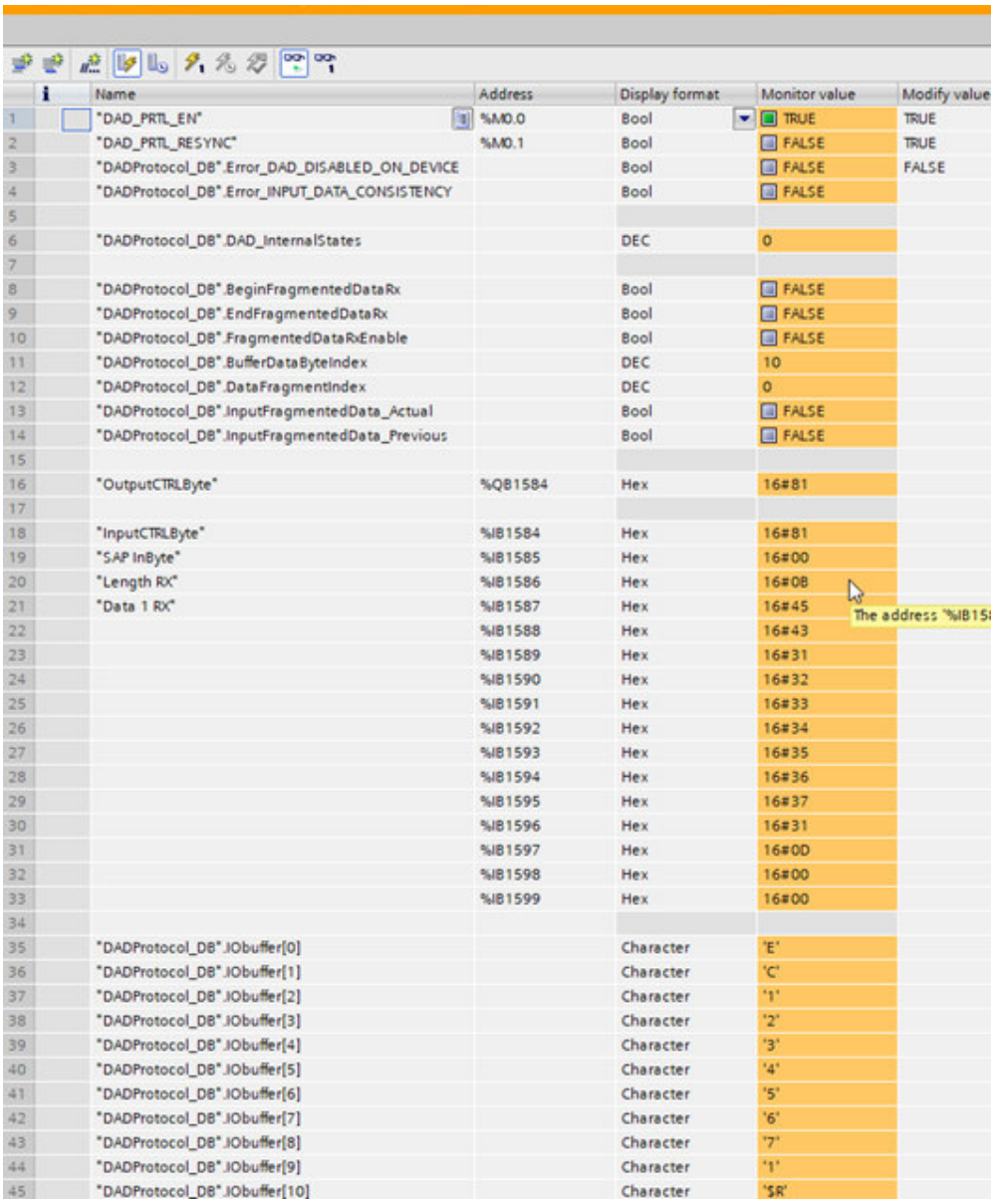
Setup DADProtocol_DB

HW Config (see example).

DADProtocol_DB

	Name	Data type	Start value
	Input		
	DAD_ENABLE	Bool	true
	Output		
	InOut		
	ProtocolDoResync	Bool	false
	Static		
	IOconditioning_Enable	Bool	false
	DataConsistency_Ena...	Bool	false
	InputExArea_FirstByte...	Int	1584
	InputExArea_Size	Int	128
	InputExArea_Type	Byte	16#81
	OutputExArea_FirstBy...	Int	1584
	OutputExArea_Size	Int	16
	OutputExArea_Type	Byte	16#82
	DB_Number	DInt	0
	IObuffer	Array[0..512] of Byte	
	DAD_PRTL_FIRST_ITER...	Bool	TRUE
	DATA_CONSISTENCY_...	Bool	false

Check with DAD_Watchtable



	Name	Address	Display format	Monitor value	Modify value
1	"DAD_PRTL_EN"	%M0.0	Bool	TRUE	TRUE
2	"DAD_PRTL_RESYNC"	%M0.1	Bool	FALSE	TRUE
3	"DADProtocol_DB".Error_DAD_DISABLED_ON_DEVICE		Bool	FALSE	FALSE
4	"DADProtocol_DB".Error_INPUT_DATA_CONSISTENCY		Bool	FALSE	
5					
6	"DADProtocol_DB".DAD_InternalStates		DEC	0	
7					
8	"DADProtocol_DB".BeginFragmentedDataRx		Bool	FALSE	
9	"DADProtocol_DB".EndFragmentedDataRx		Bool	FALSE	
10	"DADProtocol_DB".FragmentedDataRxEnable		Bool	FALSE	
11	"DADProtocol_DB".BufferDataByteIndex		DEC	10	
12	"DADProtocol_DB".DataFragmentIndex		DEC	0	
13	"DADProtocol_DB".InputFragmentedData_Actual		Bool	FALSE	
14	"DADProtocol_DB".InputFragmentedData_Previous		Bool	FALSE	
15					
16	"OutputCTRLByte"	%QB1584	Hex	16#81	
17					
18	"InputCTRLByte"	%IB1584	Hex	16#81	
19	"SAP InByte"	%IB1585	Hex	16#00	
20	"Length RX"	%IB1586	Hex	16#08	
21	"Data 1 RX"	%IB1587	Hex	16#45	
22		%IB1588	Hex	16#43	
23		%IB1589	Hex	16#31	
24		%IB1590	Hex	16#32	
25		%IB1591	Hex	16#33	
26		%IB1592	Hex	16#34	
27		%IB1593	Hex	16#35	
28		%IB1594	Hex	16#36	
29		%IB1595	Hex	16#37	
30		%IB1596	Hex	16#31	
31		%IB1597	Hex	16#0D	
32		%IB1598	Hex	16#00	
33		%IB1599	Hex	16#00	
34					
35	"DADProtocol_DB".IObuffer[0]		Character	'E'	
36	"DADProtocol_DB".IObuffer[1]		Character	'C'	
37	"DADProtocol_DB".IObuffer[2]		Character	'1'	
38	"DADProtocol_DB".IObuffer[3]		Character	'2'	
39	"DADProtocol_DB".IObuffer[4]		Character	'3'	
40	"DADProtocol_DB".IObuffer[5]		Character	'4'	
41	"DADProtocol_DB".IObuffer[6]		Character	'5'	
42	"DADProtocol_DB".IObuffer[7]		Character	'6'	
43	"DADProtocol_DB".IObuffer[8]		Character	'7'	
44	"DADProtocol_DB".IObuffer[9]		Character	'1'	
45	"DADProtocol_DB".IObuffer[10]		Character	'$R'	

Appendix A Programming codes

Read in the manual of your connected Scanner “Linking the reader” to the base.

Link Datalogic RF Devices to Base

For RF devices, before configuring the interface it is necessary to link the handheld with the base.

To link the handheld and the base, press the trigger to wake up the handheld and mount it into the base. If the reader was previously linked to another base, you must first press and hold the button on the base (>5 seconds), then scan the Unlink bar code before re-linking to the new base.

Powerscan PM95xx / PM96xx (mobile scanners)

Read codes 1,2,3 one after the other

Powerscan PD95xx / PD96xx / Gryphon 4400 / Museo Platform

Read codes 2,3 one after the other

Check that only one code is in the scanners reading field!

1. Read Unlink, place the scanner in the base

2. Read Interface RS232 STD

3. Read Default (115200 Baud, 8, N, 1)

3A. (115200 Baud) (Read this code additional for Office Products! (Gryphon..)

XX. PM95xx,96xx 2 Way Mode (Host Commands Ignore; write data into Display))

Powerscan PM91xx, PM93xx (mobile scanners), PD91xx, PD93xx

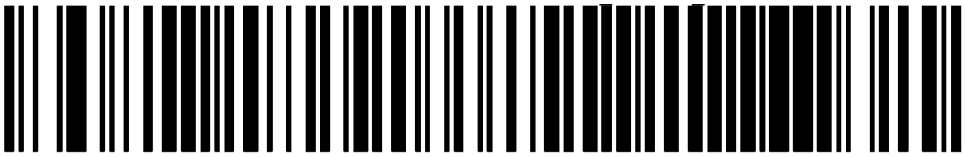
Read Unlink and place the scanner in the base

Read codes 1,2 one after the other

Powerscan PD91xx, PD93xx

Read codes 1,2 one after the other

1. Restore USA Factory Configuration

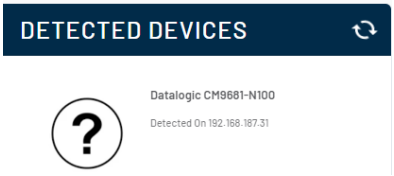


2. (115200,8, N,1, CR)

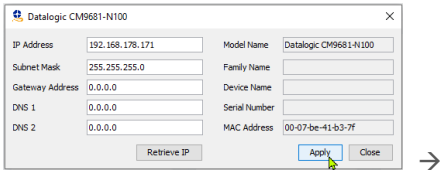
Troubleshooting:

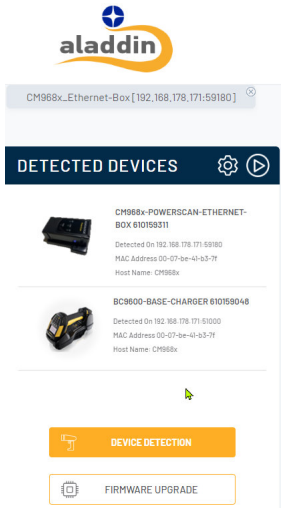
CM968x not detected by Aladdin (Wrong configuration done)

Connect with Aladdin to the CM968x → Aladdin (PC) must be in the same network area. If this is not set correct you will see the device with a "?"



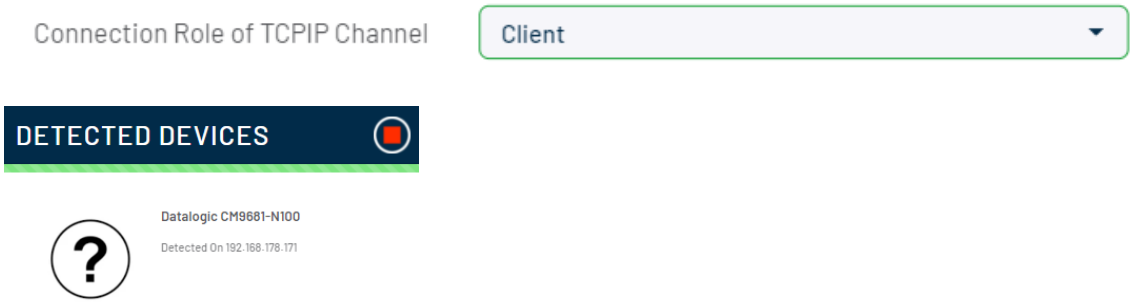
Set your PC to that Address area ...for example (192.168.187.1) or
Click to the "?" and adapt the CM968x into the range of the PC. For example (192.168.178.171) the PC … PC IP-Address for example (192.168.178.75)
If a Gateway Address is used, set this Address too.
→





Under this IP-Address the CM968x is also reachable from the TIA or Step7 Portal.
In the picture (192.168.178.171)
Check IP-Address settings carefully when doing it with programming codes or with Aladdin.

Device set to Client Connection Role and not detected by Aladdin.



→ Possible Situation:

The Socket Server Address is not set to the same Address Segment (Socket Server Address is on the bottom page in Aladdin)

Default:

Solution:

Set CM968x0 back to default Address

(192.168.187.31) set PC Address to (192.168.187.1 you can test then also direct the client – server connection).

Read the Restore default code

(Aladdin closed, Profinet connection closed, no terminal connection) (You don't know the programmed Socket Server Address)

$X,AE,X

CM968x-N100 is now configured again with default values.

IP-Address: 192.168.187.31

Gateway Address: 192.168.187.254

Device Name: cm968x

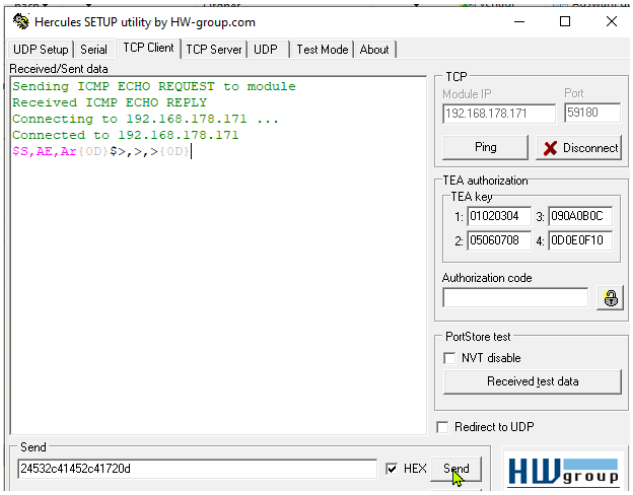
Connection Role of TCP/IP Channel: Server

Set now correct IP Address to connect with Aladdin (adapt CM968x Ethernet Box or PC Address to the same network segment) (if still not connecting restart Aladdin and power cycle the CM968x Ethernet Box)

No Scanner was found (Aladdin is closed, Profinet connection is closed)

Reset the CM968x Ethernet Box with the Restore Default Command. ($S,AE,Ar<0d>)
<0d> = 0D hex

(Use the address where you can ping the module) wait for the feedback $>,>,>{0D} of the module (10…15 sec).



Set now again correct IP Address and connect with Aladdin (adapt CM968x Ethernet Box or PC Address to the same segment) (if still not connecting restart Aladdin and power cycle the CM968x Ethernet Box)

Restore factory defaults on all parts (Gun, Base, Gateway Module)

PS9600 Ethernet modules

Question #4: gun + base + CM968X. I did some wrong cfg and I want to restart from a known cfg, the default. How can I restore the factory default in gun, base and CM968X??

Considering the different syntax of the CM968X, you need to follow some consecutive steps:

- Read the restore factory default, $AE/$Ae with the gun -> the command will default gun and base, not the CM968X. This label is made following the known syntax
- Read the interface command HA19 to set the ETH profile (still using the known syntax)
- Read the restore factory command $AE/$Ae, printed using the new syntax
- Power cycle on the base
- Now all the products are defaulted

$P,AE,P

$P,HA19,P

$X,AE,X