

# SICAM A8000 Engineering

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# SICAM WEB:

Parameterization made easy – online tool for SICAM A8000

## Convenient functions

- Easy online configuration
- Reliable and secure remote maintenance via https
- Cleartext diagnostics
- Event and alarm lists
- Supports simulation and testing

## Technical highlights

- Plug & play functionality
- Simple and intuitive user interface
- Multi-lingual support
- Universal use on tablets and desktop PCs
- Operable on all standard browsers
- Optimized for small bandwidth



## Advantages

- Access to all parameters 24/7
- One-time assignment of address
- No limitation of applicability
- Maximized user friendliness

# SICAM Device Manager

The intuitive engineering tool for SICAM A8000

## Project and device management

Online connection with device  
via SICAM WEB

Duplication of devices

Automatization functions  
via integrated CFC editor

Offline parameterization

- CP-8000
- CP-8021
- CP-8022
- CP-8050

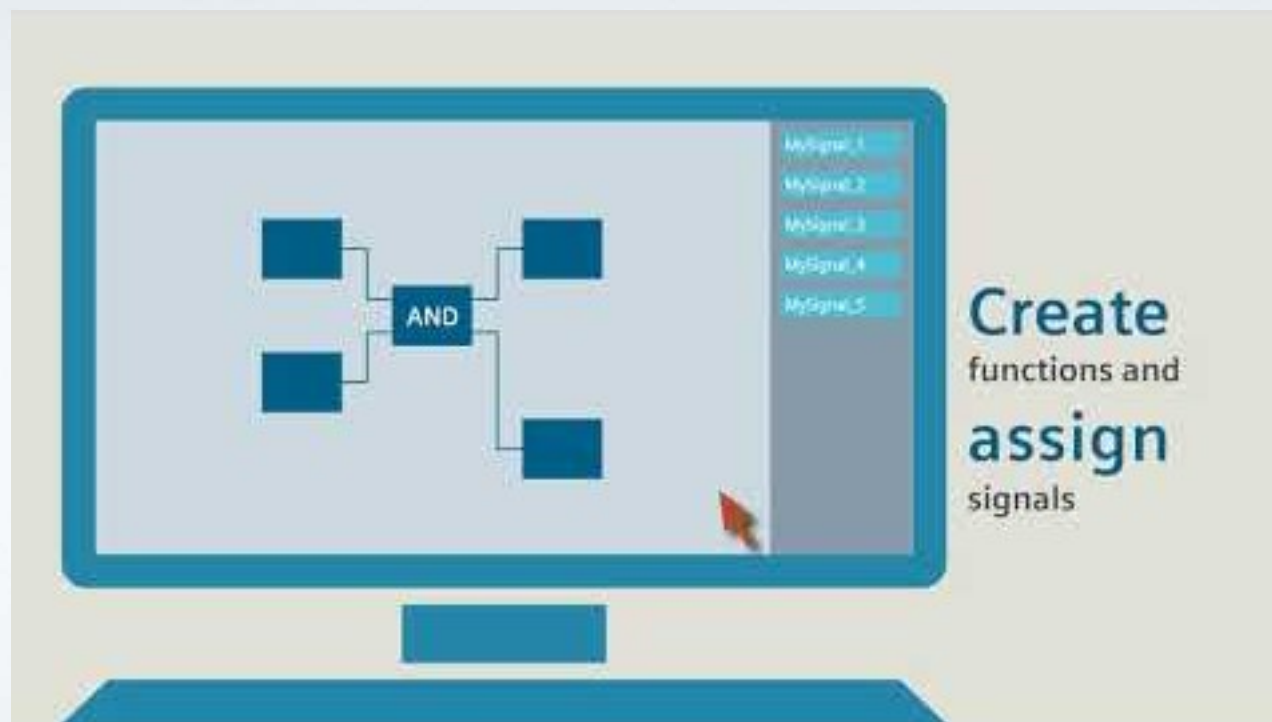
**CP-8050**  
**New in V3.0**



## Customer benefits

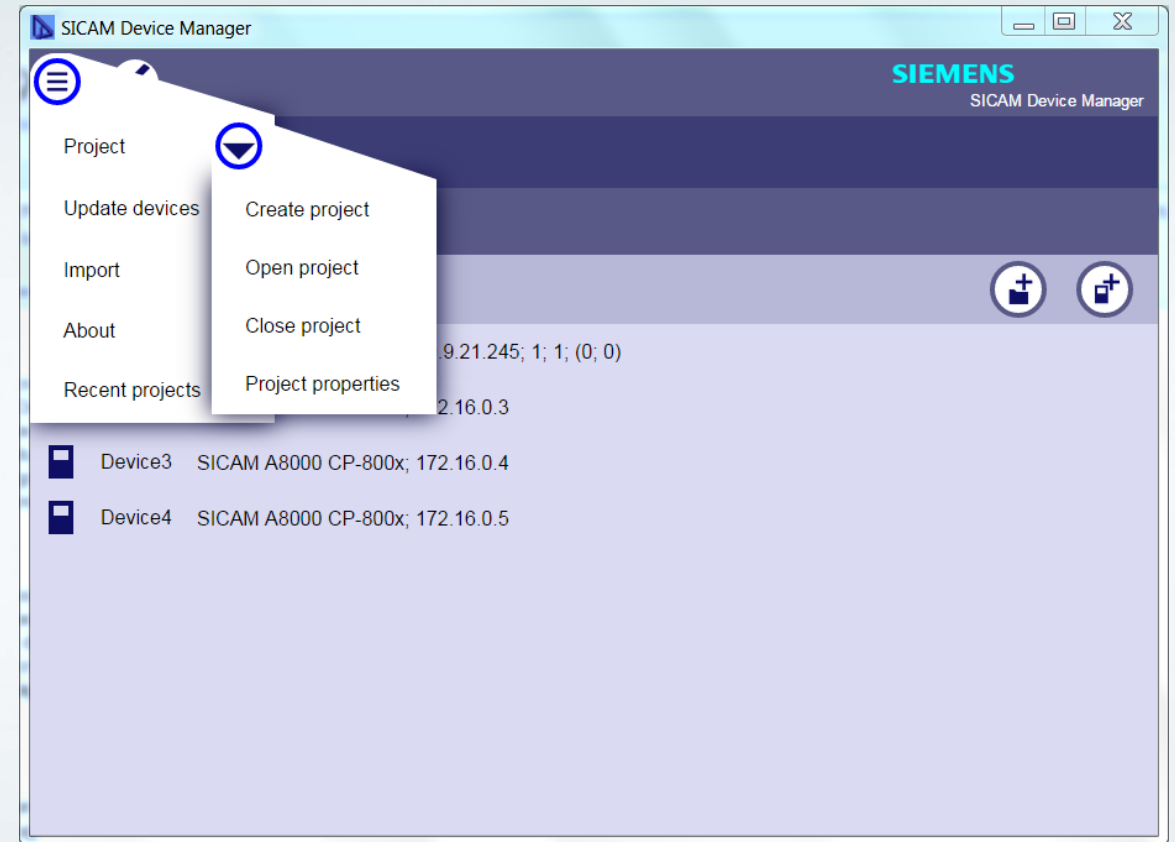
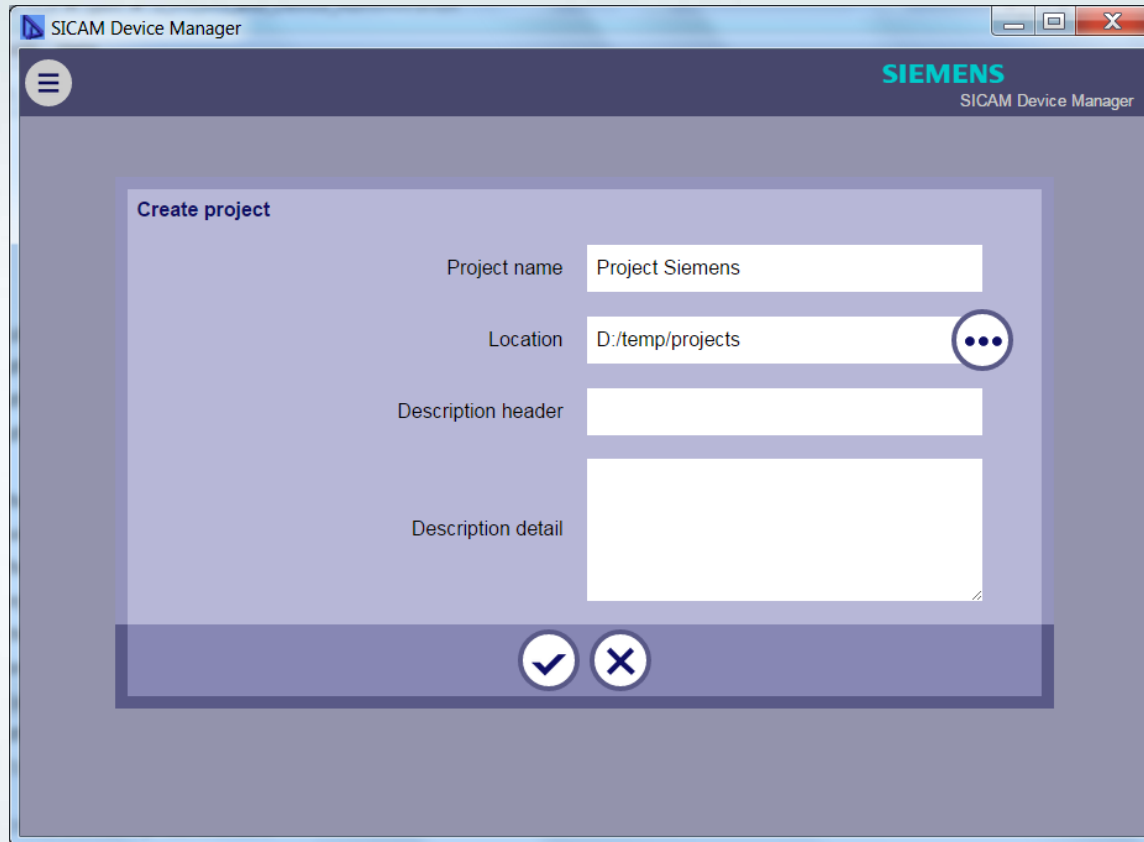
- Simple, clear management of projects and devices in folder structures
- Little time and effort needed for parameterization thanks to duplication of devices and automatic adjustment of specific parameters
- Full compatibility between SICAM WEB and Device Manager
- Look-and-feel correspond to SICAM WEB
- Up- and download of device configuration

# SICAM Device Manager Trailer with new functions



[\(Link to Video\)](#)

# SICAM Device Manager Projekt and Device Management



# SICAM Device Manager

## Copy device

The screenshot shows the main interface of SICAM Device Manager. The title bar reads "SICAM Device Manager". The top navigation bar includes the Siemens logo and "SICAM Device Manager". Below this, there's a "Project Siemens" section and a "Vienna" location indicator. A toolbar contains icons for home, play, and a list of icons. A list of devices is displayed:

- Device1 SICAM A8000 CP-800x; 10.9.21.245; 1; 1; (0; 0)
- Device2 SICAM A8000 CP-800x; 172.16.0.3; (0; 0)
- Device3 SICAM A8000 CP-800x; 172.16.0.4; (0; 0)
- Device4 SICAM A8000 CP-800x; 172.16.0.5; (0; 0)



A context menu is open over the list, showing the following options:




- Multiply device
- Restore device...
- Backup device...
- Generate SD card

The screenshot shows the "Multiply device - Device1" dialog box. It is titled "Step 1: Define devices". The dialog contains a table with the following columns: Name of new device, IP address, Region, Comp #, CASDU 1, CASDU 2, and Description. The table lists 18 new devices:

Name of new device	IP address	Region	Comp #	CASDU 1	CASDU 2	Description
NewDev1	10.9.21.251	10	51	10	1	New Device 1
NewDev2	10.9.21.252	10	52	10	2	New Device 2
NewDev3	10.9.21.253	10	53	10	3	New Device 3
NewDev4	10.9.22.0	10	54	10	4	New Device 4
NewDev5	10.9.22.1	10	55	10	5	New Device 5
NewDev6	10.9.22.2	10	56	10	6	New Device 6
NewDev7	10.9.22.3	10	57	10	7	New Device 7
NewDev8	10.9.22.4	10	58	10	8	New Device 8
NewDev9	10.9.22.5	10	59	10	9	New Device 9
NewDev10	10.9.22.6	10	60	10	10	New Device 10
NewDev11	10.9.22.7	10	61	10	11	New Device 11
NewDev12	10.9.22.8	10	62	10	12	New Device 12
NewDev13	10.9.22.9	10	63	10	13	New Device 13
NewDev14	10.9.22.10	10	64	10	14	New Device 14
NewDev15	10.9.22.11	10	65	10	15	New Device 15
NewDev16	10.9.22.12	10	66	10	16	New Device 16
NewDev17	10.9.22.13	10	67	10	17	New Device 17
NewDev18	10.9.22.14	10	68	10	18	New Device 18

# SICAM Device Manager Firmware Loader (Multiple firmwares & devices)

In directory   

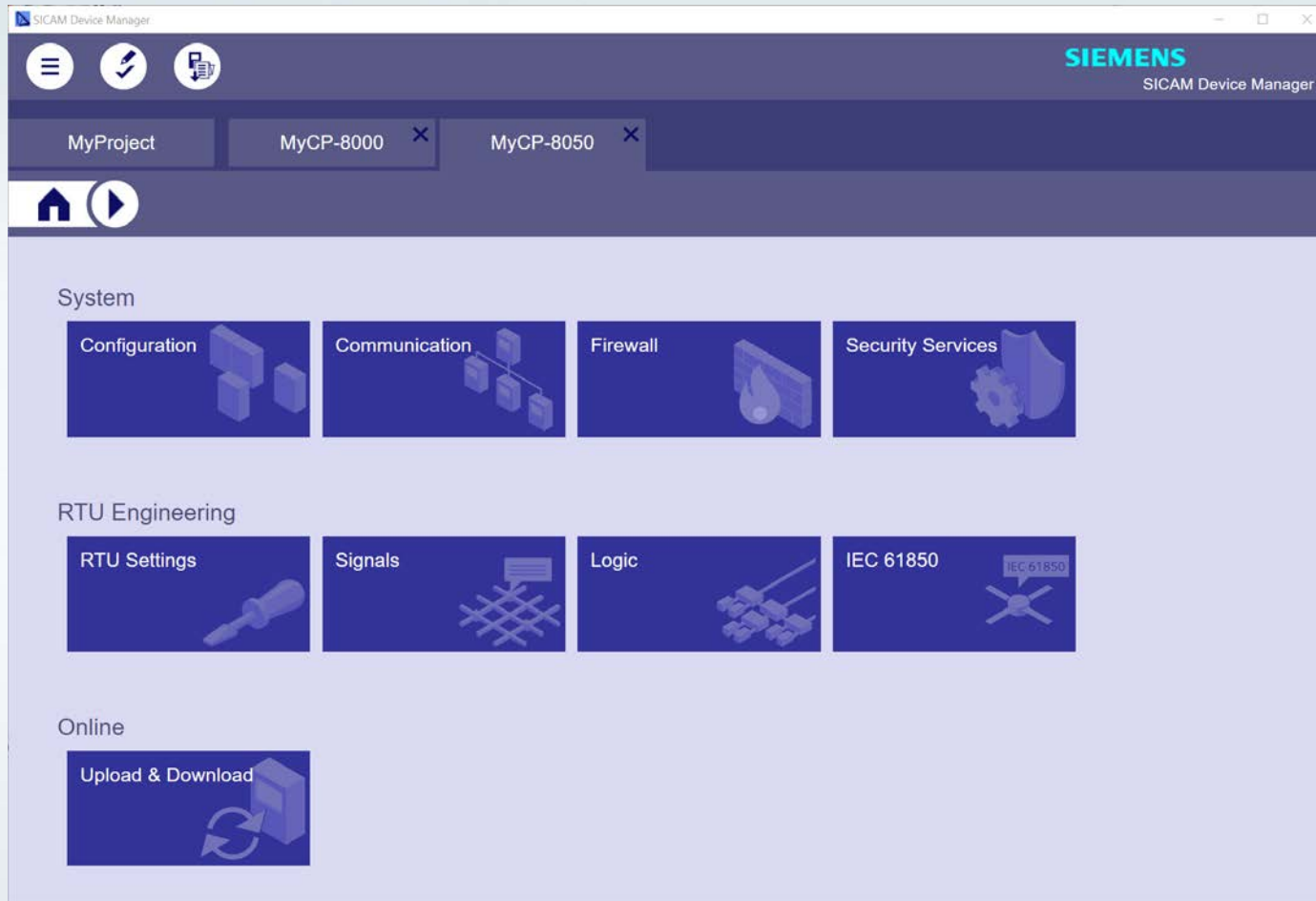
 SC8-098-1\_0400.bin  
 SC8-098-1\_0401.bin  
 SC8-098-1\_04RH.bin

Device	Firmware	Scheduled Version	Current Version
<input checked="" type="checkbox"/> 74 SICAM A8000 CP-800x, 10.9.21.74, 216, 74 /	CPC80	11	12.AG
	USIO81	04.01	not equipped
<input type="checkbox"/> 234 SICAM A8000 CP-802x, 10.9.21.234, 216, 234 /	CPC80	11	
	USIO81	04.01	
<input type="checkbox"/> 235 SICAM A8000 CP-800x, 10.9.21.235, 216, 235 /	CPC80	11	
	USIO81	04.01	
<input type="checkbox"/> 241 SICAM A8000 CP-800x, 10.9.21.241, 216, 241 /	CPC80	11	
	USIO81	04.01	
<input type="checkbox"/> 242 SICAM A8000 CP-800x, 10.9.21.242, 216, 242 /	CPC80	11	
	USIO81	04.01	
<input type="checkbox"/> 243 SICAM A8000 CP-800x, 10.9.21.243, 216, 243 /	CPC80	11	
	USIO81	04.01	

**Firmware**

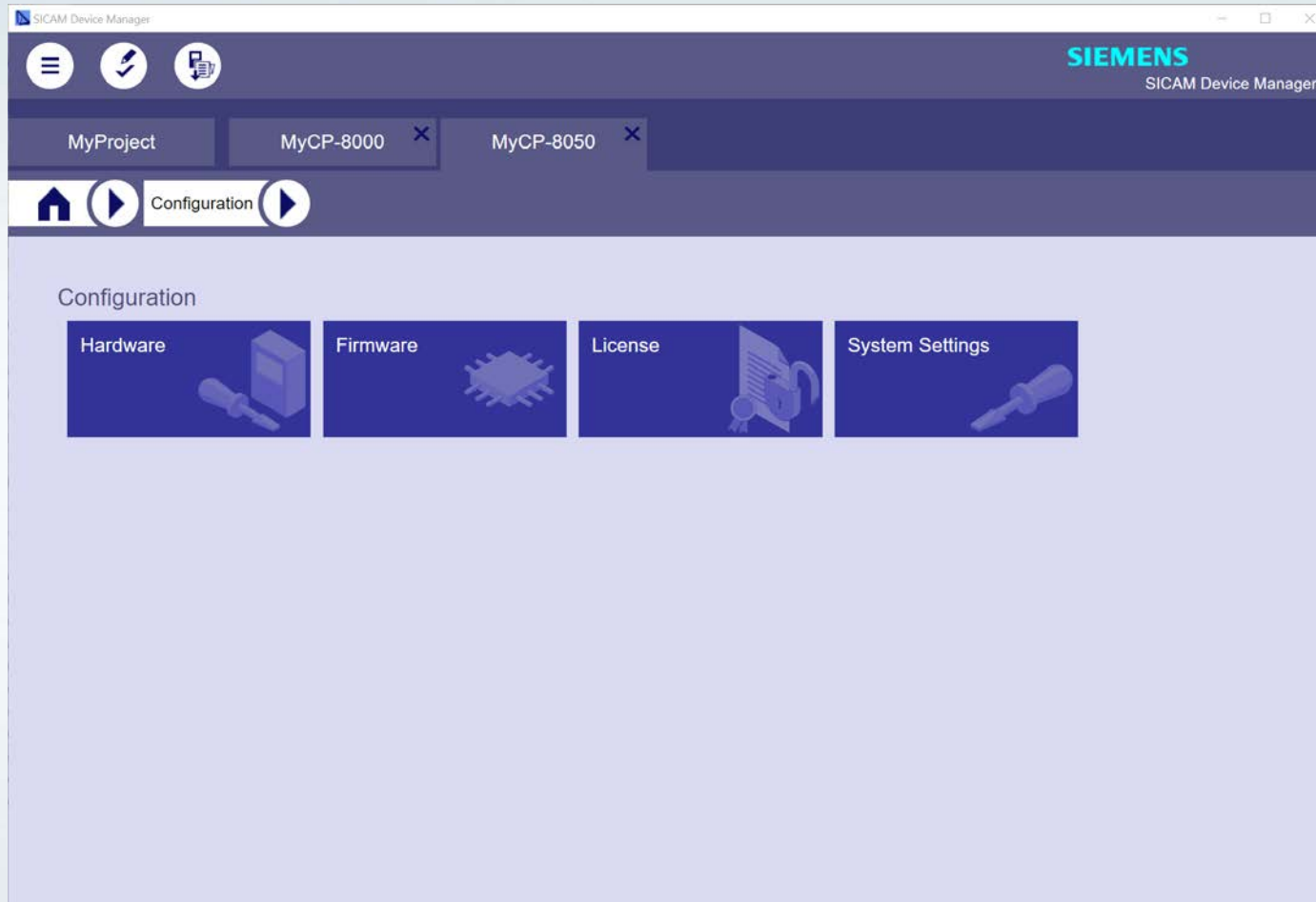
- CPC80, 11
- USIO81, 04.01

# SICAM Device Manager V3.0: CP-8050 Dash Board

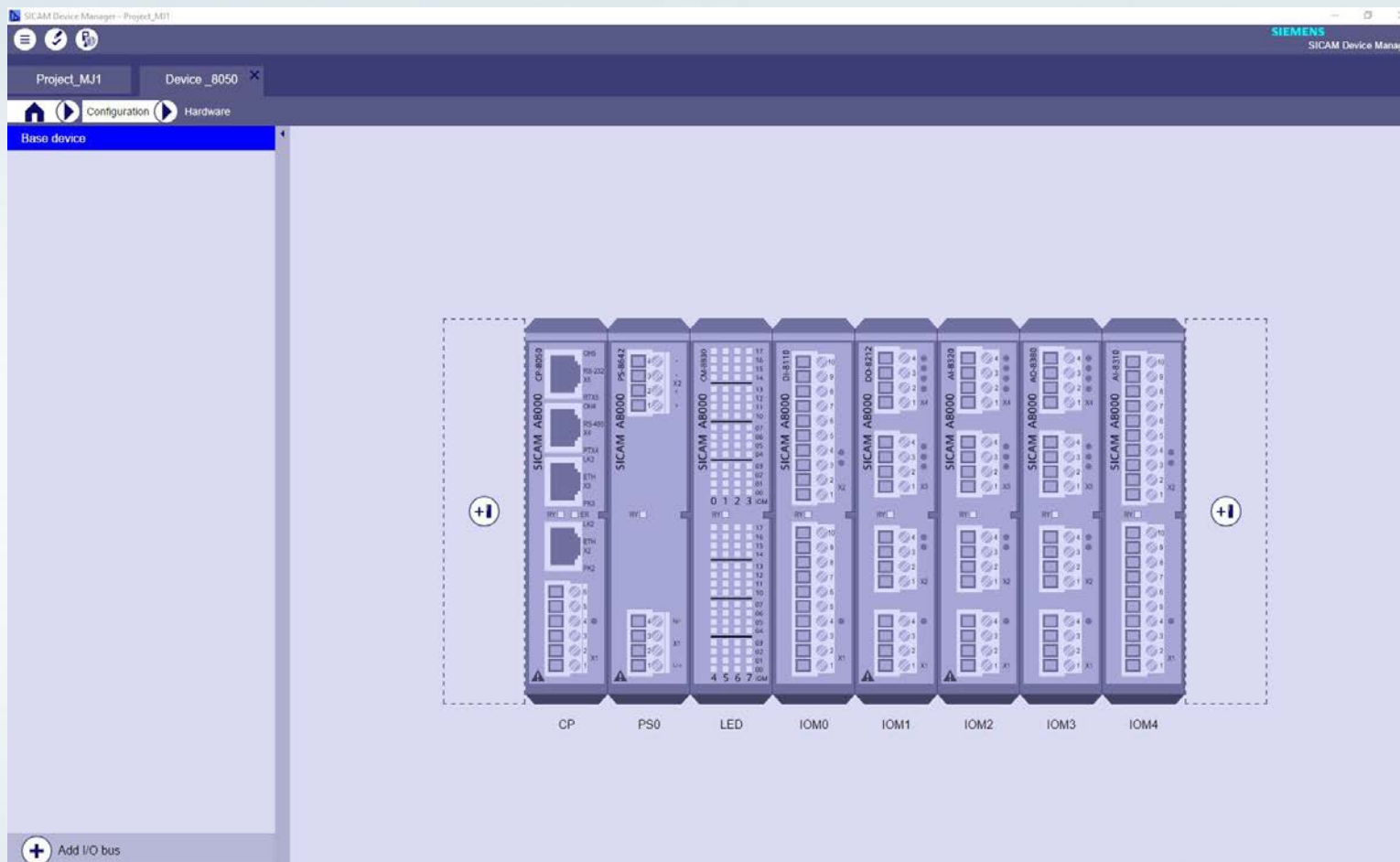




# SICAM Device Manager V3.0: CP-8050 configuration

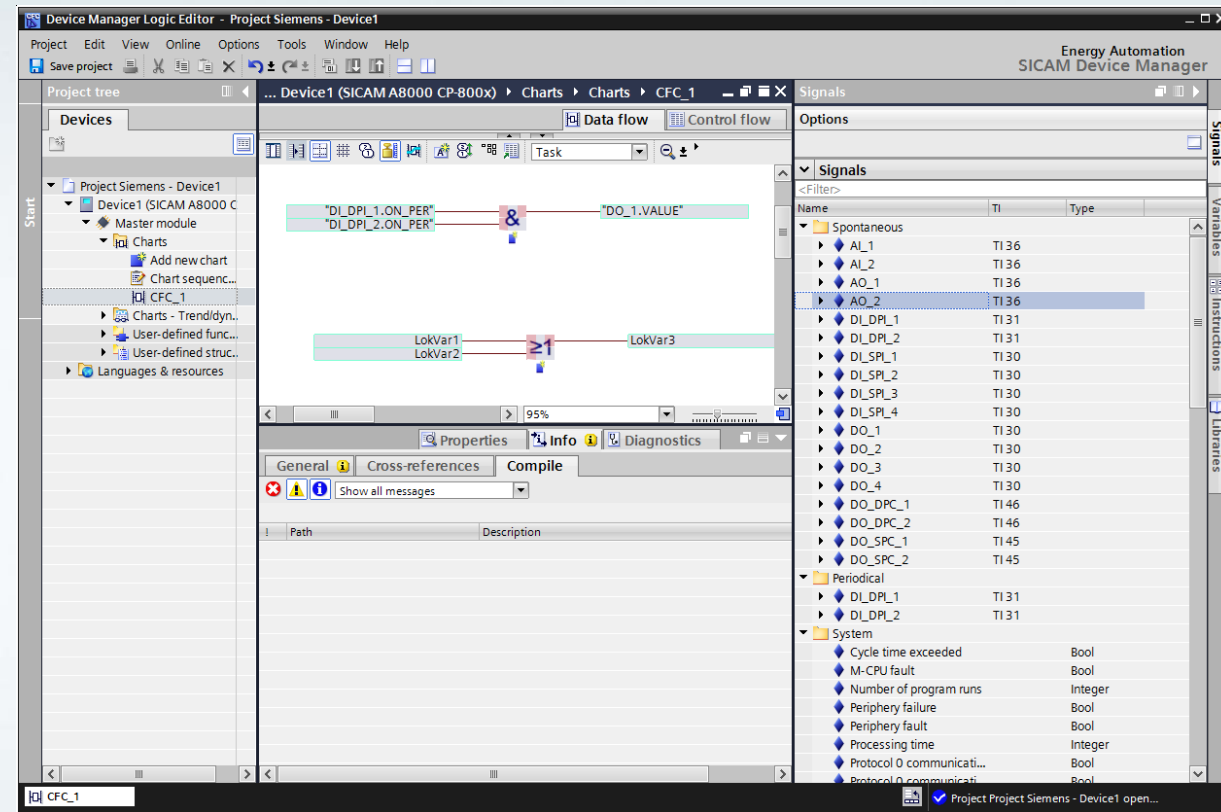
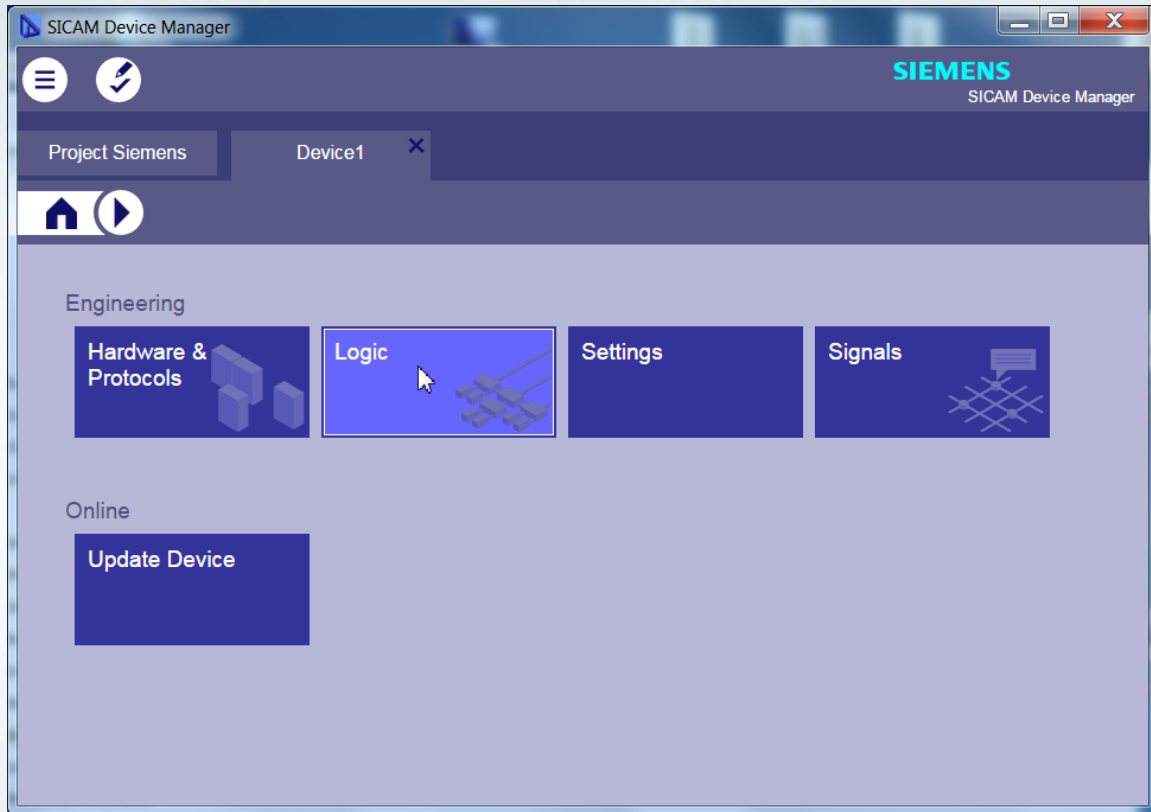


# SICAM Device Manager V3.0: CP-8050 Hardware



# SICAM Device Manager Logic Editor CFC

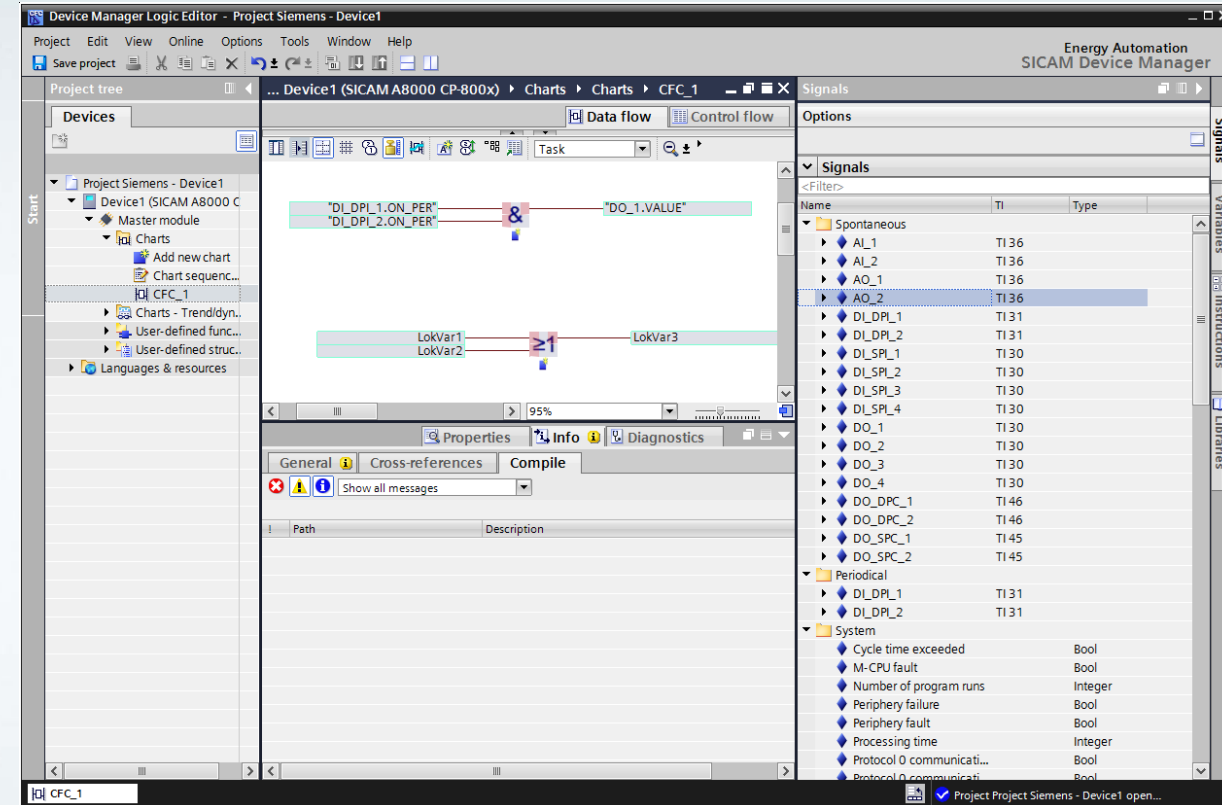
**SIEMENS**  
*Ingenuity for life*



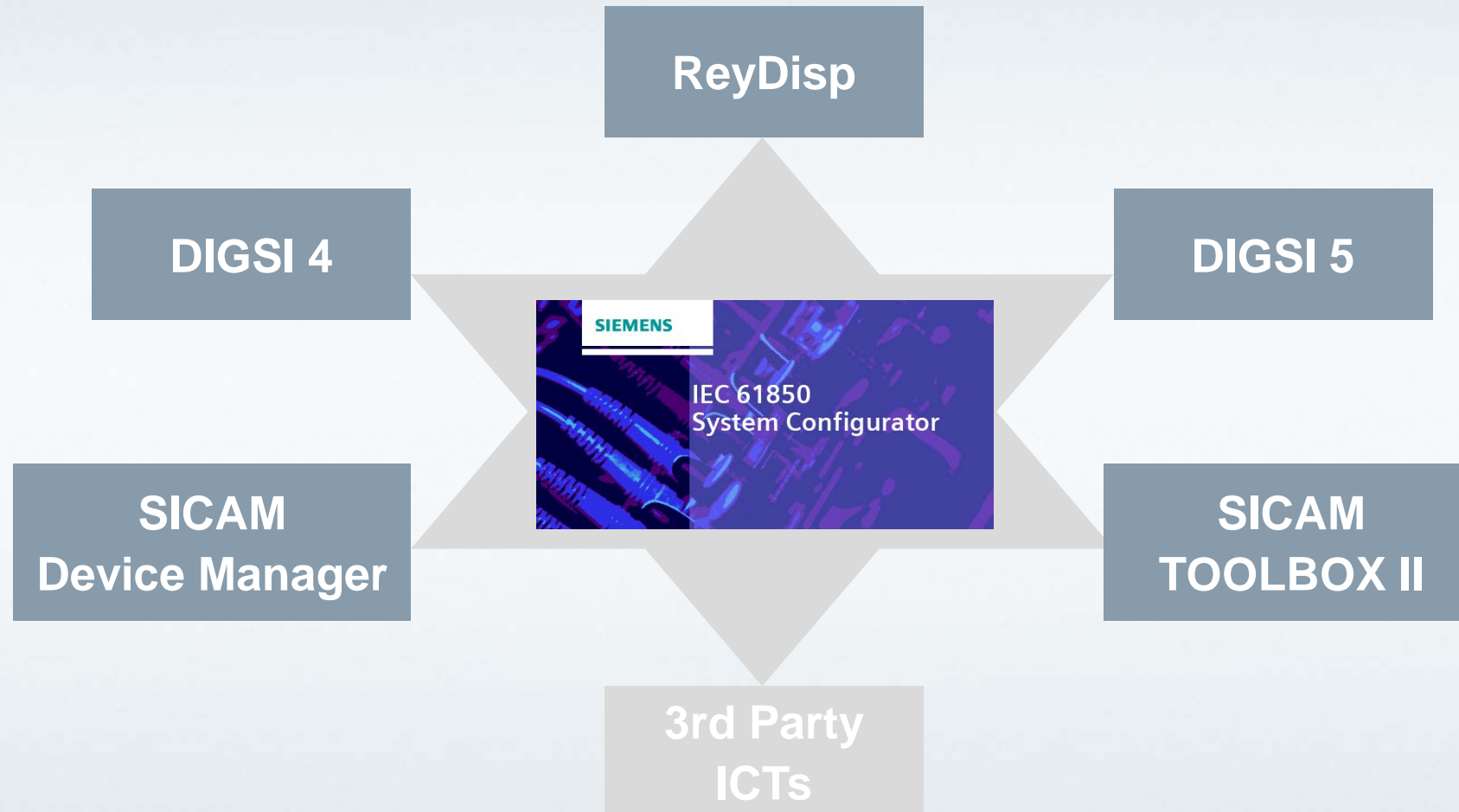
# SICAM Device Manager Logic Editor CFC



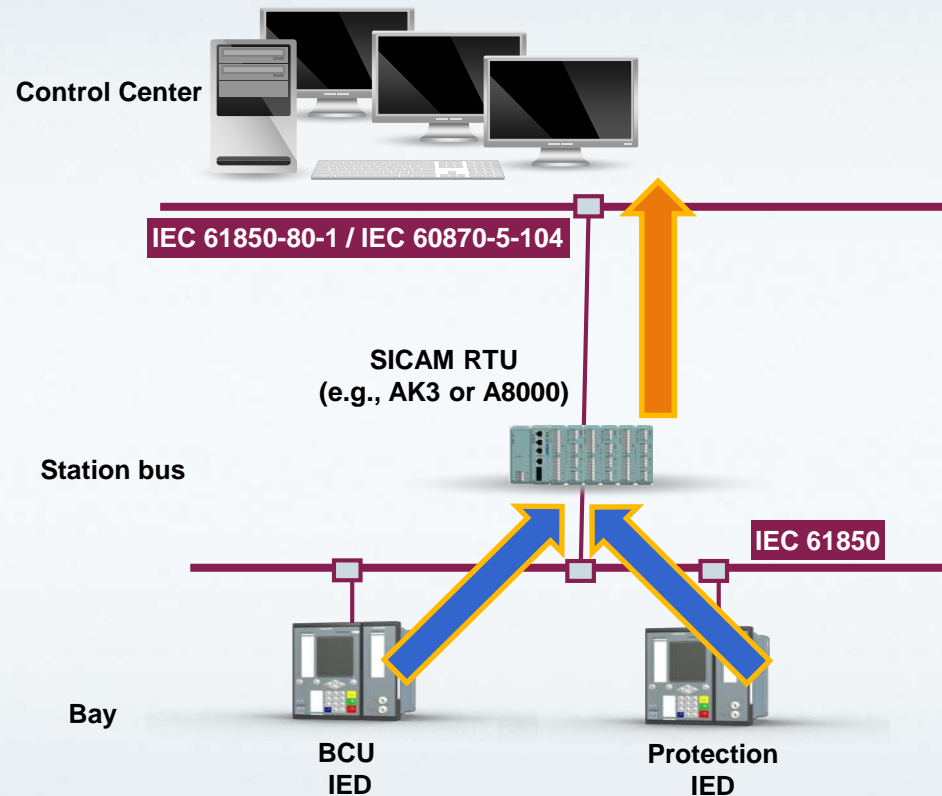
- CFC offline test
- CFC online monitoring
- CFC user defined FBs
- CFC user defined Structures
- FBs acc. to IEC 61131
- Usability: ANY-Module (ab v3.0), etc.



# IEC 61850 System Configurator – ONE tool for all IED Configuration tools (ICTs)



# IED communication engineering directly up to Control Center



- 2 data flows to define
- Simplified SCL engineering up to Control Center with:
  - (NEW) IEC 61850-80-1 for IEC 60870-5-104 addresses between RTU and Control Center
  - (implicit dynamic) MMS Reporting from IED to RTU

Protocol mapping

IO	DA	CDC	Description	CASDU	IOA	TI	CASDU1	CASDU2	IOA1	IOA2	IOA3
itr	dirPhsC	ACD	PTD1_87T 1/I-DIFF fast/Pickup								
>p	general	ACT	PTD1_87T 1/I-DIFF fast/Operate/	1	156	30	1	0	156	0	0
>p	phsA	ACT	PTD1_87T 1/I-DIFF fast/Operate/	1					157	0	0
>p	phsB	ACT	PTD1_87T 1/I-DIFF fast/Operate/	1					158	0	0
>p	phsC	ACT	PTD1_87T 1/I-DIFF fast/Operate/	1					159	0	0
ilk	stVal	SPS	PTD1_87T 1/I-DIFF fast/>Block sta...								
fod	stVal	ENC	PTD1_87T 1/Group indicat./Mode(...								

Context menu options:

- Delete T104 Address
- Fill in with same value
- Fill in with given value
- Auto increment

- Only 1 SCD Import in SICAM RTUs:
  - via SICAM ToolBox II V6.x
  - or SICAM Device Manager



# SICAM Device Manager IEC 61850 Client Engineering



SICAM Device Manager

MyFirst210Pr... IEC61850Test

IEC 61850 PRE0 ET85

Access points Signals Reports

Import IEC 61850 SCL file: Ausgangspunkt-Altanlage\_pts.scd

2 Step 2: Choose signals

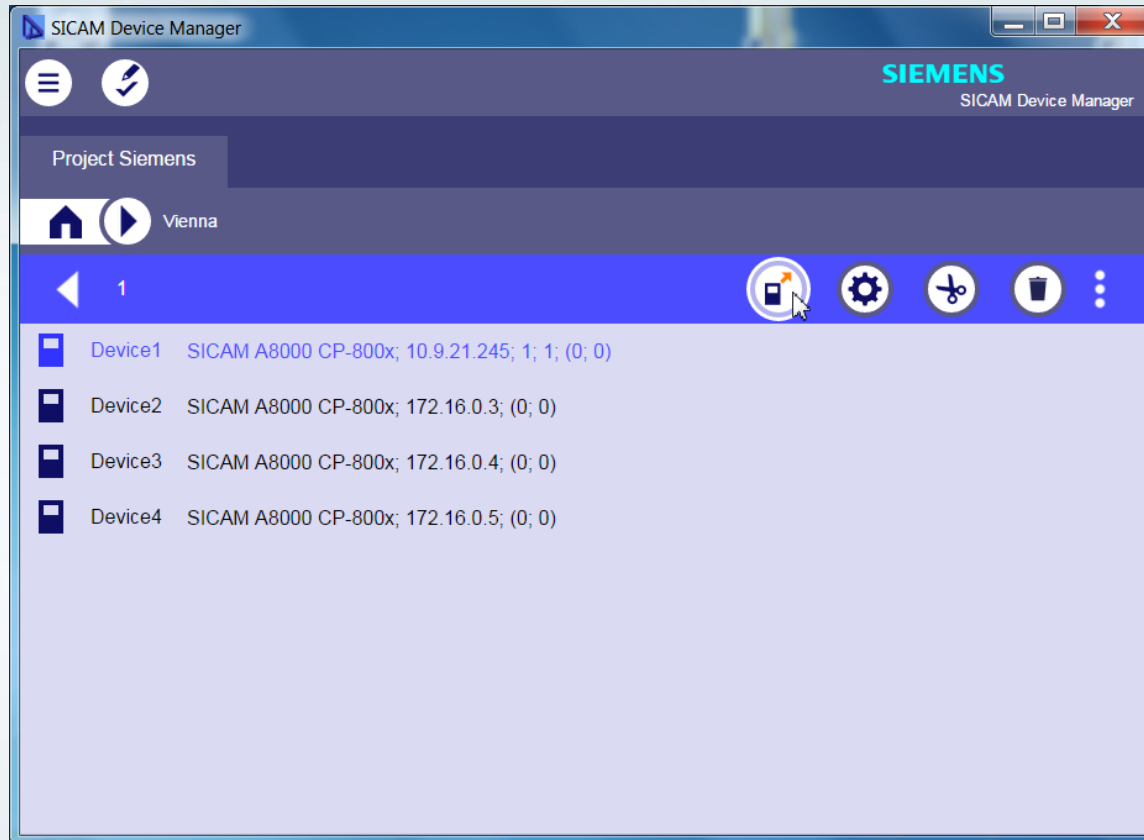
Standard Advanced

Show all signals 3 of 567 selected

<input type="checkbox"/>	State	Station number	IEC 61850 address	CDC	Direction	Signal name	Unit	Description	Details
<input checked="" type="checkbox"/>	New		U2CTRL/CALH1.GrAlm.stVal	SPS	Receive	U2CTRL/CALH1.GrAlm.stVal		Sammelmeldung	<a href="#">i</a>
<input checked="" type="checkbox"/>	New		U2CTRL/CALH1.GrWrn.stVal	SPS	Receive	U2CTRL/CALH1.GrWrn.stVal		Warnsammelmeldg	<a href="#">i</a>
<input checked="" type="checkbox"/>	New		U2CTRL/FWGGIO1.SPCSO1.stVal	SPC	Receive	U2CTRL/FWGGIO1.SPCSO1.stVal		>Fernwirk	<a href="#">i</a>
<input type="checkbox"/>	New		U2CTRL/LLN0.Beh.stVal	ENS	Receive	U2CTRL/LLN0.Beh.stVal :1 (On)		Verhalten	<a href="#">i</a>
<input type="checkbox"/>	New		U2CTRL/LLN0.Beh.stVal	ENS	Receive	U2CTRL/LLN0.Beh.stVal :2 (Blocked)		Verhalten	<a href="#">i</a>
<input type="checkbox"/>	New		U2CTRL/LLN0.Beh.stVal	ENS	Receive	U2CTRL/LLN0.Beh.stVal :3 (Test)		Verhalten	<a href="#">i</a>
<input type="checkbox"/>	New		U2CTRL/LLN0.Beh.stVal	ENS	Receive	U2CTRL/LLN0.Beh.stVal :4 (Test-Blocked)		Verhalten	<a href="#">i</a>
<input type="checkbox"/>	New		U2CTRL/LLN0.Beh.stVal	ENS	Receive	U2CTRL/LLN0.Beh.stVal :5 (Off)		Verhalten	<a href="#">i</a>
<input type="checkbox"/>	New		U2CTRL/LLN0.Health.stVal	ENS	Receive	U2CTRL/LLN0.Health.stVal :1 (OK)		Zustand	<a href="#">i</a>
<input type="checkbox"/>	New		U2CTRL/LLN0.Health.stVal	ENS	Receive	U2CTRL/LLN0.Health.stVal :2 (Warning)		Zustand	<a href="#">i</a>
<input type="checkbox"/>	New		U2CTRL/LLN0.Health.stVal	ENS	Receive	U2CTRL/LLN0.Health.stVal :3 (Alarm)		Zustand	<a href="#">i</a>
<input type="checkbox"/>	New		U2CTRL/LLN0.LEDRs.ctVal	SPC	Transmit	U2CTRL/LLN0.LEDRs.ctVal		LEDQuittung	<a href="#">i</a>
<input type="checkbox"/>	New		U2CTRL/LLN0.LEDRs.stVal	SPC	Receive	U2CTRL/LLN0.LEDRs.stVal		LEDQuittung	<a href="#">i</a>
<input type="checkbox"/>	New		U2CTRL/LLN0.Loc.stVal	SPS	Receive	U2CTRL/LLN0.Loc.stVal		SchHoheit	<a href="#">i</a>

# SICAM Device Manager

## Online function available via SICAM WEB





The screenshot displays the SICAM WEB CP-8050 interface. At the top left, there are four navigation icons: a hamburger menu, a refresh icon, a circular arrow, and a document icon with a '0' next to it. The top right header features the Siemens logo and the text 'SIEMENS SICAM A8000 CP-805x'. Below the header is a secondary navigation bar with a home icon and a play button icon. The main content area is organized into several sections:

- Geräteinformation**: Contains two tiles: 'Gerät' (with a device icon and an information 'i' icon) and 'Diagnose' (with a stethoscope icon).
- Verwaltung**: Contains three tiles: 'Benutzer' (with a gear icon), 'Zertifikate' (with a certificate icon), and 'Firmwares' (with a server rack icon).
- Service**: Contains two tiles: 'Zeit' (with a clock icon) and 'Support' (with a stethoscope icon).
- Monitoring**: Contains three tiles: 'Alarmer & Ereignisse' (with a warning triangle icon), 'Prozessdaten Archiv' (with a server rack icon), and 'I/O Monitoring' (with a server rack icon).

# SICAM WEB

## Monitoring of I/O Signals

The screenshot displays the SICAM WEB I/O Monitoring interface for a SICAM A8000 CP805x device. The interface is divided into several sections:

- Navigation Bar:** Includes a home icon, a play button, and the text "I/O Monitoring".
- Device Tree:** Shows a hierarchy starting with "SICAM A8000 CP805x", followed by "Base Device", and then "I/O Row 1" through "I/O Row 12".
- Signal Status Panels:** Four panels labeled "DI-8110", "DI-8110", "DO-8212", and "DO-8212" show the status of various signals (RY, ER, IN D0-D17, OUT D0-D7) with yellow and black indicators.
- Signal List Table:** A table on the right provides detailed information for each signal.

LED	Label	Wert	Einheit	Signal	Adresse	TI	Pin	Prozesstyp
●	IN D17	255			9-53-73-137-1	37	X2.8	DI_ZW - Zähl...
●	IN D16	482			9-53-70-137-1	37	X2.7	DI_ZW - Zähl...
●	IN D15	658			9-53-67-137-1	37	X2.6	DI_ZW - Zähl...
●	IN D14	120			9-53-64-137-1	37	X2.5	DI_ZW - Zähl...
●	IN D13	713			9-53-61-137-1	37	X2.4	DI_ZW - Zähl...
●	IN D12	305			9-53-58-137-1	37	X2.3	DI_ZW - Zähl...
●	IN D11				9-53-204-13...	30	X2.2	DI_EM - Einzel...
●	IN D10				9-53-119-13...	30	X2.1	DI_EM - Einzel...
●	IN D07						X1.8	nicht belegt
●	IN D06				9-53-85-137-1	30	X1.7	DI_EM - Einzel...
●	IN D05				9-53-63-66-15	30	X1.6	DI_EM - Einzel...
●	IN D04				9-53-129-13...	30	X1.5	DI_EM - Einzel...
●	IN D03				9-53-83-137-1	30	X1.4	DI_EM - Einzel...
●	IN D02				9-53-81-137-1	30	X1.3	DI_EM - Einzel...
●	IN D01				9-53-79-137-1	30	X1.2	DI_EM - Einzel...
●	IN D00				9-53-77-137-1	30	X1.1	DI_EM - Einzel...

# SICAM WEB

## Protocol-specific information - IEC 61850



Overview

- Connections
- ▶ Client
- ▼ Server
  - Routing transmit
  - Routing receive
  - Directory
  - Goose
  - CID file
  - Command log
- ▶ Load Shedding
- Diagnosis
- ▶ Developer information

ETI5

- ▶ ETI5DOes
- ▶ ETI5DOns
- ▼ ETI5IND
  - ▼ DAGGIO1
    - ST
    - CF
  - ▶ DOGGIO1
  - ▶ LLND
  - ▶ LPHD1
- ▶ ETI5MEAS
- ▶ ETI5MaximumLenghtofLogicalDevicelsSetToSixtyFourCaracte
- ▶ ETI5MaximumLenghtofLogicalDevicelsSetToSixtyFourCaracte
- ▶ ETI5SBOes
- ▶ ETI5SEGMENTED
- ▶ ETI5SEND
- ▶ ETI5SGCB

ETI5IND/DAGGIO1\$ST

Name	Data
BehSq	[00000000000000]
Beh\$stVal	1
BehSt	(u06/04/2018_15:08:58.820,[10
Ind1Sq	[00000000000000]
Ind1\$stVal	False
Ind1St	(u06/04/2018_15:23:27.080,[10
Ind2Sq	[00000000000000]
Ind2\$stVal	False
Ind2St	(u06/04/2018_15:08:59.120,[10
ModSq	[01000000000000]
Mod\$stVal	1
ModSt	(u06/04/2018_15:08:57.076,[10

**SIEMENS**

**IEC61850 SICAM A8000**

Overview

- Connections
- ▶ Client
- ▶ Server
- ▶ Load Shedding
- Diagnosis
- ▶ Developer information

Connections

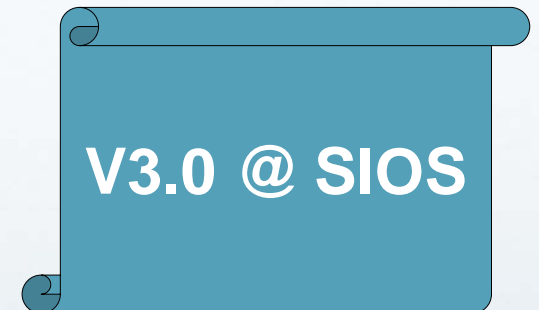
Own mode server

Number of connections	6
Number of connections connected	0
Number of connections disconnected	6

Station	IP address	conn
1	192.168.0.4	NOK
2	192.168.0.5	NOK
3	192.168.0.6	NOK
4	192.168.0.7	NOK
5	192.168.0.8	NOK
6	192.168.0.9	NOK

# SICAM Device Manager V3.0: Summary

- Engineering CP-8000 / 21 / 22 and **CP-8050**
- CFC Function CP-8000 / 21 / 22 and **CP-8050**
- IEC 61850 Client
- SICAM A8000 Online access via SICAM WEB
- SICAM A8000 configuration:
  - RTU via IEC104 to SCADA
  - SA-Gateway IEC61850 auf IEC104



# SICAM Device Manager License Concept



- 6MF7800-1**FB00** - SICAM Device Manager **Basic**  
The intuitive engineering tool for SICAM A8000



- 6MF7800-1**FS00** - SICAM Device Manager **Standard**  
The intuitive engineering tool for SICAM A8000 *plus CFC*

- 6MF7800-1**GS00** - SICAM Device Manager **Upgrade Basic to Standard**



## **Reinhard Krug**

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