SIEMENS

SICAM AK 3

MICS for IEC 61850 Ed. 2 Server

Model Implementation Conformance Statement for the
IEC 61850 Ed.2 Server Interface in
Siemens SICAM AK 3

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Preface

This document is applicable to the following product(s):

- SICAM AK 3

Purpose of this manual

This manual describes the Model Implementation Conformance Statement for the IEC 61850 Ed. 2 Server interface in:

- Siemens SICAM AK 3 using firmware ”ETA5 Rev. 03.04”

Note:
MICS “Model Implementation Conformance Statement” contains the declaration of the used logical node types.

Target Group

The document you are reading right now is addressed to users, who are in charge of the following engineering tasks:

- Customers
- Sales engineering and technical clarification
- Conceptual activities, as for example design and configuration
- Technical system maintenance

Notes

This document is based on:

- UCA International Users Group
  Testing Sub Committee
  Template version 1.1
  Date: April 24, 2008

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1 Introduction

This model implementation conformance statement is applicable for **Siemens SICAM AK 3** with firmware "**ETA5 Rev. 03.04**".

This MICS document specifies the modelling extensions compared to IEC 61850 edition 1.
For the exact details on the standardized model please compare the ICD substation configuration file: "<**SicamAK3.icd**>", version <**V1.30**>.

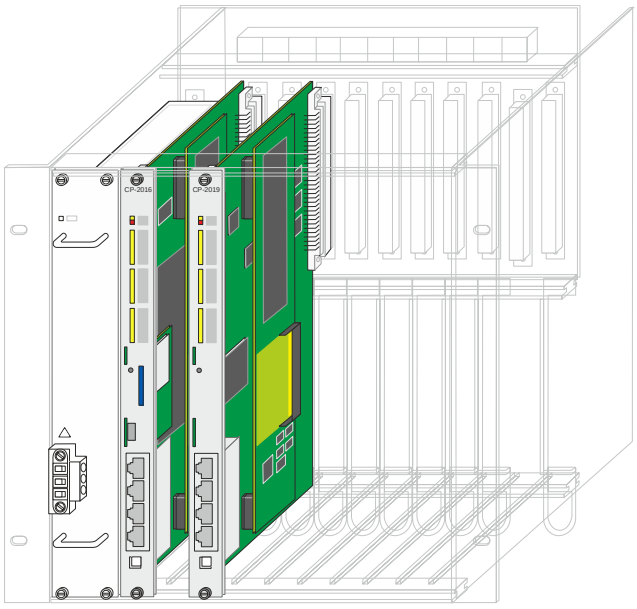
Clause 2 contains the list of implemented logical nodes.
Clause 3 describes the new and extended enum types (if any).

1.1 SICAM AK 3 “Device Under Test” (DUT)

Board	MLFB	Description
PS-2632	6MF11130CG320AA0BB	Power Supply110-220VDC, 230VAC AK 3
CP-2016	6MF10130CA160AA0BB	Central Processor AK 3
CP-2019	6MF10132CA100AA0BB	Communication/Processing AK 3
SM-2558 [1)]	6MF10130CF580AA0BB	Ethernet-Interf. 1x100TX,(+1SI)

[1)] SM-2558 Ethernet interface with **ETA5 Rev. 03.04 firmware** will be plugged on CP-2019 board.

Notes:
- the red marked interface connector is assigned to IEC61850 Ed. 2 Server with ETA5 firmware.
- the red marked interface connector is also used for WEB Browser interface for IEC61850 Ed. 2 Server.
- the blue marked interface connector is used for SICAM AK3 engineering software TOOLBOX II.



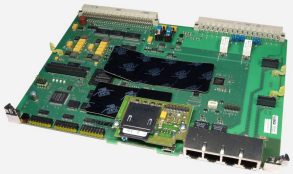
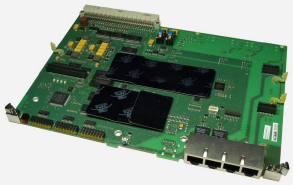
Note: SM-2558 is used as a SUB-board on CP-2019 (system internally)

Firmware Revisions

	System element	HW#	FW#	Rev	TBII-Update	SetRev	P	SSE#	Task	Supportof system elements
M	CP-2016/CPCX26	2016	2016	02	02 [02]					Supported
M-Bus0/PBA-0	PE-641X/USIO66	6410	6410	05.03	05.03 [05.03]			0		Supported
C2	CP-2019/PCCX26	2019	2019	02	02 [02]					Supported
C2-PRE/3	SM-2558/ETA5	2558	1590	03.04	03.04 [03.04]			131		Supported

Note: IEC61850 Ed.2 functionality is included in firmware ETA5 Rev. 03.04

Power Supply / CPU-Boards / Interface Cards

	Designation	Item-Number/MLFB
	PS-2632 Power supply 110-220 VDC, 230 VAC AK 3	GC2-632 6MF11130CG320AA0
	CP-2016 Central module AK 3	BC2-016 6MF10130CA160AA0
	CP-2019 Communication/Processing AK 3	BC2-019 6MF10132CA100AA0
	SM-2558 Ethernet-Interf. 1x100TX, +1 serial interface optional	BC2-558 6MF10130CF580AA0

2 Logical Nodes List

The following table contains the list of logical nodes implemented in the device:

e.g.

L: System Logical Nodes
LPHD (Physical device information)
LLN0 (Logical node zero)
P: Logical Nodes for protection functions
PIOC (Instantaneous overcurrent)
PTOC (Time overcurrent)
PTOF (Overfrequency)
PTOV (Overvoltage)
PTUV (Undervoltage)
PTUF (Underfrequency)
R: Logical nodes for protection related functions
RDIR (Directional element)
RREC (Autoreclosing)
G: Logical Nodes for generic references
GGIO (Generic process I/O)
M: Logical Nodes for metering and measurement
MMTR (Metering)
MMXU (Measurement)
X: Logical Nodes for switchgear
XCBR (Circuit breaker)
XSWI (Switch)

3 Enum types Extensions

3.1 New Enum types

New enum types are listed in this clause.

3.1.1 New Enum type: “Beh” (BehaviourModeKind)

Value	Description	Remarks
1	on	
2	blocked	
3	Test	
4	test/blocked	
5	off	

3.1.2 New Enum type: “CtlModels” (CtlModelKind)

Value	Description	Remarks
0	Status-only	
1	direct-with-normal-security	
2	sbo-with-normal-security	
3	direct-with-enhanced-security	
4	sbo-with-enhanced-security	

3.1.3 New Enum type: “Health” (HealthKind)

Value	Description	Remarks
1	Ok	
2	Warning	
3	Alarm	

3.1.4 New Enum type: “orCategory” (OriginatorCategoryKind)

Value	Description	Remarks
0	not-supported	
1	bay-control	
2	station-control	
3	remote-control	
4	automatic-bay	
5	automatic-station	
6	automatic-remote	
7	maintenance	
8	process	