SIEMENS

SICAM AK 3



# MICS for IEC 61850 Ed. 2 Client

Model Implementation Conformance Statement for the
IEC 61850 Ed.2 Client 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 Client 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 1.0
  Date 18 December 2014

# Table of Contents

# 1 Introduction

This model implementation conformance statement is applicable for the IEC 61850 client interface in **Siemens SICAM AK 3** with firmware ”**ETA5 Rev. 03.04**“.

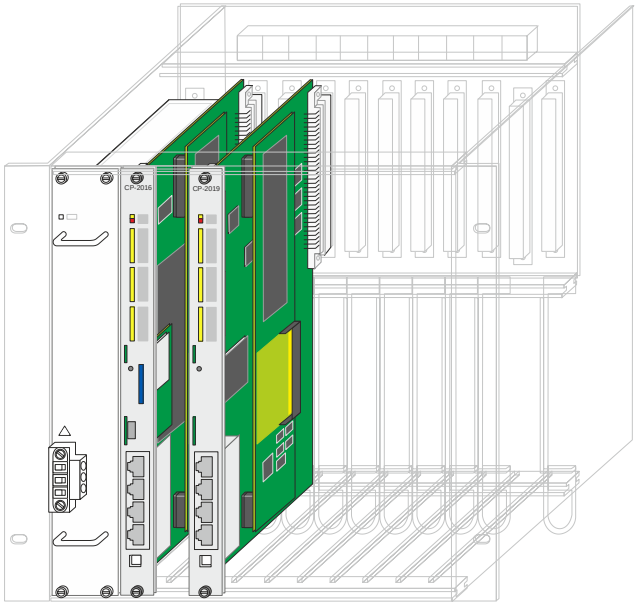
This MICS document specifies the supported Common Data Classes for IEC 61850 Edition 1 and Edition 2.

# 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 Client with ETA5 firmware.
- the red marked interface connector is also used for WEB Browser interface for IEC61850 Ed. 2 Client.
- the blue marked interface connector is used for SICAM AK3 engineering software TOOLBOX II.



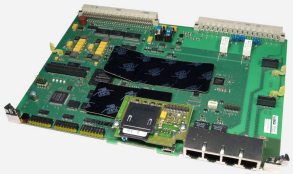

Note: SM-2558 is used as a SUB-board on CP-2019 (system internally)

## 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<br>110-220 VDC, 230 VAC AK 3 | GC2-632<br>6MF11130CG320AA0 |
|  | CP-2016 Central module AK 3 | BC2-016<br>6MF10130CA160AA0 |
|  | CP-2019 Communication/Processing AK 3 | BC2-019<br>6MF10132CA100AA0 |
|  | SM-2558 Ethernet-Interf. 1x100TX, +1 serial interface optional | BC2-558<br>6MF10130CF580AA0 |

# 2 Supported Common Data Classes

The “Ed” column indicates Edition 1 and/or Edition 2.

Common data class specifications for status information

| CDC | Ed | Description | Supported | Comment |
|---|---|---|---|---|
| SPS | 1,2 | Single point status | Y | |
| DPS | 1,2 | Double point status | Y | |
| INS | 1,2 | Integer status | Y | |
| ENS | 2 | Enumerated status | Y | |
| ACT | 1,2 | Protection activation information | Y | |
| ACD | 1,2 | Directional protection activation information | Y | |
| SEC | 1,2 | Security violation counting | N | |
| BCR | 1,2 | Binary counter reading | Y | |
| HST | 2 | Histogram | N | |
| VSS | 2 | Visible string status | N | |
| Notes: | | | | |

Common data class specifications for measurement information

| CDC | Ed | Description | Supported | Comment |
|---|---|---|---|---|
| MV | 1,2 | Measured value | Y | |
| CMV | 1,2 | Complex measured value | Y | |
| SAV | 1,2 | Sampled value | Y | |
| WYE | 1,2 | Phase to ground/neutral related measured values of a three-phase system | Y | |
| DEL | 1,2 | Phase to phase related measured values of a three-phase system | Y | |
| SEQ | 1,2 | Sequence | Y | |
| HMV | 1 | Harmonic value | N | |
| HMV | 2 | Harmonic value | N | |
| HWYE | 1 | Harmonic value for WYE | N | |
| HWYE | 2 | Harmonic value for WYE | N | |
| HDEL | 1 | Harmonic value for DEL | N | |
| HDEL | 2 | Harmonic value for DEL | N | |
| Notes: | | | | |

Common data class specifications for controls

| CDC | Ed | Description | Supported | Comment |
|---|---|---|---|---|
| SPC | 1,2 | Controllable single point | Y | |
| DPC | 1,2 | Controllable double point | Y | |
| INC | 1,2 | Controllable integer status | Y | |
| ENC | 2 | Controllable enumerated status | Y | |
| BSC | 1,2 | Binary controlled step position information | Y | |
| ISC | 1,2 | Integer controlled step position information | Y | |
| APC | 1 | Controllable analogue process value | N | |
| APC | 2 | Controllable analogue process value | Y | |
| BAC | 2 | Binary controlled analog process value | N | |
| Notes: | | | | |

Common data class specifications for status settings

| CDC | Ed | Description | Supported | Comment |
|---|---|---|---|---|
| SPG | 1,2 | Single point setting | N | |
| ING | 1,2 | Integer status setting | Y | Only FC = SP |
| ENG | 2 | Enumerated status setting | N | |
| ORG | 2 | Object reference setting | N | |
| TSG | 2 | Time setting group | N | |
| CUG | 2 | Currency setting group | N | |
| VSG | 2 | Visible string setting | N | |
| Notes: | | | | |

Common data class specifications for analogue settings

| CDC | Ed | Description | Supported | Comment |
|---|---|---|---|---|
| ASG | 1,2 | Analogue setting | Y | Only FC = SP |
| CURVE | 1,2 | Setting curve | N | |
| CSG | 2 | Curve shape setting | N | |
| Notes: | | | | |

Common data class specifications for description information

| CDC | Ed | Description | Supported | Comment |
|---|---|---|---|---|
| DPL | 1,2 | Device name plate | N | |
| LPL | 1,2 | Logical node name plate | N | |
| CSD | 1,2 | Curve shape description | N | |
| Notes: | | | | |

Common data class specifications for tracking

| CDC | Ed | Description | Supported | Comment |
|---|---|---|---|---|
| CST | 2 | Common service tracking | N | |
| BTS | 2 | Buffered report tracking service | N | |
| CTS | 2 | Control tracking service | N | |
| GTS | 2 | GOOSE Control block tracking service | N | |
| LTS | 2 | Log control block tracking service | N | |
| MTS | 2 | MSVCB tracking service | N | |
| NTS | 2 | USVCB control block tracking service | N | |
| OTS | 2 | Log tracking service | N | |
| STS | 2 | SGCB tracking service | N | |
| UTS | 2 | Unbuffered report tracking service | N | |
| Notes: | | | | |

Supported
Y = Client can issue an ASCI service on this CDC and process the data from/to the CDC
N = Client can't issue an ASCI service on this CDC and doesn't process the data from/to the CDC