Protocol Implementation Conformance Statement for the IEC 61850 interface in SINEAX CAM

Version: 1.3

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Revision History

Author	Department	Changes	Version	Date
Bernd Klein	www.camillebauer.com	Initial	0.1	17.20.2007
Alexander Zakharov	www.camillebauer.com	Update LNodes added	0.2	09.01.2008
Alexander Zakharov	www.camillebauer.com	LNodes added	0.3	12.03.2008
Alexander Zakharov	www.camillebauer.com	Data objects added	1.0	21.12.2008
Alexander Zakharov	www.camillebauer.com	Array data objects and harmonics added	1.1	01.02.2009
Alexander Zakharov	www.camillebauer.com	Update version. Issue	1.2	09.03.2009
Alexander Zakharov	www.camillebauer.com	Based on IEC 61850 PICS Template v0.1 False references corrected.	1.3	20.05.2009

Distribution

Name	Department	Location	Telephone

1. General

The following ACSI conformance statements are used to provide an overview and details about ***IEC 61850 interface in SINEAX CAM***, with firmware ***V.2.14***:

- ACSI basic conformance statement,
- ACSI models conformance statement,
- ACSI service conformance statement

The statements specify the communication features mapped to IEC 61850-8-1.

2. ACSI basic conformance statement

The basic conformance statement is defined in Table A1.

Table A.1 – Basic conformance statement

		Client/ Subscriber	Server/ Publisher	Value/ Comments
Client-Server roles				
B11	**Server** side (of TWO-PARTY-APPLICATION-ASSOCIATION)	—	Y	
B12	**Client** side of (TWO-PARTY-APPLICATION-ASSOCIATION)		—	
SCSMs supported				
B21	**SCSM**: IEC 6185-8-1 used		Y	
B22	**SCSM**: IEC 6185-9-1 used		N	
B23	**SCSM**: IEC 6185-9-2 used		N	
B24	**SCSM**: other		N	
Generic substation event model (GSE)				
B31	**Publisher** side	—	N	
B32	**Subscriber** side		—	
Transmission of sampled value model (SVC)				
B41	**Publisher** side	—	N	
B42	**Subscriber** side		—	

–
Y = supported
N or empty = not supported

- ACSI models conformance statement

The ACSI models conformance statement is defined in Table A2.

Table A.2 – ACSI models conformance statement

		Client/ Subscriber	Server/ Publisher	Value/ Comments
If **Server or Client** side (B11/12) supported				
M1	**Logical device**		Y	
M2	**Logical node**		Y	
M3	**Data**		Y	
M4	**Data set**		Y	
M5	**Substitution**		N	
M6	**Setting group control**		N	
	Reporting			
M7	**Buffered report control**		N	
M7-1	sequence-number		N	
M7-2	report-time-stamp		N	
M7-3	reason-for-inclusion		N	
M7-4	data-set-name		N	
M7-5	data-reference		N	
M7-6	buffer-overflow		N	
M7-7	entryID		N	
M7-8	BufTim		N	
M7-9	IntgPd		N	
M7-10	GI		N	
M7-11	conf-revision		N	
M8	**Unbuffered report control**		Y	
M8-1	sequence-number		Y	
M8-2	report-time-stamp		Y	
M8-3	reason-for-inclusion		Y	
M8-4	data-set-name		Y	
M8-5	data-reference		Y	
M8-6	BufTim		Y	
M8-7	IntgPd		Y	
M8-8	GI		Y	
M8-9	conf-revision		Y	
	Logging		N	
M9	**Log control**		N	
M9-1	IntgPd		N	
M10	**Log**		N	
M11	**Control**		N	
If **GSE** (B31/32) is supported				
M12	**GOOSE**		N	

		Client/ Subscriber	Server/ Publisher	Value/ Comments
M13	**GSSE**		N	
If **SVC** (41/42) is supported				
M14	Multicast SVC		N	
M15	Unicast SVC		N	
If **Server or Client** side (B11/12) supported				
M16	**Time**		Y	
M17	**File Transfer**		N	

Y = service is supported

N or empty = service is not supported

- ACSI service conformance statement

The ACSI service conformance statement is defined in Table A.3 (depending on the statements in Table A.1)

Table A.3 – ACSI service Conformance statement

	Services	AA: TP/MC	Client (C)	Server (S)	Comments
Server					
S1	ServerDirectory	TP		Y	
Application association					
S2	Associate			Y	
S3	Abort			Y	
S4	Release			Y	
Logical device					
S5	LogicalDeviceDirectory	TP		Y	
Logical node					
S6	LogicalNodeDirectory	TP		Y	
S7	GetAllDataValues	TP		Y	
Data					
S8	GetDataValues	TP		Y	
S9	SetDataValues	TP		Y	
S10	GetDataDirectory	TP		Y	
S11	GetDataDefinition	TP		Y	
Data set					
S12	GetDataSetValues	TP		Y	
S13	SetDataSetValues	TP		N	
S14	CreateDataSet	TP		N	

	Services	AA: TP/MC	Client (C)	Server (S)	Comments
S15	DeleteDataSet	TP		N	
S16	GetDataSetDirectory	TP		Y	
Substitution					
S17	SetDataValues	TP		N	
Setting group control					
S18	SelectActiveSG	TP		N	
S19	SelectEditSG	TP		N	
S20	SetSGValues	TP		N	
S21	ConfirmEditSGValues	TP		N	
S22	GetSGValues	TP		N	
S23	GetSGCBValues	TP		N	
Reporting					
Buffered report control block (BRCB)					
S24	Report	TP		N	
S24-1	data-change (dchg)			N	
S24-2	qchg-change (qchg)			N	
S24-3	data-update (dupd)			N	
S25	GetBRCBValues	TP		N	
S26	SetBRCBValues	TP		N	
Unbuffered report control block (URCB)					
S27	Report	TP		Y	
S27-1	data-change (dchg)			Y	
S27-2	qchg-change (qchg)			Y	
S27-3	data-update (dup			Y	
S28	GetURCBValues	TP		Y	
S29	SetURCBValues	TP		Y	
Logging					
Log control block					
S30	GetLCBValues	TP		N	
S31	SetLCBValues	TP		N	
Log					
S32	QueryLogByTime	TP		N	
S33	QueryLogByEntry	TP		N	
S34	GetLogStatusValues	TP		N	
Generic substation event model (GSE)					
GOOSE-CONTROL-BLOCK					
S35	SendGOOSEMessage	MC		N	

	Services	AA: TP/MC	Client (C)	Server (S)	Comments
S36	GetReference	TP		N	
S37	GetGOOSEElementNumber	TP		N	
S38	GetGoCBValues	TP		N	
S39	SetGoCBValues	TP		N	
GSSE-CONTROL-BLOCK					
S40	SendGSSEMessage	MC		N	
S41	GetReference	TP		N	
S42	GetGSSEElementNumber	TP		N	
S43	GetGsCBValues	TP		N	
S44	SetGsCBValues	TP		N	

Transmission of sampled value model (SVC)					
Multicast SVC					
S45	SendMSVMessage	MC		N	
S46	GetMSVCBValues	TP		N	
S47	SetMSVCBValues	TP		N	
Unicast SVC					
S48	SendUSVMessage	TP		N	
S49	GetUSVCBValues	TP		N	
S50	SetUSVCBValues	TP		N	

Control					
S51	Select			N	
S52	SelectWithValue	TP		N	
S53	Cancel	TP		N	
S54	Operate	TP		N	
S55	Command-Termination	TP		N	
S56	TimeActivated-Operate	TP		N	

File transfer					
S57	GetFile	TP		N	
S58	SetFile	TP		N	
S59	DeleteFile	TP		N	
S60	GetFileAttributeValues	TP		N	

Time					
T1	Time resolution of internal clock			10	nearest negative power of 2 in seconds
T2	Time accuracy of internal clock			10	T0
					T1
					T2

	Services	AA: TP/MC	Client (C)	Server (S)	Comments
					T3
					T4
					T5
T3	Supported TimeStamp resolution	-		10	nearest negative power of 2 in seconds