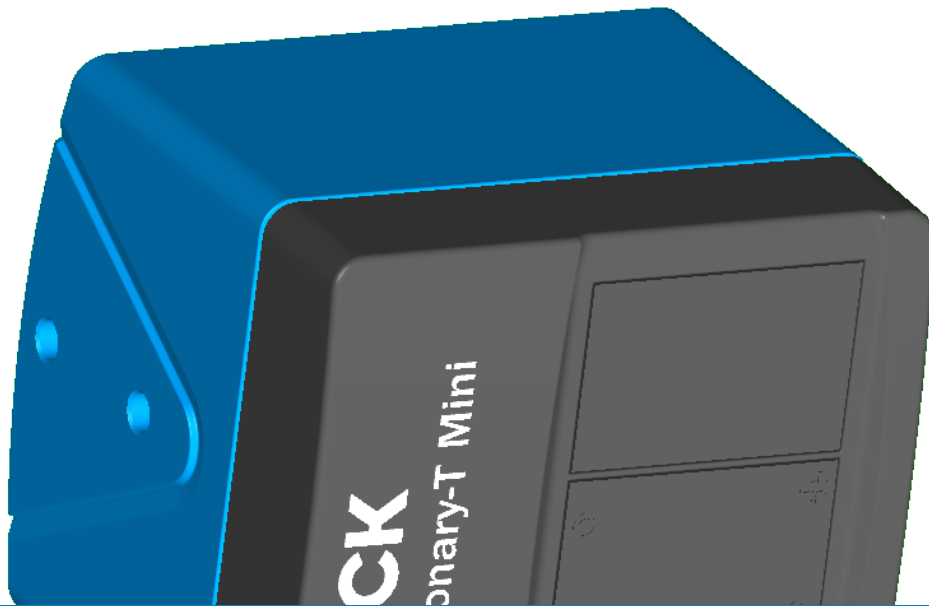




## SOPAS Communication Interface Description



# Visionary-T Mini CX V3S105-1

Version: 1.6.0.29891R  
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# 1. General

## 1.1. Introduction

This document describes the functional interfaces of the Visionary-T Mini CX V3S105-1x device, 1.6.0.29891R. The Visionary-T Mini CX V3S105-1x device is a SOPAS device. SOPAS devices may have Variables, Methods and Events.

## 1.2. User Level

Whether a Variable can be written or a Method can be executed by a user depends on the least user level. Defined user levels are:

ID	Name	Description
0	Always (Run)	Always (Run)
1	Operator	Operator
2	Maintenance	Maintenance
3	Authorised Client	Authorised Client
4	Service	Service

Table 1: User Levels

## 1.3. Variables

Variables can always be read and can only be written by a user with sufficient user level.

## 1.4. Methods

Methods can be invoked by using certain parameters. The method will return with a structure of one or more return values. If a Method can be invoked depends on the least user level.

## 1.5. Events

Events can be registered and will then be fired by the device to the registered client. Most Events have parameters which are the data coming with the Event.

## 1.6. Datatypes

All items of the interface have certain data elements. These are the Variables itself, the parameters of Methods and Events and the return values of the Methods.

The structure of the data elements can be one of the following BasicType(s), Structures or Arrays.

Basic Type

Name	Description	Range of values
Bool	boolean	True(1), False(0)
USInt	unsigned short (8 bit)	(0..255)
UInt	unsigned int (16 bit)	(0..65535)
UDInt	unsigned double int (32 bit)	(0..4294967295)



Name	Description	Range of values
ULInt	unsigned long int (64 bit)	(0..18446744073709551616)
SInt	signed short (8 bit)	(-128..127)
Int	signed int (16 bit)	(-32768..32767)
DInt	signed double int (32 bit)	(-2147483648..2147483647)
LInt	signed long int (64 bit)	(-9223372036854775808..9223372036854775807)
Real	IEEE-754 single precision (32 bit) (float)	See specification in IEEE-754
LReal	IEEE-754 single precision (64 bit) (double)	See specification in IEEE-754
Enum8	short enumeration (8 bit)	certain values defined in a list of choices (0-255)
Enum16	short enumeration (16 bit)	certain values defined in a list of choices (0-65535)
String	array of visible characters (array of 8 bit)	a character = an USInt with values between 0x20..0xFF
FlexString	array of visible characters with preceding current length (ULInt length) (array of 8 bit)	See description of String and FlexArray
Byte	bitset definition (8 bit). Detailed specification of bits ULInt1..ULInt16 = UInt (1..16 bit) Int1..Int16 = Int (1..16 bit) Enum1..Enum16 = Enum16 (1..16 bit) Bool = Bool (1 bit)	value is transferred as an array of USInt. See "XByte Serialisation" document for further details on bit ordering
Word	bitset definition (16 bit), see description of Byte	value is transferred as an array of USInt see "XByte Serialisation" document for further details on bit ordering.
DWord	bitset definition (32 bit), see description of Byte	value is transferred as an array of USInt see "XByte Serialisation" document for further details on bit ordering.
LWord	bitset definition (64 bit), see description of Byte	value is transferred as an array of USInt see "XByte Serialisation" document for further details on bit ordering.
XByte	bitset definition (8,16,24,32,... bit) see description of Byte	value is transferred as an array of USInt see "XByte Serialisation" document for further details on bit ordering.
SCont	bitset definition (8 bit). Detailed specification of bits ULInt1..ULInt16 = UInt (1..16 bit) Int1..Int16 = Int (1..16 bit) Enum1..Enum16 = Enum16 (1..16 bit) Bool = Bool (1 bit)	value is transferred as USInt.
Cont	bitset definition (16 bit), see description of SCont	value is transferred as UInt.
DCont	bitset definition (32 bit), see description of SCont	value is transferred as UInt.
LCont	bitset definition (64 bit), see description of SCont	value is transferred as ULInt.

Table 2: Basic Datatypes

## Struct

A structure is a sequence of further types. These types can be of a BasicType, Structs again or an Array.

## Array

An Array is a repetition of a type. The length of the array is defined with each Array. The types can be of a BasicType, a Struct or an Array again (n- dimensional).

## Flex Array

A FlexArray is a repetition of a type with a variable length. The maximum length of the array is defined with each FlexArray. The current length of the FlexArray is transferred as a UInt preceding the Array itself. The types can be of a BasicType, a Struct or an Array again (n- dimensional).



## 2. Interfaces

### 2.1. Interface Block: S\_Standard

#### 2.1.1. Group: V100

##### 2.1.1.1. Variable: DeviceIdent

The following section contains a detailed description of the variable DeviceIdent.

#### Variable Overview

Variable Name	Description
DeviceIdent	Unique Identification of device

Sopas Synchronisation	Variable is not relevant for synchronisation with SOPAS ET.
Sopas Index	0 (fixed)
Read-Access	Always
Write-Access	No! (readonly)

Struct	
Name	
FlexString	
Length	0..32
Initialisation	Visionary-T Mini CX V3S105-1x
Version	
FlexString	
Length	0..50
Initialisation	1.6.0.29891R

#### Variable Telegram Syntax

Read Variable:				
sRN DeviceIdent				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	DeviceIdent	String	11	Unique Identification of device

Read Variable Response:				
sRA DeviceIdent <Name> <Version>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	DeviceIdent	String	11	Unique Identification of device
Variable Data 1	Name	FlexString	32	
Variable Data 2	Version	FlexString	50	

## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 10 73 52 4E 20 44 65 76 69 63 65 49 64 65 6E 74 20 05	.....sRN Dev ceIdent .
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 3D 73 52 41 20 44 65 76 69 63 65 49 64 65 6E 74 20 00 1D 56 69 73 69 6F 6E 61 72 79 2D 54 20 4D 69 6E 69 20 43 58 20 56 33 53 31 30 35 2D 31 78 00 0C 31 2E 36 2E 30 2E 32 39 38 39 31 52 22	.....=sRA Dev ceIdent ..Vision ary-T Mini CX V3 S105-1x..1.6.0.2 9891R"

### 2.1.1.2. Variable: CidVersion

The following section contains a detailed description of the variable CidVersion.

#### Variable Overview

Variable Name	Description
CidVersion	Version of communication interface description

Sopas Synchronisation	Variable is not relevant for synchronisation with SOPAS ET.
Sopas Index	5
Read-Access	Always
Write-Access	No! (readonly)

UserType	
CidVersion	See the chapter "User Types" for details.

#### Variable Telegram Syntax

Read Variable:				
sRN CidVersion				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	CidVersion	String	10	Version of communication interface description

Read Variable Response:				
sRA CidVersion <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	CidVersion	String	10	Version of communication interface description
Variable Data	data	CidVersion	11	



## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0F 73 52 4E 20 43 69 64 56 65 72 73 69 6F 6E 20 7B	.....sRN CidV ersion {
Read Variable Response:	02 02 02 02 00 00 00 1A 73 52 41 20 43 69 64 56 65 72 73 69 6F 6E 20 00 01 00 06 00 00 00 74 C3 03 C7	.....sRA CidV ersion .....t .

### 2.1.1.3. Variable: SOPASVersion

The following section contains a detailed description of the variable SOPASVersion.

#### Variable Overview

Variable Name	Description
SOPASVersion	Version of SOPAS runtime (SOPAS DCD)

Sopas Synchronisation	Variable is not relevant for synchronisation with SOPAS ET.
Sopas Index	1 (fixed)
Read-Access	Always
Write-Access	No! (readonly)

Struct	
Version	
USInt	
Value Range	0..255
Initialisation	3
Release	
USInt	
Value Range	0..255
Initialisation	14
Build	
UInt	
Value Range	0..65535
Initialisation	37



## Variable Telegram Syntax

Read Variable:				
sRN SOPASVersion				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	SOPASVersion	String	12	Version of SOPAS runtime (SOPAS DCD)

Read Variable Response:				
sRA SOPASVersion <Version> <Release> <Build>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	SOPASVersion	String	12	Version of SOPAS runtime (SOPAS DCD)
Variable Data 1	Version	USInt	1	
Variable Data 2	Release	USInt	1	
Variable Data 3	Build	UInt	2	

## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 11 73 52 4E 20 53 4F 50 41 53 56 65 72 73 69 6F 6E 20 6B	.....sRN SOPA SVersion k
Read Variable Response:	02 02 02 02 00 00 00 15 73 52 41 20 53 4F 50 41 53 56 65 72 73 69 6F 6E 20 03 0E 00 25 4C	.....sRA SOPA SVersion ...%L

### 2.1.1.4. Variable: LocationName

The following section contains a detailed description of the variable LocationName.

#### Variable Overview

Variable Name	Description
LocationName	Location of Device (set by user)

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	2 (fixed)
Storage	Variable is stored in ParamEEProm
Read-Access	Always
Write-Access	Always

FlexString	
Length	0..16
Initialisation	not defined





## Variable Telegram Syntax

Read Variable:				
sRN LocationName				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	LocationName	String	12	Location of Device (set by user)

Read Variable Response:				
sRA LocationName <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	LocationName	String	12	Location of Device (set by user)
Variable Data	data	FlexString	16	

Write Variable:				
sWN LocationName <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	LocationName	String	12	Location of Device (set by user)
Variable Data	data	FlexString	16	

Write Variable Response:				
sWA LocationName				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	LocationName	String	12	Location of Device (set by user)

## Variable Telegram Examples

Example: Default Values			
Variable rest examples with data set to default values.			
Read Variable:	02 02 02 02 00 00 00 11 74 69 6F 6E 4E 61 6D 65	73 52 4E 20 4C 6F 63 61 20 75	.....sRN LocationName u
Read Variable Response:	02 02 02 02 00 00 00 1E 74 69 6F 6E 4E 61 6D 65 65 66 69 6E 65 64 45	73 52 41 20 4C 6F 63 61 20 00 0B 6E 6F 74 20 64	.....sRA LocationName ..not definedE
Write Variable:	02 02 02 02 00 00 00 1E 74 69 6F 6E 4E 61 6D 65 65 66 69 6E 65 64 4F	73 57 4E 20 4C 6F 63 61 20 00 0B 6E 6F 74 20 64	.....sWN LocationName ..not definedO
Write Variable Response:	02 02 02 02 00 00 00 11 74 69 6F 6E 4E 61 6D 65	73 57 41 20 4C 6F 63 61 20 7F	.....sWA LocationName .



### 2.1.1.5. Variable: SerialNumber

The following section contains a detailed description of the variable SerialNumber.

#### Variable Overview

Variable Name	Description
SerialNumber	serial number of device

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	3 (fixed)
Storage	Variable is stored in CalibEEPROM
Read-Access	Always
Write-Access	No! (readonly)

FlexString	
Length	0..8
Initialisation	12345678

#### Variable Telegram Syntax

Read Variable:				
sRN SerialNumber				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	SerialNumber	String	12	serial number of device

Read Variable Response:				
sRA SerialNumber <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	SerialNumber	String	12	serial number of device
Variable Data	data	FlexString	8	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 11 73 52 4E 20 53 65 72 69 61 6C 4E 75 6D 62 65 72 20 6C	.....sRN SerialNumber l
Read Variable Response:	02 02 02 02 00 00 00 1B 73 52 41 20 53 65 72 69 61 6C 4E 75 6D 62 65 72 20 00 08 31 32 33 34 35 36 37 38 63	.....sRA SerialNumber ..12345678c



### 2.1.1.6. Variable: FirmwareVersion

The following section contains a detailed description of the variable FirmwareVersion.

#### Variable Overview

Variable Name	Description
FirmwareVersion	Version of the application software

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	4 (fixed)
Storage	Variable is stored in CalibEEPROM
Read-Access	Always
Write-Access	No! (readonly)

FlexString	
Length	0..16
Initialisation	XXXXXXXXXX

#### Variable Telegram Syntax

Read Variable:				
sRN FirmwareVersion				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	FirmwareVersion	String	15	Version of the application software

Read Variable Response:				
sRA FirmwareVersion <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	FirmwareVersion	String	15	Version of the application software
Variable Data	data	FlexString	16	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 14 73 52 4E 20 46 69 72 6D 77 61 72 65 56 65 72 73 69 6F 6E 20 04	.....sRN FirmwareVersion .
Read Variable Response:	02 02 02 02 00 00 00 20 73 52 41 20 46 69 72 6D 77 61 72 65 56 65 72 73 69 6F 6E 20 00 0A 58 58 58 58 58 58 58 01	..... sRA FirmwareVersion ..XX XXXXXXXX.



### 2.1.1.7. Variable: SopasInfo

The following section contains a detailed description of the variable SopasInfo.

#### Variable Overview

Variable Name	Description
SopasInfo	Configuration and all supported SOPAS features by this device.
Sopas Synchronisation	Variable is not relevant for synchronisation with SOPAS ET.
Sopas Index	6 (fixed)
Read-Access	Always
Write-Access	No! (readonly)



DWord				
Bit Length			32	
CIDUploadSupported				
0.0	Bool			
	Value Range		False, True	
	Initialisation		False	
ShortUDDUploadSupported				
0.1	Bool			
	Value Range		False, True	
	Initialisation		False	
PMDUploadSupported				
0.2	Bool			
	Value Range		False, True	
	Initialisation		False	
LocationNameExists				
0.3	Bool			
	Value Range		False, True	
	Initialisation		True	
SegmentSize				
0.4	Enum4			
...	Default Value		SegSize16384	
0.7		Value	Name	Description
		0	SegSize4	
		1	SegSize8	
		2	SegSize16	
		3	SegSize64	
		4	SegSize256	
		5	SegSize1024	
		6	SegSize4096	
		7	SegSize16384	
SupportsEventPolling				
1.0	Bool			
	Value Range		False, True	
	Initialisation		False	
hasProclIndex				
1.1	Bool			
	Value Range		False, True	
	Initialisation		False	
CIDChecksumProvided				
1.2	Bool			
	Value Range		False, True	
	Initialisation		True	
CheckPasswordProvided				
1.3	Bool			
	Value Range		False, True	
	Initialisation		True	



DWord			
hubFunctionality			
1.4	Enum2		
...	Default Value	subDevicesExtended	
1.5		Value	NameDescription
		0	noSubDevices
		1	subDevicesWithDetails
		2	subDevicesWithMaxAddr
		3	subDevicesExtended
JarUploadSupported			
1.6	Bool		
	Value Range	False, True	
	Initialisation	True	
hasFirmwareDownloadAlgorithm			
1.7	Bool		
	Value Range	False, True	
	Initialisation	False	
SimultaneousMethodsSupport			
2.0	Bool		
	Value Range	False, True	
	Initialisation	False	
HashValueSupport			
2.1	Bool		
	Value Range	False, True	
	Initialisation	False	
HasAdditionalTimeout			
2.2	Bool		
	Value Range	False, True	
	Initialisation	False	
BulkTransferSupported			
2.3	Bool		
	Value Range	False, True	
	Initialisation	True	
isSystemCapable			
2.4	Bool		
	Value Range	False, True	
	Initialisation	False	
SystemSDDUploadSupported			
2.5	Bool		
	Value Range	False, True	
	Initialisation	False	



## Variable Telegram Syntax

Read Variable:				
sRN SopasInfo				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	SopasInfo	String	9	Configuration and all supported SOPAS features by this device.

Read Variable Response:				
sRA SopasInfo <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	SopasInfo	String	9	Configuration and all supported SOPAS features by this device.
Variable Data	data	DWord	4	

## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 0E 73 52 4E 20 53 6F 70 61 73 49 6E 66 6F 20 1F	.....sRN SopasInfo .
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 12 73 52 41 20 53 6F 70 61 73 49 6E 66 6F 20 78 7C 08 00 1C	.....sRA SopasInfo x ...

### 2.1.1.8. Method: NotifyMode

The following section contains a detailed description of the method NotifyMode.

#### Method Overview

Method Name	Description
NotifyMode	Decoupling login from sensor mode. This function will be called before and after something is written

Sopas Index	3
Invocation Access	Always

Parameters			
NewMode			
	Enum8		
	Value	Name	Description
	0	ENDWRITE	
	1	BEGINWRITE	



## Method Telegram Syntax

Method Invocation:				
sMN NotifyMode <NewMode>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	NotifyMode	String	10	Decoupling login from sensor mode. This function will be called before and after something is written
Parameter 1	NewMode	Enum8	1	

Method Return Value:				
sAN NotifyMode				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	NotifyMode	String	10	Decoupling login from sensor mode. This function will be called before and after something is written

## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
Method Invocation:	02 02 02 02 00 00 00 10 73 4D 4E 20 4E 6F 74 69 66 79 4D 6F 64 65 20 00 70	.....sMN NotifyMode .p
Method Return Value:	02 02 02 02 00 00 00 0F 73 41 4E 20 4E 6F 74 69 66 79 4D 6F 64 65 20 7C	.....sAN NotifyMode

### 2.1.1.9. Method: GetAccessMode

The following section contains a detailed description of the method GetAccessMode.

#### Method Overview

Method Name	Description
GetAccessMode	returns actual operation mode

Sopas Index	1 (fixed)
Invocation Access	Always

Return Values	
opmode	
<b>SInt</b>	
Value Range	-128..127





## Method Telegram Syntax

Method Invocation:				
sMN GetAccessMode				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	GetAccessMode	String	13	returns actual operation mode

Method Return Value:				
sAN GetAccessMode <opmode>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	GetAccessMode	String	13	returns actual operation mode
Return Value 1	opmode	SInt	1	

## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
Method Invocation:	02 02 02 02 00 00 00 12 73 4D 4E 20 47 65 74 41 63 63 65 73 73 4D 6F 64 65 20 21	.....sMN GetAccessMode !
Method Return Value:	02 02 02 02 00 00 00 13 73 41 4E 20 47 65 74 41 63 63 65 73 73 4D 6F 64 65 20 00 2D	.....sAN GetAccessMode --

### 2.1.1.10. Method: Run

The following section contains a detailed description of the method Run.

#### Method Overview

Method Name	Description
Run	Change operation mode to "Run"

Sopas Index	2 (fixed)
Invocation Access	Always

Return Values	
success	
	<b>Bool</b>
	Value Range
	Initialisation
	False, True
	False



## Method Telegram Syntax

Method Invocation:				
sMN Run				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	Run	String	3	Change operation mode to "Run"

Method Return Value:				
sAN Run <success>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	Run	String	3	Change operation mode to "Run"
Return Value 1	success	Bool	1	

## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
Method Invocation:	02 02 02 02 00 00 00 08 73 4D 4E 20 52 75 6E 20 39	.....sMN Run 9
Method Return Value:	02 02 02 02 00 00 00 09 73 41 4E 20 52 75 6E 20 00 35	.....sAN Run .5

### 2.1.1.11. Method: GetDescription

The following section contains a detailed description of the method GetDescription.

#### Method Overview

Method Name	
GetDescription	
Sopas Index	4 (fixed)
Invocation Access	Always



Parameters			
eType			
	Enum8		
	Value	Name	Description
	1	CID	
	2	ShortUDD	
	3	PMD	
	4	Jar	
	5	CidPMD	
	6	Eip2PMD	
	7	ChInfo	
	8	AVC	
	9	Profibus	
	10	Profibus2	
	11	CanOpen	
	12	EcatPMD	
	13	Profibus3	
uiSegmentNumber			
	UInt		
	Value Range	0..65535	

Return Values					
eState					
		Enum8			
			Value	Name	Description
			0	TypeNotSupported	
			1	SegmentOutOfRange	
			2	FirstSegment	
			3	NormalSegment	
			4	LastSegment	
uiSegmentNumber					
		UInt			
		Value Range	0..65535		
aByteStream					
		Array			
		Length	0..16384		
			UInt		
		Value Range	0..255		



## Method Telegram Syntax

Method Invocation:				
sMN GetDescription <eType> <uiSegmentNumber>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	GetDescription	String	14	
Parameter 1	eType	Enum8	1	
Parameter 2	uiSegmentNumber	UInt	2	

Method Return Value:				
sAN GetDescription <eState> <uiSegmentNumber> <aByteArray>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	GetDescription	String	14	
Return Value 1	eState	Enum8	1	
Return Value 2	uiSegmentNumber	UInt	2	
Return Value 3	aByteArray	Array	16384	

## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
Method Invocation:	02 02 02 02 00 00 00 13 73 4D 4E 20 47 65 74 44 65 73 63 72 69 70 74 69 6F 6E 20 60	.....sMN GetD escription `
Method Return Value:	02 02 02 02 00 00 00 18 73 41 4E 20 47 65 74 44 65 73 63 72 69 70 74 69 6F 6E 20 00 00 00 00 00 6C	.....sAN GetD escription ..... 1

### 2.1.1.12. Method: SetAccessMode

The following section contains a detailed description of the method SetAccessMode.

#### Method Overview

Method Name	
SetAccessMode	

Sopas Index	0 (fixed)
Invocation Access	Always

Parameters	
NewMode	
SInt	
Value Range	-128..127



Parameters	
Password	
<b>UDInt</b>	
Value Range	0..4294967295

Return Values	
success	
<b>Bool</b>	
Value Range	False, True
Initialisation	False

## Method Telegram Syntax

Method Invocation:				
sMN SetAccessMode <NewMode> <Password>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	SetAccessMode	String	13	
Parameter 1	NewMode	SInt	1	
Parameter 2	Password	UDInt	4	

Method Return Value:				
sAN SetAccessMode <success>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	SetAccessMode	String	13	
Return Value 1	success	Bool	1	

## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
<b>Method Invocation:</b>	02 02 02 02 00 00 00 17 73 4D 4E 20 53 65 74 41 63 63 65 73 73 4D 6F 64 65 20 00 00 00 00 00 35	.....sMN SetAccessMode .....5
<b>Method Return Value:</b>	02 02 02 02 00 00 00 13 73 41 4E 20 53 65 74 41 63 63 65 73 73 4D 6F 64 65 20 00 39	.....sAN SetAccessMode .9



## 2.1.2. Group: V200

### 2.1.2.1. Method: GetChallenge

The following section contains a detailed description of the method GetChallenge.

#### Method Overview

Method Name				
GetChallenge				
Sopas Index		6		
Invocation Access		Always		
Return Values				
result				
		Enum8		
		Value	Name	Description
		0	SUCCESS	
		1	INVALID_CLIENT	
		2	NOT_ACCEPTED	
challenge				
		Array		
		Length		16
		USInt		
		Value Range		0..255

#### Method Telegram Syntax

Method Invocation:				
sMN GetChallenge				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	GetChallenge	String	12	
Method Return Value:				
sAN GetChallenge <result> <challenge>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	GetChallenge	String	12	
Return Value 1	result	Enum8	1	
Return Value 2	challenge	Array	16	



## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
Method Invocation:	02 02 02 02 00 00 00 11 73 4D 4E 20 47 65 74 43 68 61 6C 6C 65 6E 67 65 20 65	.....sMN GetC hallenge e
Method Return Value:	02 02 02 02 00 00 00 22 73 41 4E 20 47 65 74 43 68 61 6C 6C 65 6E 67 65 20 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 69	....."sAN GetC hallenge ..... .....i

### 2.1.2.2. Method: SetUserLevel

The following section contains a detailed description of the method SetUserLevel.

#### Method Overview

Method Name	
SetUserLevel	

Sopas Index	7
Invocation Access	Always

Parameters		
challengeResponse		
	<b>Array</b>	
	Length	32
	<b>USInt</b>	
	Value Range	0..255
userLevel		
	<b>UserType</b>	
	E_USER_LEVEL_TYPE	See the chapter "User Types" for details.

Return Values			
result			
	<b>Enum8</b>		
	Value	Name	Description
	0	SUCCESS	
	1	INVALID_CLIENT	
	2	NOT_ACCEPTED	
	3	UNKNOWN_CHALLENGE	



## Method Telegram Syntax

Method Invocation:				
sMN SetUserLevel <challengeResponse> <userLevel>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	SetUserLevel	String	12	
Parameter 1	challengeResponse	Array	32	
Parameter 2	userLevel	E_USER_LEVEL_TYPE	0	

Method Return Value:				
sAN SetUserLevel <result>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	SetUserLevel	String	12	
Return Value 1	result	Enum8	1	

## Method Telegram Examples

Example: Default Values			
Method telegram examples with parameter data and return value data set to default values.			
Method Invocation:	02 02 02 02 00 00 00 32 73 4D 4E 20 53 65 74 55 73 65 72 4C 65 76 65 6C 20 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 55		.....2sMN SetUserLevel .....U
Method Return Value:	02 02 02 02 00 00 00 12 73 41 4E 20 53 65 74 55 73 65 72 4C 65 76 65 6C 20 00 59		.....sAN SetUserLevel ·Y

### 2.1.2.3. Method: ChangePassword

The following section contains a detailed description of the method ChangePassword.

#### Method Overview

Method Name	
ChangePassword	

Sopas Index	8
Invocation Access	Always

Parameters		
encryptedMessage		
	Array	
	Length	0..1024
	USInt	
	Value Range	0..255





Parameters	
userLevel	
<b>UserType</b>	
E_USER_LEVEL_TYPE	See the chapter "User Types" for details.

Return Values			
result			
Enum8			
	Value	Name	Description
	0	SUCCESS	
	1	INVALID_CLIENT	
	2	NOT_ACCEPTED	
	4	PWD NOT CHANGABLE	

## Method Telegram Syntax

Method Invocation:				
sMN ChangePassword <encryptedMessage> <userLevel>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	ChangePassword	String	14	
Parameter 1	encryptedMessage	Array	1024	
Parameter 2	userLevel	E_USER_LEVEL_TYPE	0	

Method Return Value:				
sAN ChangePassword <result>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	ChangePassword	String	14	
Return Value 1	result	Enum8	1	

## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
<b>Method Invocation:</b>	02 02 02 02 00 00 00 16 73 4D 4E 20 43 68 61 6E 67 65 50 61 73 73 77 6F 72 64 20 00 00 00 69	.....sMN ChangePassword ...i
<b>Method Return Value:</b>	02 02 02 02 00 00 00 14 73 41 4E 20 43 68 61 6E 67 65 50 61 73 73 77 6F 72 64 20 00 65	.....sAN ChangePassword .e

### 2.1.3. Group: Optional

#### 2.1.3.1. Variable: CIDChecksum

The following section contains a detailed description of the variable CIDChecksum.

##### Variable Overview

Variable Name	Description
CIDChecksum	Checksum of CID which was used to generate the SRT.

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	9 (fixed)
Read-Access	Always
Write-Access	No! (readonly)

Array	
Length	16
Default Value	{ 0xEA, 0xE9, 0x78, 0x9E, 0x3D, 0x0A, 0x10, 0xE8, 0xA0, 0xC4, 0xF2, 0xAA, 0xDA, 0xD5, 0xDF, 0xD4 }
<b>USInt</b>	
Value Range	0..255

##### Variable Telegram Syntax

Read Variable:				
sRN CIDChecksum				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	CIDChecksum	String	11	Checksum of CID which was used to generate the SRT.

Read Variable Response:				
sRA CIDChecksum <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	CIDChecksum	String	11	Checksum of CID which was used to generate the SRT.
Variable Data	data	Array	16	

##### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 10 73 52 4E 20 43 49 44 43 68 65 63 6B 73 75 6D 20 0C	.....sRN CIDC hecksum .
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 20 73 52 41 20 43 49 44 43 68 65 63 6B 73 75 6D 20 EA E9 78 9E 3D 0A 10 E8 A0 C4 F2 AA DA D5 DF D4 11	..... sRA CIDC hecksum x=... .



### 2.1.3.2. Variable: SubDevicesExt

The following section contains a detailed description of the variable SubDevicesExt.

#### Variable Overview

Variable Name
SubDevicesExt

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	7 (fixed)
Read-Access	Always
Write-Access	No! (readonly)

Struct							
Addresses							
		<b>Array</b>					
		Length	0..63				
	<b>Struct</b>						
	usiSubAddress						
	<b>USInt</b>						
	Value Range		0..255				
	xProperties						
	<b>Word</b>						
	Bit Length		16				
	bVisible						
	0.0	<b>Bool</b>					
		Value Range		False, True			
		Initialisation		False			
	eProtocol						
	0.1	<b>Enum4</b>					
	...		Value	Name		Description	
	0.4		0	eProtNotDefined			
			1	eProtCoLaA			
		2	eProtCoLaB				
		3	eProtSerialLink				
reserved							
<b>Array</b>							
		Length	4				
	<b>UInt</b>						
	Value Range		0..0				



## Variable Telegram Syntax

Read Variable:				
sRN SubDevicesExt				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	SubDevicesExt	String	13	

Read Variable Response:				
sRA SubDevicesExt <Addresses> <reserved>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	SubDevicesExt	String	13	
Variable Data 1	Addresses	Array	189	
Variable Data 2	reserved	Array	8	

## Variable Telegram Examples

Example: Default Values			
Variable rest examples with data set to default values.			
Read Variable:	02 02 02 02 00 00 00 12 65 76 69 63 65 73 45 78	73 52 4E 20 53 75 62 44 74 20 29	.....sRN SubD evicesExt )
Read Variable Response:	02 02 02 02 00 00 00 1C 65 76 69 63 65 73 45 78 00 00 00 00 26	73 52 41 20 53 75 62 44 74 20 00 00 00 00 00 00	.....sRA SubD evicesExt ..... ....&

### 2.1.3.3. Method: SetPassword

The following section contains a detailed description of the method SetPassword.

#### Method Overview

Method Name	
SetPassword	

Sopas Index	9
Invocation Access	Always

Parameters		
siUserLevel		
	<b>SInt</b>	
	Value Range	-128..127
udiNewPassword		
	<b>UDInt</b>	
	Value Range	0..4294967295



Return Values	
bSuccess	
<b>Bool</b>	
Value Range	False, True
Initialisation	False

## Method Telegram Syntax

Method Invocation:				
sMN SetPassword <siUserLevel> <udiNewPassword>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	SetPassword	String	11	
Parameter 1	siUserLevel	SIInt	1	
Parameter 2	udiNewPassword	UDInt	4	

Method Return Value:				
sAN SetPassword <bSuccess>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	SetPassword	String	11	
Return Value 1	bSuccess	Bool	1	

## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
<b>Method Invocation:</b>	02 02 02 02 00 00 00 15 73 4D 4E 20 53 65 74 50 61 73 73 77 6F 72 64 20 00 00 00 00 00 0D	.....sMN SetP assword .....
<b>Method Return Value:</b>	02 02 02 02 00 00 00 11 73 41 4E 20 53 65 74 50 61 73 73 77 6F 72 64 20 00 01	.....sAN SetP assword ..

### 2.1.3.4. Method: CheckPassword

The following section contains a detailed description of the method CheckPassword.

#### Method Overview

Method Name	
CheckPassword	
Sopas Index	5 (fixed)
Invocation Access	Always



Parameters	
siUserLevel	
<b>SInt</b>	
Value Range	-128..127
udiPassword	
<b>UDInt</b>	
Value Range	0..4294967295

Return Values	
bSuccess	
<b>Bool</b>	
Value Range	False, True
Initialisation	False

## Method Telegram Syntax

Method Invocation:				
sMN CheckPassword <siUserLevel> <udiPassword>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	CheckPassword	String	13	
Parameter 1	siUserLevel	SInt	1	
Parameter 2	udiPassword	UDInt	4	

Method Return Value:				
sAN CheckPassword <bSuccess>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	CheckPassword	String	13	
Return Value 1	bSuccess	Bool	1	

## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
<b>Method Invocation:</b>	02 02 02 02 00 00 00 17 73 4D 4E 20 43 68 65 63 6B 50 61 73 73 77 6F 72 64 20 00 00 00 00 09	.....sMN Chec kPassword .....
<b>Method Return Value:</b>	02 02 02 02 00 00 00 13 73 41 4E 20 43 68 65 63 6B 50 61 73 73 77 6F 72 64 20 00 05	.....sAN Chec kPassword ..



## 2.1.4. Group: fileMethods

### 2.1.4.1. Method: GenOpenFile

The following section contains a detailed description of the method GenOpenFile.

#### Method Overview

Method Name	Description
GenOpenFile	Open selected file

Communication Name	OpenFile
Sopas Index	10 (fixed)
Invocation Access	Always

Parameters		
Name	<b>FlexString</b>	
	Length	0..256
Mode	<b>FlexString</b>	
	Length	0..5

Return Values		
State	<b>Int</b>	
	Value Range	-32768..32767
FileHandle	<b>UDInt</b>	
	Value Range	0..4294967295

#### Method Telegram Syntax

Method Invocation:				
sMN OpenFile <Name> <Mode>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	OpenFile	String	8	Open selected file
Parameter 1	Name	FlexString	256	
Parameter 2	Mode	FlexString	5	

Method Return Value:				
sAN OpenFile <State> <FileHandle>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	OpenFile	String	8	Open selected file
Return Value 1	State	Int	2	
Return Value 2	FileHandle	UDInt	4	



## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
Method Invocation:	02 02 02 02 00 00 00 11 73 4D 4E 20 4F 70 65 6E 46 69 6C 65 20 00 00 00 00 62	.....sMN Open File ....b
Method Return Value:	02 02 02 02 00 00 00 13 73 41 4E 20 4F 70 65 6E 46 69 6C 65 20 00 00 00 00 00 00 6E	.....sAN Open File .....n

### 2.1.4.2. Method: GenCloseFile

The following section contains a detailed description of the method GenCloseFile.

#### Method Overview

Method Name	Description
GenCloseFile	Close selected file

Communication Name	CloseFile
Sopas Index	11 (fixed)
Invocation Access	Always

Parameters	
FileHandle	
UDInt	
Value Range	0..4294967295

Return Values	
State	
Int	
Value Range	-32768..32767

#### Method Telegram Syntax

Method Invocation:				
sMN CloseFile <FileHandle>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	CloseFile	String	9	Close selected file
Parameter 1	FileHandle	UDInt	4	

Method Return Value:				
sAN CloseFile <State>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	CloseFile	String	9	Close selected file
Return Value 1	State	Int	2	





## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
<b>Method Invocation:</b>	02 02 02 02 00 00 00 12 73 4D 4E 20 43 6C 6F 73 65 46 69 6C 65 20 00 00 00 00 00	.....sMN Clos eFile .....
<b>Method Return Value:</b>	02 02 02 02 00 00 00 10 73 41 4E 20 43 6C 6F 73 65 46 69 6C 65 20 00 00 0C	.....sAN Clos eFile ...

### 2.1.4.3. Method: GenReadFile

The following section contains a detailed description of the method GenReadFile.

#### Method Overview

Method Name	Description
GenReadFile	Read selected file

Communication Name	ReadFile
Sopas Index	13 (fixed)
Invocation Access	Always

Parameters	
FileHandle	
	<b>UDInt</b>
Value Range	0..4294967295
SequenceNumber	
	<b>UDInt</b>
Value Range	0..4294967295

Return Values	
State	
	<b>Int</b>
Value Range	-32768..32767
Data	
	<b>Array</b>
	Length
	0..16384
	<b>USInt</b>
	Value Range
	0..255



## Method Telegram Syntax

Method Invocation:				
sMN ReadFile <FileHandle> <SequenceNumber>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	ReadFile	String	8	Read selected file
Parameter 1	FileHandle	UDInt	4	
Parameter 2	SequenceNumber	UDInt	4	

Method Return Value:				
sAN ReadFile <State> <Data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	ReadFile	String	8	Read selected file
Return Value 1	State	Int	2	
Return Value 2	Data	Array	16384	

## Method Telegram Examples

Example: Default Values			
Method telegram examples with parameter data and return value data set to default values.			
Method Invocation:	02 02 02 02 00 00 00 15 46 69 6C 65 20 00 00 00	73 4D 4E 20 52 65 61 64 00 00 00 00 00 64	.....sMN Read File .....d
Method Return Value:	02 02 02 02 00 00 00 11 46 69 6C 65 20 00 00 00	73 41 4E 20 52 65 61 64 00 68	.....sAN Read File ....h

### 2.1.4.4. Method: GenWriteFile

The following section contains a detailed description of the method GenWriteFile.

#### Method Overview

Method Name	Description
GenWriteFile	Write selected file

Communication Name	WriteFile
Sopas Index	14 (fixed)
Invocation Access	Always

Parameters		
FileHandle		
	UDInt	
	Value Range	0..4294967295



Parameters	
Data	
Array	
Length	0..16384
USInt	
Value Range	0..255
SequenceNumber	
UDInt	
Value Range	0..4294967295

Return Values	
State	
Int	
Value Range	-32768..32767

## Method Telegram Syntax

Method Invocation:				
sMN WriteFile <FileHandle> <Data> <SequenceNumber>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	WriteFile	String	9	Write selected file
Parameter 1	FileHandle	UDInt	4	
Parameter 2	Data	Array	16384	
Parameter 3	SequenceNumber	UDInt	4	

Method Return Value:				
sAN WriteFile <State>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	WriteFile	String	9	Write selected file
Return Value 1	State	Int	2	

## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
Method Invocation:	02 02 02 02 00 00 00 18 73 4D 4E 20 57 72 69 74 65 46 69 6C 65 20 00 00 00 00 00 00 00 00 0B	.....sMN WriteFile .....
Method Return Value:	02 02 02 02 00 00 00 10 73 41 4E 20 57 72 69 74 65 46 69 6C 65 20 00 00 07	.....sAN WriteFile ...



## 2.1.4.5. Method: GetFileSyncValue

The following section contains a detailed description of the method GetFileSyncValue.

### Method Overview

Method Name	Description
GetFileSyncValue	get Sync Value for file

Sopas Index	15 (fixed)
Invocation Access	Always

Parameters	
Name	
FlexString	
Length	0..256

Return Values	
HashValue	
UDInt	
Value Range	0..4294967295

### Method Telegram Syntax

Method Invocation:				
sMN GetFileSyncValue <Name>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	GetFileSyncValue	String	16	get Sync Value for file
Parameter 1	Name	FlexString	256	

Method Return Value:				
sAN GetFileSyncValue <HashValue>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	GetFileSyncValue	String	16	get Sync Value for file
Return Value 1	HashValue	UDInt	4	

### Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
Method Invocation:	02 02 02 02 00 00 00 17 73 4D 4E 20 47 65 74 46 69 6C 65 53 79 6E 63 56 61 6C 75 65 20 00 00 6C	.....sMN GetFileSyncValue ..l
Method Return Value:	02 02 02 02 00 00 00 19 73 41 4E 20 47 65 74 46 69 6C 65 53 79 6E 63 56 61 6C 75 65 20 00 00 00 00 60	.....sAN GetFileSyncValue ...`



## 2.1.4.6. Method: GetFileSize

The following section contains a detailed description of the method GetFileSize.

### Method Overview

Method Name	Description
GetFileSize	get file size

Sopas Index	16 (fixed)
Invocation Access	Always

Parameters	
FileHandle	
UDInt	
Value Range	0..4294967295

Return Values	
State	
Int	
Value Range	-32768..32767
FileSize	
UDInt	
Value Range	0..4294967295

### Method Telegram Syntax

Method Invocation:				
sMN GetFileSize <FileHandle>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	GetFileSize	String	11	get file size
Parameter 1	FileHandle	UDInt	4	

Method Return Value:				
sAN GetFileSize <State> <FileSize>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	GetFileSize	String	11	get file size
Return Value 1	State	Int	2	
Return Value 2	FileSize	UDInt	4	



## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
Method Invocation:	02 02 02 02 00 00 00 14 73 4D 4E 20 47 65 74 46 69 6C 65 53 69 7A 65 20 00 00 00 00 25	.....sMN GetF ileSize ....%
Method Return Value:	02 02 02 02 00 00 00 16 73 41 4E 20 47 65 74 46 69 6C 65 53 69 7A 65 20 00 00 00 00 00 29	.....sAN GetF ileSize .....)



## 2.2. Interface Block: CoLa2

### 2.2.1. Group: CoLa2

#### 2.2.1.1. Variable: TypeCode

The following section contains a detailed description of the variable TypeCode.

#### Variable Overview

Variable Name	Description
TypeCode	This variable's value matches the SICK type code as it is used in SAP (first 18 characters).

Communication Name	TypCod
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	8
Read-Access	Always
Write-Access	No! (readonly)

FlexString	
Length	0..32
Initialisation	1234567

#### Variable Telegram Syntax

Read Variable:				
sRN TypCod				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	TypCod	String	6	This variable's value matches the SICK type code as it is used in SAP (first 18 characters).

Read Variable Response:				
sRA TypCod <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	TypCod	String	6	This variable's value matches the SICK type code as it is used in SAP (first 18 characters).
Variable Data	data	FlexString	32	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0B 73 52 4E 20 54 79 70 43 6F 64 20 7A	.....sRN TypC od z
Read Variable Response:	02 02 02 02 00 00 00 14 73 52 41 20 54 79 70 43 6F 64 20 00 07 31 32 33 34 35 36 37 42	.....sRA TypC od ..1234567B



### 2.2.1.2. Variable: OrderNumber

The following section contains a detailed description of the variable OrderNumber.

#### Variable Overview

Variable Name	Description
OrderNumber	This variable's value matches the SICK order number (million number) in SAP.

Communication Name	OrdNum
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	10
Read-Access	Always
Write-Access	No! (readonly)

FlexString	
Length	0..32
Initialisation	1234567

#### Variable Telegram Syntax

Read Variable:				
sRN OrdNum				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	OrdNum	String	6	This variable's value matches the SICK order number (million number) in SAP.

Read Variable Response:				
sRA OrdNum <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	OrdNum	String	6	This variable's value matches the SICK order number (million number) in SAP.
Variable Data	data	FlexString	32	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0B 73 52 4E 20 4F 72 64 4E 75 6D 20 60	.....sRN OrdNum`
Read Variable Response:	02 02 02 02 00 00 00 14 73 52 41 20 4F 72 64 4E 75 6D 20 00 07 31 32 33 34 35 36 37 58	.....sRA OrdNum ..1234567X





### 2.2.1.3. Variable: DeviceStatus

The following section contains a detailed description of the variable DeviceStatus.

#### Variable Overview

Variable Name	Description
DeviceStatus	Current state of the device.

Communication Name	DevSta
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	11
Read-Access	Always
Write-Access	No! (readonly)

UserType	
DeviceStatus	See the chapter "User Types" for details.

#### Variable Telegram Syntax

Read Variable:				
sRN DevSta				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	DevSta	String	6	Current state of the device.

Read Variable Response:				
sRA DevSta <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	DevSta	String	6	Current state of the device.
Variable Data	data	DeviceStatus	0	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0B 73 52 4E 20 44 65 76 53 74 61 20 7E	.....sRN DevSta ~
Read Variable Response:	02 02 02 02 00 00 00 0C 73 52 41 20 44 65 76 53 74 61 20 00 71	.....sRA DevSta ·q



#### 2.2.1.4. Variable: RequiredUserAction

The following section contains a detailed description of the variable RequiredUserAction.

##### Variable Overview

Variable Name	Description
RequiredUserAction	A Hint what can be done if the DeviceStatus is not DS_NormalOperation.

Communication Name	ReqAct
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	12
Read-Access	Always
Write-Access	No! (readonly)

UserType	
RequiredUserAction	See the chapter "User Types" for details.

##### Variable Telegram Syntax

Read Variable:				
sRN ReqAct				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	ReqAct	String	6	A Hint what can be done if the DeviceStatus is not DS_NormalOperation.

Read Variable Response:				
sRA ReqAct <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	ReqAct	String	6	A Hint what can be done if the DeviceStatus is not DS_NormalOperation.
Variable Data	data	RequiredUserAction	0	

##### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0B 73 52 4E 20 52 65 71 41 63 74 20 7F	.....sRN ReqAct .
Read Variable Response:	02 02 02 02 00 00 00 0D 73 52 41 20 52 65 71 41 63 74 20 00 00 70	.....sRA ReqAct ..p



### 2.2.1.5. Variable: DeviceName

The following section contains a detailed description of the variable DeviceName.

#### Variable Overview

Variable Name	Description
DeviceName	Name of device

Communication Name	DevNam
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	13
Read-Access	Always
Write-Access	No! (readonly)

FlexString	
Length	0..32
Initialisation	Visionary AP

#### Variable Telegram Syntax

Read Variable:				
sRN DevNam				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	DevNam	String	6	Name of device

Read Variable Response:				
sRA DevNam <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	DevNam	String	6	Name of device
Variable Data	data	FlexString	32	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0B 73 52 4E 20 44 65 76 4E 61 6D 20 7A	.....sRN DevN am z
Read Variable Response:	02 02 02 02 00 00 00 19 73 52 41 20 44 65 76 4E 61 6D 20 00 0C 56 69 73 69 6F 6E 61 72 79 20 41 50 06	.....sRA DevN am ..Visionary A P.



### 2.2.1.6. Variable: ProjectName

The following section contains a detailed description of the variable ProjectName.

#### Variable Overview

Variable Name	Description
ProjectName	Project name

Communication Name	PrjNam
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	14
Read-Access	Always
Write-Access	Maintenance, AuthorizedClient, Service

FlexString	
Length	0..32
Initialisation	Visionary AP

#### Variable Telegram Syntax

Read Variable:				
sRN PrjNam				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	PrjNam	String	6	Project name

Read Variable Response:				
sRA PrjNam <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	PrjNam	String	6	Project name
Variable Data	data	FlexString	32	

Write Variable:				
sWN PrjNam <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	PrjNam	String	6	Project name
Variable Data	data	FlexString	32	

Write Variable Response:				
sWA PrjNam				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	PrjNam	String	6	Project name



## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 0B 73 52 4E 20 50 72 6A 4E 61 6D 20 65	.....sRN PrjN am e
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 19 73 52 41 20 50 72 6A 4E 61 6D 20 00 0C 56 69 73 69 6F 6E 61 72 79 20 41 50 19	.....sRA PrjN am ..Visionary A P.
<b>Write Variable:</b>	02 02 02 02 00 00 00 19 73 57 4E 20 50 72 6A 4E 61 6D 20 00 0C 56 69 73 69 6F 6E 61 72 79 20 41 50 13	.....sWN PrjN am ..Visionary A P.
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 0B 73 57 41 20 50 72 6A 4E 61 6D 20 6F	.....sWA PrjN am o

### 2.2.1.7. Method: FindMe

The following section contains a detailed description of the method FindMe.

#### Method Overview

Method Name	Description
FindMe	CoLa standard method FindMe initiates an acoustic or visual signal for a defined period of time.
Sopas Index	12
Invocation Access	Always

Parameters	
uiDuration	Duration in seconds.
<b>UInt</b>	
Value Range	0..65535

#### Method Telegram Syntax

Method Invocation:				
sMN FindMe <uiDuration>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	FindMe	String	6	CoLa standard method FindMe initiates an acoustic or visual signal for a defined period of time.
Parameter 1	uiDuration	UInt	2	Duration in seconds.

Method Return Value:				
sAN FindMe				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	FindMe	String	6	CoLa standard method FindMe initiates an acoustic or visual signal for a defined period of time.



## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
Method Invocation:	02 02 02 02 00 00 00 0D 73 4D 4E 20 46 69 6E 64 4D 65 20 00 00 7D	.....sMN Find Me ..}
Method Return Value:	02 02 02 02 00 00 00 0B 73 41 4E 20 46 69 6E 64 4D 65 20 71	.....sAN Find Me q

## 2.3. Interface Block: GeneralCfgBase

### 2.3.1. Group: EEprom

#### 2.3.1.1. Method: ReadEeprom

The following section contains a detailed description of the method ReadEeprom.

##### Method Overview

Method Name	Description
ReadEeprom	Method reads all permanent parameters from the ParamEEprom into the mirror

Communication Name	mEEreadall
Sopas Index	17
Invocation Access	AuthorizedClient, Service

Return Values	
Success	
<b>Bool</b>	
Value Range	False, True
Initialisation	False

##### Method Telegram Syntax

Method Invocation:				
sMN mEEreadall				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	mEEreadall	String	10	Method reads all permanent parameters from the ParamEEprom into the mirror

Method Return Value:				
sAN mEEreadall <Success>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	mEEreadall	String	10	Method reads all permanent parameters from the ParamEEprom into the mirror
Return Value 1	Success	Bool	1	



## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
<b>Method Invocation:</b>	02 02 02 02 00 00 00 0F 73 4D 4E 20 6D 45 45 72 65 61 64 61 6C 6C 20 6E	.....sMN mEEr eadall n
<b>Method Return Value:</b>	02 02 02 02 00 00 00 10 73 41 4E 20 6D 45 45 72 65 61 64 61 6C 6C 20 00 62	.....sAN mEEr eadall .b

### 2.3.1.2. Method: WriteEeprom

The following section contains a detailed description of the method WriteEeprom.

#### Method Overview

Method Name	Description
WriteEeprom	Method writes all permanent parameters from the SOPAS mirror to the ParamEeprom

Communication Name	mEEwriteall
Sopas Index	18
Invocation Access	AuthorizedClient, Service

Return Values	
Success	
<b>Bool</b>	
Value Range	False, True
Initialisation	False

#### Method Telegram Syntax

Method Invocation:				
sMN mEEwriteall				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	mEEwriteall	String	11	Method writes all permanent parameters from the SOPAS mirror to the ParamEeprom

Method Return Value:				
sAN mEEwriteall <Success>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	mEEwriteall	String	11	Method writes all permanent parameters from the SOPAS mirror to the ParamEeprom
Return Value 1	Success	Bool	1	





## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
Method Invocation:	02 02 02 02 00 00 00 10 73 4D 4E 20 6D 45 45 77 72 69 74 65 61 6C 6C 20 01	.....sMN mEEw riteall .
Method Return Value:	02 02 02 02 00 00 00 11 73 41 4E 20 6D 45 45 77 72 69 74 65 61 6C 6C 20 00 0D	.....sAN mEEw riteall ..

## 2.3.2. Group: SystemControl

### 2.3.2.1. Variable: SCRebootNeedful

The following section contains a detailed description of the variable SCRebootNeedful.

#### Variable Overview

Variable Name	Description
SCRebootNeedful	Signs that ue to special parameter changes a reboot is meaningful

Communication Name	SCreboot
Sopas Synchronisation	Variable is not relevant for synchronisation with SOPAS ET.
Sopas Index	15
Read-Access	Always
Write-Access	No! (readonly)

USInt	
Value Range	0..255
Initialisation	0

#### Variable Telegram Syntax

Read Variable:				
sRN SCreboot				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	SCreboot	String	8	Signs that ue to special parameter changes a reboot is meaningful

Read Variable Response:				
sRA SCreboot <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	SCreboot	String	8	Signs that ue to special parameter changes a reboot is meaningful
Variable Data	data	USInt	1	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 0D 73 52 4E 20 53 43 72 65 62 6F 6F 74 20 7E	.....sRN SCreboot ~
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 0E 73 52 41 20 53 43 72 65 62 6F 6F 74 20 00 71	.....sRA SCreboot ·q



### 2.3.2.2. Variable: SCdevicestate

The following section contains a detailed description of the variable SCdevicestate.

#### Variable Overview

Variable Name	Description
SCdevicestate	Signals the state of the device

Sopas Synchronisation	Variable is not relevant for synchronisation with SOPAS ET.
Sopas Index	16
Read-Access	Always
Write-Access	No! (readonly)

Enum8			
Default Value		0	
	Value	Name	Description
	0	Busy	
	1	Ready	
	2	Error	

#### Variable Telegram Syntax

Read Variable:				
sRN SCdevicestate				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	SCdevicestate	String	13	Signals the state of the device

Read Variable Response:				
sRA SCdevicestate <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	SCdevicestate	String	13	Signals the state of the device
Variable Data	data	Enum8	1	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 12 73 52 4E 20 53 43 64 65 76 69 63 65 73 74 61 74 65 20 10	.....sRN SCdevicestate .
Read Variable Response:	02 02 02 02 00 00 00 13 73 52 41 20 53 43 64 65 76 69 63 65 73 74 61 74 65 20 00 1F	.....sRA SCdevicestate ..



### 2.3.2.3. Variable: SCTimeFormat

The following section contains a detailed description of the variable SCTimeFormat.

#### Variable Overview

Variable Name	Description
SCTimeFormat	Defines the time format

Communication Name	SCtimeformat
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	18
Read-Access	AuthorizedClient, Service
Write-Access	AuthorizedClient, Service

Enum8			
Default Value		0	
	Value	Name	Description
	0	OpHours	
	1	RealTime	

#### Variable Telegram Syntax

Read Variable:				
sRN SCtimeformat				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	SCtimeformat	String	12	Defines the time format

Read Variable Response:				
sRA SCtimeformat <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	SCtimeformat	String	12	Defines the time format
Variable Data	data	Enum8	1	

Write Variable:				
sWN SCtimeformat <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	SCtimeformat	String	12	Defines the time format
Variable Data	data	Enum8	1	

Write Variable Response:				
sWA SCtimeformat				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	SCtimeformat	String	12	Defines the time format



## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 11 73 52 4E 20 53 43 74 69 6D 65 66 6F 72 6D 61 74 20 69	.....sRN Scti meformat i
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 12 73 52 41 20 53 43 74 69 6D 65 66 6F 72 6D 61 74 20 00 66	.....sRA Scti meformat .f
<b>Write Variable:</b>	02 02 02 02 00 00 00 12 73 57 4E 20 53 43 74 69 6D 65 66 6F 72 6D 61 74 20 00 6C	.....sWN Scti meformat .l
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 11 73 57 41 20 53 43 74 69 6D 65 66 6F 72 6D 61 74 20 63	.....sWA Scti meformat c

### 2.3.2.4. Variable: SCParamsChanged

The following section contains a detailed description of the variable SCParamsChanged.

#### Variable Overview

Variable Name	Description
SCParamsChanged	Flag is set if parameters may have been changed but are not saved permanently

Communication Name	SCParmChngd
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	19
Read-Access	Always
Write-Access	No! (readonly)

Bool	
Value Range	False, True
Initialisation	False

#### Variable Telegram Syntax

Read Variable:				
sRN SCParmChngd				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	SCParmChngd	String	11	Flag is set if parameters may have been changed but are not saved permanently

Read Variable Response:				
sRA SCParmChngd <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	SCParmChngd	String	11	Flag is set if parameters may have been changed but are not saved permanently
Variable Data	data	Bool	1	



## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 10 73 52 4E 20 53 43 50 61 72 6D 43 68 6E 67 64 20 17	.....sRN SCPa rmChngd .
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 11 73 52 41 20 53 43 50 61 72 6D 43 68 6E 67 64 20 00 18	.....sRA SCPa rmChngd ..

### 2.3.2.5. Variable: SCUInterfaceVariant

The following section contains a detailed description of the variable SCUInterfaceVariant.

#### Variable Overview

Variable Name	Description
SCUInterfaceVariant	Defines which kind of User interface has been used for parametrization. Variable may be set by the OnDeviceAdded-Hook

Communication Name	SCUIVers
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	20
Storage	Variable is stored in ParamEEProm
Read-Access	Always
Write-Access	Always

Enum8			
Default Value		0	
	Value	Name	Description
	0	TX_NOT_DEFINED	
	1	TX_SOPAS_ET_STANDARD	

#### Variable Telegram Syntax

Read Variable:				
sRN SCUIVers				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	SCUIVers	String	8	Defines which kind of User interface has been used for parametrization. Variable may be set by the OnDeviceAdded-Hook

Read Variable Response:				
sRA SCUIVers <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	SCUIVers	String	8	Defines which kind of User interface has been used for parametrization. Variable may be set by the OnDeviceAdded-Hook
Variable Data	data	Enum8	1	



Write Variable:				
sWN SCUIVers <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	SCUIVers	String	8	Defines which kind of User interface has been used for parametrization. Variable may be set by the OnDeviceAdded-Hook
Variable Data	data	Enum8	1	

Write Variable Response:				
sWA SCUIVers				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	SCUIVers	String	8	Defines which kind of User interface has been used for parametrization. Variable may be set by the OnDeviceAdded-Hook

### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0D 56 65 72 73 20 51 73 52 4E 20 53 43 55 49	.....sRN SCUIVers Q
Read Variable Response:	02 02 02 02 00 00 00 0E 56 65 72 73 20 00 5E 73 52 41 20 53 43 55 49	.....sRA SCUIVers .^
Write Variable:	02 02 02 02 00 00 00 0E 56 65 72 73 20 00 54 73 57 4E 20 53 43 55 49	.....sWN SCUIVers .T
Write Variable Response:	02 02 02 02 00 00 00 0D 56 65 72 73 20 5B 73 57 41 20 53 43 55 49	.....sWA SCUIVers [

### 2.3.2.6. Method: SoftReset

The following section contains a detailed description of the method SoftReset.

#### Method Overview

Method Name	Description
SoftReset	Method executes a software reset on the device

Communication Name	mSCsoftreset
Sopas Index	21
Invocation Access	AuthorizedClient, Service

Parameters	
ProcessorNbr	
UInt	
Value Range	0..65535



## Method Telegram Syntax

Method Invocation:				
sMN mSCsoftreset <ProcessorNbr>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	mSCsoftreset	String	12	Method executes a software reset on the device
Parameter 1	ProcessorNbr	UInt	2	

Method Return Value:				
sAN mSCsoftreset				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	mSCsoftreset	String	12	Method executes a software reset on the device

## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
Method Invocation:	02 02 02 02 00 00 00 13 73 4D 4E 20 6D 53 43 73 6F 66 74 72 65 73 65 74 20 00 00 76	.....sMN mSCs oftreset ..v
Method Return Value:	02 02 02 02 00 00 00 11 73 41 4E 20 6D 53 43 73 6F 66 74 72 65 73 65 74 20 7A	.....sAN mSCs oftreset z

### 2.3.2.7. Method: RebootDevice

The following section contains a detailed description of the method RebootDevice.

#### Method Overview

Method Name	Description
RebootDevice	Method shuts the device down but saves the parameter before shutdown ist executed

Communication Name	mSCreboot
Sopas Index	22
Invocation Access	AuthorizedClient, Service





## Method Telegram Syntax

Method Invocation:				
sMN mSCreboot				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	mSCreboot	String	9	Method shuts the device down but saves the parameter before shutdown ist executed

Method Return Value:				
sAN mSCreboot				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	mSCreboot	String	9	Method shuts the device down but saves the parameter before shutdown ist executed

## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
Method Invocation:	02 02 02 02 00 00 00 0E 73 4D 4E 20 6D 53 43 72 65 62 6F 6F 74 20 0C	.....sMN mSCreboot .
Method Return Value:	02 02 02 02 00 00 00 0E 73 41 4E 20 6D 53 43 72 65 62 6F 6F 74 20 00	.....sAN mSCreboot .

### 2.3.2.8. Method: LoadFactoryDefaults

The following section contains a detailed description of the method LoadFactoryDefaults.

#### Method Overview

Method Name	Description
LoadFactoryDefaults	The method resets all variables to their default value.

Communication Name	mSCloadfacdef
Sopas Index	23
Invocation Access	AuthorizedClient, Service



## Method Telegram Syntax

Method Invocation:				
sMN mSCloadfacdef				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	mSCloadfacdef	String	13	The method resets all variables to their default value.

Method Return Value:				
sAN mSCloadfacdef				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	mSCloadfacdef	String	13	The method resets all variables to their default value.

## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
Method Invocation:	02 02 02 02 00 00 00 12 73 4D 4E 20 6D 53 43 6C 6F 61 64 66 61 63 64 65 66 20 08	.....sMN mSCl oadfacdef .
Method Return Value:	02 02 02 02 00 00 00 12 73 41 4E 20 6D 53 43 6C 6F 61 64 66 61 63 64 65 66 20 04	.....sAN mSCl oadfacdef .

### 2.3.2.9. Method: LoadApplicationDefaults

The following section contains a detailed description of the method LoadApplicationDefaults.

#### Method Overview

Method Name	Description
LoadApplicationDefaults	The method resets all application relevant variables to their default value

Communication Name	mSCloadappdef
Sopas Index	24
Invocation Access	AuthorizedClient, Service



## Method Telegram Syntax

Method Invocation:				
sMN mSCloadappdef				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	mSCloadappdef	String	13	The method resets all application relevant variables to their default value

Method Return Value:				
sAN mSCloadappdef				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	mSCloadappdef	String	13	The method resets all application relevant variables to their default value

## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
Method Invocation:	02 02 02 02 00 00 00 12 73 4D 4E 20 6D 53 43 6C 6F 61 64 61 70 70 64 65 66 20 0D	.....sMN mSCl oadappdef .
Method Return Value:	02 02 02 02 00 00 00 12 73 41 4E 20 6D 53 43 6C 6F 61 64 61 70 70 64 65 66 20 01	.....sAN mSCl oadappdef .

### 2.3.3. Group: FirmwareDownload2nd

#### 2.3.3.1. Variable: FDSignature

The following section contains a detailed description of the variable FDSignature.

##### Variable Overview

Variable Name	Description
FDSignature	Defines the Signature of the device. Variable is read only and can only be changed by writing an encrypted signature using the method WriteSignature

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	21
Read-Access	Always
Write-Access	No! (readonly)

FlexString	
Length	0..18
Initialisation	Standard

##### Variable Telegram Syntax

Read Variable:				
sRN FDSignature				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	FDSignature	String	11	Defines the Signature of the device. Variable is read only and can only be changed by writing an encrypted signature using the method WriteSignature

Read Variable Response:				
sRA FDSignature <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	FDSignature	String	11	Defines the Signature of the device. Variable is read only and can only be changed by writing an encrypted signature using the method WriteSignature
Variable Data	data	FlexString	18	

##### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 10 73 52 4E 20 46 44 53 69 67 6E 61 74 75 72 65 20 29	.....sRN FDSi gnature )
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 1A 73 52 41 20 46 44 53 69 67 6E 61 74 75 72 65 20 00 08 53 74 61 6E 64 61 72 64 15	.....sRA FDSi gnature ..Standa rd.



### 2.3.3.2. Method: Start2ndStageLoader

The following section contains a detailed description of the method Start2ndStageLoader.

#### Method Overview

Method Name	Description
Start2ndStageLoader	Method starts the second-stage loader and publishes for which processor the following the following data are intended

Communication Name	mFDsrt2ndstgldr
Sopas Index	27
Invocation Access	Service

Parameters	
Parameter	
DInt	
Value Range	-2147483648..2147483647

Return Values	
Handle	
DInt	
Value Range	-2147483648..2147483647

#### Method Telegram Syntax

Method Invocation:				
sMN mFDsrt2ndstgldr <Parameter>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	mFDsrt2ndstgldr	String	15	Method starts the second-stage loader and publishes for which processor the following the following data are intended
Parameter 1	Parameter	DInt	4	

Method Return Value:				
sAN mFDsrt2ndstgldr <Handle>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	mFDsrt2ndstgldr	String	15	Method starts the second-stage loader and publishes for which processor the following the following data are intended
Return Value 1	Handle	DInt	4	



## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
<b>Method Invocation:</b>	02 02 02 02 00 00 00 18 73 4D 4E 20 6D 46 44 73 72 74 32 6E 64 73 74 67 6C 64 72 20 00 00 00 00 48	.....sMN mFDs rt2ndstgldr .... H
<b>Method Return Value:</b>	02 02 02 02 00 00 00 18 73 41 4E 20 6D 46 44 73 72 74 32 6E 64 73 74 67 6C 64 72 20 00 00 00 00 44	.....sAN mFDs rt2ndstgldr .... D

### 2.3.3.3. Method: LogWrite

The following section contains a detailed description of the method LogWrite.

#### Method Overview

Method Name	Description
LogWrite	Transfer logging data

Communication Name	mFDlogwrite
Sopas Index	28
Invocation Access	Service

Parameters	
Handle	
DInt	
Value Range	-2147483648..2147483647
LogData	
FlexString	
Length	0..256

Return Values	
Result	
DInt	
Value Range	-2147483648..2147483647



## Method Telegram Syntax

Method Invocation:				
sMN mFDlogwrite <Handle> <LogData>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	mFDlogwrite	String	11	Transfer logging data
Parameter 1	Handle	DInt	4	
Parameter 2	LogData	FlexString	256	

Method Return Value:				
sAN mFDlogwrite <Result>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	mFDlogwrite	String	11	Transfer logging data
Return Value 1	Result	DInt	4	

## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
Method Invocation:	02 02 02 02 00 00 00 16 73 4D 4E 20 6D 46 44 6C 6F 67 77 72 69 74 65 20 00 00 00 00 00 06	.....sMN mFDlogwrite .....
Method Return Value:	02 02 02 02 00 00 00 14 73 41 4E 20 6D 46 44 6C 6F 67 77 72 69 74 65 20 00 00 00 00 0A	.....sAN mFDlogwrite .....

### 2.3.3.4. Method: LogEnd

The following section contains a detailed description of the method LogEnd.

#### Method Overview

Method Name	Description
LogEnd	Ends logging data

Communication Name	mFDlogend
Sopas Index	29
Invocation Access	Service

Parameters	
Handle	
DInt	
Value Range	-2147483648..2147483647



Return Values	
Result	
<b>DInt</b>	
Value Range	-2147483648..2147483647

## Method Telegram Syntax

Method Invocation:				
sMN mFDlogend <Handle>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	mFDlogend	String	9	Ends logging data
Parameter 1	Handle	DInt	4	

Method Return Value:				
sAN mFDlogend <Result>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	mFDlogend	String	9	Ends logging data
Return Value 1	Result	DInt	4	

## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
<b>Method Invocation:</b>	02 02 02 02 00 00 00 12 73 4D 4E 20 6D 46 44 6C 6F 67 65 6E 64 20 00 00 00 00 14	.....sMN mFDlogend .....
<b>Method Return Value:</b>	02 02 02 02 00 00 00 12 73 41 4E 20 6D 46 44 6C 6F 67 65 6E 64 20 00 00 00 00 18	.....sAN mFDlogend .....

### 2.3.3.5. Method: LogInfo

The following section contains a detailed description of the method LogInfo.

#### Method Overview

Method Name	Description
LogInfo	Informs about free logging space

Communication Name	mFDloginfo
Sopas Index	30
Invocation Access	Service

Return Values	
Size	
<b>DInt</b>	
Value Range	-2147483648..2147483647





## Method Telegram Syntax

Method Invocation:				
sMN mFDloginfo				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	mFDloginfo	String	10	Informs about free logging space

Method Return Value:				
sAN mFDloginfo <Size>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	mFDloginfo	String	10	Informs about free logging space
Return Value 1	Size	DInt	4	

## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
Method Invocation:	02 02 02 02 00 00 00 0F 73 4D 4E 20 6D 46 44 6C 6F 67 69 6E 66 6F 20 75	.....sMN mFDl oginfo u
Method Return Value:	02 02 02 02 00 00 00 13 73 41 4E 20 6D 46 44 6C 6F 67 69 6E 66 6F 20 00 00 00 00 79	.....sAN mFDl oginfo ....y

### 2.3.3.6. Method: LogErase

The following section contains a detailed description of the method LogErase.

#### Method Overview

Method Name	Description
LogErase	Deletes the log file

Communication Name	mFDlogerase
Sopas Index	31
Invocation Access	Service

Parameters	
Handle	
DInt	
Value Range	-2147483648..2147483647

Return Values	
Result	
DInt	
Value Range	-2147483648..2147483647



## Method Telegram Syntax

Method Invocation:				
sMN mFDlogerase <Handle>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	mFDlogerase	String	11	Deletes the log file
Parameter 1	Handle	DInt	4	

Method Return Value:				
sAN mFDlogerase <Result>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	mFDlogerase	String	11	Deletes the log file
Return Value 1	Result	DInt	4	

## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
Method Invocation:	02 02 02 02 00 00 00 14 73 4D 4E 20 6D 46 44 6C 6F 67 65 72 61 73 65 20 00 00 00 00 1B	.....sMN mFDlogerase .....
Method Return Value:	02 02 02 02 00 00 00 14 73 41 4E 20 6D 46 44 6C 6F 67 65 72 61 73 65 20 00 00 00 00 17	.....sAN mFDlogerase .....



## 2.4. Interface Block: DiagBase

### 2.4.1. Group: Message

#### 2.4.1.1. Variable: ETraceMsg

The following section contains a detailed description of the variable ETraceMsg.

##### Variable Overview

Variable Name	Description
ETraceMsg	Variable includes Trace Msg

Communication Name	MStrace
Sopas Synchronisation	Variable is not relevant for synchronisation with SOPAS ET.
Sopas Index	22
Read-Access	Always
Write-Access	No! (readonly)

FlexString	
Length	0..256

##### Variable Telegram Syntax

Read Variable:				
sRN MStrace				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	MStrace	String	7	Variable includes Trace Msg

Read Variable Response:				
sRA MStrace <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	MStrace	String	7	Variable includes Trace Msg
Variable Data	data	FlexString	256	

##### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0C 73 52 4E 20 4D 53 74 72 61 63 65 20 10	.....sRN MStrace .
Read Variable Response:	02 02 02 02 00 00 00 0E 73 52 41 20 4D 53 74 72 61 63 65 20 00 00 1F	.....sRA MStrace ...



### 2.4.1.2. Variable: EMsgDebug

The following section contains a detailed description of the variable EMsgDebug.

#### Variable Overview

Variable Name	Description
EMsgDebug	Error messages or infos on level DEBUG which are stored in volatile memory. They are used as debugging aids.

Communication Name	MSdbg
Sopas Synchronisation	Variable is not relevant for synchronisation with SOPAS ET.
Sopas Index	23
Read-Access	Always
Write-Access	No! (readonly)

Array		
Length		25
	UserType	
	ErrStructType	See the chapter "User Types" for details.

#### Variable Telegram Syntax

Read Variable:				
sRN MSdbg				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	MSdbg	String	5	Error messages or infos on level DEBUG which are stored in volatile memory. They are used as debugging aids.

Read Variable Response:				
sRA MSdbg <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	MSdbg	String	5	Error messages or infos on level DEBUG which are stored in volatile memory. They are used as debugging aids.
Variable Data	data	Array	2050	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0A 73 52 4E 20 4D 53 64 62 67 20 10	.....sRN MSdb g .



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### 2.4.1.3. Variable: EMsgInfo

The following section contains a detailed description of the variable EMsgInfo.

#### Variable Overview

Variable Name	Description
EMsgInfo	Info messages which are stored in volatile memory. They are informations and do not indicate an error condition.

Communication Name	MSinfo
Sopas Synchronisation	Variable is not relevant for synchronisation with SOPAS ET.
Sopas Index	24
Read-Access	Always
Write-Access	No! (readonly)

Array		
Length		25
	UserType	
	ErrStructType	See the chapter "User Types" for details.

#### Variable Telegram Syntax

Read Variable:				
sRN MSinfo				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	MSinfo	String	6	Info messages which are stored in volatile memory. They are informations and do not indicate an error condition.

Read Variable Response:				
sRA MSinfo <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	MSinfo	String	6	Info messages which are stored in volatile memory. They are informations and do not indicate an error condition.
Variable Data	data	Array	2050	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0B 73 52 4E 20 4D 53 69 6E 66 6F 20 7F	.....sRN MSin fo .



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#### 2.4.1.4. Variable: EMsgWarning

The following section contains a detailed description of the variable EMsgWarning.

##### Variable Overview

Variable Name	Description
EMsgWarning	Error message on level WARNING which is stored in non volatile memory (EEPROM) TODO: storing

Communication Name	MSwarn
Sopas Synchronisation	Variable is not relevant for synchronisation with SOPAS ET.
Sopas Index	25
Read-Access	Always
Write-Access	No! (readonly)

Array		
Length	25	
	UserType	
	ErrStructType	See the chapter "User Types" for details.

##### Variable Telegram Syntax

Read Variable:				
sRN MSwarn				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	MSwarn	String	6	Error message on level WARNING which is stored in non volatile memory (EEPROM) TODO: storing

Read Variable Response:				
sRA MSwarn <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	MSwarn	String	6	Error message on level WARNING which is stored in non volatile memory (EEPROM) TODO: storing
Variable Data	data	Array	2050	

##### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0B 73 52 4E 20 4D 53 77 61 72 6E 20 7B	.....sRN MSwa rn {





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### 2.4.1.5. Variable: EMsgError

The following section contains a detailed description of the variable EMsgError.

#### Variable Overview

Variable Name	Description
EMsgError	Error message on level ERROR which is stored in non volatile memory (EEPROM) TODO: storing

Communication Name	MSerr
Sopas Synchronisation	Variable is not relevant for synchronisation with SOPAS ET.
Sopas Index	26
Read-Access	Always
Write-Access	No! (readonly)

Array		
Length		10
	UserType	
	ErrStructType	See the chapter "User Types" for details.

#### Variable Telegram Syntax

Read Variable:				
sRN MSerr				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	MSerr	String	5	Error message on level ERROR which is stored in non volatile memory (EEPROM) TODO: storing

Read Variable Response:				
sRA MSerr <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	MSerr	String	5	Error message on level ERROR which is stored in non volatile memory (EEPROM) TODO: storing
Variable Data	data	Array	820	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0A 73 52 4E 20 4D 53 65 72 72 20 14	.....sRN MSer r .





## Variable Telegram Syntax

Read Variable:				
sRN MSfat				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	MSfat	String	5	Error message on level FATAL which is stored in non volatile memory (EEPROM) TODO: storing

Read Variable Response:				
sRA MSfat <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	MSfat	String	5	Error message on level FATAL which is stored in non volatile memory (EEPROM) TODO: storing
Variable Data	data	Array	820	

## Variable Telegram Examples

[illegible]



## 2.4.2. Group: DeviceInformationBase

### 2.4.2.1. Variable: LastUsername

The following section contains a detailed description of the variable LastUsername.

#### Variable Overview

Variable Name	Description
LastUsername	Last user executed store permanent

Communication Name	DIuser
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	28
Storage	Variable is stored in ParamEEProm
Read-Access	Always
Write-Access	No! (readonly)

FlexString	
Length	0..18
Initialisation	not defined

#### Variable Telegram Syntax

Read Variable:				
sRN DIuser				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	DIuser	String	6	Last user executed store permanent

Read Variable Response:				
sRA DIuser <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	DIuser	String	6	Last user executed store permanent
Variable Data	data	FlexString	18	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0B 73 52 4E 20 44 49 75 73 65 72 20 73	.....sRN DIuser s
Read Variable Response:	02 02 02 02 00 00 00 18 73 52 41 20 44 49 75 73 65 72 20 00 0B 6E 6F 74 20 64 65 66 69 6E 65 64 43	.....sRA DIuser ..not defined C

### 2.4.2.2. Variable: LastParaDate

The following section contains a detailed description of the variable LastParaDate.

#### Variable Overview

Variable Name	Description
LastParaDate	Last date when store permanent was executed

Communication Name	DIpara
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	29
Storage	Variable is stored in ParamEEPROM
Read-Access	Always
Write-Access	No! (readonly)

FlexString	
Length	0..10
Initialisation	DD.MM.YYYY

#### Variable Telegram Syntax

Read Variable:				
sRN DIpara				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	DIpara	String	6	Last date when store permanent was executed

Read Variable Response:				
sRA DIpara <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	DIpara	String	6	Last date when store permanent was executed
Variable Data	data	FlexString	10	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 0B 73 52 4E 20 44 49 70 61 72 61 20 60	.....sRN DIpara`
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 17 73 52 41 20 44 49 70 61 72 61 20 00 0A 44 44 2E 4D 4D 2E 59 59 59 59 65	.....sRA DIpara` ..DD.MM.YYYYe

### 2.4.2.3. Variable: LastParaTime

The following section contains a detailed description of the variable LastParaTime.

#### Variable Overview

Variable Name	Description
LastParaTime	Last date when store permanent was executed

Communication Name	Dlparatm
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	30
Storage	Variable is stored in ParamEEProm
Read-Access	Always
Write-Access	No! (readonly)

FlexString	
Length	0..5
Initialisation	HH:MM

#### Variable Telegram Syntax

Read Variable:				
sRN Dlparatm				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	Dlparatm	String	8	Last date when store permanent was executed

Read Variable Response:				
sRA Dlparatm <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	Dlparatm	String	8	Last date when store permanent was executed
Variable Data	data	FlexString	5	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 0D 73 52 4E 20 44 49 70 61 72 61 74 6D 20 79	.....sRN DIpa ratm y
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 14 73 52 41 20 44 49 70 61 72 61 74 6D 20 00 05 48 48 3A 4D 4D 49	.....sRA DIpa ratm ..HH:MMI



## 2.4.2.4. Variable: LastUsernameTemp

The following section contains a detailed description of the variable LastUsernameTemp.

### Variable Overview

Variable Name	Description
LastUsernameTemp	is not defined until the method SetLastUser has been executed

Communication Name	DIusertmp
Sopas Synchronisation	Variable is not relevant for synchronisation with SOPAS ET.
Sopas Index	31
Read-Access	Always
Write-Access	No! (readonly)

FlexString	
Length	0..18
Initialisation	not defined

### Variable Telegram Syntax

Read Variable:				
sRN DIusertmp				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	DIusertmp	String	9	is not defined until the method SetLastUser has been executed

Read Variable Response:				
sRA DIusertmp <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	DIusertmp	String	9	is not defined until the method SetLastUser has been executed
Variable Data	data	FlexString	18	

### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0E 73 52 4E 20 44 49 75 73 65 72 74 6D 70 20 1A	.....sRN DIusertmp .
Read Variable Response:	02 02 02 02 00 00 00 1B 73 52 41 20 44 49 75 73 65 72 74 6D 70 20 00 0B 6E 6F 74 20 64 65 66 69 6E 65 64 2A	.....sRA DIusertmp ..not defined*





### 2.4.2.5. Variable: LastParaDateTemp

The following section contains a detailed description of the variable LastParaDateTemp.

#### Variable Overview

Variable Name	Description
LastParaDateTemp	is not defined until the method SetLastUser has been executed

Communication Name	Dlparatmp
Sopas Synchronisation	Variable is not relevant for synchronisation with SOPAS ET.
Sopas Index	32
Read-Access	Always
Write-Access	No! (readonly)

FlexString	
Length	0..10
Initialisation	DD.MM.YYYY

#### Variable Telegram Syntax

Read Variable:				
sRN Dlparatmp				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	Dlparatmp	String	9	is not defined until the method SetLastUser has been executed

Read Variable Response:				
sRA Dlparatmp <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	Dlparatmp	String	9	is not defined until the method SetLastUser has been executed
Variable Data	data	FlexString	10	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0E 73 52 4E 20 44 49 70 61 72 61 74 6D 70 20 09	.....sRN DIpa ratmp .
Read Variable Response:	02 02 02 02 00 00 00 1A 73 52 41 20 44 49 70 61 72 61 74 6D 70 20 00 0A 44 44 2E 4D 4D 2E 59 59 59 59 0C	.....sRA DIpa ratmp ..DD.MM.YY YY.



## 2.4.2.6. Variable: LastParaTimeTemp

The following section contains a detailed description of the variable LastParaTimeTemp.

### Variable Overview

Variable Name	Description
LastParaTimeTemp	is not defined until the method SetLastUser has been executed

Communication Name	Dlparatmtmp
Sopas Synchronisation	Variable is not relevant for synchronisation with SOPAS ET.
Sopas Index	33
Read-Access	Always
Write-Access	No! (readonly)

FlexString	
Length	0..5
Initialisation	HH:MM

### Variable Telegram Syntax

Read Variable:				
sRN Dlparatmtmp				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	Dlparatmtmp	String	11	is not defined until the method SetLastUser has been executed

Read Variable Response:				
sRA Dlparatmtmp <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	Dlparatmtmp	String	11	is not defined until the method SetLastUser has been executed
Variable Data	data	FlexString	5	

### Variable Telegram Examples

Example: Default Values				
Variable rest examples with data set to default values.				
Read Variable:	02 02 02 02 00 00 00 10 72 61 74 6D 74 6D 70 20	73 52 4E 20 44 49 70 61 10	.....sRN DIpa ratmtmp .	
Read Variable Response:	02 02 02 02 00 00 00 17 72 61 74 6D 74 6D 70 20	73 52 41 20 44 49 70 61 00 05 48 48 3A 4D 4D 20	.....sRA DIpa ratmtmp ..HH:MM	



### 2.4.2.7. Variable: LastMaintenance

The following section contains a detailed description of the variable LastMaintenance.

#### Variable Overview

Variable Name	Description
LastMaintenance	Date of last maintenance

Communication Name	Dllstmt
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	34
Storage	Variable is stored in ParamEEProm
Read-Access	Always
Write-Access	AuthorizedClient, Service

FlexString	
Length	0..10
Initialisation	DD.MM.YYYY

#### Variable Telegram Syntax

Read Variable:				
sRN Dllstmt				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	Dllstmt	String	7	Date of last maintenance

Read Variable Response:				
sRA Dllstmt <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	Dllstmt	String	7	Date of last maintenance
Variable Data	data	FlexString	10	

Write Variable:				
sWN Dllstmt <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	Dllstmt	String	7	Date of last maintenance
Variable Data	data	FlexString	10	

Write Variable Response:				
sWA Dllstmt				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	Dllstmt	String	7	Date of last maintenance



## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 0C 73 52 4E 20 44 49 6C 73 74 6D 74 20 10	.....sRN DIls tmt .
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 18 73 52 41 20 44 49 6C 73 74 6D 74 20 00 0A 44 44 2E 4D 4D 2E 59 59 59 59 15	.....sRA DIls tmt ..DD.MM.YYYY .
<b>Write Variable:</b>	02 02 02 02 00 00 00 18 73 57 4E 20 44 49 6C 73 74 6D 74 20 00 0A 44 44 2E 4D 4D 2E 59 59 59 59 1F	.....sWN DIls tmt ..DD.MM.YYYY .
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 0C 73 57 41 20 44 49 6C 73 74 6D 74 20 1A	.....sWA DIls tmt .

### 2.4.2.8. Variable: NextMaintenance

The following section contains a detailed description of the variable NextMaintenance.

#### Variable Overview

Variable Name	Description
NextMaintenance	Date of Next maintenance

Communication Name	DInxtmt
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	35
Storage	Variable is stored in ParamEEProm
Read-Access	Always
Write-Access	AuthorizedClient, Service

String	
Length	10
Initialisation	DD.MM.YYYY



## Variable Telegram Syntax

Read Variable:				
sRN DInxtmt				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	DInxtmt	String	7	Date of Next maintenance

Read Variable Response:				
sRA DInxtmt <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	DInxtmt	String	7	Date of Next maintenance
Variable Data	data	String	10	

Write Variable:				
sWN DInxtmt <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	DInxtmt	String	7	Date of Next maintenance
Variable Data	data	String	10	

Write Variable Response:				
sWA DInxtmt				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	DInxtmt	String	7	Date of Next maintenance

## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 0C 73 52 4E 20 44 49 6E 78 74 6D 74 20 19	.....sRN DInx tmt .
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 16 73 52 41 20 44 49 6E 78 74 6D 74 20 44 44 2E 4D 4D 2E 59 59 59 59 16	.....sRA DInx tmt DD.MM.YYYY.
<b>Write Variable:</b>	02 02 02 02 00 00 00 16 73 57 4E 20 44 49 6E 78 74 6D 74 20 44 44 2E 4D 4D 2E 59 59 59 59 1C	.....sWN DInx tmt DD.MM.YYYY.
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 0C 73 57 41 20 44 49 6E 78 74 6D 74 20 13	.....sWA DInx tmt .

### 2.4.2.9. Variable: GoReadyCount

The following section contains a detailed description of the variable GoReadyCount.

#### Variable Overview

Variable Name	Description
GoReadyCount	The number of go-ready cycles

Communication Name	DIgrdycnt
Sopas Synchronisation	Variable is not relevant for synchronisation with SOPAS ET.
Sopas Index	36
Read-Access	Always
Write-Access	No! (readonly)

UDInt	
Value Range	0..4294967295
Initialisation	0

#### Variable Telegram Syntax

Read Variable:				
sRN DIgrdycnt				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	DIgrdycnt	String	9	The number of go-ready cycles

Read Variable Response:				
sRA DIgrdycnt <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	DIgrdycnt	String	9	The number of go-ready cycles
Variable Data	data	UDInt	4	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 0E 73 52 4E 20 44 49 67 72 64 79 63 6E 74 20 13	.....sRN DIgr dycnt .
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 12 73 52 41 20 44 49 67 72 64 79 63 6E 74 20 00 00 00 00 1C	.....sRA DIgr dycnt .....

## 2.4.2.10. Method: SetLastUser

The following section contains a detailed description of the method SetLastUser.

### Method Overview

Method Name	Description
SetLastUser	Method defines the last user and last date parameters

Communication Name	mDIsetlast
Sopas Index	34
Invocation Access	AuthorizedClient, Service

Parameters	
LastUser	
<b>FlexString</b>	
Length	0..18
LastParaDate	
<b>FlexString</b>	
Length	0..10
LastParaTime	
<b>FlexString</b>	
Length	0..5

### Method Telegram Syntax

Method Invocation:				
sMN mDIsetlast <LastUser> <LastParaDate> <LastParaTime>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	mDIsetlast	String	10	Method defines the last user and last date parameters
Parameter 1	LastUser	FlexString	18	
Parameter 2	LastParaDate	FlexString	10	
Parameter 3	LastParaTime	FlexString	5	

Method Return Value:				
sAN mDIsetlast				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	mDIsetlast	String	10	Method defines the last user and last date parameters



## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
<b>Method Invocation:</b>	02 02 02 02 00 00 00 15 73 4D 4E 20 6D 44 49 73 65 74 6C 61 73 74 20 00 00 00 00 00 00 78	.....sMN mDIs etlast .....x
<b>Method Return Value:</b>	02 02 02 02 00 00 00 0F 73 41 4E 20 6D 44 49 73 65 74 6C 61 73 74 20 74	.....sAN mDIs etlast t





## 2.5. Interface Block: FirstStageLdr

### 2.5.1. Group: FirmwareDownload

#### 2.5.1.1. Variable: ProgramDataTransferSize

The following section contains a detailed description of the variable ProgramDataTransferSize.

#### Variable Overview

Variable Name	Description
ProgramDataTransferSize	The number of how many bytes is accepted by the ProgramData method for each transfer

Communication Name	FDprgdatatransize
Sopas Synchronisation	Variable is not relevant for synchronisation with SOPAS ET.
Sopas Index	37
Read-Access	Always
Write-Access	No! (readonly)

UDInt	
Value Range	0..4294967295
Initialisation	1024

#### Variable Telegram Syntax

Read Variable:				
sRN FDprgdatatransize				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	FDprgdatatransize	String	17	The number of how many bytes is accepted by the ProgramData method for each transfer

Read Variable Response:				
sRA FDprgdatatransize <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	FDprgdatatransize	String	17	The number of how many bytes is accepted by the ProgramData method for each transfer
Variable Data	data	UDInt	4	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 16 73 52 4E 20 46 44 70 72 67 64 61 74 61 74 72 61 6E 73 69 7A 65 20 14	.....sRN FDprgdatatransize .
Read Variable Response:	02 02 02 02 00 00 00 1A 73 52 41 20 46 44 70 72 67 64 61 74 61 74 72 61 6E 73 69 7A 65 20 00 00 80 00 9B	.....sRA FDprgdatatransize .. .



### 2.5.1.2. Method: SystemConfigData

The following section contains a detailed description of the method SystemConfigData.

#### Method Overview

Method Name	Description
SystemConfigData	Method transfers the relevant data of the system header

Communication Name	mFDsyscfgdata
Sopas Index	38
Invocation Access	Service

Parameters	
Handle	
DInt	
Value Range	-2147483648..2147483647
Identifier	
FlexString	
Length	0..64
Data	
FlexString	
Length	0..256

Return Values	
Result	
DInt	
Value Range	-2147483648..2147483647

#### Method Telegram Syntax

Method Invocation:				
sMN mFDsyscfgdata <Handle> <Identifier> <Data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	mFDsyscfgdata	String	13	Method transfers the relevant data of the system header
Parameter 1	Handle	DInt	4	
Parameter 2	Identifier	FlexString	64	
Parameter 3	Data	FlexString	256	

Method Return Value:				
sAN mFDsyscfgdata <Result>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	mFDsyscfgdata	String	13	Method transfers the relevant data of the system header
Return Value 1	Result	DInt	4	



## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
<b>Method Invocation:</b>	02 02 02 02 00 00 00 1A 73 4D 4E 20 6D 46 44 73 79 73 63 66 67 64 61 74 61 20 00 00 00 00 00 00 00 14	.....sMN mFDs yscfgdata ..... ...
<b>Method Return Value:</b>	02 02 02 02 00 00 00 16 73 41 4E 20 6D 46 44 73 79 73 63 66 67 64 61 74 61 20 00 00 00 00 18	.....sAN mFDs yscfgdata .....

### 2.5.1.3. Method: ProgramConfigData

The following section contains a detailed description of the method ProgramConfigData.

#### Method Overview

Method Name	Description
ProgramConfigData	Method transfers the relevant data of the program header

Communication Name	mFDprgcfgdata
Sopas Index	39
Invocation Access	Service

Parameters	
Handle	
DInt	
Value Range	-2147483648..2147483647
Device	
DInt	
Value Range	-2147483648..2147483647
Identifier	
FlexString	
Length	0..64
Data	
FlexString	
Length	0..256

Return Values	
Result	
DInt	
Value Range	-2147483648..2147483647



## Method Telegram Syntax

Method Invocation:				
sMN mFDprgcfgdata <Handle> <Device> <Identifier> <Data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	mFDprgcfgdata	String	13	Method transfers the relevant data of the program header
Parameter 1	Handle	DInt	4	
Parameter 2	Device	DInt	4	
Parameter 3	Identifier	FlexString	64	
Parameter 4	Data	FlexString	256	

Method Return Value:				
sAN mFDprgcfgdata <Result>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	mFDprgcfgdata	String	13	Method transfers the relevant data of the program header
Return Value 1	Result	DInt	4	

## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
<b>Method Invocation:</b>	02 02 02 02 00 00 00 1E 73 4D 4E 20 6D 46 44 70 72 67 63 66 67 64 61 74 61 20 00 00 00 00 00 00 00 00 00 08	.....sMN mFDp rgcfgdata ..... .....
<b>Method Return Value:</b>	02 02 02 02 00 00 00 16 73 41 4E 20 6D 46 44 70 72 67 63 66 67 64 61 74 61 20 00 00 00 00 00 04	.....sAN mFDp rgcfgdata ..... .....

### 2.5.1.4. Method: ProgramData

The following section contains a detailed description of the method ProgramData.

#### Method Overview

Method Name	Description
ProgramData	Method transfers the program data

Communication Name	mFDprgdata
Sopas Index	40
Invocation Access	Service

Parameters	
Handle	
DInt	
Value Range	-2147483648..2147483647



Parameters		
Device		
	<b>DInt</b>	
	Value Range	-2147483648..2147483647
BlockSize		
	<b>DInt</b>	
	Value Range	-2147483648..2147483647
Data		
	<b>FlexString</b>	
	Length	0..32768

Return Values		
Result		
	<b>DInt</b>	
	Value Range	-2147483648..2147483647

## Method Telegram Syntax

Method Invocation:					
sMN mFDprgdata <Handle> <Device> <BlockSize> <Data>					
Telegram Part	Telegram	Type	Length [Byte]	Description	
Command Type	sMN	String	3	Request (SOPAS Method by Name)	
Command	mFDprgdata	String	10	Method transfers the program data	
Parameter 1	Handle	DInt	4		
Parameter 2	Device	DInt	4		
Parameter 3	BlockSize	DInt	4		
Parameter 4	Data	FlexString	32768		

Method Return Value:					
sAN mFDprgdata <Result>					
Telegram Part	Telegram	Type	Length [Byte]	Description	
Command Type	sAN	String	3	Result (SOPAS Method Result)	
Command	mFDprgdata	String	10	Method transfers the program data	
Return Value 1	Result	DInt	4		

## Method Telegram Examples

Example: Default Values			
Method telegram examples with parameter data and return value data set to default values.			
<b>Method Invocation:</b>	02 02 02 02 00 00 00 1D 73 4D 4E 20 6D 46 44 70 72 67 64 61 74 61 20 00 00 00 00 00 00 00 00 00 00 00 00 00 6A		.....sMN mFDp rgdata ..... .....j
<b>Method Return Value:</b>	02 02 02 02 00 00 00 13 73 41 4E 20 6D 46 44 70 72 67 64 61 74 61 20 00 00 00 00 66		.....sAN mFDp rgdata ....f



### 2.5.1.5. Method: ExecuteDownload

The following section contains a detailed description of the method ExecuteDownload.

#### Method Overview

Method Name	Description
ExecuteDownload	Method directs the device to execute the download

Communication Name	mFDexedwnld
Sopas Index	41
Invocation Access	Service

Parameters	
Handle	
DInt	
Value Range	-2147483648..2147483647
Device	
DInt	
Value Range	-2147483648..2147483647

Return Values	
Result	
DInt	
Value Range	-2147483648..2147483647

#### Method Telegram Syntax

Method Invocation:				
sMN mFDexedwnld <Handle> <Device>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	mFDexedwnld	String	11	Method directs the device to execute the download
Parameter 1	Handle	DInt	4	
Parameter 2	Device	DInt	4	

Method Return Value:				
sAN mFDexedwnld <Result>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	mFDexedwnld	String	11	Method directs the device to execute the download
Return Value 1	Result	DInt	4	



## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
<b>Method Invocation:</b>	02 02 02 02 00 00 00 18 73 4D 4E 20 6D 46 44 65 78 65 64 77 6E 6C 64 20 00 00 00 00 00 00 00 12	.....sMN mFDe xedwnld ..... .
<b>Method Return Value:</b>	02 02 02 02 00 00 00 14 73 41 4E 20 6D 46 44 65 78 65 64 77 6E 6C 64 20 00 00 00 00 1E	.....sAN mFDe xedwnld .....

### 2.5.1.6. Method: StatusDownload

The following section contains a detailed description of the method StatusDownload.

#### Method Overview

Method Name	Description
StatusDownload	Method informs the progress of the download process

Communication Name	mFDstadwnld
Sopas Index	42
Invocation Access	Service

Parameters	
Handle	
DInt	
Value Range	-2147483648..2147483647
Device	
DInt	
Value Range	-2147483648..2147483647

Return Values	
Status	
DInt	
Value Range	-2147483648..2147483647



## Method Telegram Syntax

Method Invocation:				
sMN mFDstadwnld <Handle> <Device>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	mFDstadwnld	String	11	Method informs the progress of the download process
Parameter 1	Handle	DInt	4	
Parameter 2	Device	DInt	4	

Method Return Value:				
sAN mFDstadwnld <Status>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	mFDstadwnld	String	11	Method informs the progress of the download process
Return Value 1	Status	DInt	4	

## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
Method Invocation:	02 02 02 02 00 00 00 18 73 4D 4E 20 6D 46 44 73 74 61 64 77 6E 6C 64 20 00 00 00 00 00 00 00 0C	.....sMN mFDs tadwnld ..... .
Method Return Value:	02 02 02 02 00 00 00 14 73 41 4E 20 6D 46 44 73 74 61 64 77 6E 6C 64 20 00 00 00 00 00	.....sAN mFDs tadwnld .....

### 2.5.1.7. Method: FinishDownload

The following section contains a detailed description of the method FinishDownload.

#### Method Overview

Method Name	Description
FinishDownload	Finishes the download process

Communication Name	mFDfindwnld
Sopas Index	43
Invocation Access	Service

Parameters	
Handle	
DInt	
Value Range	-2147483648..2147483647





Parameters	
Device	
<b>DInt</b>	
Value Range	-2147483648..2147483647

Return Values	
Result	
<b>DInt</b>	
Value Range	-2147483648..2147483647

## Method Telegram Syntax

Method Invocation:				
sMN mFDfindwnld <Handle> <Device>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	mFDfindwnld	String	11	Finishes the download process
Parameter 1	Handle	DInt	4	
Parameter 2	Device	DInt	4	

Method Return Value:				
sAN mFDfindwnld <Result>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	mFDfindwnld	String	11	Finishes the download process
Return Value 1	Result	DInt	4	

## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
<b>Method Invocation:</b>	02 02 02 02 00 00 00 18 73 4D 4E 20 6D 46 44 66 69 6E 64 77 6E 6C 64 20 00 00 00 00 00 00 00 0B	.....sMN mFDf indwnld ..... .
<b>Method Return Value:</b>	02 02 02 02 00 00 00 14 73 41 4E 20 6D 46 44 66 69 6E 64 77 6E 6C 64 20 00 00 00 00 07	.....sAN mFDf indwnld .....

### 2.5.1.8. Method: AbortDownload

The following section contains a detailed description of the method AbortDownload.

#### Method Overview

Method Name	Description
AbortDownload	Aborts the download process

Communication Name	mFDabrtdwld
Sopas Index	44
Invocation Access	Service

Parameters	
Handle	
<b>DInt</b>	
Value Range	-2147483648..2147483647
Device	
<b>DInt</b>	
Value Range	-2147483648..2147483647

Return Values	
Result	
<b>DInt</b>	
Value Range	-2147483648..2147483647

#### Method Telegram Syntax

Method Invocation:				
sMN mFDabrtdwld <Handle> <Device>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	mFDabrtdwld	String	12	Aborts the download process
Parameter 1	Handle	DInt	4	
Parameter 2	Device	DInt	4	

Method Return Value:				
sAN mFDabrtdwld <Result>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	mFDabrtdwld	String	12	Aborts the download process
Return Value 1	Result	DInt	4	



## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
Method Invocation:	02 02 02 02 00 00 00 19 73 4D 4E 20 6D 46 44 61 62 72 74 64 77 6E 6C 64 20 00 00 00 00 00 00 00 00 6F	.....sMN mFDa brtdwnld ..... ·o
Method Return Value:	02 02 02 02 00 00 00 15 73 41 4E 20 6D 46 44 61 62 72 74 64 77 6E 6C 64 20 00 00 00 00 63	.....sAN mFDa brtdwnld ....c

## 2.6. Interface Block: GeneralCfgNetworkBase

### 2.6.1. Group: NetworkBase

#### 2.6.1.1. Variable: NetDeviceID

The following section contains a detailed description of the variable NetDeviceID.

##### Variable Overview

Variable Name	Description
NetDeviceID	ID of the Device

Communication Name	NWDevID
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	38
Storage	Variable is stored in ParamEEProm
Read-Access	Always
Write-Access	AuthorizedClient, Service

UInt	
Value Range	1..63
Initialisation	1

##### Variable Telegram Syntax

Read Variable:				
sRN NWDevID				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	NWDevID	String	7	ID of the Device

Read Variable Response:				
sRA NWDevID <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	NWDevID	String	7	ID of the Device
Variable Data	data	UInt	2	

Write Variable:				
sWN NWDevID <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	NWDevID	String	7	ID of the Device
Variable Data	data	UInt	2	



Write Variable Response:				
sWA NWDevID				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	NWDevID	String	7	ID of the Device

## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 0C 73 52 4E 20 4E 57 44 65 76 49 44 20 2C	.....sRN NWDe vID ,
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 0E 73 52 41 20 4E 57 44 65 76 49 44 20 00 01 22	.....sRA NWDe vID .."
<b>Write Variable:</b>	02 02 02 02 00 00 00 0E 73 57 4E 20 4E 57 44 65 76 49 44 20 00 01 28	.....sWN NWDe vID ..(
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 0C 73 57 41 20 4E 57 44 65 76 49 44 20 26	.....sWA NWDe vID &

## 2.7. Interface Block: GeneralCfgEthernetBase

### 2.7.1. Group: EthernetBase

#### 2.7.1.1. Variable: EtherIPAddress

The following section contains a detailed description of the variable EtherIPAddress.

#### Variable Overview

Variable Name	Description
EtherIPAddress	IP-Address of the Device

Communication Name	EIIPAddr
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	39
Storage	Variable is stored in ParamEEProm
Read-Access	Always
Write-Access	AuthorizedClient, Service

Array	
Length	4
Default Value	{192,168,1,10}
USInt	
Value Range	0..255

#### Variable Telegram Syntax

Read Variable:				
sRN EIIPAddr				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	EIIPAddr	String	8	IP-Address of the Device

Read Variable Response:				
sRA EIIPAddr <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	EIIPAddr	String	8	IP-Address of the Device
Variable Data	data	Array	4	

Write Variable:				
sWN EIIPAddr <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	EIIPAddr	String	8	IP-Address of the Device
Variable Data	data	Array	4	



Write Variable Response:				
sWA EIIPAddr				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	EIIPAddr	String	8	IP-Address of the Device

## Variable Telegram Examples

Example: Default Values				
Variable rest examples with data set to default values.				
<b>Read Variable:</b>	02 02 02 02 00 00 00 0D 41 64 64 72 20 69	73 52 4E 20 45 49 49 70	.....sRN EIIP Addr i	
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 11 41 64 64 72 20 C0 A8 01	73 52 41 20 45 49 49 70 0A 05	.....sRA EIIP Addr ...	
<b>Write Variable:</b>	02 02 02 02 00 00 00 11 41 64 64 72 20 C0 A8 01	73 57 4E 20 45 49 49 70 0A 0F	.....sWN EIIP Addr ...	
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 0D 41 64 64 72 20 63	73 57 41 20 45 49 49 70	.....sWA EIIP Addr c	

### 2.7.1.2. Variable: EtherIPGateAddress

The following section contains a detailed description of the variable EtherIPGateAddress.

#### Variable Overview

Variable Name	Description
EtherIPGateAddress	IP-Address of the Ethernet Gateway

Communication Name	Elgate
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	40
Storage	Variable is stored in ParamEEProm
Read-Access	Always
Write-Access	AuthorizedClient, Service

Array		
Length	4	
Default Value	{0,0,0,0}	
	USInt	
	Value Range	0..255



## Variable Telegram Syntax

Read Variable:				
sRN Elgate				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	Elgate	String	6	IP-Address of the Ethernet Gateway

Read Variable Response:				
sRA Elgate <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	Elgate	String	6	IP-Address of the Ethernet Gateway
Variable Data	data	Array	4	

Write Variable:				
sWN Elgate <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	Elgate	String	6	IP-Address of the Ethernet Gateway
Variable Data	data	Array	4	

Write Variable Response:				
sWA Elgate				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	Elgate	String	6	IP-Address of the Ethernet Gateway

## Variable Telegram Examples

Example: Default Values				
Variable rest examples with data set to default values.				
Read Variable:	02 02 02 02 00 00 00 0B 74 65 20 74	73 52 4E 20 45 49 67 61	.....sRN Elgate t	
Read Variable Response:	02 02 02 02 00 00 00 0F 74 65 20 00 00 00 00 7B	73 52 41 20 45 49 67 61	.....sRA Elgate ....{	
Write Variable:	02 02 02 02 00 00 00 00 74 65 20 00 00 00 00 71	73 57 4E 20 45 49 67 61	.....sWN Elgate ....g	
Write Variable Response:	02 02 02 02 00 00 00 0B 74 65 20 7E	73 57 41 20 45 49 67 61	.....sWA Elgate ~	



### 2.7.1.3. Variable: EtherIPMask

The following section contains a detailed description of the variable EtherIPMask.

#### Variable Overview

Variable Name	Description
EtherIPMask	Netmask

Communication Name	Elmask
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	41
Storage	Variable is stored in ParamEEProm
Read-Access	Always
Write-Access	AuthorizedClient, Service

Array	
Length	4
Default Value	{255,255,255,0}
	<b>UInt</b>
Value Range	0..255

#### Variable Telegram Syntax

Read Variable:				
sRN EImask				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	EImask	String	6	Netmask

Read Variable Response:				
sRA EImask <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	EImask	String	6	Netmask
Variable Data	data	Array	4	

Write Variable:				
sWN EImask <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	EImask	String	6	Netmask
Variable Data	data	Array	4	

Write Variable Response:				
sWA EImask				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	EImask	String	6	Netmask



## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 0B 73 52 4E 20 45 49 6D 61 73 6B 20 77	.....sRN EIma sk w
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 0F 73 52 41 20 45 49 6D 61 73 6B 20 FF FF FF 00 87	.....sRA EIma sk .
<b>Write Variable:</b>	02 02 02 02 00 00 00 0F 73 57 4E 20 45 49 6D 61 73 6B 20 FF FF FF 00 8D	.....sWN EIma sk .
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 0B 73 57 41 20 45 49 6D 61 73 6B 20 7D	.....sWA EIma sk }

### 2.7.1.4. Variable: EtherIPSpeedDuplex

The following section contains a detailed description of the variable EtherIPSpeedDuplex.

#### Variable Overview

Variable Name	Description
EtherIPSpeedDuplex	Speed and Duplex settings

Communication Name	EISpdDpx
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	42
Storage	Variable is stored in ParamEEProm
Read-Access	Always
Write-Access	Service

Enum8			
Default Value		TX_AUTO	
	Value	Name	Description
	0	TX_AUTO	
	1	TX_10MB_HALF	
	2	TX_10MB_FULL	
	3	TX_100MB_HALF	
	4	TX_100MB_FULL	
	5	TX_1000MB_HALF	
	6	TX_1000MB_FULL	



## Variable Telegram Syntax

Read Variable:				
sRN EISpdDpx				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	EISpdDpx	String	8	Speed and Duplex settings

Read Variable Response:				
sRA EISpdDpx <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	EISpdDpx	String	8	Speed and Duplex settings
Variable Data	data	Enum8	1	

Write Variable:				
sWN EISpdDpx <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	EISpdDpx	String	8	Speed and Duplex settings
Variable Data	data	Enum8	1	

Write Variable Response:				
sWA EISpdDpx				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	EISpdDpx	String	8	Speed and Duplex settings

## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0D 73 52 4E 20 45 49 53 70 64 44 70 78 20 68	.....sRN EISp dDpx h
Read Variable Response:	02 02 02 02 00 00 00 0E 73 52 41 20 45 49 53 70 64 44 70 78 20 00 67	.....sRA EISp dDpx g
Write Variable:	02 02 02 02 00 00 00 0E 73 57 4E 20 45 49 53 70 64 44 70 78 20 00 6D	.....sWN EISp dDpx m
Write Variable Response:	02 02 02 02 00 00 00 0D 73 57 41 20 45 49 53 70 64 44 70 78 20 62	.....sWA EISp dDpx b



### 2.7.1.5. Variable: EtherAuxIPPort

The following section contains a detailed description of the variable EtherAuxIPPort.

#### Variable Overview

Variable Name	Description
EtherAuxIPPort	Port for TCP/IP communication Aux

Communication Name	EIAuxPort
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	43
Read-Access	Always
Write-Access	No! (readonly)

UInt	
Value Range	0..65535
Initialisation	2111

#### Variable Telegram Syntax

Read Variable:				
sRN EIAuxPort				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	EIAuxPort	String	9	Port for TCP/IP communication Aux

Read Variable Response:				
sRA EIAuxPort <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	EIAuxPort	String	9	Port for TCP/IP communication Aux
Variable Data	data	UInt	2	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 0E 73 52 4E 20 45 49 41 75 78 50 6F 72 74 20 16	.....sRN EIAu xPort .
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 10 73 52 41 20 45 49 41 75 78 50 6F 72 74 20 08 3F 2E	.....sRA EIAu xPort .?.

### 2.7.1.6. Variable: EtherAuxServerClient

The following section contains a detailed description of the variable EtherAuxServerClient.

#### Variable Overview

Variable Name	Description
EtherAuxServerClient	Selects if Ethernet Aux is server or client (is always server)

Communication Name	EIAuxSrvClnt
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	44
Read-Access	Always
Write-Access	No! (readonly)

Enum8			
Default Value		TX_SERVER	
	Value	Name	Description
	0	TX_SERVER	

#### Variable Telegram Syntax

Read Variable:				
sRN EIAuxSrvClnt				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	EIAuxSrvClnt	String	12	Selects if Ethernet Aux is server or client (is always server)

Read Variable Response:				
sRA EIAuxSrvClnt <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	EIAuxSrvClnt	String	12	Selects if Ethernet Aux is server or client (is always server)
Variable Data	data	Enum8	1	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 11 73 52 4E 20 45 49 41 75 78 53 72 76 43 6C 6E 74 20 4D	.....sRN EIAu xSrvClnt M
Read Variable Response:	02 02 02 02 00 00 00 12 73 52 41 20 45 49 41 75 78 53 72 76 43 6C 6E 74 20 00 42	.....sRA EIAu xSrvClnt ·B

### 2.7.1.7. Variable: EtherAddressingMode

The following section contains a detailed description of the variable EtherAddressingMode.

#### Variable Overview

Variable Name	Description
EtherAddressingMode	Which mode to use for Ethernet address assignment

Communication Name	EIAddrMode
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	45
Storage	Variable is stored in ParamEEProm
Read-Access	Always
Write-Access	Service

Enum8			
Default Value		TX_IP_STATIC	
	Value	Name	Description
	0	TX_IP_STATIC	
	1	TX_IP_DHCP	

#### Variable Telegram Syntax

Read Variable:				
sRN EIAddrMode				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	EIAddrMode	String	10	Which mode to use for Ethernet address assignment

Read Variable Response:				
sRA EIAddrMode <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	EIAddrMode	String	10	Which mode to use for Ethernet address assignment
Variable Data	data	Enum8	1	

Write Variable:				
sWN EIAddrMode <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	EIAddrMode	String	10	Which mode to use for Ethernet address assignment
Variable Data	data	Enum8	1	



Write Variable Response:				
sWA EIAddrMode				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	EIAddrMode	String	10	Which mode to use for Ethernet address assignment

## Variable Telegram Examples

Example: Default Values				
Variable rest examples with data set to default values.				
Read Variable:	02 02 02 02 00 00 00 0F 64 72 4D 6F 64 65 20 73	73 52 4E 20 45 49 41 64	.....sRN EIAd drMode s	
Read Variable Response:	02 02 02 02 00 00 00 10 64 72 4D 6F 64 65 20 00	73 52 41 20 45 49 41 64 7C	.....sRA EIAd drMode .	
Write Variable:	02 02 02 02 00 00 00 10 64 72 4D 6F 64 65 20 00	73 57 4E 20 45 49 41 64 76	.....sWN EIAd drMode -v	
Write Variable Response:	02 02 02 02 00 00 00 0F 64 72 4D 6F 64 65 20 79	73 57 41 20 45 49 41 64	.....sWA EIAd drMode y	

### 2.7.1.8. Variable: EtherDHCPFallback

The following section contains a detailed description of the variable EtherDHCPFallback.

#### Variable Overview

Variable Name	Description
EtherDHCPFallback	Fallback if DHCP not successfull

Communication Name	EIDHCPFallback
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	46
Storage	Variable is stored in ParamEEProm
Read-Access	Always
Write-Access	Service

Enum8			
Default Value		TX_RETRY_DHCP	
	Value	Name	Description
	0	TX_USE_STATIC_IP	
	1	TX_RETRY_DHCP	



## Variable Telegram Syntax

Read Variable:				
sRN EIDHCPFallback				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	EIDHCPFallback	String	14	Fallback if DHCP not successful

Read Variable Response:				
sRA EIDHCPFallback <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	EIDHCPFallback	String	14	Fallback if DHCP not successful
Variable Data	data	Enum8	1	

Write Variable:				
sWN EIDHCPFallback <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	EIDHCPFallback	String	14	Fallback if DHCP not successful
Variable Data	data	Enum8	1	

Write Variable Response:				
sWA EIDHCPFallback				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	EIDHCPFallback	String	14	Fallback if DHCP not successful

## Variable Telegram Examples

Example: Default Values			
Variable rest examples with data set to default values.			
Read Variable:	02 02 02 02 00 00 00 13 43 50 46 61 6C 6C 62 61	73 52 4E 20 45 49 44 48 63 6B 20 50	.....sRN EIDH CPFallback P
Read Variable Response:	02 02 02 02 00 00 00 14 43 50 46 61 6C 6C 62 61	73 52 41 20 45 49 44 48 63 6B 20 01 5E	.....sRA EIDH CPFallback .^
Write Variable:	02 02 02 02 00 00 00 14 43 50 46 61 6C 6C 62 61	73 57 4E 20 45 49 44 48 63 6B 20 01 54	.....sWN EIDH CPFallback .T
Write Variable Response:	02 02 02 02 00 00 00 13 43 50 46 61 6C 6C 62 61	73 57 41 20 45 49 44 48 63 6B 20 5A	.....sWA EIDH CPFallback Z





### 2.7.1.9. Variable: EtherUpdateNeeded

The following section contains a detailed description of the variable EtherUpdateNeeded.

#### Variable Overview

Variable Name	Description
EtherUpdateNeeded	Signs that due to parameter changes a update is meaningful

Communication Name	EIUpdtNdd
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	47
Read-Access	Always
Write-Access	Always

Bool	
Value Range	False, True
Initialisation	False

#### Variable Telegram Syntax

Read Variable:				
sRN EIUpdtNdd				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	EIUpdtNdd	String	9	Signs that due to parameter changes a update is meaningful

Read Variable Response:				
sRA EIUpdtNdd <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	EIUpdtNdd	String	9	Signs that due to parameter changes a update is meaningful
Variable Data	data	Bool	1	

Write Variable:				
sWN EIUpdtNdd <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	EIUpdtNdd	String	9	Signs that due to parameter changes a update is meaningful
Variable Data	data	Bool	1	

Write Variable Response:				
sWA EIUpdtNdd				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	EIUpdtNdd	String	9	Signs that due to parameter changes a update is meaningful



## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0E 73 52 4E 20 45 49 55 70 64 74 4E 64 64 20 18	.....sRN EIUp dtNdd .
Read Variable Response:	02 02 02 02 00 00 00 0F 73 52 41 20 45 49 55 70 64 74 4E 64 64 20 00 17	.....sRA EIUp dtNdd ..
Write Variable:	02 02 02 02 00 00 00 0F 73 57 4E 20 45 49 55 70 64 74 4E 64 64 20 00 1D	.....sWN EIUp dtNdd ..
Write Variable Response:	02 02 02 02 00 00 00 0E 73 57 41 20 45 49 55 70 64 74 4E 64 64 20 12	.....sWA EIUp dtNdd .

### 2.7.1.10. Method: EthernetPing

The following section contains a detailed description of the method EthernetPing.

#### Method Overview

Method Name	Description
EthernetPing	tests the ethernet connection

Communication Name	mEthPing
Sopas Index	45
Invocation Access	AuthorizedClient, Service

Parameters	
IPAddress	
	<b>Array</b>
	Length 4
	<b>UInt</b> Value Range 0..255
Timeout	Ping-Timeout in MS
	<b>UInt</b>
	Value Range 0..10000

Return Values	
Success	
	<b>Bool</b>
	Value Range False, True
	Initialisation False



## Method Telegram Syntax

Method Invocation:				
sMN mEthPing <IPAddress> <Timeout>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	mEthPing	String	8	tests the ethernet connection
Parameter 1	IPAddress	Array	4	
Parameter 2	Timeout	UDInt	4	Ping-Timeout in MS

Method Return Value:				
sAN mEthPing <Success>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	mEthPing	String	8	tests the ethernet connection
Return Value 1	Success	Bool	1	

## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
Method Invocation:	02 02 02 02 00 00 00 15 73 4D 4E 20 6D 45 74 68 50 69 6E 67 20 00 00 00 00 00 00 00 00 00 74	.....sMN mEth Ping .....t
Method Return Value:	02 02 02 02 00 00 00 0E 73 41 4E 20 6D 45 74 68 50 69 6E 67 20 00 00 78	.....sAN mEth Ping .x

### 2.7.1.11. Method: EthernetUpdate

The following section contains a detailed description of the method EthernetUpdate.

#### Method Overview

Method Name	Description
EthernetUpdate	updates the ethernet connection

Communication Name	mEthUpdt
Sopas Index	46
Invocation Access	AuthorizedClient, Service



## Method Telegram Syntax

Method Invocation:				
sMN mEthUpdt				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	mEthUpdt	String	8	updates the ethernet connection

Method Return Value:				
sAN mEthUpdt				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	mEthUpdt	String	8	updates the ethernet connection

## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
Method Invocation:	02 02 02 02 00 00 00 0D 73 4D 4E 20 6D 45 74 68 55 70 64 74 20 71	.....sMN mEth Updt g
Method Return Value:	02 02 02 02 00 00 00 0D 73 41 4E 20 6D 45 74 68 55 70 64 74 20 7D	.....sAN mEth Updt }

## 2.8. Interface Block: EthernetDiag

### 2.8.1. Group: EthernetDiag

#### 2.8.1.1. Variable: EtherIPSpeedDuplexNegotiated

The following section contains a detailed description of the variable EtherIPSpeedDuplexNegotiated.

#### Variable Overview

Variable Name	Description
EtherIPSpeedDuplexNegotiated	Speed and Duplex settings as negotiated when set to AUTO

Communication Name	EISpdDpxNet
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	48
Read-Access	Always
Write-Access	No! (readonly)

Enum8			
Default Value		TX_UNKNOWN_DUPLEX_SPEED	
	Value	Name	Description
	0	TX_UNKNOWN_DUPLEX_SPEED	
	1	TX_10MB_HALF	
	2	TX_10MB_FULL	
	3	TX_100MB_HALF	
	4	TX_100MB_FULL	
	5	TX_1000MB_HALF	
	6	TX_1000MB_FULL	

#### Variable Telegram Syntax

Read Variable:				
sRN EISpdDpxNet				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	EISpdDpxNet	String	11	Speed and Duplex settings as negotiated when set to AUTO

Read Variable Response:				
sRA EISpdDpxNet <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	EISpdDpxNet	String	11	Speed and Duplex settings as negotiated when set to AUTO
Variable Data	data	Enum8	1	



## Variable Telegram Examples

Example: Default Values				
Variable rest examples with data set to default values.				
<b>Read Variable:</b>	02 02 02 02 00 00 00 10 64 44 70 78 4E 65 74 20	73 52 4E 20 45 49 53 70 37	.....sRN EISp dDpxNet 7	
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 11 64 44 70 78 4E 65 74 20	73 52 41 20 45 49 53 70 00 38	.....sRA EISp dDpxNet 8	

### 2.8.1.2. Variable: EtherIPAddressDHCP

The following section contains a detailed description of the variable EtherIPAddressDHCP.

#### Variable Overview

Variable Name	Description
EtherIPAddressDHCP	IP-Address of the Device assigned by DHCP if active

Communication Name	ElIpAddrDHCP
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	49
Read-Access	Always
Write-Access	No! (readonly)

Array	
Length	4
Default Value	{192,168,0,1}
<b>USInt</b>	
Value Range	0..255

#### Variable Telegram Syntax

Read Variable:				
sRN ElIpAddrDHCP				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	ElIpAddrDHCP	String	12	IP-Address of the Device assigned by DHCP if active

Read Variable Response:				
sRA ElIpAddrDHCP <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	ElIpAddrDHCP	String	12	IP-Address of the Device assigned by DHCP if active
Variable Data	data	Array	4	

## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 11 73 52 4E 20 45 49 49 70 41 64 64 72 44 48 43 50 20 76	.....sRN EIIP AddrDHCP v
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 15 73 52 41 20 45 49 49 70 41 64 64 72 44 48 43 50 20 C0 A8 00 01 10	.....sRA EIIP AddrDHCP ...

### 2.8.1.3. Variable: EtherIPGateAddressDHCP

The following section contains a detailed description of the variable EtherIPGateAddressDHCP.

#### Variable Overview

Variable Name	Description
EtherIPGateAddressDHCP	IP-Address of the Ethernet Gateway assigned by DHCP if active

Communication Name	ElgateDHCP
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	50
Read-Access	Always
Write-Access	No! (readonly)

Array	
Length	4
Default Value	{0,0,0,0}
	<b>USInt</b>
	Value Range 0..255

#### Variable Telegram Syntax

Read Variable:				
sRN EIgateDHCP				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	ElgateDHCP	String	10	IP-Address of the Ethernet Gateway assigned by DHCP if active

Read Variable Response:				
sRA EIgateDHCP <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	ElgateDHCP	String	10	IP-Address of the Ethernet Gateway assigned by DHCP if active
Variable Data	data	Array	4	

## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 0F 73 52 4E 20 45 49 67 61 74 65 44 48 43 50 20 6B	.....sRN EIga teDHCP k
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 13 73 52 41 20 45 49 67 61 74 65 44 48 43 50 20 00 00 00 00 64	.....sRA EIga teDHCP .....d

### 2.8.1.4. Variable: EtherIPMaskDHCP

The following section contains a detailed description of the variable EtherIPMaskDHCP.

#### Variable Overview

Variable Name	Description
EtherIPMaskDHCP	Netmask assigned by DHCP if active

Communication Name	ElmaskDHCP
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	51
Read-Access	Always
Write-Access	No! (readonly)

Array	
Length	4
Default Value	{255,255,255,0}
<b>USInt</b>	
Value Range	0..255

#### Variable Telegram Syntax

Read Variable:				
sRN EImaskDHCP				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	ElmaskDHCP	String	10	Netmask assigned by DHCP if active

Read Variable Response:				
sRA EImaskDHCP <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	ElmaskDHCP	String	10	Netmask assigned by DHCP if active
Variable Data	data	Array	4	





## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 0F 73 52 4E 20 45 49 6D 61 73 6B 44 48 43 50 20 68	.....sRN EIma skDHCP h
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 13 73 52 41 20 45 49 6D 61 73 6B 44 48 43 50 20 FF FF FF 00 98	.....sRA EIma skDHCP .

### 2.8.1.5. Variable: EtherLinkState

The following section contains a detailed description of the variable EtherLinkState.

#### Variable Overview

Variable Name	Description
EtherLinkState	Linkstate of the Cable, up or down

Communication Name	EILinkState
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	52
Read-Access	Always
Write-Access	No! (readonly)

Bool	
Value Range	False, True
Initialisation	False

#### Variable Telegram Syntax

Read Variable:				
sRN EILinkState				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	EILinkState	String	11	Linkstate of the Cable, up or down

Read Variable Response:				
sRA EILinkState <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	EILinkState	String	11	Linkstate of the Cable, up or down
Variable Data	data	Bool	1	



## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 10 73 52 4E 20 45 49 4C 69 6E 6B 53 74 61 74 65 20 14	.....sRN EILi nkState .
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 11 73 52 41 20 45 49 4C 69 6E 6B 53 74 61 74 65 20 00 1B	.....sRA EILi nkState ..



## 2.9. Interface Block: GeneralCfgFileSystem2Base

### 2.9.1. Group: FileSystem2Base

#### 2.9.1.1. Method: FileSystemAccess

The following section contains a detailed description of the method FileSystemAccess.

##### Method Overview

Method Name	Description
FileSystemAccess	EDP2 File system accessor

Communication Name	mFSAcc
Sopas Index	47
Invocation Access	Always

Parameters	
URL	
	<b>FlexString</b>
Length	0..286
Buffer	
	<b>FlexString</b>
Length	0..32768
BufferCRC	
	<b>UDInt</b>
Value Range	0..4294967295

Return Values	
URL	
	<b>FlexString</b>
Length	0..286
Buffer	
	<b>FlexString</b>
Length	0..32768
BufferCRC	
	<b>UDInt</b>
Value Range	0..4294967295



## Method Telegram Syntax

Method Invocation:				
sMN mFSAcc <URL> <Buffer> <BufferCRC>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	mFSAcc	String	6	EDP2 File system accessor
Parameter 1	URL	FlexString	286	
Parameter 2	Buffer	FlexString	32768	
Parameter 3	BufferCRC	UDInt	4	

Method Return Value:				
sAN mFSAcc <URL> <Buffer> <BufferCRC>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	mFSAcc	String	6	EDP2 File system accessor
Return Value 1	URL	FlexString	286	
Return Value 2	Buffer	FlexString	32768	
Return Value 3	BufferCRC	UDInt	4	

## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
Method Invocation:	02 02 02 02 00 00 00 13 73 4D 4E 20 6D 46 53 41 63 63 20 00 00 00 00 00 00 00 00 49	.....sMN mFSA cc .....I
Method Return Value:	02 02 02 02 00 00 00 13 73 41 4E 20 6D 46 53 41 63 63 20 00 00 00 00 00 00 00 00 45	.....sAN mFSA cc .....E



## 2.10. Interface Block: GeneralCfgAppSpace

### 2.10.1. Group: AppSpace

#### 2.10.1.1. Variable: AppEngineVersion

The following section contains a detailed description of the variable AppEngineVersion.

##### Variable Overview

Variable Name	Description
AppEngineVersion	AppEngine version

Communication Name	AEVersion
Sopas Synchronisation	Variable is not relevant for synchronisation with SOPAS ET.
Sopas Index	53
Read-Access	Always
Write-Access	No! (readonly)

FlexString	
Length	0..12
Initialisation	UNKOWN

##### Variable Telegram Syntax

Read Variable:				
sRN AEVersion				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	AEVersion	String	9	AppEngine version

Read Variable Response:				
sRA AEVersion <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	AEVersion	String	9	AppEngine version
Variable Data	data	FlexString	12	

##### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0E 73 52 4E 20 41 45 56 65 72 73 69 6F 6E 20 31	.....sRN AEVe rsion 1
Read Variable Response:	02 02 02 02 00 00 00 16 73 52 41 20 41 45 56 65 72 73 69 6F 6E 20 00 06 55 4E 4B 4F 57 4E 3E	.....sRA AEVe rsion ..UNKOWN>

### 2.10.1.2. Variable: AppEngineLockAppDev

The following section contains a detailed description of the variable AppEngineLockAppDev.

#### Variable Overview

Variable Name	Description
AppEngineLockAppDev	AppEngine locked for further programming. Needs a device reboot to get active.

Communication Name	AELockAppDev
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	54
Storage	Variable is stored in CalibEEPROM
Read-Access	Always
Write-Access	No! (readonly)

Bool
Value Range
Initialisation

#### Variable Telegram Syntax

Read Variable:				
sRN AELockAppDev				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	AELockAppDev	String	12	AppEngine locked for further programming. Needs a device reboot to get active.

Read Variable Response:				
sRA AELockAppDev <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	AELockAppDev	String	12	AppEngine locked for further programming. Needs a device reboot to get active.
Variable Data	data	Bool	1	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 11 73 52 4E 20 41 45 4C 6F 63 6B 41 70 70 44 65 76 20 56	.....sRN AELo ckAppDev V
Read Variable Response:	02 02 02 02 00 00 00 12 73 52 41 20 41 45 4C 6F 63 6B 41 70 70 44 65 76 20 00 59	.....sRA AELo ckAppDev ·Y



### 2.10.1.3. Variable: AppEngineDevSysApps

The following section contains a detailed description of the variable AppEngineDevSysApps.

#### Variable Overview

Variable Name	Description
AppEngineDevSysApps	AppEngine shows the system apps and allows development of them. Needs a device reboot to get active.

Communication Name	AEDevSysApps
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	55
Storage	Variable is stored in CalibEEPROM
Read-Access	Always
Write-Access	No! (readonly)

Bool	
Value Range	False, True
Initialisation	False

#### Variable Telegram Syntax

Read Variable:				
sRN AEDevSysApps				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	AEDevSysApps	String	12	AppEngine shows the system apps and allows development of them. Needs a device reboot to get active.

Read Variable Response:				
sRA AEDevSysApps <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	AEDevSysApps	String	12	AppEngine shows the system apps and allows development of them. Needs a device reboot to get active.
Variable Data	data	Bool	1	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 11 76 53 79 73 41 70 70 73 73 52 4E 20 41 45 44 65 20 57	.....sRN AEDevSysApps W
Read Variable Response:	02 02 02 02 00 00 00 12 76 53 79 73 41 70 70 73 73 52 41 20 41 45 44 65 20 00 58	.....sRA AEDevSysApps ·X

## 2.10.1.4. Variable: AppEngineDefaultWebpage

The following section contains a detailed description of the variable AppEngineDefaultWebpage.

### Variable Overview

Variable Name	Description
AppEngineDefaultWebpage	Defines which MSDD file of which App should be used as default view for the webserver. Value can be in format 'appname' or 'appname/msddfilename'. Default is empty which means to use the first one of the first alphabetical app, or if no app use the device msdd webpage.

Communication Name	AEDefaultWebpage
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	56
Storage	Variable is stored in ParamEEProm
Read-Access	Always
Write-Access	AuthorizedClient, Service

FlexString	
Length	0..256

### Variable Telegram Syntax

Read Variable:				
sRN AEDefaultWebpage				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	AEDefaultWebpage	String	16	Defines which MSDD file of which App should be used as default view for the webserver. Value can be in format 'appname' or 'appname/msddfilename'. Default is empty which means to use the first one of the first alphabetical app, or if no app use the device msdd webpage.

Read Variable Response:				
sRA AEDefaultWebpage <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	AEDefaultWebpage	String	16	Defines which MSDD file of which App should be used as default view for the webserver. Value can be in format 'appname' or 'appname/msddfilename'. Default is empty which means to use the first one of the first alphabetical app, or if no app use the device msdd webpage.
Variable Data	data	FlexString	256	

Write Variable:				
sWN AEDefaultWebpage <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	AEDefaultWebpage	String	16	Defines which MSDD file of which App should be used as default view for the webserver. Value can be in format 'appname' or 'appname/msddfilename'. Default is empty which means to use the first one of the first alphabetical app, or if no app use the device msdd webpage.





Write Variable:				
sWN AEDefaultWebpage <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Variable Data	data	FlexString	256	

Write Variable Response:				
sWA AEDefaultWebpage				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	AEDefaultWebpage	String	16	Defines which MSDD file of which App should be used as default view for the webserver. Value can be in format 'appname' or 'appname/msddfilename'. Default is empty which means to use the first one of the first alphabetical app, or if no app use the device msdd webpage.

## Variable Telegram Examples

Example: Default Values				
Variable rest examples with data set to default values.				
<b>Read Variable:</b>	02 02 02 02 00 00 00 15 66 61 75 6C 74 57 65 62	73 52 4E 20 41 45 44 65 70 61 67 65 20 63	.....sRN AEDe faultWebpage c	
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 17 66 61 75 6C 74 57 65 62	73 52 41 20 41 45 44 65 70 61 67 65 20 00 00 6C	.....sRA AEDe faultWebpage ..l	
<b>Write Variable:</b>	02 02 02 02 00 00 00 17 66 61 75 6C 74 57 65 62	73 57 4E 20 41 45 44 65 70 61 67 65 20 00 00 66	.....sWN AEDe faultWebpage ..f	
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 15 66 61 75 6C 74 57 65 62	73 57 41 20 41 45 44 65 70 61 67 65 20 69	.....sWA AEDe faultWebpage i	

### 2.10.1.5. Variable: AppConsoleOutput

The following section contains a detailed description of the variable AppConsoleOutput.

#### Variable Overview

Variable Name	Description
AppConsoleOutput	App Console output

Communication Name	AppConOut
Sopas Synchronisation	Variable is not relevant for synchronisation with SOPAS ET.
Sopas Index	57
Read-Access	Always
Write-Access	No! (readonly)

FlexString	
Length	0..4096



## Variable Telegram Syntax

Read Variable:				
sRN AppConOut				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	AppConOut	String	9	App Console output

Read Variable Response:				
sRA AppConOut <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	AppConOut	String	9	App Console output
Variable Data	data	FlexString	4096	

## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0E 73 52 4E 20 41 70 70 43 6F 6E 4F 75 74 20 22	.....sRN AppConOut "
Read Variable Response:	02 02 02 02 00 00 00 10 73 52 41 20 41 70 70 43 6F 6E 4F 75 74 20 00 00 2D	.....sRA AppConOut --

### 2.10.1.6. Variable: AppDebugEnabledment

The following section contains a detailed description of the variable AppDebugEnabledment.

#### Variable Overview

Variable Name	Description
AppDebugEnabledment	App debugging environment

Communication Name	AppDbgEnv
Sopas Synchronisation	Variable is not relevant for synchronisation with SOPAS ET.
Sopas Index	58
Read-Access	Always
Write-Access	No! (readonly)

FlexString	
Length	0..4096



## Variable Telegram Syntax

Read Variable:				
sRN AppDbgEnv				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	AppDbgEnv	String	9	App debugging environment

Read Variable Response:				
sRA AppDbgEnv <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	AppDbgEnv	String	9	App debugging environment
Variable Data	data	FlexString	4096	

## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0E 73 52 4E 20 41 70 70 44 62 67 45 6E 76 20 32	.....sRN AppD bgEnv 2
Read Variable Response:	02 02 02 02 00 00 00 10 73 52 41 20 41 70 70 44 62 67 45 6E 76 20 00 00 3D	.....sRA AppD bgEnv ..=

### 2.10.1.7. Variable: PluginsFolder

The following section contains a detailed description of the variable PluginsFolder.

#### Variable Overview

Variable Name	Description
PluginsFolder	The plugin folder contains dynamic loaded extensions of the firmware. Could be a list of plugin paths separated by semicolons.

Communication Name	PlgnsFldr
Sopas Synchronisation	Variable is not relevant for synchronisation with SOPAS ET.
Sopas Index	59
Read-Access	Always
Write-Access	No! (readonly)

FlexString	
Length	0..256
Initialisation	plugins:///



## Variable Telegram Syntax

Read Variable:				
sRN PlgnsFldr				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	PlgnsFldr	String	9	The plugin folder contains dynamic loaded extensions of the firmware. Could be a list of plugin paths separated by semicolons.

Read Variable Response:				
sRA PlgnsFldr <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	PlgnsFldr	String	9	The plugin folder contains dynamic loaded extensions of the firmware. Could be a list of plugin paths separated by semicolons.
Variable Data	data	FlexString	256	

## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0E 73 52 4E 20 50 6C 67 6E 73 46 6C 64 72 20 15	.....sRN Plgn sFldr .
Read Variable Response:	02 02 02 02 00 00 00 1B 73 52 41 20 50 6C 67 6E 73 46 6C 64 72 20 00 0B 70 6C 75 67 69 6E 73 3A 2F 2F 2F 7E	.....sRA Plgn sFldr ..plugins: ///~

### 2.10.1.8. Method: AppCommand

The following section contains a detailed description of the method AppCommand.

#### Method Overview

Method Name	Description
AppCommand	Runs a App command

Communication Name	mAppCmd
Sopas Index	48
Invocation Access	Always

Parameters	
SLCmd	
FlexString	
Length	0..200



Return Values	
Success	
<b>Bool</b>	
Value Range	False, True
Initialisation	False

## Method Telegram Syntax

Method Invocation:				
sMN mAppCmd <SLCmd>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	mAppCmd	String	7	Runs a App command
Parameter 1	SLCmd	FlexString	200	

Method Return Value:				
sAN mAppCmd <Success>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	mAppCmd	String	7	Runs a App command
Return Value 1	Success	Bool	1	

## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
<b>Method Invocation:</b>	02 02 02 02 00 00 00 0E 73 4D 4E 20 6D 41 70 70 43 6D 64 20 00 00 16	.....sMN mApp Cmd ...
<b>Method Return Value:</b>	02 02 02 02 00 00 00 0D 73 41 4E 20 6D 41 70 70 43 6D 64 20 00 1A	.....sAN mApp Cmd ..



## 2.11. Interface Block: System

### 2.11.1. Group: Clocks

#### 2.11.1.1. Variable: DeviceTime

The following section contains a detailed description of the variable DeviceTime.

##### Variable Overview

Variable Name	Description
DeviceTime	Timestamp of the device in milliseconds. Must be updated in real time by the device itself

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	60
Read-Access	Always
Write-Access	Always

UDInt	
Value Range	0..4294967295
Initialisation	0

##### Variable Telegram Syntax

Read Variable:				
sRN DeviceTime				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	DeviceTime	String	10	Timestamp of the device in milliseconds. Must be updated in real time by the device itself

Read Variable Response:				
sRA DeviceTime <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	DeviceTime	String	10	Timestamp of the device in milliseconds. Must be updated in real time by the device itself
Variable Data	data	UDInt	4	

Write Variable:				
sWN DeviceTime <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	DeviceTime	String	10	Timestamp of the device in milliseconds. Must be updated in real time by the device itself
Variable Data	data	UDInt	4	



Write Variable Response:				
sWA DeviceTime				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	DeviceTime	String	10	Timestamp of the device in milliseconds. Must be updated in real time by the device itself

## Variable Telegram Examples

Example: Default Values				
Variable rest examples with data set to default values.				
<b>Read Variable:</b>	02 02 02 02 00 00 00 0F 63 65 54 69 6D 65 20 62	73 52 4E 20 44 65 76 69	.....sRN Dev ceTime b	
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 13 63 65 54 69 6D 65 20 00	73 52 41 20 44 65 76 69 00 00 00 6D	.....sRA Dev ceTime ....m	
<b>Write Variable:</b>	02 02 02 02 00 00 00 13 63 65 54 69 6D 65 20 00	73 57 4E 20 44 65 76 69 00 00 00 67	.....sWN Dev ceTime ....g	
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 0F 63 65 54 69 6D 65 20 68	73 57 41 20 44 65 76 69	.....sWA Dev ceTime h	

### 2.11.1.2. Variable: DeviceInc

The following section contains a detailed description of the variable DeviceInc.

#### Variable Overview

Variable Name	Description
DeviceInc	Increment value of the device. Must be updated in real time by the device itself

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	61
Read-Access	Always
Write-Access	Always

UDInt	
Value Range	0..4294967295
Initialisation	0



## Variable Telegram Syntax

Read Variable:				
sRN DeviceInc				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	DeviceInc	String	9	Increment value of the device. Must be updated in real time by the device itself

Read Variable Response:				
sRA DeviceInc <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	DeviceInc	String	9	Increment value of the device. Must be updated in real time by the device itself
Variable Data	data	UDInt	4	

Write Variable:				
sWN DeviceInc <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	DeviceInc	String	9	Increment value of the device. Must be updated in real time by the device itself
Variable Data	data	UDInt	4	

Write Variable Response:				
sWA DeviceInc				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	DeviceInc	String	9	Increment value of the device. Must be updated in real time by the device itself

## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 0E 73 52 4E 20 44 65 76 69 63 65 49 6E 63 20 13	.....sRN Devi ceInc .
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 12 73 52 41 20 44 65 76 69 63 65 49 6E 63 20 00 00 00 00 1C	.....sRA Devi ceInc .....
<b>Write Variable:</b>	02 02 02 02 00 00 00 12 73 57 4E 20 44 65 76 69 63 65 49 6E 63 20 00 00 00 00 16	.....sWN Devi ceInc .....
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 0E 73 57 41 20 44 65 76 69 63 65 49 6E 63 20 19	.....sWA Devi ceInc .





## 2.11.2. Group: Frontend

### 2.11.2.1. Variable: playing

The following section contains a detailed description of the variable playing.

#### Variable Overview

Variable Name	Description
playing	Flag whether the algorithm/image acquisition is running

Communication Name	PLAYING
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	62
Read-Access	Always
Write-Access	No! (readonly)

Bool	
Value Range	False, True
Initialisation	False

#### Variable Telegram Syntax

Read Variable:				
sRN PLAYING				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	PLAYING	String	7	Flag whether the algorithm/image acquisition is running

Read Variable Response:				
sRA PLAYING <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	PLAYING	String	7	Flag whether the algorithm/image acquisition is running
Variable Data	data	Bool	1	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0C 73 52 4E 20 50 4C 41 59 49 4E 47 20 2B	.....sRN PLAYING +
Read Variable Response:	02 02 02 02 00 00 00 0D 73 52 41 20 50 4C 41 59 49 4E 47 20 00 24	.....sRA PLAYING ·\$

## 2.12. Interface Block: Calib

### 2.12.1. Group: EthernetCal

#### 2.12.1.1. Variable: EtherMACAddress

The following section contains a detailed description of the variable EtherMACAddress.

##### Variable Overview

Variable Name	Description
EtherMACAddress	MAC-Address of the Device

Communication Name	EIMacAdr
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	63
Storage	Variable is stored in CalibEEPROM
Read-Access	Always
Write-Access	No! (readonly)

Array	
Length	6
Default Value	{0,6,0x77,0,0,0}
	<b>USInt</b>
	Value Range
	0..255

##### Variable Telegram Syntax

Read Variable:				
sRN EIMacAdr				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	EIMacAdr	String	8	MAC-Address of the Device

Read Variable Response:				
sRA EIMacAdr <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	EIMacAdr	String	8	MAC-Address of the Device
Variable Data	data	Array	6	



## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0D 73 52 4E 20 45 49 4D 61 63 41 64 72 20 7B	.....sRN EIMa cAdr {
Read Variable Response:	02 02 02 02 00 00 00 13 73 52 41 20 45 49 4D 61 63 41 64 72 20 00 06 77 00 00 00 05	.....sRA EIMa cAdr ..w.....

## 2.13. Interface Block: GeneralCfgApp

### 2.13.1. Group: System

#### 2.13.1.1. Variable: SYParaPasswordGuarded

The following section contains a detailed description of the variable SYParaPasswordGuarded.

##### Variable Overview

Variable Name	Description
SYParaPasswordGuarded	If true parametrization if password guarded. (Parameter is only mentioned by SOPAS ET)

Communication Name	SYPwGuarded
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	66
Storage	Variable is stored in ParamEEProm
Read-Access	Always
Write-Access	AuthorizedClient, Service

Bool	
Value Range	False, True
Initialisation	False

##### Variable Telegram Syntax

Read Variable:				
sRN SYPwGuarded				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	SYPwGuarded	String	11	If true parametrization if password guarded. (Parameter is only mentioned by SOPAS ET)

Read Variable Response:				
sRA SYPwGuarded <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	SYPwGuarded	String	11	If true parametrization if password guarded. (Parameter is only mentioned by SOPAS ET)
Variable Data	data	Bool	1	

Write Variable:				
sWN SYPwGuarded <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	SYPwGuarded	String	11	If true parametrization if password guarded. (Parameter is only mentioned by SOPAS ET)
Variable Data	data	Bool	1	



Write Variable Response:				
sWA SYPwGuarded				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	SYPwGuarded	String	11	If true parametrization if password guarded. (Parameter is only mentioned by SOPAS ET)

## Variable Telegram Examples

Example: Default Values			
Variable rest examples with data set to default values.			
<b>Read Variable:</b>	02 02 02 02 00 00 00 10 47 75 61 72 64 65 64 20	73 52 4E 20 53 59 50 77 06	.....sRN SYPw Guarded .
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 11 47 75 61 72 64 65 64 20	73 52 41 20 53 59 50 77 00 09	.....sRA SYPw Guarded ..
<b>Write Variable:</b>	02 02 02 02 00 00 00 11 47 75 61 72 64 65 64 20	73 57 4E 20 53 59 50 77 00 03	.....sWN SYPw Guarded ..
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 10 47 75 61 72 64 65 64 20	73 57 41 20 53 59 50 77 0C	.....sWA SYPw Guarded .

## 2.14. Interface Block: Diag

### 2.14.1. Group: OpData

#### 2.14.1.1. Variable: PowerOnCnt

The following section contains a detailed description of the variable PowerOnCnt.

##### Variable Overview

Variable Name	Description
PowerOnCnt	The number of power on cycles

Communication Name	ODpwrc
Sopas Synchronisation	Variable is not relevant for synchronisation with SOPAS ET.
Sopas Index	67
Storage	Variable is stored in OpdataEEProm
Read-Access	Always
Write-Access	No! (readonly)

UDInt	
Value Range	0..4294967295
Initialisation	0

##### Variable Telegram Syntax

Read Variable:				
sRN ODpwrc				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	ODpwrc	String	6	The number of power on cycles

Read Variable Response:				
sRA ODpwrc <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	ODpwrc	String	6	The number of power on cycles
Variable Data	data	UDInt	4	

##### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0B 73 52 4E 20 4F 44 70 77 72 63 20 72	.....sRN ODpw rc r
Read Variable Response:	02 02 02 02 00 00 00 0F 73 52 41 20 4F 44 70 77 72 63 20 00 00 00 00 7D	.....sRA ODpw rc ....}



### 2.14.1.2. Variable: DailyOpHours

The following section contains a detailed description of the variable DailyOpHours.

#### Variable Overview

Variable Name	Description
DailyOpHours	The runtime duration since last power on. Non persistent !

Communication Name	ODopdaily
Sopas Synchronisation	Variable is not relevant for synchronisation with SOPAS ET.
Sopas Index	68
Read-Access	Always
Write-Access	No! (readonly)

Real	
Value Range	See specification IEEE 754
Initialisation	0.0
Physical Unit	h

#### Variable Telegram Syntax

Read Variable:				
sRN ODopdaily				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	ODopdaily	String	9	The runtime duration since last power on. Non persistent !

Read Variable Response:				
sRA ODopdaily <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	ODopdaily	String	9	The runtime duration since last power on. Non persistent !
Variable Data	data	Real	4	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0E 73 52 4E 20 4F 44 6F 70 64 61 69 6C 79 20 02	.....sRN ODop daily .
Read Variable Response:	02 02 02 02 00 00 00 12 73 52 41 20 4F 44 6F 70 64 61 69 6C 79 20 00 00 00 00 0D	.....sRA ODop daily .....



### 2.14.1.3. Variable: OpHours

The following section contains a detailed description of the variable OpHours.

#### Variable Overview

Variable Name	Description
OpHours	The total number of operating hours since last service reset. Can be reset by the service

Communication Name	ODoprh
Sopas Synchronisation	Variable is not relevant for synchronisation with SOPAS ET.
Sopas Index	69
Storage	Variable is stored in OpdataEEProm
Read-Access	Always
Write-Access	No! (readonly)

Real	
Value Range	See specification IEEE 754
Initialisation	0.0
Physical Unit	h

#### Variable Telegram Syntax

Read Variable:				
sRN ODoprh				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	ODoprh	String	6	The total number of operating hours since last service reset. Can be reset by the service

Read Variable Response:				
sRA ODoprh <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	ODoprh	String	6	The total number of operating hours since last service reset. Can be reset by the service
Variable Data	data	Real	4	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0B 73 52 4E 20 4F 44 6F 70 72 68 20 61	.....sRN ODop rh a
Read Variable Response:	02 02 02 02 00 00 00 0F 73 52 41 20 4F 44 6F 70 72 68 20 00 00 00 00 6E	.....sRA ODop rh ....n





## 2.14.2. Group: DeviceInformation

### 2.14.2.1. Variable: DeviceType

The following section contains a detailed description of the variable DeviceType.

#### Variable Overview

Variable Name	Description
DeviceType	DeviceType

Communication Name	DItpe
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	72
Storage	Variable is stored in CalibEEProm
Read-Access	Always
Write-Access	No! (readonly)

FlexString	
Length	0..18
Initialisation	V3SXXX-XXXXXXX

#### Variable Telegram Syntax

Read Variable:				
sRN DItpe				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	DItpe	String	6	DeviceType

Read Variable Response:				
sRA DItpe <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	DItpe	String	6	DeviceType
Variable Data	data	FlexString	18	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0B 73 52 4E 20 44 49 74 79 70 65 20 7A	.....sRN DIt pe z
Read Variable Response:	02 02 02 02 00 00 00 1B 73 52 41 20 44 49 74 79 70 65 20 00 0E 56 33 53 58 58 58 2D 58 58 58 58 58 58 58 60	.....sRA DIt pe ..V3SXXX-XXXX xxx`

## 2.14.2.2. Variable: Manufacturer

The following section contains a detailed description of the variable Manufacturer.

### Variable Overview

Variable Name	Description
Manufacturer	Manufacturer

Communication Name	DImanf
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	73
Storage	Variable is stored in CalibEEPROM
Read-Access	Always
Write-Access	No! (readonly)

FlexString	
Length	0..18
Initialisation	SICK AG

### Variable Telegram Syntax

Read Variable:				
sRN DImanf				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	DImanf	String	6	Manufacturer

Read Variable Response:				
sRA DImanf <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	DImanf	String	6	Manufacturer
Variable Data	data	FlexString	18	

### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 0B 73 52 4E 20 44 49 6D 61 6E 66 20 66	.....sRN DIma nf f
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 14 73 52 41 20 44 49 6D 61 6E 66 20 00 07 53 49 43 4B 20 41 47 5A	.....sRA DIma nf ..SICK AGZ



### 2.14.2.3. Variable: OrderNumberCompat

The following section contains a detailed description of the variable OrderNumberCompat.

#### Variable Overview

Variable Name	Description
OrderNumberCompat	Order number

Communication Name	DIornr
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	74
Storage	Variable is stored in CalibEEPROM
Read-Access	Always
Write-Access	No! (readonly)

String	
Length	7
Initialisation	1234567

#### Variable Telegram Syntax

Read Variable:				
sRN DIornr				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	DIornr	String	6	Order number

Read Variable Response:				
sRA DIornr <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	DIornr	String	6	Order number
Variable Data	data	String	7	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0B 73 52 4E 20 44 49 6F 72 6E 72 20 63	.....sRN DIor nr c
Read Variable Response:	02 02 02 02 00 00 00 12 73 52 41 20 44 49 6F 72 6E 72 20 31 32 33 34 35 36 37 5C	.....sRA DIor nr 1234567\



#### 2.14.2.4. Variable: HasEthernet

The following section contains a detailed description of the variable HasEthernet.

##### Variable Overview

Variable Name	Description
HasEthernet	True if device type has got an ethernet interface

Communication Name	DIHasEth
Sopas Synchronisation	Variable is not relevant for synchronisation with SOPAS ET.
Sopas Index	75
Read-Access	Always
Write-Access	No! (readonly)

Bool	
Value Range	False, True
Initialisation	True

##### Variable Telegram Syntax

Read Variable:				
sRN DIHasEth				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	DIHasEth	String	8	True if device type has got an ethernet interface

Read Variable Response:				
sRA DIHasEth <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	DIHasEth	String	8	True if device type has got an ethernet interface
Variable Data	data	Bool	1	

##### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0D 73 52 4E 20 44 49 48 61 73 45 74 68 20 61	.....sRN DIHa sEth a
Read Variable Response:	02 02 02 02 00 00 00 0E 73 52 41 20 44 49 48 61 73 45 74 68 20 01 6F	.....sRA DIHa sEth .o

## 2.14.3. Group: FirmwareInformation

### 2.14.3.1. Variable: ApplicationName

The following section contains a detailed description of the variable ApplicationName.

#### Variable Overview

Variable Name	Description
ApplicationName	Optionally definable name of RAPID or SPEED Application

Communication Name	FIAppIName
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	76
Read-Access	Always
Write-Access	No! (readonly)

FlexString	
Length	0..30
Initialisation	Standard

#### Variable Telegram Syntax

Read Variable:				
sRN FIAppIName				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	FIAppIName	String	10	Optionally definable name of RAPID or SPEED Application

Read Variable Response:				
sRA FIAppIName <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	FIAppIName	String	10	Optionally definable name of RAPID or SPEED Application
Variable Data	data	FlexString	30	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 0F 73 52 4E 20 46 49 41 70 70 6C 4E 61 6D 65 20 6A	.....sRN FIAppIName j
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 19 73 52 41 20 46 49 41 70 70 6C 4E 61 6D 65 20 00 08 53 74 61 6E 64 61 72 64 56	.....sRA FIAppIName ..StandardV



### 2.14.3.2. Variable: BootloaderIdentification

The following section contains a detailed description of the variable BootloaderIdentification.

#### Variable Overview

Variable Name	Description
BootloaderIdentification	Shows the identification string of the current bootloader.

Communication Name	FIBootloaderIdent
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	77
Read-Access	Always
Write-Access	No! (readonly)

FlexString	
Length	0..80

#### Variable Telegram Syntax

Read Variable:				
sRN FIBootloaderIdent				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	FIBootloaderIdent	String	17	Shows the identification string of the current bootloader.

Read Variable Response:				
sRA FIBootloaderIdent <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	FIBootloaderIdent	String	17	Shows the identification string of the current bootloader.
Variable Data	data	FlexString	80	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 16 73 52 4E 20 46 49 42 6F 6F 74 6C 6F 61 64 65 72 49 64 65 6E 74 20 15	.....sRN FIBo otloaderIdent .
Read Variable Response:	02 02 02 02 00 00 00 18 73 52 41 20 46 49 42 6F 6F 74 6C 6F 61 64 65 72 49 64 65 6E 74 20 00 00 1A	.....sRA FIBo otloaderIdent .. .

### 2.14.3.3. Variable: KernelVersion

The following section contains a detailed description of the variable KernelVersion.

#### Variable Overview

Variable Name	Description
KernelVersion	Returns the version of the Linux Kernel.
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	78
Read-Access	Always
Write-Access	No! (readonly)
<b>FlexString</b>	
Length	0..80

#### Variable Telegram Syntax

<b>Read Variable:</b>				
sRN KernelVersion				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	KernelVersion	String	13	Returns the version of the Linux Kernel.
<b>Read Variable Response:</b>				
sRA KernelVersion <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	KernelVersion	String	13	Returns the version of the Linux Kernel.
Variable Data	data	FlexString	80	

#### Variable Telegram Examples

<b>Example: Default Values</b>		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 12 73 52 4E 20 4B 65 72 6E 65 6C 56 65 72 73 69 6F 6E 20 0E	.....sRN KernelVersion .
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 14 73 52 41 20 4B 65 72 6E 65 6C 56 65 72 73 69 6F 6E 20 00 00 01	.....sRA KernelVersion ...

#### 2.14.3.4. Variable: IoControllerVersion

The following section contains a detailed description of the variable IoControllerVersion.

##### Variable Overview

Variable Name	Description
IoControllerVersion	Returns the version of the IO Controller firmware.

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	79
Read-Access	Always
Write-Access	No! (readonly)

FlexString	
Length	0..10

##### Variable Telegram Syntax

Read Variable:				
sRN IoControllerVersion				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	IoControllerVersion	String	19	Returns the version of the IO Controller firmware.

Read Variable Response:				
sRA IoControllerVersion <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	IoControllerVersion	String	19	Returns the version of the IO Controller firmware.
Variable Data	data	FlexString	10	

##### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 18 73 52 4E 20 49 6F 43 6F 6E 74 72 6F 6C 6C 65 72 56 65 72 73 69 6F 6E 20 2F	.....sRN IoCo ntrollerVersion /
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 1A 73 52 41 20 49 6F 43 6F 6E 74 72 6F 6C 6C 65 72 56 65 72 73 69 6F 6E 20 00 00 20	.....sRA IoCo ntrollerVersion ..





### 2.14.3.5. Variable: LmControllerVersion

The following section contains a detailed description of the variable LmControllerVersion.

#### Variable Overview

Variable Name	Description
LmControllerVersion	Returns the version of the LM Controller firmware.

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	80
Read-Access	Always
Write-Access	No! (readonly)

FlexString	
Length	0..10

#### Variable Telegram Syntax

Read Variable:				
sRN LmControllerVersion				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	LmControllerVersion	String	19	Returns the version of the LM Controller firmware.

Read Variable Response:				
sRA LmControllerVersion <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	LmControllerVersion	String	19	Returns the version of the LM Controller firmware.
Variable Data	data	FlexString	10	

#### Variable Telegram Examples

Example: Default Values			
Variable rest examples with data set to default values.			
Read Variable:	02 02 02 02 00 00 00 18 6E 74 72 6F 6C 6C 65 72 28	73 52 4E 20 4C 6D 43 6F 56 65 72 73 69 6F 6E 20	.....sRN LmCo ntrollerVersion (
Read Variable Response:	02 02 02 02 00 00 00 1A 6E 74 72 6F 6C 6C 65 72 00 00 27	73 52 41 20 4C 6D 43 6F 56 65 72 73 69 6F 6E 20	.....sRA LmCo ntrollerVersion ..'

### 2.14.3.6. Variable: FpgaBitstreamVersion

The following section contains a detailed description of the variable FpgaBitstreamVersion.

#### Variable Overview

Variable Name	Description
FpgaBitstreamVersion	Returns the version of the FPGA bitstream: Will return 0.0 or 255.255 if FPGA bitstream is corrupted.

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	81
Read-Access	Always
Write-Access	No! (readonly)

FlexString	
Length	0..20
Initialisation	255.255

#### Variable Telegram Syntax

Read Variable:				
sRN FpgaBitstreamVersion				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	FpgaBitstreamVersion	String	20	Returns the version of the FPGA bitstream: Will return 0.0 or 255.255 if FPGA bitstream is corrupted.

Read Variable Response:				
sRA FpgaBitstreamVersion <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	FpgaBitstreamVersion	String	20	Returns the version of the FPGA bitstream: Will return 0.0 or 255.255 if FPGA bitstream is corrupted.
Variable Data	data	FlexString	20	

#### Variable Telegram Examples

Example: Default Values				
Variable rest examples with data set to default values.				
Read Variable:	02 02 02 02 00 00 00 19 42 69 74 73 74 72 65 61 20 46	73 52 4E 20 46 70 67 61 6D 56 65 72 73 69 6F 6E	.....sRN Fpga BitstreamVersion F	
Read Variable Response:	02 02 02 02 00 00 00 22 42 69 74 73 74 72 65 61 20 00 07 32 35 35 2E 32	73 52 41 20 46 70 67 61 6D 56 65 72 73 69 6F 6E 35 35 60	....."sRA Fpga BitstreamVersion ..255.255`	



### 2.14.3.7. Variable: SvnTagName

The following section contains a detailed description of the variable SvnTagName.

#### Variable Overview

Variable Name	Description
SvnTagName	The SVN tag name this build is based on. Will be "trunk" if not based on a tag at all.

Communication Name	FISvnTagName
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	82
Read-Access	Always
Write-Access	No! (readonly)

FlexString	
Length	0..50

#### Variable Telegram Syntax

Read Variable:				
sRN FISvnTagName				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	FISvnTagName	String	12	The SVN tag name this build is based on. Will be "trunk" if not based on a tag at all.

Read Variable Response:				
sRA FISvnTagName <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	FISvnTagName	String	12	The SVN tag name this build is based on. Will be "trunk" if not based on a tag at all.
Variable Data	data	FlexString	50	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 11 73 52 4E 20 46 49 53 76 6E 54 61 67 4E 61 6D 65 20 5E	.....sRN FISv nTagName ^
Read Variable Response:	02 02 02 02 00 00 00 13 73 52 41 20 46 49 53 76 6E 54 61 67 4E 61 6D 65 20 00 00 51	.....sRA FISv nTagName ..Q



### 2.14.3.8. Variable: ApplicationVersion

The following section contains a detailed description of the variable ApplicationVersion.

#### Variable Overview

Variable Name	Description
ApplicationVersion	Optionally definable version of RAPID or SPEED application

Communication Name	FIAppIVersion
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	83
Read-Access	Always
Write-Access	No! (readonly)

FlexString	
Length	0..8

#### Variable Telegram Syntax

Read Variable:				
sRN FIAppIVersion				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	FIAppIVersion	String	13	Optionally definable version of RAPID or SPEED application

Read Variable Response:				
sRA FIAppIVersion <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	FIAppIVersion	String	13	Optionally definable version of RAPID or SPEED application
Variable Data	data	FlexString	8	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 12 73 52 4E 20 46 49 41 70 70 6C 56 65 72 73 69 6F 6E 20 17	.....sRN FIAppIVersion .
Read Variable Response:	02 02 02 02 00 00 00 14 73 52 41 20 46 49 41 70 70 6C 56 65 72 73 69 6F 6E 20 00 00 18	.....sRA FIAppIVersion ...



### 2.14.3.9. Variable: MainBuildDate

The following section contains a detailed description of the variable MainBuildDate.

#### Variable Overview

Variable Name	Description
MainBuildDate	Build-Date of main application

Communication Name	FIBuildDate
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	84
Read-Access	Service
Write-Access	No! (readonly)

String	
Length	12

#### Variable Telegram Syntax

Read Variable:				
sRN FIBuildDate				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	FIBuildDate	String	11	Build-Date of main application

Read Variable Response:				
sRA FIBuildDate <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	FIBuildDate	String	11	Build-Date of main application
Variable Data	data	String	12	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 10 73 52 4E 20 46 49 42 75 69 6C 64 44 61 74 65 20 02	.....sRN FIBuildDate .
Read Variable Response:	02 02 02 02 00 00 00 1C 73 52 41 20 46 49 42 75 69 6C 64 44 61 74 65 20 00 00 00 00 00 00 00 00 00 00 0D	.....sRA FIBuildDate ..... .....



## 2.14.4. Group: SoftwareInformation

### 2.14.4.1. Method: RequestTaskInformationItems

The following section contains a detailed description of the method RequestTaskInformationItems.

#### Method Overview

Method Name	Description
RequestTaskInformationItems	Requests the information related to the tasks actually running in the system and threads in the device application

Sopas Index	50
Invocation Access	Always

Parameters	
WithSystemTasks	
Bool	
Value Range	False, True
Initialisation	False

Return Values	
NumTasks	
UDInt	
Value Range	0..4294967295
NumTasksStored	
UDInt	
Value Range	0..4294967295
NameArray	
Array	
Length	128
FlexString	
Length	0..128
IsDeviceTaskArray	A flag that tells the programmer whether this task belongs to the device application or not
Array	
Length	128
Bool	
Value Range	False, True
Initialisation	False
IdArray	
Array	
Length	128
UDInt	
Value Range	0..4294967295
PriorityArray	
Array	
Length	128
DInt	
Value Range	-2147483648..2147483647



Return Values		
StackSizeArray		
	<b>Array</b>	
	Length	128
	<b>UDInt</b>	
	Value Range	0..4294967295
StackMaxUsageArray		
	<b>Array</b>	
	Length	128
	<b>UDInt</b>	
	Value Range	0..4294967295
HeapSizeArray		
	<b>Array</b>	
	Length	128
	<b>UDInt</b>	
	Value Range	0..4294967295
MsgPoolSizeArray		
	<b>Array</b>	
	Length	128
	<b>UDInt</b>	
	Value Range	0..4294967295
CPUUsageArray		
	<b>Array</b>	
	Length	128
	<b>Real</b>	
	Value Range	See specification IEEE 754

## Method Telegram Syntax

Method Invocation:				
sMN RequestTaskInformationItems <WithSystemTasks>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	RequestTaskInformationItems	String	27	Requests the information related to the tasks actually running in the system and threads in the device application
Parameter 1	WithSystemTasks	Bool	1	

Method Return Value:				
sAN RequestTaskInformationItems <NumTasks> <NumTasksStored> <NameArray> <IsDeviceTaskArray> <IdArray> <PriorityArray> <StackSizeArray> <StackMaxUsageArray> <HeapSizeArray> <MsgPoolSizeArray> <CPUUsageArray>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	RequestTaskInformationItems	String	27	Requests the information related to the tasks actually running in the system and threads in the device application
Return Value 1	NumTasks	UDInt	4	
Return Value 2	NumTasksStored	UDInt	4	
Return Value 3	NameArray	Array	16384	
Return Value 4	IsDeviceTaskArray	Array	16	A flag that tells the programmer whether this task belongs to the device application or not



Method Return Value:				
sAN RequestTaskInformationItems <NumTasks> <NumTasksStored> <NameArray> <IsDeviceTaskArray> <IdArray> <PriorityArray> <StackSizeArray> <StackMaxUsageArray> <HeapSizeArray> <MsgPoolSizeArray> <CPUUsageArray>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Return Value 5	IdArray	Array	512	
Return Value 6	PriorityArray	Array	512	
Return Value 7	StackSizeArray	Array	512	
Return Value 8	StackMaxUsageArray	Array	512	
Return Value 9	HeapSizeArray	Array	512	
Return Value 10	MsgPoolSizeArray	Array	512	
Return Value 11	CPUUsageArray	Array	512	

## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
Method Invocation:	02 02 02 02 00 00 00 21 73 4D 4E 20 52 65 71 75 65 73 74 54 61 73 6B 49 6E 66 6F 72 6D 61 74 69 6F 6E 49 74 65 6D 73 20 00 06	.....!sMN RequestTaskInformationItems ..





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	00 00 00 00 00 00 00 00	00 00 00 00 00 00 00 00	.....
	00 00 00 00 00 00 00 00	00 00 00 00 00 00 00 00	.....
	00 00 00 00 00 00 00 00	00 00 00 00 00 00 00 00	.....
	00 00 00 00 00 00 00 00	00 00 00 00 00 00 00 00	.....
	00 00 00 00 00 00 00 00	00 00 00 00 00 00 00 00	.....
	0A		.



## 2.15. Interface Block: V3STemperatures

### 2.15.1. Group: SysTemperature

#### 2.15.1.1. Variable: SysTemperatureCurrentValue

The following section contains a detailed description of the variable SysTemperatureCurrentValue.

##### Variable Overview

Variable Name	Description
SysTemperatureCurrentValue	Current temperature of the device.

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	85
Read-Access	Always
Write-Access	No! (readonly)

Int	
Value Range	-32768..32767
Physical Unit	°C
Physical Unit Factor	10.0

##### Variable Telegram Syntax

Read Variable:				
sRN SysTemperatureCurrentValue				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	SysTemperatureCurrentValue	String	26	Current temperature of the device.

Read Variable Response:				
sRA SysTemperatureCurrentValue <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	SysTemperatureCurrentValue	String	26	Current temperature of the device.
Variable Data	data	Int	2	

##### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 1F 73 52 4E 20 53 79 73 54 65 6D 70 65 72 61 74 75 74 56 61 6C 75 65 20 78	.....sRN SysT emperatureCurren tValue x
Read Variable Response:	02 02 02 02 00 00 00 21 73 52 41 20 53 79 73 54 65 6D 70 65 72 61 74 75 72 65 43 75 72 72 65 6E 74 56 61 6C 75 65 20 00 00 77	.....!sRA SysT emperatureCurren tValue ..w



### 2.15.1.2. Variable: SysTemperatureErrorLimit

The following section contains a detailed description of the variable SysTemperatureErrorLimit.

#### Variable Overview

Variable Name	Description
SysTemperatureErrorLimit	Systems highest allowed temperature. May depend on configuration.

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	86
Read-Access	Always
Write-Access	No! (readonly)

Int	
Value Range	-32768..32767
Initialisation	750
Physical Unit	°C
Physical Unit Factor	10.0

#### Variable Telegram Syntax

Read Variable:				
sRN SysTemperatureErrorLimit				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	SysTemperatureErrorLimit	String	24	Systems highest allowed temperature. May depend on configuration.

Read Variable Response:				
sRA SysTemperatureErrorLimit <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	SysTemperatureErrorLimit	String	24	Systems highest allowed temperature. May depend on configuration.
Variable Data	data	Int	2	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 1D 73 52 4E 20 53 79 73 54 65 6D 70 65 72 61 74 75 72 65 45 72 72 6F 72 4C 69 6D 69 74 20 77	.....sRN SysTemperatureErrorLimit w
Read Variable Response:	02 02 02 02 00 00 00 1F 73 52 41 20 53 79 73 54 65 6D 70 65 72 61 74 75 72 65 45 72 72 6F 72 4C 69 6D 69 74 20 02 EE 94	.....sRA SysTemperatureErrorLimit .



### 2.15.1.3. Variable: SysTemperatureWarningMargin

The following section contains a detailed description of the variable SysTemperatureWarningMargin.

#### Variable Overview

Variable Name	Description
SysTemperatureWarningMargin	The margin to systems error limit. If temeprature raises above the margin, the device will change into warning state.

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	87
Storage	Variable is stored in ParamEEProm
Read-Access	Always
Write-Access	Service

Int	
Value Range	-32768..32767
Initialisation	50
Physical Unit	°C
Physical Unit Factor	10.0

#### Variable Telegram Syntax

Read Variable:				
sRN SysTemperatureWarningMargin				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	SysTemperatureWarningMargin	String	27	The margin to systems error limit. If temeprature raises above the margin, the device will change into warning state.

Read Variable Response:				
sRA SysTemperatureWarningMargin <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	SysTemperatureWarningMargin	String	27	The margin to systems error limit. If temeprature raises above the margin, the device will change into warning state.
Variable Data	data	Int	2	

Write Variable:				
sWN SysTemperatureWarningMargin <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	SysTemperatureWarningMargin	String	27	The margin to systems error limit. If temeprature raises above the margin, the device will change into warning state.
Variable Data	data	Int	2	



Write Variable Response:				
sWA SysTemperatureWarningMargin				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	SysTemperatureWarningMargin	String	27	The margin to systems error limit. If temeprature raises above the margin, the device will change into warning state.

## Variable Telegram Examples

Example: Default Values			
Variable rest examples with data set to default values.			
Read Variable:	02 02 02 02 00 00 00 20 65 6D 70 65 72 61 74 75 67 4D 61 72 67 69 6E 20	73 52 4E 20 53 79 73 54 72 65 57 61 72 6E 69 6E 0E	..... sRN SysT emperatureWarnin gMargin .
Read Variable Response:	02 02 02 02 00 00 00 22 65 6D 70 65 72 61 74 75 67 4D 61 72 67 69 6E 20	73 52 41 20 53 79 73 54 72 65 57 61 72 6E 69 6E 00 32 33	....."sRA SysT emperatureWarnin gMargin .23
Write Variable:	02 02 02 02 00 00 00 22 65 6D 70 65 72 61 74 75 67 4D 61 72 67 69 6E 20	73 57 4E 20 53 79 73 54 72 65 57 61 72 6E 69 6E 00 32 39	....."sWN SysT emperatureWarnin gMargin .29
Write Variable Response:	02 02 02 02 00 00 00 20 65 6D 70 65 72 61 74 75 67 4D 61 72 67 69 6E 20	73 57 41 20 53 79 73 54 72 65 57 61 72 6E 69 6E 04	..... sWA SysT emperatureWarnin gMargin .





## 2.15.2. Group: TemperatureInternal

### 2.15.2.1. Variable: TemperatureValues

The following section contains a detailed description of the variable TemperatureValues.

#### Variable Overview

Variable Name	Description
TemperatureValues	List of all available temperatures. Ordered by significance in terms of calibration.

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	88
Read-Access	Service
Write-Access	No! (readonly)

Array	
Length	0..128
Int	
	Value Range
	-32768..32767
	Physical Unit
Physical Unit Factor	°C
	10.0

#### Variable Telegram Syntax

Read Variable:				
sRN TemperatureValues				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	TemperatureValues	String	17	List of all available temperatures. Ordered by significance in terms of calibration.

Read Variable Response:				
sRA TemperatureValues <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	TemperatureValues	String	17	List of all available temperatures. Ordered by significance in terms of calibration.
Variable Data	data	Array	256	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 16 73 52 4E 20 54 65 6D 70 65 72 61 74 75 72 65 56 61 6C 75 65 73 20 1B	.....sRN TemperatureValues .
Read Variable Response:	02 02 02 02 00 00 00 18 73 52 41 20 54 65 6D 70 65 72 61 74 75 72 65 56 61 6C 75 65 73 20 00 00 14	.....sRA TemperatureValues ..

## 2.15.2.2. Variable: TemperatureNames

The following section contains a detailed description of the variable TemperatureNames.

### Variable Overview

Variable Name	Description
TemperatureNames	List of all names for variable TemperatureValues

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	91
Read-Access	Service
Write-Access	No! (readonly)

Array	
Length	0..128
<b>FlexString</b>	
Length	0..128

### Variable Telegram Syntax

Read Variable:				
sRN TemperatureNames				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	TemperatureNames	String	16	List of all names for variable TemperatureValues

Read Variable Response:				
sRA TemperatureNames <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	TemperatureNames	String	16	List of all names for variable TemperatureValues
Variable Data	data	Array	16384	

### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 15 73 52 4E 20 54 65 6D 70 65 72 61 74 75 72 65 4E 61 6D 65 73 20 77	.....sRN TemperatureNames w
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 17 73 52 41 20 54 65 6D 70 65 72 61 74 75 72 65 4E 61 6D 65 73 20 00 00 78	.....sRA TemperatureNames ..x



## 2.16. Interface Block: SystemInternal

### 2.16.1. Group: IPCIOCONTROLLER

#### 2.16.1.1. Variable: ElectricalMonitoring

The following section contains a detailed description of the variable ElectricalMonitoring.

##### Variable Overview

Variable Name	Description
ElectricalMonitoring	All available electrical value.

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	92
Read-Access	Always
Write-Access	No! (readonly)

UserType	
V3SElectricalMonitoring	See the chapter "User Types" for details.

##### Variable Telegram Syntax

Read Variable:				
sRN ElectricalMonitoring				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	ElectricalMonitoring	String	20	All available electrical value.

Read Variable Response:				
sRA ElectricalMonitoring <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	ElectricalMonitoring	String	20	All available electrical value.
Variable Data	data	V3SElectricalMonitoring	16	

##### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 19 73 52 4E 20 45 6C 65 63 74 72 69 63 61 6C 4D 6F 6E 69 74 6F 72 69 6E 67 20 6D	.....sRN ElectricalMonitoring
Read Variable Response:	02 02 02 02 00 00 00 29 73 52 41 20 45 6C 65 63 74 72 69 63 61 6C 4D 6F 6E 69 74 6F 72 69 6E 67 20 00 00 00 00 00 00 00 00 00 00 00 00 00 62	.....)sRA ElectricalMonitoring ..... ..b



### 2.16.1.2. Variable: ElectricalLimits

The following section contains a detailed description of the variable ElectricalLimits.

#### Variable Overview

Variable Name	Description
ElectricalLimits	The electrical limit values.

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	93
Read-Access	Always
Write-Access	No! (readonly)

UserType	
V3SElectricalLimits	See the chapter "User Types" for details.

#### Variable Telegram Syntax

Read Variable:				
sRN ElectricalLimits				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	ElectricalLimits	String	16	The electrical limit values.

Read Variable Response:				
sRA ElectricalLimits <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	ElectricalLimits	String	16	The electrical limit values.
Variable Data	data	V3SElectricalLimits	16	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 15 73 52 4E 20 45 6C 65 63 74 72 69 63 61 6C 4C 69 6D 69 74 73 20 67	.....sRN ElectricalLimits g
Read Variable Response:	02 02 02 02 00 00 00 25 73 52 41 20 45 6C 65 63 74 72 69 63 61 6C 4C 69 6D 69 74 73 20 00 00 00 00 40 A0 00 00 41 A0 00 00 41 E0 00 00 C8	.....%sRA ElectricalLimits ... ...A...A...



### 2.16.1.3. Variable: OpVoltageStatus

The following section contains a detailed description of the variable OpVoltageStatus.

#### Variable Overview

Variable Name
OpVoltageStatus

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	94
Read-Access	Always
Write-Access	No! (readonly)

UserType	
ThreeLevels	See the chapter "User Types" for details.

#### Variable Telegram Syntax

Read Variable:				
sRN OpVoltageStatus				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	OpVoltageStatus	String	15	

Read Variable Response:				
sRA OpVoltageStatus <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	OpVoltageStatus	String	15	
Variable Data	data	ThreeLevels	0	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 14 73 52 4E 20 4F 70 56 6F 6C 74 61 67 65 53 74 61 74 75 73 20 26	.....sRN OpVo ltageStatus &
Read Variable Response:	02 02 02 02 00 00 00 15 73 52 41 20 4F 70 56 6F 6C 74 61 67 65 53 74 61 74 75 73 20 00 29	.....sRA OpVo ltageStatus .)



#### 2.16.1.4. Variable: statusOfLeds

The following section contains a detailed description of the variable statusOfLeds.

##### Variable Overview

Variable Name	Description
statusOfLeds	Mirrors the current state of the device LEDs

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	95
Read-Access	Always
Write-Access	No! (readonly)

Struct	
DeviceLed	
UserType	
LedConfig	See the chapter "User Types" for details.
ApplicationLed	
UserType	
LedConfig	See the chapter "User Types" for details.

##### Variable Telegram Syntax

Read Variable:				
sRN statusOfLeds				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	statusOfLeds	String	12	Mirrors the current state of the device LEDs

Read Variable Response:				
sRA statusOfLeds <DeviceLed> <ApplicationLed>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	statusOfLeds	String	12	Mirrors the current state of the device LEDs
Variable Data 1	DeviceLed	LedConfig	5	
Variable Data 2	ApplicationLed	LedConfig	5	

##### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 11 73 52 4E 20 73 74 61 74 75 73 4F 66 4C 65 64 73 20 6C	.....sRN stat usOfLeds l
Read Variable Response:	02 02 02 02 00 00 00 1B 73 52 41 20 73 74 61 74 75 73 4F 66 4C 65 64 73 20 00 00 05 00 32 00 00 05 00 32 63	.....sRA stat usOfLeds ....2.. ..2c



## 2.16.2. Group: ProductionInfo

### 2.16.2.1. Variable: HwInfoAll

The following section contains a detailed description of the variable HwInfoAll.

#### Variable Overview

Variable Name	Description
HwInfoAll	Available production data of all boards.

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	96
Read-Access	Service
Write-Access	No! (readonly)

Struct	
boards	
Array	
Length	0..32
Struct	
name	
FlexString	
Length	0..32
prodData	
UserType	
V3SProductionData	See the chapter "User Types" for details.

#### Variable Telegram Syntax

Read Variable:				
sRN HwInfoAll				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	HwInfoAll	String	9	Available production data of all boards.

Read Variable Response:				
sRA HwInfoAll <boards>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	HwInfoAll	String	9	Available production data of all boards.
Variable Data 1	boards	Array	2016	



## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 0E 73 52 4E 20 48 77 49 6E 66 6F 41 6C 6C 20 3F	.....sRN HwIn foAll ?
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 10 73 52 41 20 48 77 49 6E 66 6F 41 6C 6C 20 00 00 30	.....sRA HwIn foAll ..0

### 2.16.2.2. Variable: ProductionDataAll

The following section contains a detailed description of the variable ProductionDataAll.

#### Variable Overview

Variable Name	Description
ProductionDataAll	Available production data of all boards.

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	97
Read-Access	Service
Write-Access	No! (readonly)

Struct		
boards		
	<b>Array</b>	
	Length	0..32
	<b>Struct</b>	
	name	
	<b>FlexString</b>	
	Length	0..32
	pairs	Key/value pairs, the value is encoded as string
	<b>Array</b>	
	Length	0..64
	UserType	Struct[boards].Array.Struct[pairs].Array.UserType

UserType	Struct[boards].Array.Struct[pairs].Array.UserType
KeyValue	See the chapter "User Types" for details.





## Variable Telegram Syntax

Read Variable:				
sRN ProductionDataAll				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	ProductionDataAll	String	17	Available production data of all boards.

Read Variable Response:				
sRA ProductionDataAll <boards>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	ProductionDataAll	String	17	Available production data of all boards.
Variable Data 1	boards	Array	263168	

## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 16 73 52 4E 20 50 72 6F 64 75 63 74 69 6F 6E 44 61 74 61 41 6C 6C 20 3D	.....sRN ProductionDataAll =
Read Variable Response:	02 02 02 02 00 00 00 18 73 52 41 20 50 72 6F 64 75 63 74 69 6F 6E 44 61 74 61 41 6C 6C 20 00 00 32	.....sRA ProductionDataAll .. 2

### 2.16.2.3. Method: ReadHwInfo

The following section contains a detailed description of the method ReadHwInfo.

#### Method Overview

Method Name	Description
ReadHwInfo	Read available production data of all boards.

Sopas Index	51
Invocation Access	Service

UserType	
V3SHardwareInfo	See the chapter "User Types" for details.



## Method Telegram Syntax

Method Invocation:				
sMN_ReadHwInfo				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	ReadHwInfo	String	10	Read available production data of all boards.

Method Return Value:				
sAN ReadHwInfo <ProcessorBoard> <PowerIOBoard> <ImagerBoard> <IlluminationBoard>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	ReadHwInfo	String	10	Read available production data of all boards.
Return Value 1	ProcessorBoard	V3SProducti onData	31	
Return Value 2	PowerIOBoard	V3SProducti onData	31	
Return Value 3	ImagerBoard	V3SProducti onData	31	
Return Value 4	IlluminationBoard	V3SProducti onData	31	

## Method Telegram Examples

[illegible]



## 2.16.2.4. Method: ReadHwInfoAll

The following section contains a detailed description of the method ReadHwInfoAll.

### Method Overview

Method Name	Description
ReadHwInfoAll	Read available production data of all boards.

Sopas Index	52
Invocation Access	Service

Return Values	
boards	
<b>Array</b>	
Length	0..32
<b>Struct</b>	
name	
<b>FlexString</b>	
Length	0..32
prodData	
<b>UserType</b>	
V3SProductionData	See the chapter "User Types" for details.

### Method Telegram Syntax

Method Invocation:				
sMN ReadHwInfoAll				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	ReadHwInfoAll	String	13	Read available production data of all boards.

Method Return Value:				
sAN ReadHwInfoAll <boards>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	ReadHwInfoAll	String	13	Read available production data of all boards.
Return Value 1	boards	Array	2016	



## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
<b>Method Invocation:</b>	02 02 02 02 00 00 00 12 73 4D 4E 20 52 65 61 64 48 77 49 6E 66 6F 41 6C 6C 20 12	.....sMN Read HwInfoAll .
<b>Method Return Value:</b>	02 02 02 02 00 00 00 14 73 41 4E 20 52 65 61 64 48 77 49 6E 66 6F 41 6C 6C 20 00 00 1E	.....sAN Read HwInfoAll ...

## 2.17. Interface Block: DIV09GeneralCfgIOBase

### 2.17.1. Group: DIV09DigitalIOBase

#### 2.17.1.1. Variable: INOUT1\_Function

The following section contains a detailed description of the variable INOUT1\_Function.

#### Variable Overview

Variable Name	Description
INOUT1_Function	Function of INOUT1

Communication Name	DIO1Fnc
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

UserType	
IOFunctionType	See the chapter "User Types" for details.

#### Variable Telegram Syntax

Read Variable:				
sRN DIO1Fnc				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	DIO1Fnc	String	7	Function of INOUT1

Read Variable Response:				
sRA DIO1Fnc <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	DIO1Fnc	String	7	Function of INOUT1
Variable Data	data	IOFunctionType	0	

Write Variable:				
sWN DIO1Fnc <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	DIO1Fnc	String	7	Function of INOUT1
Variable Data	data	IOFunctionType	0	



Write Variable Response:				
sWA DIO1Fnc				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	DIO1Fnc	String	7	Function of INOUT1

## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 0C 73 52 4E 20 44 49 4F 31 46 6E 63 20 57	.....sRN DIO1 Fnc W
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 0D 73 52 41 20 44 49 4F 31 46 6E 63 20 00 58	.....sRA DIO1 Fnc ·X
<b>Write Variable:</b>	02 02 02 02 00 00 00 0D 73 57 4E 20 44 49 4F 31 46 6E 63 20 00 52	.....sWN DIO1 Fnc ·R
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 0C 73 57 41 20 44 49 4F 31 46 6E 63 20 5D	.....sWA DIO1 Fnc ]

### 2.17.1.2. Variable: INOUT2\_Function

The following section contains a detailed description of the variable INOUT2\_Function.

#### Variable Overview

Variable Name	Description
INOUT2_Function	Function of INOUT2

Communication Name	DIO2Fnc
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

UserType	
IOFunctionType	See the chapter "User Types" for details.



## Variable Telegram Syntax

Read Variable:				
sRN DIO2Fnc				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	DIO2Fnc	String	7	Function of INOUT2

Read Variable Response:				
sRA DIO2Fnc <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	DIO2Fnc	String	7	Function of INOUT2
Variable Data	data	IOFunctionType	0	

Write Variable:				
sWN DIO2Fnc <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	DIO2Fnc	String	7	Function of INOUT2
Variable Data	data	IOFunctionType	0	

Write Variable Response:				
sWA DIO2Fnc				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	DIO2Fnc	String	7	Function of INOUT2

## Variable Telegram Examples

Example: Default Values				
Variable rest examples with data set to default values.				
Read Variable:	02 02 02 02 00 00 00 0C 46 6E 63 20 54	73 52 4E 20 44 49 4F 32	.....sRN DIO2Fnc T	
Read Variable Response:	02 02 02 02 00 00 00 0D 46 6E 63 20 00 5B	73 52 41 20 44 49 4F 32	.....sRA DIO2Fnc ·[	
Write Variable:	02 02 02 02 00 00 00 0D 46 6E 63 20 00 51	73 57 4E 20 44 49 4F 32	.....sWN DIO2Fnc ·Q	
Write Variable Response:	02 02 02 02 00 00 00 0C 46 6E 63 20 5E	73 57 41 20 44 49 4F 32	.....sWA DIO2Fnc ^	

### 2.17.1.3. Variable: INOUT3\_Function

The following section contains a detailed description of the variable INOUT3\_Function.

#### Variable Overview

Variable Name	Description
INOUT3_Function	Function of INOUT3

Communication Name	DIO3Fnc
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

UserType	
IOFunctionType	See the chapter "User Types" for details.

#### Variable Telegram Syntax

Read Variable:				
sRN DIO3Fnc				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	DIO3Fnc	String	7	Function of INOUT3

Read Variable Response:				
sRA DIO3Fnc <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	DIO3Fnc	String	7	Function of INOUT3
Variable Data	data	IOFunctionType	0	

Write Variable:				
sWN DIO3Fnc <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	DIO3Fnc	String	7	Function of INOUT3
Variable Data	data	IOFunctionType	0	

Write Variable Response:				
sWA DIO3Fnc				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	DIO3Fnc	String	7	Function of INOUT3





## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 0C 73 52 4E 20 44 49 4F 33 46 6E 63 20 55	.....sRN DIO3 Fnc U
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 0D 73 52 41 20 44 49 4F 33 46 6E 63 20 00 5A	.....sRA DIO3 Fnc ·Z
<b>Write Variable:</b>	02 02 02 02 00 00 00 0D 73 57 4E 20 44 49 4F 33 46 6E 63 20 00 50	.....sWN DIO3 Fnc ·P
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 0C 73 57 41 20 44 49 4F 33 46 6E 63 20 5F	.....sWA DIO3 Fnc _

### 2.17.1.4. Variable: INOUT4\_Function

The following section contains a detailed description of the variable INOUT4\_Function.

#### Variable Overview

Variable Name	Description
INOUT4_Function	Function of INOUT4

Communication Name	DIO4Fnc
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

UserType	
IOFunctionType	See the chapter "User Types" for details.

#### Variable Telegram Syntax

Read Variable:				
sRN DIO4Fnc				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	DIO4Fnc	String	7	Function of INOUT4

Read Variable Response:				
sRA DIO4Fnc <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	DIO4Fnc	String	7	Function of INOUT4
Variable Data	data	IOFunctionType	0	



Write Variable:				
sWN DIO4Fnc <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	DIO4Fnc	String	7	Function of INOUT4
Variable Data	data	IOFunctionType	0	

Write Variable Response:				
sWA DIO4Fnc				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	DIO4Fnc	String	7	Function of INOUT4

## Variable Telegram Examples

Example: Default Values				
Variable rest examples with data set to default values.				
<b>Read Variable:</b>	02 02 02 02 00 00 00 0C 46 6E 63 20 52	73 52 4E 20 44 49 4F 34	.....sRN DIO4 Fnc R	
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 0D 46 6E 63 20 00 5D	73 52 41 20 44 49 4F 34	.....sRA DIO4 Fnc .]	
<b>Write Variable:</b>	02 02 02 02 00 00 00 0D 46 6E 63 20 00 57	73 57 4E 20 44 49 4F 34	.....sWN DIO4 Fnc .W	
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 0C 46 6E 63 20 58	73 57 41 20 44 49 4F 34	.....sWA DIO4 Fnc X	

### 2.17.1.5. Variable: INOUT5\_Function

The following section contains a detailed description of the variable INOUT5\_Function.

#### Variable Overview

Variable Name	Description
INOUT5_Function	Function of INOUT5

Communication Name	DIO5Fnc
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

UserType	
IOFunctionType	See the chapter "User Types" for details.



## Variable Telegram Syntax

Read Variable:				
sRN DIO5Fnc				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	DIO5Fnc	String	7	Function of INOUT5

Read Variable Response:				
sRA DIO5Fnc <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	DIO5Fnc	String	7	Function of INOUT5
Variable Data	data	IOFunctionType	0	

Write Variable:				
sWN DIO5Fnc <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	DIO5Fnc	String	7	Function of INOUT5
Variable Data	data	IOFunctionType	0	

Write Variable Response:				
sWA DIO5Fnc				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	DIO5Fnc	String	7	Function of INOUT5

## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0C 73 52 4E 20 44 49 4F 35 46 6E 63 20 53	.....sRN DIO5Fnc S
Read Variable Response:	02 02 02 02 00 00 00 0D 73 52 41 20 44 49 4F 35 46 6E 63 20 00 5C	.....sRA DIO5Fnc \
Write Variable:	02 02 02 02 00 00 00 0D 73 57 4E 20 44 49 4F 35 46 6E 63 20 00 56	.....sWN DIO5Fnc V
Write Variable Response:	02 02 02 02 00 00 00 0C 73 57 41 20 44 49 4F 35 46 6E 63 20 59	.....sWA DIO5Fnc Y

### 2.17.1.6. Variable: INOUT6\_Function

The following section contains a detailed description of the variable INOUT6\_Function.

#### Variable Overview

Variable Name	Description
INOUT6_Function	Function of INOUT6

Communication Name	DIO6Fnc
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

UserType	
IOFunctionType	See the chapter "User Types" for details.

#### Variable Telegram Syntax

Read Variable:				
sRN DIO6Fnc				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	DIO6Fnc	String	7	Function of INOUT6

Read Variable Response:				
sRA DIO6Fnc <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	DIO6Fnc	String	7	Function of INOUT6
Variable Data	data	IOFunctionType	0	

Write Variable:				
sWN DIO6Fnc <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	DIO6Fnc	String	7	Function of INOUT6
Variable Data	data	IOFunctionType	0	

Write Variable Response:				
sWA DIO6Fnc				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	DIO6Fnc	String	7	Function of INOUT6



## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 0C 73 52 4E 20 44 49 4F 36 46 6E 63 20 50	.....sRN DIO6 Fnc P
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 0D 73 52 41 20 44 49 4F 36 46 6E 63 20 00 5F	.....sRA DIO6 Fnc .
<b>Write Variable:</b>	02 02 02 02 00 00 00 0D 73 57 4E 20 44 49 4F 36 46 6E 63 20 00 55	.....sWN DIO6 Fnc .U
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 0C 73 57 41 20 44 49 4F 36 46 6E 63 20 5A	.....sWA DIO6 Fnc Z

### 2.17.1.7. Variable: IOValue

The following section contains a detailed description of the variable IOValue.

#### Variable Overview

Variable Name	Description
IOValue	All available IOs Values

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Read-Access	Always
Write-Access	No! (readonly)

UserType	
V3SIOsState	See the chapter "User Types" for details.

#### Variable Telegram Syntax

Read Variable:				
sRN IOValue				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	IOValue	String	7	All available IOs Values

Read Variable Response:				
sRA IOValue <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	IOValue	String	7	All available IOs Values
Variable Data	data	V3SIOsState	6	



## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 0C 73 52 4E 20 49 4F 56 61 6C 75 65 20 22	.....sRN IOVa lue "
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 12 73 52 41 20 49 4F 56 61 6C 75 65 20 00 00 00 00 00 00 2D	.....sRA IOVa lue .....-



## 2.17.2. Group: SystemHealthDiagnostics

### 2.17.2.1. Variable: TempLevel

The following section contains a detailed description of the variable TempLevel.

#### Variable Overview

Variable Name	Description
TempLevel	Temperature level

Communication Name	TmpLvl
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Read-Access	Always
Write-Access	No! (readonly)

UserType	
ThreeLevels	See the chapter "User Types" for details.

#### Variable Telegram Syntax

Read Variable:				
sRN TmpLvl				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	TmpLvl	String	6	Temperature level

Read Variable Response:				
sRA TmpLvl <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	TmpLvl	String	6	Temperature level
Variable Data	data	ThreeLevels	0	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0B 73 52 4E 20 54 6D 70 4C 76 6C 20 70	.....sRN TmpL vl p
Read Variable Response:	02 02 02 02 00 00 00 0C 73 52 41 20 54 6D 70 4C 76 6C 20 00 7F	.....sRA TmpL vl ..

## 2.17.2.2. Variable: doutPinError

The following section contains a detailed description of the variable doutPinError.

### Variable Overview

Variable Name	Description
doutPinError	Digital output health, if set, a short circuit occurred

Communication Name	DoPinErr
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Read-Access	Always
Write-Access	No! (readonly)

DCont		
Bit Length	32	
out1		
0.0	<b>Bool</b>	
	Value Range	False, True
	Initialisation	False
out2		
0.1	<b>Bool</b>	
	Value Range	False, True
	Initialisation	False
out3		
0.2	<b>Bool</b>	
	Value Range	False, True
	Initialisation	False
out4		
0.3	<b>Bool</b>	
	Value Range	False, True
	Initialisation	False
out5		
0.4	<b>Bool</b>	
	Value Range	False, True
	Initialisation	False
out6		
0.5	<b>Bool</b>	
	Value Range	False, True
	Initialisation	False
out7		
0.6	<b>Bool</b>	
	Value Range	False, True
	Initialisation	False
out8		
0.7	<b>Bool</b>	
	Value Range	False, True
	Initialisation	False





## Variable Telegram Syntax

Read Variable:				
sRN DoPinErr				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	DoPinErr	String	8	Digital output health, if set, a short circuit occurred

Read Variable Response:				
sRA DoPinErr <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	DoPinErr	String	8	Digital output health, if set, a short circuit occurred
Variable Data	data	DCont	4	

## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0D 73 52 4E 20 44 6F 50 69 6E 45 72 72 20 56	.....sRN DoPinErr V
Read Variable Response:	02 02 02 02 00 00 00 11 73 52 41 20 44 6F 50 69 6E 45 72 72 20 00 00 00 00 59	.....sRA DoPinErr ....Y

### 2.17.2.3. Variable: doutOverload

The following section contains a detailed description of the variable doutOverload.

#### Variable Overview

Variable Name	Description
doutOverload	Digital output overheated, i.e. due to a overload

Communication Name	DoOvrlD
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Read-Access	Always
Write-Access	No! (readonly)

Bool	
Value Range	False, True
Initialisation	False



## Variable Telegram Syntax

Read Variable:				
sRN DoOvrld				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	DoOvrld	String	7	Digital output overheated, i.e. due to a overload

Read Variable Response:				
sRA DoOvrld <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	DoOvrld	String	7	Digital output overheated, i.e. due to a overload
Variable Data	data	Bool	1	

## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0C 73 52 4E 20 44 6F 4F 76 72 6C 64 20 07	.....sRN DoOv rld .
Read Variable Response:	02 02 02 02 00 00 00 0D 73 52 41 20 44 6F 4F 76 72 6C 64 20 00 08	.....sRA DoOv rld ..

### 2.17.2.4. Variable: digitalIOStatus

The following section contains a detailed description of the variable digitalIOStatus.

#### Variable Overview

Variable Name	Description
digitalIOStatus	Digital output status, true if neither overload nor any pin error.

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Read-Access	Always
Write-Access	No! (readonly)

Bool	
Value Range	False, True
Initialisation	False



## Variable Telegram Syntax

Read Variable:				
sRN digitalIOStatus				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	digitalIOStatus	String	15	Digital output status, true if neither overload nor any pin error.

Read Variable Response:				
sRA digitalIOStatus <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	digitalIOStatus	String	15	Digital output status, true if neither overload nor any pin error.
Variable Data	data	Bool	1	

## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 14 73 52 4E 20 64 69 67 69 74 61 6C 49 4F 53 74 61 74 75 73 20 27	.....sRN digitalIOStatus '
Read Variable Response:	02 02 02 02 00 00 00 15 73 52 41 20 64 69 67 69 74 61 6C 49 4F 53 74 61 74 75 73 20 00 28	.....sRA digitalIOStatus .(

## 2.18. Interface Block: TodoRemoveUnusedVariables

### 2.18.1. Group: TodoRemoveUnusedVariables

#### 2.18.1.1. Variable: IoJobOutputMap

The following section contains a detailed description of the variable IoJobOutputMap.

##### Variable Overview

Variable Name	Description
IoJobOutputMap	Mapping of JobOutput DIO to DIO Function.

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Read-Access	Always
Write-Access	No! (readonly)

Array			
Length	6		
	Enum8		
	Default Value		
	NoFunction		
	Value	Name	Description
	0	NoFunction	

##### Variable Telegram Syntax

Read Variable:				
sRN IoJobOutputMap				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	IoJobOutputMap	String	14	Mapping of JobOutput DIO to DIO Function.

Read Variable Response:				
sRA IoJobOutputMap <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	IoJobOutputMap	String	14	Mapping of JobOutput DIO to DIO Function.
Variable Data	data	Array	6	

##### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 13 73 52 4E 20 49 6F 4A 6F 62 4F 75 74 70 75 74 4D 61 70 20 6D	.....sRN IoJo bOutputMap m
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 19 73 52 41 20 49 6F 4A 6F 62 4F 75 74 70 75 74 4D 61 70 20 00 00 00 00 00 00 62	.....sRA IoJo bOutputMap ..... ·b



### 2.18.1.2. Variable: OUT1\_offdelay

The following section contains a detailed description of the variable OUT1\_offdelay.

#### Variable Overview

Variable Name	Description
OUT1_offdelay	Off state of (in)out pin 1 will be delayed by this value multiplied with 10ms.

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	No! (readonly)

USInt	
Value Range	0..255
Initialisation	0
Physical Unit	10 ms

#### Variable Telegram Syntax

Read Variable:				
sRN OUT1_offdelay				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	OUT1_offdelay	String	13	Off state of (in)out pin 1 will be delayed by this value multiplied with 10ms.

Read Variable Response:				
sRA OUT1_offdelay <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	OUT1_offdelay	String	13	Off state of (in)out pin 1 will be delayed by this value multiplied with 10ms.
Variable Data	data	USInt	1	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 12 73 52 4E 20 4F 55 54 31 5F 6F 66 66 64 65 6C 61 79 20 55	.....sRN OUT1_offdelay U
Read Variable Response:	02 02 02 02 00 00 00 13 73 52 41 20 4F 55 54 31 5F 6F 66 66 64 65 6C 61 79 20 00 5A	.....sRA OUT1_offdelay .Z

### 2.18.1.3. Variable: OUT2\_offdelay

The following section contains a detailed description of the variable OUT2\_offdelay.

#### Variable Overview

Variable Name	Description
OUT2_offdelay	Off state of (in)out pin 2 will be delayed by this value multiplied with 10ms.

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	No! (readonly)

USInt	
Value Range	0..255
Initialisation	0
Physical Unit	10 ms

#### Variable Telegram Syntax

Read Variable:				
sRN OUT2_offdelay				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	OUT2_offdelay	String	13	Off state of (in)out pin 2 will be delayed by this value multiplied with 10ms.

Read Variable Response:				
sRA OUT2_offdelay <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	OUT2_offdelay	String	13	Off state of (in)out pin 2 will be delayed by this value multiplied with 10ms.
Variable Data	data	USInt	1	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 12 73 52 4E 20 4F 55 54 32 5F 6F 66 66 64 65 6C 61 79 20 56	.....sRN OUT2_offdelay V
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 13 73 52 41 20 4F 55 54 32 5F 6F 66 66 64 65 6C 61 79 20 00 59	.....sRA OUT2_offdelay .Y



#### 2.18.1.4. Variable: OUT3\_offdelay

The following section contains a detailed description of the variable OUT3\_offdelay.

##### Variable Overview

Variable Name	Description
OUT3_offdelay	Off state of (in)out pin 3 will be delayed by this value multiplied with 10ms.

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	No! (readonly)

USInt	
Value Range	0..255
Initialisation	0
Physical Unit	10 ms

##### Variable Telegram Syntax

Read Variable:				
sRN OUT3_offdelay				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	OUT3_offdelay	String	13	Off state of (in)out pin 3 will be delayed by this value multiplied with 10ms.

Read Variable Response:				
sRA OUT3_offdelay <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	OUT3_offdelay	String	13	Off state of (in)out pin 3 will be delayed by this value multiplied with 10ms.
Variable Data	data	USInt	1	

##### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 12 73 52 4E 20 4F 55 54 33 5F 6F 66 66 64 65 6C 61 79 20 57	.....sRN OUT3_offdelay W
Read Variable Response:	02 02 02 02 00 00 00 13 73 52 41 20 4F 55 54 33 5F 6F 66 66 64 65 6C 61 79 20 00 58	.....sRA OUT3_offdelay .X

### 2.18.1.5. Variable: OUT4\_offdelay

The following section contains a detailed description of the variable OUT4\_offdelay.

#### Variable Overview

Variable Name	Description
OUT4_offdelay	Off state of (in)out pin 4 will be delayed by this value multiplied with 10ms.

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	No! (readonly)

USInt	
Value Range	0..255
Initialisation	0
Physical Unit	10 ms

#### Variable Telegram Syntax

Read Variable:				
sRN OUT4_offdelay				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	OUT4_offdelay	String	13	Off state of (in)out pin 4 will be delayed by this value multiplied with 10ms.

Read Variable Response:				
sRA OUT4_offdelay <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	OUT4_offdelay	String	13	Off state of (in)out pin 4 will be delayed by this value multiplied with 10ms.
Variable Data	data	USInt	1	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 12 73 52 4E 20 4F 55 54 34 5F 6F 66 66 64 65 6C 61 79 20 50	.....sRN OUT4 _offdelay P
Read Variable Response:	02 02 02 02 00 00 00 13 73 52 41 20 4F 55 54 34 5F 6F 66 66 64 65 6C 61 79 20 00 5F	.....sRA OUT4 _offdelay .





### 2.18.1.6. Variable: OUT5\_offdelay

The following section contains a detailed description of the variable OUT5\_offdelay.

#### Variable Overview

Variable Name	Description
OUT5_offdelay	Off state of (in)out pin 5 will be delayed by this value multiplied with 10ms.

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	No! (readonly)

USInt	
Value Range	0..255
Initialisation	0
Physical Unit	10 ms

#### Variable Telegram Syntax

Read Variable:				
sRN OUT5_offdelay				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	OUT5_offdelay	String	13	Off state of (in)out pin 5 will be delayed by this value multiplied with 10ms.

Read Variable Response:				
sRA OUT5_offdelay <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	OUT5_offdelay	String	13	Off state of (in)out pin 5 will be delayed by this value multiplied with 10ms.
Variable Data	data	USInt	1	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 12 73 52 4E 20 4F 55 54 35 5F 6F 66 66 64 65 6C 61 79 20 51	.....sRN OUT5_offdelay Q
Read Variable Response:	02 02 02 02 00 00 00 13 73 52 41 20 4F 55 54 35 5F 6F 66 66 64 65 6C 61 79 20 00 5E	.....sRA OUT5_offdelay .^



### 2.18.1.7. Variable: OUT6\_offdelay

The following section contains a detailed description of the variable OUT6\_offdelay.

#### Variable Overview

Variable Name	Description
OUT6_offdelay	Off state of (in)out pin 6 will be delayed by this value multiplied with 10ms.

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	No! (readonly)

USInt	
Value Range	0..255
Initialisation	0
Physical Unit	10 ms

#### Variable Telegram Syntax

Read Variable:				
sRN OUT6_offdelay				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	OUT6_offdelay	String	13	Off state of (in)out pin 6 will be delayed by this value multiplied with 10ms.

Read Variable Response:				
sRA OUT6_offdelay <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	OUT6_offdelay	String	13	Off state of (in)out pin 6 will be delayed by this value multiplied with 10ms.
Variable Data	data	USInt	1	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 12 73 52 4E 20 4F 55 54 36 5F 6F 66 66 64 65 6C 61 79 20 52	.....sRN OUT6 _offdelay R
Read Variable Response:	02 02 02 02 00 00 00 13 73 52 41 20 4F 55 54 36 5F 6F 66 66 64 65 6C 61 79 20 00 5D	.....sRA OUT6 _offdelay .]



### 2.18.1.8. Variable: averaging

The following section contains a detailed description of the variable averaging.

#### Variable Overview

Variable Name	Description
averaging	If false a simple frame rate reduction is done, if true the average of the specified number of frames is computed.

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	No! (readonly)

Bool	
Value Range	False, True
Initialisation	False

#### Variable Telegram Syntax

Read Variable:				
sRN averaging				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	averaging	String	9	If false a simple frame rate reduction is done, if true the average of the specified number of frames is computed.

Read Variable Response:				
sRA averaging <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	averaging	String	9	If false a simple frame rate reduction is done, if true the average of the specified number of frames is computed.
Variable Data	data	Bool	1	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0E 73 52 4E 20 61 76 65 72 61 67 69 6E 67 20 09	.....sRN averaging .
Read Variable Response:	02 02 02 02 00 00 00 0F 73 52 41 20 61 76 65 72 61 67 69 6E 67 20 00 06	.....sRA averaging ..



### 2.18.1.9. Variable: ExtInPowerMode

The following section contains a detailed description of the variable ExtInPowerMode.

#### Variable Overview

Variable Name	Description
ExtInPowerMode	Power mode associated with the external power-down digital input

Communication Name	XIPwrMod
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	200
Read-Access	Always
Write-Access	No! (readonly)

UserType	
PowerMode	See the chapter "User Types" for details.

#### Variable Telegram Syntax

Read Variable:				
sRN XIPwrMod				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	XIPwrMod	String	8	Power mode associated with the external power-down digital input

Read Variable Response:				
sRA XIPwrMod <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	XIPwrMod	String	8	Power mode associated with the external power-down digital input
Variable Data	data	PowerMode	1	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0D 73 52 4E 20 58 49 50 77 72 4D 6F 64 20 6D	.....sRN XIPw rMod m
Read Variable Response:	02 02 02 02 00 00 00 0E 73 52 41 20 58 49 50 77 72 4D 6F 64 20 00 62	.....sRA XIPw rMod .b



#### 2.18.1.10. Variable: IoJobSelectionMap32

The following section contains a detailed description of the variable `IoJobSelectionMap32`.

## Variable Overview

Variable Name	Description
IoJobSelectionMap32	Value to job ID mapping. Value determined by I/O pins.

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	68
Read-Access	Always
Write-Access	No! (readonly)

<b>Array</b>		
Length		32
	<b>Int</b>	
	Value Range	-1..255
	Initialisation	-1

## Variable Telegram Syntax

<b>Read Variable:</b>				
sRN IoJobSelectionMap32				
<b>Telegram Part</b>	<b>Telegram</b>	<b>Type</b>	<b>Length [Byte]</b>	<b>Description</b>
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	IoJobSelectionMap32	String	19	Value to job ID mapping. Value determined by I/O pins.

Read Variable Response:				
sRA IoJobSelectionMap32 <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	IoJobSelectionMap32	String	19	Value to job ID mapping. Value determined by I/O pins.
Variable Data	data	Array	64	

## Variable Telegram Examples

Example: Default Values																
Variable rest examples with data set to default values.																
Read Variable:	02 02 02 02 00 00 00 18 62 53 65 6C 65 63 74 69 13	73 52 4E 20 49 6F 4A 6F 6F 6E 4D 61 70 33 32 20	.....sRN IoJo bSelectionMap32 .													
Read Variable Response:	02 02 02 02 00 00 00 58 62 53 65 6C 65 63 74 69 FF 1C	73 52 41 20 49 6F 4A 6F 6F 6E 4D 61 70 33 32 20 FF	.....XsRA IoJo bSelectionMap32 .													



### 2.18.1.11. Variable: selectedFrontend

The following section contains a detailed description of the variable selectedFrontend.

#### Variable Overview

Variable Name
selectedFrontend

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	139
Read-Access	Always
Write-Access	No! (readonly)

Enum8			
Default Value		NONE	
	Value	Name	Description
	0	NONE	
	1	FILE	
	2	TOF	
	3	STEREO	

#### Variable Telegram Syntax

Read Variable:				
sRN selectedFrontend				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	selectedFrontend	String	16	

Read Variable Response:				
sRA selectedFrontend <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	selectedFrontend	String	16	
Variable Data	data	Enum8	1	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 15 73 52 4E 20 73 65 6C 65 63 74 65 64 46 72 6F 6E 74 65 6E 64 20 48	.....sRN selectedFrontend H
Read Variable Response:	02 02 02 02 00 00 00 16 73 52 41 20 73 65 6C 65 63 74 65 64 46 72 6F 6E 74 65 6E 64 20 00 47	.....sRA selectedFrontend .G



### 2.18.1.12. Variable: PlayFilePath

The following section contains a detailed description of the variable PlayFilePath.

#### Variable Overview

Variable Name
PlayFilePath

Communication Name	plyPth
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Sopas Index	145
Read-Access	Always
Write-Access	No! (readonly)

Struct	
Path	
FlexString	
Length	0..200
Initialisation	file:///c:/data/b32/
Name	
FlexString	
Length	0..50
Initialisation	example.b32

#### Variable Telegram Syntax

Read Variable:				
sRN plyPth				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	plyPth	String	6	

Read Variable Response:				
sRA plyPth <Path> <Name>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	plyPth	String	6	
Variable Data 1	Path	FlexString	200	
Variable Data 2	Name	FlexString	50	



## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0B 73 52 4E 20 70 6C 79 50 74 68 20 46	.....sRN plyP th F
Read Variable Response:	02 02 02 02 00 00 00 2E 73 52 41 20 70 6C 79 50 74 68 20 00 14 66 69 6C 65 3A 2F 2F 2F 63 3A 2F 64 61 74 61 2F 62 33 32 2F 00 0B 65 78 61 6D 70 6C 65 2E 62 33 32 65	.....sRA plyP th ..file:///c:/ data/b32/...examp le.b32e

### 2.18.1.13. Method: BlobServerGetStatistics

The following section contains a detailed description of the method BlobServerGetStatistics.

#### Method Overview

Method Name	
BlobServerGetStatistics	
Invocation Access	Always





Return Values		
Levels		
	<b>Array</b>	
	Length	2
	<b>Struct</b>	
	Decoding	
	<b>Struct</b>	
	NumImages	
	UDInt	Return Values[Levels].Array.Struct[Decoding].Struct[NumImages].UDInt
	NumErrors	
	UDInt	Return Values[Levels].Array.Struct[Decoding].Struct[NumErrors].UDInt
	Sending	
	<b>Struct</b>	
	NumImages	
	UDInt	Return Values[Levels].Array.Struct[Sending].Struct[NumImages].UDInt
	NumErrors	
	UDInt	Return Values[Levels].Array.Struct[Sending].Struct[NumErrors].UDInt
	NumInactive	
	UDInt	Return Values[Levels].Array.Struct[Sending].Struct[NumInactive].UDInt
	ScalingTime	
	<b>Struct</b>	
	MinTime_ms	
	Real	Return Values[Levels].Array.Struct[ScalingTime].Struct[MinTime_ms].Real
	AvgTime_ms	
	Real	Return Values[Levels].Array.Struct[ScalingTime].Struct[AvgTime_ms].Real
	MaxTime_ms	
	Real	Return Values[Levels].Array.Struct[ScalingTime].Struct[MaxTime_ms].Real
	SendingTime	
	<b>Struct</b>	
	MinTime_ms	
	Real	Return Values[Levels].Array.Struct[SendingTime].Struct[MinTime_ms].Real
	AvgTime_ms	
	Real	Return Values[Levels].Array.Struct[SendingTime].Struct[AvgTime_ms].Real
	MaxTime_ms	
	Real	Return Values[Levels].Array.Struct[SendingTime].Struct[MaxTime_ms].Real

<b>UDInt</b>	Return Values[Levels].Array.Struct[Decoding].Struct[NumImages].UDInt
Value Range	0..4294967295

<b>UDInt</b>	Return Values[Levels].Array.Struct[Decoding].Struct[NumErrors].UDInt
Value Range	0..4294967295

<b>UDInt</b>	Return Values[Levels].Array.Struct[Sending].Struct[NumImages].UDInt
Value Range	0..4294967295



<b>UDInt</b>	Return Values[Levels].Array.Struct[Sending].Struct[NumErrors].UDInt
Value Range	0..4294967295

<b>UDInt</b>	Return Values[Levels].Array.Struct[Sending].Struct[NumInactive].UDInt
Value Range	0..4294967295

<b>Real</b>	Return Values[Levels].Array.Struct[ScalingTime].Struct[MinTime_ms].Real
Value Range	See specification IEEE 754

<b>Real</b>	Return Values[Levels].Array.Struct[ScalingTime].Struct[AvgTime_ms].Real
Value Range	See specification IEEE 754

<b>Real</b>	Return Values[Levels].Array.Struct[ScalingTime].Struct[MaxTime_ms].Real
Value Range	See specification IEEE 754

<b>Real</b>	Return Values[Levels].Array.Struct[SendingTime].Struct[MinTime_ms].Real
Value Range	See specification IEEE 754

<b>Real</b>	Return Values[Levels].Array.Struct[SendingTime].Struct[AvgTime_ms].Real
Value Range	See specification IEEE 754

<b>Real</b>	Return Values[Levels].Array.Struct[SendingTime].Struct[MaxTime_ms].Real
Value Range	See specification IEEE 754

## Method Telegram Syntax

<b>Method Invocation:</b>				
sMN BlobServerGetStatistics				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	BlobServerGetStatistics	String	23	

<b>Method Return Value:</b>				
sAN BlobServerGetStatistics <Levels>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	BlobServerGetStatistics	String	23	
Return Value 1	Levels	Array	88	

## Method Telegram Examples

<b>Example: Default Values</b>		
Method telegram examples with parameter data and return value data set to default values.		
<b>Method Invocation:</b>	02 02 02 02 00 00 00 1C 73 4D 4E 20 42 6C 6F 62 53 65 72 76 65 72 47 65 74 53 74 61 74 69 73 74 69 63 73 20 05	.....sMN Blob ServerGetStatist ics .



Method Return Value:	02 02 02 02 00 00 00 74	73 41 4E 20 42 6C 6F 62	.....tsAN Blob ServerGetStatist ics ..... ..... ..... ..... ..... ..... .....
	53 65 72 76 65 72 47 65	74 53 74 61 74 69 73 74	
	69 63 73 20 00 00 00 00	00 00 00 00 00 00 00 00	
	00 00 00 00 00 00 00 00	00 00 00 00 00 00 00 00	
	00 00 00 00 00 00 00 00	00 00 00 00 00 00 00 00	
	00 00 00 00 00 00 00 00	00 00 00 00 00 00 00 00	
	00 00 00 00 00 00 00 00	00 00 00 00 00 00 00 00	
	00 00 00 00 00 00 00 00	00 00 00 00 00 00 00 00	
	00 00 00 00 00 00 00 00	00 00 00 00 09	

#### 2.18.1.14. Method: BlobServerResetLocalStatistics

The following section contains a detailed description of the method BlobServerResetLocalStatistics.

##### Method Overview

Method Name
BlobServerResetLocalStatistics

Invocation Access	Always
-------------------	--------

##### Method Telegram Syntax

Method Invocation:				
sMN BlobServerResetLocalStatistics				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	BlobServerResetLocalStatistics	String	30	

Method Return Value:				
sAN BlobServerResetLocalStatistics				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	BlobServerResetLocalStatistics	String	30	

##### Method Telegram Examples

Example: Default Values			
Method telegram examples with parameter data and return value data set to default values.			
Method Invocation:	02 02 02 02 00 00 00 23 53 65 72 76 65 72 52 65 53 74 61 74 69 73 74 69	73 4D 4E 20 42 6C 6F 62 73 65 74 4C 6F 63 61 6C 63 73 20 4B	.....#sMN Blob ServerResetLocal Statistics K
Method Return Value:	02 02 02 02 00 00 00 23 53 65 72 76 65 72 52 65 53 74 61 74 69 73 74 69	73 41 4E 20 42 6C 6F 62 73 65 74 4C 6F 63 61 6C 63 73 20 47	.....#sAN Blob ServerResetLocal Statistics G



## 2.19. Interface Block: HumiditySensor

### 2.19.1. Group: System

#### 2.19.1.1. Variable: humidity

The following section contains a detailed description of the variable humidity.

##### Variable Overview

Variable Name	Description
humidity	Relative Humidity in %

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Read-Access	Always
Write-Access	No! (readonly)

LReal	
Value Range	See specification IEEE 754 0.0..100.0

##### Variable Telegram Syntax

Read Variable:				
sRN humidity				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	humidity	String	8	Relative Humidity in %

Read Variable Response:				
sRA humidity <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	humidity	String	8	Relative Humidity in %
Variable Data	data	LReal	8	

##### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0D 73 52 4E 20 68 75 6D 69 64 69 74 79 20 76	.....sRN humidity v
Read Variable Response:	02 02 02 02 00 00 00 15 73 52 41 20 68 75 6D 69 64 69 74 79 20 00 00 00 00 00 79	.....sRA humidity .....y

## 2.20. Interface Block: FrontendControl

### 2.20.1. Group: Common

#### 2.20.1.1. Variable: frontendMode

The following section contains a detailed description of the variable frontendMode.

#### Variable Overview

Variable Name	Description
frontendMode	(Persistent) state that specifies the mode of the device (continuous, stop, externalTrigger)

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

Enum8			
Default Value		CONTINUOUS	
	Value	Name	Description
	0	CONTINUOUS	
	1	STOP	

#### Variable Telegram Syntax

Read Variable:				
sRN frontendMode				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	frontendMode	String	12	(Persistent) state that specifies the mode of the device (continuous, stop, externalTrigger)

Read Variable Response:				
sRA frontendMode <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	frontendMode	String	12	(Persistent) state that specifies the mode of the device (continuous, stop, externalTrigger)
Variable Data	data	Enum8	1	

Write Variable:				
sWN frontendMode <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	frontendMode	String	12	(Persistent) state that specifies the mode of the device (continuous, stop, externalTrigger)
Variable Data	data	Enum8	1	



Write Variable Response:				
sWA frontendMode				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	frontendMode	String	12	(Persistent) state that specifies the mode of the device (continuous, stop, externalTrigger)

## Variable Telegram Examples

Example: Default Values				
Variable rest examples with data set to default values.				
<b>Read Variable:</b>	02 02 02 02 00 00 00 11 74 65 6E 64 4D 6F 64 65	73 52 4E 20 66 72 6F 6E 20 42	.....sRN fron tendMode B	
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 12 74 65 6E 64 4D 6F 64 65	73 52 41 20 66 72 6F 6E 20 00 4D	.....sRA fron tendMode ·M	
<b>Write Variable:</b>	02 02 02 02 00 00 00 12 74 65 6E 64 4D 6F 64 65	73 57 4E 20 66 72 6F 6E 20 00 47	.....sWN fron tendMode ·G	
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 11 74 65 6E 64 4D 6F 64 65	73 57 41 20 66 72 6F 6E 20 48	.....sWA fron tendMode H	

### 2.20.1.2. Variable: framePeriodUs

The following section contains a detailed description of the variable framePeriodUs.

#### Variable Overview

Variable Name	Description
framePeriodUs	The frame period of the 3D frontend used.

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

UDInt	
Value Range	33333..1000000
Initialisation	40000
Physical Unit	µs



## Variable Telegram Syntax

Read Variable:				
sRN framePeriodUs				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	framePeriodUs	String	13	The frame period of the 3D frontend used.

Read Variable Response:				
sRA framePeriodUs <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	framePeriodUs	String	13	The frame period of the 3D frontend used.
Variable Data	data	UDInt	4	

Write Variable:				
sWN framePeriodUs <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	framePeriodUs	String	13	The frame period of the 3D frontend used.
Variable Data	data	UDInt	4	

Write Variable Response:				
sWA framePeriodUs				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	framePeriodUs	String	13	The frame period of the 3D frontend used.

## Variable Telegram Examples

Example: Default Values				
Variable rest examples with data set to default values.				
Read Variable:	02 02 02 02 00 00 00 12 65 50 65 72 69 6F 64 55	73 52 4E 20 66 72 61 6D 73 20 11	.....sRN fram ePeriodUs .	
Read Variable Response:	02 02 02 02 00 00 00 16 65 50 65 72 69 6F 64 55	73 52 41 20 66 72 61 6D 73 20 00 00 9C 40 C2	.....sRA fram ePeriodUs ..@	
Write Variable:	02 02 02 02 00 00 00 16 65 50 65 72 69 6F 64 55	73 57 4E 20 66 72 61 6D 73 20 00 00 9C 40 C8	.....sWN fram ePeriodUs ..@	
Write Variable Response:	02 02 02 02 00 00 00 12 65 50 65 72 69 6F 64 55	73 57 41 20 66 72 61 6D 73 20 1B	.....sWA fram ePeriodUs .	

### 2.20.1.3. Variable: illuminationActive

The following section contains a detailed description of the variable illuminationActive.

#### Variable Overview

Variable Name	Description
illuminationActive	Shows whether illumination is active.

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Read-Access	Always
Write-Access	No! (readonly)

Bool	
Value Range	False, True
Initialisation	False

#### Variable Telegram Syntax

Read Variable:				
sRN illuminationActive				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	illuminationActive	String	18	Shows whether illumination is active.

Read Variable Response:				
sRA illuminationActive <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	illuminationActive	String	18	Shows whether illumination is active.
Variable Data	data	Bool	1	

#### Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 17 73 52 4E 20 69 6C 6C 75 6D 69 6E 61 74 69 6F 6E 41 63 74 69 76 65 20 48	.....sRN illuminationActive H
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 18 73 52 41 20 69 6C 6C 75 6D 69 6E 61 74 69 6F 6E 41 63 74 69 76 65 20 00 47	.....sRA illuminationActive . G





#### 2.20.1.4. Method: PlayStart

The following section contains a detailed description of the method PlayStart.

##### Method Overview

Method Name	Description
PlayStart	Activates playback.

Communication Name	PLAYSTART
Invocation Access	Always

##### Method Telegram Syntax

Method Invocation:				
sMN PLAYSTART				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	PLAYSTART	String	9	Activates playback.

Method Return Value:				
sAN PLAYSTART				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	PLAYSTART	String	9	Activates playback.

##### Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
Method Invocation:	02 02 02 02 00 00 00 0E 73 4D 4E 20 50 4C 41 59 53 54 41 52 54 20 34	.....sMN PLAY START 4
Method Return Value:	02 02 02 02 00 00 00 0E 73 41 4E 20 50 4C 41 59 53 54 41 52 54 20 38	.....sAN PLAY START 8



### 2.20.1.5. Method: PlayStop

The following section contains a detailed description of the method PlayStop.

#### Method Overview

Method Name	Description
PlayStop	Stops playback.

Communication Name	PLAYSTOP
Invocation Access	Always

#### Method Telegram Syntax

Method Invocation:				
sMN PLAYSTOP				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	PLAYSTOP	String	8	Stops playback.

Method Return Value:				
sAN PLAYSTOP				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	PLAYSTOP	String	8	Stops playback.

#### Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
Method Invocation:	02 02 02 02 00 00 00 0D 73 4D 4E 20 50 4C 41 59 53 54 4F 50 20 6C	.....sMN PLAY STOP 1
Method Return Value:	02 02 02 02 00 00 00 0D 73 41 4E 20 50 4C 41 59 53 54 4F 50 20 60	.....sAN PLAY STOP `



### 2.20.1.6. Method: SingleStep

The following section contains a detailed description of the method SingleStep.

#### Method Overview

Method Name	Description
SingleStep	Request single image from device.
Communication Name	PLAYNEXT
Invocation Access	Always

#### Method Telegram Syntax

Method Invocation:				
sMN PLAYNEXT				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	PLAYNEXT	String	8	Request single image from device.
Method Return Value:				
sAN PLAYNEXT				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	PLAYNEXT	String	8	Request single image from device.

#### Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
Method Invocation:	02 02 02 02 00 00 00 0D 73 4D 4E 20 50 4C 41 59 4E 45 58 54 20 73	.....sMN PLAY NEXT s
Method Return Value:	02 02 02 02 00 00 00 0D 73 41 4E 20 50 4C 41 59 4E 45 58 54 20 7F	.....sAN PLAY NEXT .





### 2.20.2.2. Variable: sensorPosition

The following section contains a detailed description of the variable sensorPosition.

#### Variable Overview

Variable Name	Description
sensorPosition	Sensor position in 3D Cartesian coordinates.

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

UserType	
Vector3	See the chapter "User Types" for details.

#### Variable Telegram Syntax

Read Variable:				
sRN sensorPosition				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	sensorPosition	String	14	Sensor position in 3D Cartesian coordinates.

Read Variable Response:				
sRA sensorPosition <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	sensorPosition	String	14	Sensor position in 3D Cartesian coordinates.
Variable Data	data	Vector3	12	

Write Variable:				
sWN sensorPosition <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	sensorPosition	String	14	Sensor position in 3D Cartesian coordinates.
Variable Data	data	Vector3	12	

Write Variable Response:				
sWA sensorPosition				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	sensorPosition	String	14	Sensor position in 3D Cartesian coordinates.



## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 13 73 52 4E 20 73 65 6E 73 6F 72 50 6F 73 69 74 69 6F 6E 20 40	.....sRN sens orPosition @
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 1F 73 52 41 20 73 65 6E 73 6F 72 50 6F 73 69 74 69 6F 6E 20 00 00 00 00 00 00 00 00 00 00 00 4F	.....sRA sens orPosition ..... .....O
<b>Write Variable:</b>	02 02 02 02 00 00 00 1F 73 57 4E 20 73 65 6E 73 6F 72 50 6F 73 69 74 69 6F 6E 20 00 00 00 00 00 00 00 00 00 00 00 45	.....sWN sens orPosition ..... .....E
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 13 73 57 41 20 73 65 6E 73 6F 72 50 6F 73 69 74 69 6F 6E 20 4A	.....sWA sens orPosition J

### 2.20.2.3. Variable: sensorOrientation

The following section contains a detailed description of the variable sensorOrientation.

#### Variable Overview

Variable Name	Description
sensorOrientation	Sensor orientation in Euler angles.

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

UserType	
RotationVector3f	See the chapter "User Types" for details.

#### Variable Telegram Syntax

Read Variable:				
sRN sensorOrientation				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	sensorOrientation	String	17	Sensor orientation in Euler angles.

Read Variable Response:				
sRA sensorOrientation <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	sensorOrientation	String	17	Sensor orientation in Euler angles.
Variable Data	data	RotationVec tor3f	12	



Write Variable:				
sWN sensorOrientation <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	sensorOrientation	String	17	Sensor orientation in Euler angles.
Variable Data	data	RotationVector3f	12	

Write Variable Response:				
sWA sensorOrientation				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	sensorOrientation	String	17	Sensor orientation in Euler angles.

## Variable Telegram Examples

Example: Default Values			
Variable rest examples with data set to default values.			
Read Variable:	02 02 02 02 00 00 00 16 6F 72 4F 72 69 65 6E 74	73 52 4E 20 73 65 6E 73 61 74 69 6F 6E 20 2F	.....sRN sens orOrientation /
Read Variable Response:	02 02 02 02 00 00 00 22 6F 72 4F 72 69 65 6E 74 00 00 00 00 00 00 00	73 52 41 20 73 65 6E 73 61 74 69 6F 6E 20 00 00 00 00 20	....."sRA sens orOrientation .. .....
Write Variable:	02 02 02 02 00 00 00 22 6F 72 4F 72 69 65 6E 74 00 00 00 00 00 00 00	73 57 4E 20 73 65 6E 73 61 74 69 6F 6E 20 00 00 00 00 2A	....."sWN sens orOrientation .. .....*
Write Variable Response:	02 02 02 02 00 00 00 16 6F 72 4F 72 69 65 6E 74	73 57 41 20 73 65 6E 73 61 74 69 6F 6E 20 25	.....sWA sens orOrientation %



## 2.20.3. Group: Tof

### 2.20.3.1. Variable: enDepthMask

The following section contains a detailed description of the variable enDepthMask.

#### Variable Overview

Variable Name	Description
enDepthMask	Enables Masking of Invalid Pixels on Depthmap.

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

Bool	
Value Range	False, True
Initialisation	True

#### Variable Telegram Syntax

Read Variable:				
sRN enDepthMask				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	enDepthMask	String	11	Enables Masking of Invalid Pixels on Depthmap.

Read Variable Response:				
sRA enDepthMask <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	enDepthMask	String	11	Enables Masking of Invalid Pixels on Depthmap.
Variable Data	data	Bool	1	

Write Variable:				
sWN enDepthMask <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	enDepthMask	String	11	Enables Masking of Invalid Pixels on Depthmap.
Variable Data	data	Bool	1	

Write Variable Response:				
sWA enDepthMask				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	enDepthMask	String	11	Enables Masking of Invalid Pixels on Depthmap.





## Variable Telegram Examples

Example: Default Values			
Variable rest examples with data set to default values.			
<b>Read Variable:</b>	02 02 02 02 00 00 00 10 70 74 68 4D 61 73 6B 20	73 52 4E 20 65 6E 44 65 1D	.....sRN enDe pthMask .
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 11 70 74 68 4D 61 73 6B 20	73 52 41 20 65 6E 44 65 01 13	.....sRA enDe pthMask ..
<b>Write Variable:</b>	02 02 02 02 00 00 00 11 70 74 68 4D 61 73 6B 20	73 57 4E 20 65 6E 44 65 01 19	.....sWN enDe pthMask ..
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 10 70 74 68 4D 61 73 6B 20	73 57 41 20 65 6E 44 65 17	.....sWA enDe pthMask .

### 2.20.3.2. Variable: binningOption

The following section contains a detailed description of the variable binningOption.

#### Variable Overview

Variable Name	
binningOption	

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

Enum8			
Default Value		NONE	
	Value	Name	Description
	0	NONE	
	1	TWO_BY_TWO	
	2	FOUR_BY_FOUR	

#### Variable Telegram Syntax

Read Variable:				
sRN binningOption				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	binningOption	String	13	

Read Variable Response:				
sRA binningOption <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	binningOption	String	13	
Variable Data	data	Enum8	1	



Write Variable:				
sWN binningOption <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	binningOption	String	13	
Variable Data	data	Enum8	1	

Write Variable Response:				
sWA binningOption				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	binningOption	String	13	

## Variable Telegram Examples

Example: Default Values				
Variable rest examples with data set to default values.				
<b>Read Variable:</b>	02 02 02 02 00 00 00 12 69 6E 67 4F 70 74 69 6F	73 52 4E 20 62 69 6E 6E 6E 20 27	.....sRN binn ingOption '	
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 13 69 6E 67 4F 70 74 69 6F	73 52 41 20 62 69 6E 6E 6E 20 00 28	.....sRA binn ingOption .(	
<b>Write Variable:</b>	02 02 02 02 00 00 00 13 69 6E 67 4F 70 74 69 6F	73 57 4E 20 62 69 6E 6E 6E 20 00 22	.....sWN binn ingOption ."	
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 12 69 6E 67 4F 70 74 69 6F	73 57 41 20 62 69 6E 6E 6E 20 2D	.....sWA binn ingOption -	

### 2.20.3.3. Variable: enableCropping

The following section contains a detailed description of the variable enableCropping.

#### Variable Overview

Variable Name	Description
enableCropping	Enables cropping of the image.

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

Bool	
Value Range	False, True
Initialisation	False



## Variable Telegram Syntax

Read Variable:				
sRN enableCropping				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	enableCropping	String	14	Enables cropping of the image.

Read Variable Response:				
sRA enableCropping <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	enableCropping	String	14	Enables cropping of the image.
Variable Data	data	Bool	1	

Write Variable:				
sWN enableCropping <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	enableCropping	String	14	Enables cropping of the image.
Variable Data	data	Bool	1	

Write Variable Response:				
sWA enableCropping				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	enableCropping	String	14	Enables cropping of the image.

## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 13 6C 65 43 72 6F 70 70 69 73 52 4E 20 65 6E 61 62 6E 67 20 50	.....sRN enableCropping P
Read Variable Response:	02 02 02 02 00 00 00 14 6C 65 43 72 6F 70 70 69 73 52 41 20 65 6E 61 62 6E 67 20 00 5F	.....sRA enableCropping .
Write Variable:	02 02 02 02 00 00 00 14 6C 65 43 72 6F 70 70 69 73 57 4E 20 65 6E 61 62 6E 67 20 00 55	.....sWN enableCropping .U
Write Variable Response:	02 02 02 02 00 00 00 13 6C 65 43 72 6F 70 70 69 73 57 41 20 65 6E 61 62 6E 67 20 5A	.....sWA enableCropping Z

## 2.20.3.4. Variable: croppingPositionX

The following section contains a detailed description of the variable croppingPositionX.

### Variable Overview

Variable Name	Description
croppingPositionX	The position of the cropping region along the x-axis.

Communication Name	cropPosX
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

UInt	
Value Range	0..423
Initialisation	0
Physical Unit	px

### Variable Telegram Syntax

Read Variable:				
sRN cropPosX				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	cropPosX	String	8	The position of the cropping region along the x-axis.

Read Variable Response:				
sRA cropPosX <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	cropPosX	String	8	The position of the cropping region along the x-axis.
Variable Data	data	UInt	2	

Write Variable:				
sWN cropPosX <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	cropPosX	String	8	The position of the cropping region along the x-axis.
Variable Data	data	UInt	2	

Write Variable Response:				
sWA cropPosX				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	cropPosX	String	8	The position of the cropping region along the x-axis.



## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 0D 73 52 4E 20 63 72 6F 70 50 6F 73 58 20 75	.....sRN crop PosX u
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 0F 73 52 41 20 63 72 6F 70 50 6F 73 58 20 00 00 7A	.....sRA crop PosX ..z
<b>Write Variable:</b>	02 02 02 02 00 00 00 0F 73 57 4E 20 63 72 6F 70 50 6F 73 58 20 00 00 70	.....sWN crop PosX ..p
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 0D 73 57 41 20 63 72 6F 70 50 6F 73 58 20 7F	.....sWA crop PosX .

### 2.20.3.5. Variable: croppingPositionY

The following section contains a detailed description of the variable croppingPositionY.

#### Variable Overview

Variable Name	Description
croppingPositionY	The position of the cropping region along the y-axis.

Communication Name	cropPosY
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

UInt	
Value Range	0..511
Initialisation	0
Physical Unit	px

#### Variable Telegram Syntax

Read Variable:				
sRN cropPosY				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	cropPosY	String	8	The position of the cropping region along the y-axis.

Read Variable Response:				
sRA cropPosY <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	cropPosY	String	8	The position of the cropping region along the y-axis.
Variable Data	data	UInt	2	



Write Variable:				
sWN cropPosY <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	cropPosY	String	8	The position of the cropping region along the y-axis.
Variable Data	data	UInt	2	

Write Variable Response:				
sWA cropPosY				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	cropPosY	String	8	The position of the cropping region along the y-axis.

## Variable Telegram Examples

Example: Default Values				
Variable rest examples with data set to default values.				
Read Variable:	02 02 02 02 00 00 00 0D 50 6F 73 59 20 74	73 52 4E 20 63 72 6F 70	.....sRN crop PosY t	
Read Variable Response:	02 02 02 02 00 00 00 0F 50 6F 73 59 20 00 00 7B	73 52 41 20 63 72 6F 70	.....sRA crop PosY ..{	
Write Variable:	02 02 02 02 00 00 00 0F 50 6F 73 59 20 00 00 71	73 57 4E 20 63 72 6F 70	.....sWN crop PosY ..q	
Write Variable Response:	02 02 02 02 00 00 00 0D 50 6F 73 59 20 7E	73 57 41 20 63 72 6F 70	.....sWA crop PosY ~	

### 2.20.3.6. Variable: croppingWidth

The following section contains a detailed description of the variable croppingWidth.

#### Variable Overview

Variable Name	Description
croppingWidth	The width of the cropping region in pixels.

Communication Name	cropWidth
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

UInt	
Value Range	0..512
Initialisation	512
Physical Unit	px



## Variable Telegram Syntax

Read Variable:				
sRN cropWidth				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	cropWidth	String	9	The width of the cropping region in pixels.

Read Variable Response:				
sRA cropWidth <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	cropWidth	String	9	The width of the cropping region in pixels.
Variable Data	data	UInt	2	

Write Variable:				
sWN cropWidth <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	cropWidth	String	9	The width of the cropping region in pixels.
Variable Data	data	UInt	2	

Write Variable Response:				
sWA cropWidth				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	cropWidth	String	9	The width of the cropping region in pixels.

## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0E 73 52 4E 20 63 72 6F 70 57 69 64 74 68 20 27	.....sRN crop width '
Read Variable Response:	02 02 02 02 00 00 00 10 73 52 41 20 63 72 6F 70 57 69 64 74 68 20 02 00 2A	.....sRA crop width ..*
Write Variable:	02 02 02 02 00 00 00 10 73 57 4E 20 63 72 6F 70 57 69 64 74 68 20 02 00 20	.....sWN crop width ..
Write Variable Response:	02 02 02 02 00 00 00 0E 73 57 41 20 63 72 6F 70 57 69 64 74 68 20 2D	.....sWA crop width -

### 2.20.3.7. Variable: croppingHeight

The following section contains a detailed description of the variable croppingHeight.

#### Variable Overview

Variable Name	Description
croppingHeight	The width of the cropping region in pixels.

Communication Name	cropHeight
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

UInt	
Value Range	0..424
Initialisation	424
Physical Unit	px

#### Variable Telegram Syntax

Read Variable:				
sRN croppingHeight				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	croppingHeight	String	10	The width of the cropping region in pixels.

Read Variable Response:				
sRA croppingHeight <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	croppingHeight	String	10	The width of the cropping region in pixels.
Variable Data	data	UInt	2	

Write Variable:				
sWN croppingHeight <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	croppingHeight	String	10	The width of the cropping region in pixels.
Variable Data	data	UInt	2	

Write Variable Response:				
sWA croppingHeight				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	croppingHeight	String	10	The width of the cropping region in pixels.





## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 0F 73 52 4E 20 63 72 6F 70 48 65 69 67 68 74 20 5E	.....sRN crop Height ^
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 11 73 52 41 20 63 72 6F 70 48 65 69 67 68 74 20 01 A8 F8	.....sRA crop Height .
<b>Write Variable:</b>	02 02 02 02 00 00 00 11 73 57 4E 20 63 72 6F 70 48 65 69 67 68 74 20 01 A8 F2	.....sWN crop Height .
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 0F 73 57 41 20 63 72 6F 70 48 65 69 67 68 74 20 54	.....sWA crop Height T



## 2.21. Interface Block: TofDataFilter

### 2.21.1. Group: IntensityFilter

#### 2.21.1.1. Variable: enableIntensityFilter

The following section contains a detailed description of the variable enableIntensityFilter.

#### Variable Overview

Variable Name	Description
enableIntensityFilter	Switching the Intensitybased filtering on and off

Communication Name	enIntFilter
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

Bool	
Value Range	False, True
Initialisation	True

#### Variable Telegram Syntax

Read Variable:				
sRN enIntFilter				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	enIntFilter	String	11	Switching the Intensitybased filtering on and off

Read Variable Response:				
sRA enIntFilter <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	enIntFilter	String	11	Switching the Intensitybased filtering on and off
Variable Data	data	Bool	1	

Write Variable:				
sWN enIntFilter <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	enIntFilter	String	11	Switching the Intensitybased filtering on and off
Variable Data	data	Bool	1	



Write Variable Response:				
sWA enIntFilter				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	enIntFilter	String	11	Switching the Intensitybased filtering on and off

## Variable Telegram Examples

Example: Default Values				
Variable rest examples with data set to default values.				
<b>Read Variable:</b>	02 02 02 02 00 00 00 10 74 46 69 6C 74 65 72 20	73 52 4E 20 65 6E 49 6E 17	.....sRN enIn tFilter .	
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 11 74 46 69 6C 74 65 72 20	73 52 41 20 65 6E 49 6E 01 19	.....sRA enIn tFilter ..	
<b>Write Variable:</b>	02 02 02 02 00 00 00 11 74 46 69 6C 74 65 72 20	73 57 4E 20 65 6E 49 6E 01 13	.....sWN enIn tFilter ..	
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 10 74 46 69 6C 74 65 72 20	73 57 41 20 65 6E 49 6E 1D	.....sWA enIn tFilter .	

### 2.21.1.2. Variable: minIntensityThreshold

The following section contains a detailed description of the variable minIntensityThreshold.

#### Variable Overview

Variable Name	Description
minIntensityThreshold	The minimal Intensity threshold. If the Intensity value of a pixel is below, the corresponding pixel in the distance map is set to zero, if the Intensity based filter is active.

Communication Name	minIntThresh
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

UInt	
Value Range	0..20000
Initialisation	5



## Variable Telegram Syntax

Read Variable:				
sRN minIntThresh				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	minIntThresh	String	12	The minimal Intensity threshold. If the Intensity value of a pixel is below, the corresponding pixel in the distance map is set to zero, if the Intensity based filter is active.

Read Variable Response:				
sRA minIntThresh <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	minIntThresh	String	12	The minimal Intensity threshold. If the Intensity value of a pixel is below, the corresponding pixel in the distance map is set to zero, if the Intensity based filter is active.
Variable Data	data	UInt	2	

Write Variable:				
sWN minIntThresh <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	minIntThresh	String	12	The minimal Intensity threshold. If the Intensity value of a pixel is below, the corresponding pixel in the distance map is set to zero, if the Intensity based filter is active.
Variable Data	data	UInt	2	

Write Variable Response:				
sWA minIntThresh				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	minIntThresh	String	12	The minimal Intensity threshold. If the Intensity value of a pixel is below, the corresponding pixel in the distance map is set to zero, if the Intensity based filter is active.

## Variable Telegram Examples

Example: Default Values				
Variable rest examples with data set to default values.				
Read Variable:	02 02 02 02 00 00 00 11 6E 74 54 68 72 65 73 68	73 52 4E 20 6D 69 6E 49 20 66	.....sRN minIntThresh f	
Read Variable Response:	02 02 02 02 00 00 00 13 6E 74 54 68 72 65 73 68	73 52 41 20 6D 69 6E 49 20 00 05 6C	.....sRA minIntThresh ..l	
Write Variable:	02 02 02 02 00 00 00 13 6E 74 54 68 72 65 73 68	73 57 4E 20 6D 69 6E 49 20 00 05 66	.....sWN minIntThresh ..f	
Write Variable Response:	02 02 02 02 00 00 00 11 6E 74 54 68 72 65 73 68	73 57 41 20 6D 69 6E 49 20 6C	.....sWA minIntThresh l	



### 2.21.1.3. Variable: maxIntensityThreshold

The following section contains a detailed description of the variable maxIntensityThreshold.

#### Variable Overview

Variable Name	Description
maxIntensityThreshold	The maximal intensity threshold. If the intensity value of a pixel is above the corresponding pixel in the distance map is set to zero, if the intensity based filter is active.

Communication Name	maxIntThresh
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

UInt	
Value Range	0..20000
Initialisation	20000

#### Variable Telegram Syntax

Read Variable:				
sRN maxIntThresh				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	maxIntThresh	String	12	The maximal intensity threshold. If the intensity value of a pixel is above the corresponding pixel in the distance map is set to zero, if the intensity based filter is active.

Read Variable Response:				
sRA maxIntThresh <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	maxIntThresh	String	12	The maximal intensity threshold. If the intensity value of a pixel is above the corresponding pixel in the distance map is set to zero, if the intensity based filter is active.
Variable Data	data	UInt	2	

Write Variable:				
sWN maxIntThresh <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	maxIntThresh	String	12	The maximal intensity threshold. If the intensity value of a pixel is above the corresponding pixel in the distance map is set to zero, if the intensity based filter is active.
Variable Data	data	UInt	2	



Write Variable Response:				
sWA maxIntThresh				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	maxIntThresh	String	12	The maximal intensity threshold. If the intensity value of a pixel is above the corresponding pixel in the distance map is set to zero, if the intensity based filter is active.

## Variable Telegram Examples

Example: Default Values				
Variable rest examples with data set to default values.				
Read Variable:	02 02 02 02 00 00 00 11 6E 74 54 68 72 65 73 68	73 52 4E 20 6D 61 78 49 20 78	.....sRN maxI ntThresh x	
Read Variable Response:	02 02 02 02 00 00 00 13 6E 74 54 68 72 65 73 68	73 52 41 20 6D 61 78 49 20 4E 20 19	.....sRA maxI ntThresh N .	
Write Variable:	02 02 02 02 00 00 00 13 6E 74 54 68 72 65 73 68	73 57 4E 20 6D 61 78 49 20 4E 20 13	.....sWN maxI ntThresh N .	
Write Variable Response:	02 02 02 02 00 00 00 11 6E 74 54 68 72 65 73 68	73 57 41 20 6D 61 78 49 20 72	.....sWA maxI ntThresh r	



## 2.21.2. Group: DistanceFilter

### 2.21.2.1. Variable: enableDistanceFilter

The following section contains a detailed description of the variable enableDistanceFilter.

#### Variable Overview

Variable Name	Description
enableDistanceFilter	Switching the distance based filtering on and off

Communication Name	enDistFilter
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

Bool	
Value Range	False, True
Initialisation	True

#### Variable Telegram Syntax

Read Variable:				
sRN enDistFilter				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	enDistFilter	String	12	Switching the distance based filtering on and off

Read Variable Response:				
sRA enDistFilter <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	enDistFilter	String	12	Switching the distance based filtering on and off
Variable Data	data	Bool	1	

Write Variable:				
sWN enDistFilter <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	enDistFilter	String	12	Switching the distance based filtering on and off
Variable Data	data	Bool	1	

Write Variable Response:				
sWA enDistFilter				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	enDistFilter	String	12	Switching the distance based filtering on and off



## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 11 73 52 4E 20 65 6E 44 69 73 74 46 69 6C 74 65 72 20 6E	.....sRN enDi stFilter n
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 12 73 52 41 20 65 6E 44 69 73 74 46 69 6C 74 65 72 20 01 60	.....sRA enDi stFilter ·`
<b>Write Variable:</b>	02 02 02 02 00 00 00 12 73 57 4E 20 65 6E 44 69 73 74 46 69 6C 74 65 72 20 01 6A	.....sWN enDi stFilter ·j
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 11 73 57 41 20 65 6E 44 69 73 74 46 69 6C 74 65 72 20 64	.....sWA enDi stFilter d

### 2.21.2.2. Variable: minDistanceThreshold

The following section contains a detailed description of the variable minDistanceThreshold.

#### Variable Overview

Variable Name	Description
minDistanceThreshold	The minimal distance threshold. All values below are set to zero if the distance based filter is active.

Communication Name	minDistThresh
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

UInt	
Value Range	0..16383
Initialisation	100
Physical Unit	mm

#### Variable Telegram Syntax

Read Variable:				
sRN minDistThresh				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	minDistThresh	String	13	The minimal distance threshold. All values below are set to zero if the distance based filter is active.

Read Variable Response:				
sRA minDistThresh <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	minDistThresh	String	13	The minimal distance threshold. All values below are set to zero if the distance based filter is active.
Variable Data	data	UInt	2	





Write Variable:				
sWN minDistThresh <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	minDistThresh	String	13	The minimal distance threshold. All values below are set to zero if the distance based filter is active.
Variable Data	data	UInt	2	

Write Variable Response:				
sWA minDistThresh				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	minDistThresh	String	13	The minimal distance threshold. All values below are set to zero if the distance based filter is active.

## Variable Telegram Examples

Example: Default Values				
Variable rest examples with data set to default values.				
<b>Read Variable:</b>	02 02 02 02 00 00 00 12 69 73 74 54 68 72 65 73	73 52 4E 20 6D 69 6E 44 68 20 1F	.....sRN minD istThresh .	
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 14 69 73 74 54 68 72 65 73	73 52 41 20 6D 69 6E 44 68 20 00 64 74	.....sRA minD istThresh .dt	
<b>Write Variable:</b>	02 02 02 02 00 00 00 14 69 73 74 54 68 72 65 73	73 57 4E 20 6D 69 6E 44 68 20 00 64 7E	.....sWN minD istThresh .d~	
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 12 69 73 74 54 68 72 65 73	73 57 41 20 6D 69 6E 44 68 20 15	.....sWA minD istThresh .	

### 2.21.2.3. Variable: maxDistanceThreshold

The following section contains a detailed description of the variable maxDistanceThreshold.

#### Variable Overview

Variable Name	Description
maxDistanceThreshold	The maximal distance threshold. All values above are set to zero if the distance based filter is active.

Communication Name	maxDistThresh
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

UInt	
Value Range	0..16383
Initialisation	9000
Physical Unit	mm



## Variable Telegram Syntax

Read Variable:				
sRN maxDistThresh				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	maxDistThresh	String	13	The maximal distance threshold. All values above are set to zero if the distance based filter is active.

Read Variable Response:				
sRA maxDistThresh <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	maxDistThresh	String	13	The maximal distance threshold. All values above are set to zero if the distance based filter is active.
Variable Data	data	UInt	2	

Write Variable:				
sWN maxDistThresh <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	maxDistThresh	String	13	The maximal distance threshold. All values above are set to zero if the distance based filter is active.
Variable Data	data	UInt	2	

Write Variable Response:				
sWA maxDistThresh				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	maxDistThresh	String	13	The maximal distance threshold. All values above are set to zero if the distance based filter is active.

## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 12 73 52 4E 20 6D 61 78 44 69 73 74 54 68 72 65 73 68 20 01	.....sRN maxDistThresh .
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 14 73 52 41 20 6D 61 78 44 69 73 74 54 68 72 65 73 68 20 23 28 05	.....sRA maxDistThresh #(. .
<b>Write Variable:</b>	02 02 02 02 00 00 00 14 73 57 4E 20 6D 61 78 44 69 73 74 54 68 72 65 73 68 20 23 28 0F	.....sWN maxDistThresh #(. .
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 12 73 57 41 20 6D 61 78 44 69 73 74 54 68 72 65 73 68 20 0B	.....sWA maxDistThresh .



## 2.21.3. Group: EdgeCorrection

### 2.21.3.1. Variable: enableEdgeCorrection

The following section contains a detailed description of the variable enableEdgeCorrection.

#### Variable Overview

Variable Name	Description
enableEdgeCorrection	Switching the edge correction on and off

Communication Name	enEdgeCorr
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

Bool	
Value Range	False, True
Initialisation	False

#### Variable Telegram Syntax

Read Variable:				
sRN enEdgeCorr				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	enEdgeCorr	String	10	Switching the edge correction on and off

Read Variable Response:				
sRA enEdgeCorr <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	enEdgeCorr	String	10	Switching the edge correction on and off
Variable Data	data	Bool	1	

Write Variable:				
sWN enEdgeCorr <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	enEdgeCorr	String	10	Switching the edge correction on and off
Variable Data	data	Bool	1	

Write Variable Response:				
sWA enEdgeCorr				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	enEdgeCorr	String	10	Switching the edge correction on and off



## Variable Telegram Examples

Example: Default Values			
Variable rest examples with data set to default values.			
<b>Read Variable:</b>	02 02 02 02 00 00 00 0F 73 52 4E 20 65 6E 45 64 67 65 43 6F 72 72 20 6B		.....sRN enEd geCorr k
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 10 73 52 41 20 65 6E 45 64 67 65 43 6F 72 72 20 00 64		.....sRA enEd geCorr d
<b>Write Variable:</b>	02 02 02 02 00 00 00 10 73 57 4E 20 65 6E 45 64 67 65 43 6F 72 72 20 00 6E		.....sWN enEd geCorr n
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 0F 73 57 41 20 65 6E 45 64 67 65 43 6F 72 72 20 61		.....sWA enEd geCorr a

### 2.21.3.2. Variable: lowerEdgeCorrectionThreshold

The following section contains a detailed description of the variable lowerEdgeCorrectionThreshold.

#### Variable Overview

Variable Name	Description
lowerEdgeCorrectionThreshold	The lower edge correction threshold.

Communication Name	lowerEdgeCorrThresh
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

LReal	
Value Range	See specification IEEE 754 0.0..256.0
Initialisation	0.25

#### Variable Telegram Syntax

Read Variable:				
sRN lowerEdgeCorrThresh				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	lowerEdgeCorrThresh	String	19	The lower edge correction threshold.

Read Variable Response:				
sRA lowerEdgeCorrThresh <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	lowerEdgeCorrThresh	String	19	The lower edge correction threshold.
Variable Data	data	LReal	8	



Write Variable:				
sWN lowerEdgeCorrThresh <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	lowerEdgeCorrThresh	String	19	The lower edge correction threshold.
Variable Data	data	LReal	8	

Write Variable Response:				
sWA lowerEdgeCorrThresh				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	lowerEdgeCorrThresh	String	19	The lower edge correction threshold.

## Variable Telegram Examples

Example: Default Values				
Variable rest examples with data set to default values.				
<b>Read Variable:</b>	02 02 02 02 00 00 00 18 72 45 64 67 65 43 6F 72 33	73 52 4E 20 6C 6F 77 65 72 54 68 72 65 73 68 20		.....sRN lowe rEdgeCorrThresh 3
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 20 72 45 64 67 65 43 6F 72 3F D0 00 00 00 00 00 00	73 52 41 20 6C 6F 77 65 72 54 68 72 65 73 68 20 D3		..... sRA lowe rEdgeCorrThresh ?.....
<b>Write Variable:</b>	02 02 02 02 00 00 00 20 72 45 64 67 65 43 6F 72 3F D0 00 00 00 00 00 00	73 57 4E 20 6C 6F 77 65 72 54 68 72 65 73 68 20 D9		..... sWN lowe rEdgeCorrThresh ?.....
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 18 72 45 64 67 65 43 6F 72 39	73 57 41 20 6C 6F 77 65 72 54 68 72 65 73 68 20		.....sWA lowe rEdgeCorrThresh 9

### 2.21.3.3. Variable: upperEdgeCorrectionThreshold

The following section contains a detailed description of the variable upperEdgeCorrectionThreshold.

#### Variable Overview

Variable Name	Description
upperEdgeCorrectionThreshold	The upper edge correction threshold.

Communication Name	upperEdgeCorrThresh
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

LReal	
Value Range	See specification IEEE 754 0.0..65535.0
Initialisation	125.0



## Variable Telegram Syntax

Read Variable:				
sRN upperEdgeCorrThresh				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	upperEdgeCorrThresh	String	19	The upper edge correction threshold.

Read Variable Response:				
sRA upperEdgeCorrThresh <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	upperEdgeCorrThresh	String	19	The upper edge correction threshold.
Variable Data	data	LReal	8	

Write Variable:				
sWN upperEdgeCorrThresh <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	upperEdgeCorrThresh	String	19	The upper edge correction threshold.
Variable Data	data	LReal	8	

Write Variable Response:				
sWA upperEdgeCorrThresh				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	upperEdgeCorrThresh	String	19	The upper edge correction threshold.

## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 18 73 52 4E 20 75 70 70 65 72 45 64 67 65 43 6F 72 72 54 68 72 65 73 68 20 32	.....sRN upperEdgeCorrThresh 2
Read Variable Response:	02 02 02 02 00 00 00 20 73 52 41 20 75 70 70 65 72 45 64 67 65 43 6F 72 72 54 68 72 65 73 68 20 40 5F 40 00 00 00 00 62	..... sRA upperEdgeCorrThresh @_.....b
Write Variable:	02 02 02 02 00 00 00 20 73 57 4E 20 75 70 70 65 72 45 64 67 65 43 6F 72 72 54 68 72 65 73 68 20 40 5F 40 00 00 00 00 68	..... sWN upperEdgeCorrThresh @_.....h
Write Variable Response:	02 02 02 02 00 00 00 18 73 57 41 20 75 70 70 65 72 45 64 67 65 43 6F 72 72 54 68 72 65 73 68 20 38	.....sWA upperEdgeCorrThresh 8

## 2.21.4. Group: RemissionFilter

### 2.21.4.1. Variable: enableRemissionFilter

The following section contains a detailed description of the variable enableRemissionFilter.

#### Variable Overview

Variable Name	Description
enableRemissionFilter	Switching the remission filter on and off

Communication Name	enRemFilter
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

Bool	
Value Range	False, True
Initialisation	False

#### Variable Telegram Syntax

Read Variable:				
sRN enRemFilter				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	enRemFilter	String	11	Switching the remission filter on and off

Read Variable Response:				
sRA enRemFilter <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	enRemFilter	String	11	Switching the remission filter on and off
Variable Data	data	Bool	1	

Write Variable:				
sWN enRemFilter <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	enRemFilter	String	11	Switching the remission filter on and off
Variable Data	data	Bool	1	

Write Variable Response:				
sWA enRemFilter				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	enRemFilter	String	11	Switching the remission filter on and off



## Variable Telegram Examples

Example: Default Values			
Variable rest examples with data set to default values.			
<b>Read Variable:</b>	02 02 02 02 00 00 00 10 6D 46 69 6C 74 65 72 20	73 52 4E 20 65 6E 52 65 1E	.....sRN enRe mFilter .
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 11 6D 46 69 6C 74 65 72 20	73 52 41 20 65 6E 52 65 00 11	.....sRA enRe mFilter ..
<b>Write Variable:</b>	02 02 02 02 00 00 00 11 6D 46 69 6C 74 65 72 20	73 57 4E 20 65 6E 52 65 00 1B	.....sWN enRe mFilter ..
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 10 6D 46 69 6C 74 65 72 20	73 57 41 20 65 6E 52 65 14	.....sWA enRe mFilter .

### 2.21.4.2. Variable: lowerRemissionFilterThreshold

The following section contains a detailed description of the variable lowerRemissionFilterThreshold.

#### Variable Overview

Variable Name	Description
lowerRemissionFilterThreshold	The lower remission filter threshold.

Communication Name	lowerRemFilterThresh
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

LReal	
Value Range	See specification IEEE 754 0.0..10000.0
Initialisation	0.1

#### Variable Telegram Syntax

Read Variable:				
sRN lowerRemFilterThresh				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	lowerRemFilterThresh	String	20	The lower remission filter threshold.

Read Variable Response:				
sRA lowerRemFilterThresh <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	lowerRemFilterThresh	String	20	The lower remission filter threshold.
Variable Data	data	LReal	8	





Write Variable:				
sWN lowerRemFilterThresh <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	lowerRemFilterThresh	String	20	The lower remission filter threshold.
Variable Data	data	LReal	8	

Write Variable Response:				
sWA lowerRemFilterThresh				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	lowerRemFilterThresh	String	20	The lower remission filter threshold.

## Variable Telegram Examples

Example: Default Values				
Variable rest examples with data set to default values.				
<b>Read Variable:</b>	02 02 02 02 00 00 00 19 72 52 65 6D 46 69 6C 74 20 46	73 52 4E 20 6C 6F 77 65 65 72 54 68 72 65 73 68	.....sRN lowe rRemFilterThresh F	
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 21 72 52 65 6D 46 69 6C 74 20 3F B9 99 99 99 99 99	73 52 41 20 6C 6F 77 65 65 72 54 68 72 65 73 68 9A CC	.....!sRA lowe rRemFilterThresh ?	
<b>Write Variable:</b>	02 02 02 02 00 00 00 21 72 52 65 6D 46 69 6C 74 20 3F B9 99 99 99 99 99	73 57 4E 20 6C 6F 77 65 65 72 54 68 72 65 73 68 9A C6	.....!sWN lowe rRemFilterThresh ?	
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 19 72 52 65 6D 46 69 6C 74 20 4C	73 57 41 20 6C 6F 77 65 65 72 54 68 72 65 73 68	.....sWA lowe rRemFilterThresh L	

### 2.21.4.3. Variable: upperRemissionFilterThreshold

The following section contains a detailed description of the variable upperRemissionFilterThreshold.

#### Variable Overview

Variable Name	Description
upperRemissionFilterThreshold	The upper remission filter threshold.

Communication Name	upperRemFilterThresh
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

LReal	
Value Range	See specification IEEE 754 0.0..10000.0
Initialisation	1.0



## Variable Telegram Syntax

Read Variable:				
sRN upperRemFilterThresh				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	upperRemFilterThresh	String	20	The upper remission filter threshold.

Read Variable Response:				
sRA upperRemFilterThresh <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	upperRemFilterThresh	String	20	The upper remission filter threshold.
Variable Data	data	LReal	8	

Write Variable:				
sWN upperRemFilterThresh <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	upperRemFilterThresh	String	20	The upper remission filter threshold.
Variable Data	data	LReal	8	

Write Variable Response:				
sWA upperRemFilterThresh				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	upperRemFilterThresh	String	20	The upper remission filter threshold.

## Variable Telegram Examples

Example: Default Values			
Variable rest examples with data set to default values.			
<b>Read Variable:</b>	02 02 02 02 00 00 00 19 72 52 65 6D 46 69 6C 74 20 47	73 52 4E 20 75 70 70 65 65 72 54 68 72 65 73 68	.....sRN uppe rRemFilterThresh G
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 21 72 52 65 6D 46 69 6C 74 20 3F F0 00 00 00 00 00	73 52 41 20 75 70 70 65 65 72 54 68 72 65 73 68 00 87	.....!sRA uppe rRemFilterThresh ?.....
<b>Write Variable:</b>	02 02 02 02 00 00 00 21 72 52 65 6D 46 69 6C 74 20 3F F0 00 00 00 00 00	73 57 4E 20 75 70 70 65 65 72 54 68 72 65 73 68 00 8D	.....!sWN uppe rRemFilterThresh ?.....
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 19 72 52 65 6D 46 69 6C 74 20 4D	73 57 41 20 75 70 70 65 65 72 54 68 72 65 73 68	.....sWA uppe rRemFilterThresh M



## 2.21.5. Group: AmbiguityFilter

### 2.21.5.1. Variable: enableAmbiguityFilter

The following section contains a detailed description of the variable enableAmbiguityFilter.

#### Variable Overview

Variable Name	Description
enableAmbiguityFilter	Switching the ambiguity filter on and off

Communication Name	enAmbFilter
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

Bool	
Value Range	False, True
Initialisation	False

#### Variable Telegram Syntax

Read Variable:				
sRN enAmbFilter				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	enAmbFilter	String	11	Switching the ambiguity filter on and off

Read Variable Response:				
sRA enAmbFilter <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	enAmbFilter	String	11	Switching the ambiguity filter on and off
Variable Data	data	Bool	1	

Write Variable:				
sWN enAmbFilter <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	enAmbFilter	String	11	Switching the ambiguity filter on and off
Variable Data	data	Bool	1	

Write Variable Response:				
sWA enAmbFilter				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	enAmbFilter	String	11	Switching the ambiguity filter on and off



## Variable Telegram Examples

Example: Default Values			
Variable rest examples with data set to default values.			
<b>Read Variable:</b>	02 02 02 02 00 00 00 10 62 46 69 6C 74 65 72 20	73 52 4E 20 65 6E 41 6D 0A	.....sRN enAm bFilter .
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 11 62 46 69 6C 74 65 72 20	73 52 41 20 65 6E 41 6D 00 05	.....sRA enAm bFilter ..
<b>Write Variable:</b>	02 02 02 02 00 00 00 11 62 46 69 6C 74 65 72 20	73 57 4E 20 65 6E 41 6D 00 0F	.....sWN enAm bFilter ..
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 10 62 46 69 6C 74 65 72 20	73 57 41 20 65 6E 41 6D 00	.....sWA enAm bFilter .

### 2.21.5.2. Variable: scaleAmbiguityFilter

The following section contains a detailed description of the variable scaleAmbiguityFilter.

#### Variable Overview

Variable Name	Description
scaleAmbiguityFilter	Ambiguity difference scaling factor

Communication Name	scaleAmbFilter
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

LReal	
Value Range	See specification IEEE 754 0.0..1.0
Initialisation	0.55

#### Variable Telegram Syntax

Read Variable:				
sRN scaleAmbFilter				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	scaleAmbFilter	String	14	Ambiguity difference scaling factor

Read Variable Response:				
sRA scaleAmbFilter <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	scaleAmbFilter	String	14	Ambiguity difference scaling factor
Variable Data	data	LReal	8	



Write Variable:				
sWN scaleAmbFilter <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	scaleAmbFilter	String	14	Ambiguity difference scaling factor
Variable Data	data	LReal	8	

Write Variable Response:				
sWA scaleAmbFilter				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	scaleAmbFilter	String	14	Ambiguity difference scaling factor

## Variable Telegram Examples

Example: Default Values			
Variable rest examples with data set to default values.			
Read Variable:	02 02 02 02 00 00 00 13 65 41 6D 62 46 69 6C 74	73 52 4E 20 73 63 61 6C 65 72 20 79	.....sRN scal eAmbFilter y
Read Variable Response:	02 02 02 02 00 00 00 1B 65 41 6D 62 46 69 6C 74 99 99 9A AB	73 52 41 20 73 63 61 6C 65 72 20 3F E1 99 99 99	.....sRA scal eAmbFilter ?
Write Variable:	02 02 02 02 00 00 00 1B 65 41 6D 62 46 69 6C 74 99 99 9A A1	73 57 4E 20 73 63 61 6C 65 72 20 3F E1 99 99 99	.....sWN scal eAmbFilter ?
Write Variable Response:	02 02 02 02 00 00 00 13 65 41 6D 62 46 69 6C 74	73 57 41 20 73 63 61 6C 65 72 20 73	.....sWA scal eAmbFilter s

## 2.21.6. Group: IsolatedPixelFilter

### 2.21.6.1. Variable: enableIsolatedPixelFilter

The following section contains a detailed description of the variable enableIsolatedPixelFilter.

#### Variable Overview

Variable Name	Description
enableIsolatedPixelFilter	Switching the isolated pixel filter on and off

Communication Name	enIsoPixFilter
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

Bool	
Value Range	False, True
Initialisation	False

#### Variable Telegram Syntax

Read Variable:				
sRN enIsoPixFilter				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	enIsoPixFilter	String	14	Switching the isolated pixel filter on and off

Read Variable Response:				
sRA enIsoPixFilter <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	enIsoPixFilter	String	14	Switching the isolated pixel filter on and off
Variable Data	data	Bool	1	

Write Variable:				
sWN enIsoPixFilter <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	enIsoPixFilter	String	14	Switching the isolated pixel filter on and off
Variable Data	data	Bool	1	

Write Variable Response:				
sWA enIsoPixFilter				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	enIsoPixFilter	String	14	Switching the isolated pixel filter on and off



## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 13 73 52 4E 20 65 6E 49 73 6F 50 69 78 46 69 6C 74 65 72 20 50	.....sRN enIs oPixFilter P
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 14 73 52 41 20 65 6E 49 73 6F 50 69 78 46 69 6C 74 65 72 20 00 5F	.....sRA enIs oPixFilter .
<b>Write Variable:</b>	02 02 02 02 00 00 00 14 73 57 4E 20 65 6E 49 73 6F 50 69 78 46 69 6C 74 65 72 20 00 55	.....sWN enIs oPixFilter .U
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 13 73 57 41 20 65 6E 49 73 6F 50 69 78 46 69 6C 74 65 72 20 5A	.....sWA enIs oPixFilter Z

### 2.21.6.2. Variable: isolatedPixelDistanceThres

The following section contains a detailed description of the variable isolatedPixelDistanceThres.

#### Variable Overview

Variable Name	Description
isolatedPixelDistanceThres	The difference threshold between opened and closed map of isolated pixel filter.

Communication Name	isoPixelDistThres
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

UInt	
Value Range	0..10000
Initialisation	300

#### Variable Telegram Syntax

Read Variable:				
sRN isoPixelDistThres				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	isoPixelDistThres	String	17	The difference threshold between opened and closed map of isolated pixel filter.

Read Variable Response:				
sRA isoPixelDistThres <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	isoPixelDistThres	String	17	The difference threshold between opened and closed map of isolated pixel filter.
Variable Data	data	UInt	2	



Write Variable:				
sWN isoPixelDistThres <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	isoPixelDistThres	String	17	The difference threshold between opened and closed map of isolated pixel filter.
Variable Data	data	UInt	2	

Write Variable Response:				
sWA isoPixelDistThres				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	isoPixelDistThres	String	17	The difference threshold between opened and closed map of isolated pixel filter.

## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 16 73 52 4E 20 69 73 6F 50 69 78 65 6C 44 69 73 74 54 68 72 65 73 20 20	.....sRN isoP ixelDistThres
Read Variable Response:	02 02 02 02 00 00 00 18 73 52 41 20 69 73 6F 50 69 78 65 6C 44 69 73 74 54 68 72 65 73 20 01 2C 02	.....sRA isoP ixelDistThres ., .
Write Variable:	02 02 02 02 00 00 00 18 73 57 4E 20 69 73 6F 50 69 78 65 6C 44 69 73 74 54 68 72 65 73 20 01 2C 08	.....sWN isoP ixelDistThres ., .
Write Variable Response:	02 02 02 02 00 00 00 16 73 57 41 20 69 73 6F 50 69 78 65 6C 44 69 73 74 54 68 72 65 73 20 2A	.....sWA isoP ixelDistThres *





## 2.22. Interface Block: API\_BlobTransfer

### 2.22.1. Group: API\_BlobClientConfig

#### 2.22.1.1. Variable: BlobTransportProtocolAPI

The following section contains a detailed description of the variable BlobTransportProtocolAPI.

#### Variable Overview

Variable Name	
BlobTransportProtocolAPI	

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

Enum8			
Default Value		TCP	
	Value	Name	Description
	0	TCP	TCP Protocol
	1	UDP	UDP Protocol

#### Variable Telegram Syntax

Read Variable:				
sRN BlobTransportProtocolAPI				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	BlobTransportProtocolAPI	String	24	

Read Variable Response:				
sRA BlobTransportProtocolAPI <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	BlobTransportProtocolAPI	String	24	
Variable Data	data	Enum8	1	

Write Variable:				
sWN BlobTransportProtocolAPI <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	BlobTransportProtocolAPI	String	24	
Variable Data	data	Enum8	1	



Write Variable Response:				
sWA BlobTransportProtocolAPI				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	BlobTransportProtocolAPI	String	24	

## Variable Telegram Examples

Example: Default Values				
Variable rest examples with data set to default values.				
<b>Read Variable:</b>	02 02 02 02 00 00 00 1D 54 72 61 6E 73 70 6F 72 6C 41 50 49 20 61	73 52 4E 20 42 6C 6F 62 74 50 72 6F 74 6F 63 6F		.....sRN Blob TransportProtoco lAPI a
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 1E 54 72 61 6E 73 70 6F 72 6C 41 50 49 20 00 6E	73 52 41 20 42 6C 6F 62 74 50 72 6F 74 6F 63 6F		.....sRA Blob TransportProtoco lAPI ·n
<b>Write Variable:</b>	02 02 02 02 00 00 00 1E 54 72 61 6E 73 70 6F 72 6C 41 50 49 20 00 64	73 57 4E 20 42 6C 6F 62 74 50 72 6F 74 6F 63 6F		.....sWN Blob TransportProtoco lAPI ·d
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 1D 54 72 61 6E 73 70 6F 72 6C 41 50 49 20 6B	73 57 41 20 42 6C 6F 62 74 50 72 6F 74 6F 63 6F		.....sWA Blob TransportProtoco lAPI k

### 2.22.1.2. Variable: BlobTcpPortAPI

The following section contains a detailed description of the variable BlobTcpPortAPI.

#### Variable Overview

Variable Name	
BlobTcpPortAPI	
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service
UInt	
Value Range	1025..65535
Initialisation	2114



## Variable Telegram Syntax

Read Variable:				
sRN BlobTcpPortAPI				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	BlobTcpPortAPI	String	14	

Read Variable Response:				
sRA BlobTcpPortAPI <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	BlobTcpPortAPI	String	14	
Variable Data	data	UInt	2	

Write Variable:				
sWN BlobTcpPortAPI <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	BlobTcpPortAPI	String	14	
Variable Data	data	UInt	2	

Write Variable Response:				
sWA BlobTcpPortAPI				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	BlobTcpPortAPI	String	14	

## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 13 54 63 70 50 6F 72 74 41 73 52 4E 20 42 6C 6F 62 50 49 20 6A	.....sRN Blob TcpPortAPI j
Read Variable Response:	02 02 02 02 00 00 00 15 54 63 70 50 6F 72 74 41 73 52 41 20 42 6C 6F 62 50 49 20 08 42 2F	.....sRA Blob TcpPortAPI ·B/
Write Variable:	02 02 02 02 00 00 00 15 54 63 70 50 6F 72 74 41 73 57 4E 20 42 6C 6F 62 50 49 20 08 42 25	.....sWN Blob TcpPortAPI ·B%
Write Variable Response:	02 02 02 02 00 00 00 13 54 63 70 50 6F 72 74 41 73 57 41 20 42 6C 6F 62 50 49 20 60	.....sWA Blob TcpPortAPI `



### 2.22.1.3. Variable: BlobUdpReceiverPortAPI

The following section contains a detailed description of the variable BlobUdpReceiverPortAPI.

#### Variable Overview

Variable Name
BlobUdpReceiverPortAPI

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

UInt	
Value Range	1025..65535
Initialisation	2114

#### Variable Telegram Syntax

Read Variable:				
sRN BlobUdpReceiverPortAPI				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	BlobUdpReceiverPortAPI	String	22	

Read Variable Response:				
sRA BlobUdpReceiverPortAPI <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	BlobUdpReceiverPortAPI	String	22	
Variable Data	data	UInt	2	

Write Variable:				
sWN BlobUdpReceiverPortAPI <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	BlobUdpReceiverPortAPI	String	22	
Variable Data	data	UInt	2	

Write Variable Response:				
sWA BlobUdpReceiverPortAPI				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	BlobUdpReceiverPortAPI	String	22	



## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 1B 73 52 4E 20 42 6C 6F 62 55 64 70 52 65 63 65 69 76 65 72 50 6F 72 74 41 50 49 20 55	.....sRN Blob UdpReceiverPortA PI U
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 1D 73 52 41 20 42 6C 6F 62 55 64 70 52 65 63 65 69 76 65 72 50 6F 72 74 41 50 49 20 08 42 10	.....sRA Blob UdpReceiverPortA PI .B.
<b>Write Variable:</b>	02 02 02 02 00 00 00 1D 73 57 4E 20 42 6C 6F 62 55 64 70 52 65 63 65 69 76 65 72 50 6F 72 74 41 50 49 20 08 42 1A	.....sWN Blob UdpReceiverPortA PI .B.
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 1B 73 57 41 20 42 6C 6F 62 55 64 70 52 65 63 65 69 76 65 72 50 6F 72 74 41 50 49 20 5F	.....sWA Blob UdpReceiverPortA PI _

### 2.22.1.4. Variable: BlobUdpReceiverIPAPI

The following section contains a detailed description of the variable BlobUdpReceiverIPAPI.

#### Variable Overview

Variable Name	Description
BlobUdpReceiverIPAPI	The IP Address where the blob data will be send to.

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

FlexString	
Length	0..45
Initialisation	192.168.1.2

#### Variable Telegram Syntax

Read Variable:				
sRN BlobUdpReceiverIPAPI				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	BlobUdpReceiverIPAPI	String	20	The IP Address where the blob data will be send to.

Read Variable Response:				
sRA BlobUdpReceiverIPAPI <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	BlobUdpReceiverIPAPI	String	20	The IP Address where the blob data will be send to.
Variable Data	data	FlexString	45	



Write Variable:				
sWN BlobUdpReceiverIPAPI <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	BlobUdpReceiverIPAPI	String	20	The IP Address where the blob data will be send to.
Variable Data	data	FlexString	45	

Write Variable Response:				
sWA BlobUdpReceiverIPAPI				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	BlobUdpReceiverIPAPI	String	20	The IP Address where the blob data will be send to.

## Variable Telegram Examples

Example: Default Values				
Variable rest examples with data set to default values.				
Read Variable:	02 02 02 02 00 00 00 19 55 64 70 52 65 63 65 69 20 75	73 52 4E 20 42 6C 6F 62 76 65 72 49 50 41 50 49	.....sRN Blob UdpReceiverIPAPI u	
Read Variable Response:	02 02 02 02 00 00 00 26 55 64 70 52 65 63 65 69 20 00 0B 31 39 32 2E 31	73 52 41 20 42 6C 6F 62 76 65 72 49 50 41 50 49 36 38 2E 31 2E 32 59	.....&sRA Blob UdpReceiverIPAPI ..192.168.1.2Y	
Write Variable:	02 02 02 02 00 00 00 26 55 64 70 52 65 63 65 69 20 00 0B 31 39 32 2E 31	73 57 4E 20 42 6C 6F 62 76 65 72 49 50 41 50 49 36 38 2E 31 2E 32 53	.....&sWN Blob UdpReceiverIPAPI ..192.168.1.2S	
Write Variable Response:	02 02 02 02 00 00 00 19 55 64 70 52 65 63 65 69 20 7F	73 57 41 20 42 6C 6F 62 76 65 72 49 50 41 50 49	.....sWA Blob UdpReceiverIPAPI .	

### 2.22.1.5. Variable: BlobUdpControlPortAPI

The following section contains a detailed description of the variable BlobUdpControlPortAPI.

#### Variable Overview

Variable Name	
BlobUdpControlPortAPI	

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

UInt	
Value Range	1025..65535
Initialisation	2114



## Variable Telegram Syntax

Read Variable:				
sRN BlobUdpControlPortAPI				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	BlobUdpControlPortAPI	String	21	

Read Variable Response:				
sRA BlobUdpControlPortAPI <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	BlobUdpControlPortAPI	String	21	
Variable Data	data	UInt	2	

Write Variable:				
sWN BlobUdpControlPortAPI <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	BlobUdpControlPortAPI	String	21	
Variable Data	data	UInt	2	

Write Variable Response:				
sWA BlobUdpControlPortAPI				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	BlobUdpControlPortAPI	String	21	

## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 1A 73 52 4E 20 42 6C 6F 62 55 64 70 43 6F 6E 74 72 6F 6C 50 6F 72 74 41 50 49 20 2B	.....sRN Blob UdpControlPortAPI +
Read Variable Response:	02 02 02 02 00 00 00 1C 73 52 41 20 42 6C 6F 62 55 64 70 43 6F 6E 74 72 6F 6C 50 6F 72 74 41 50 49 20 08 42 6E	.....sRA Blob UdpControlPortAPI ·Bn
Write Variable:	02 02 02 02 00 00 00 1C 73 57 4E 20 42 6C 6F 62 55 64 70 43 6F 6E 74 72 6F 6C 50 6F 72 74 41 50 49 20 08 42 64	.....sWN Blob UdpControlPortAPI ·Bd
Write Variable Response:	02 02 02 02 00 00 00 1A 73 57 41 20 42 6C 6F 62 55 64 70 43 6F 6E 74 72 6F 6C 50 6F 72 74 41 50 49 20 21	.....sWA Blob UdpControlPortAPI !

### 2.22.1.6. Variable: BlobUdpMaxPacketSizeAPI

The following section contains a detailed description of the variable BlobUdpMaxPacketSizeAPI.

#### Variable Overview

Variable Name	Description
BlobUdpMaxPacketSizeAPI	The maximum size of a single UDP Packet

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

UInt	
Value Range	100..65535
Initialisation	1024

#### Variable Telegram Syntax

Read Variable:				
sRN BlobUdpMaxPacketSizeAPI				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	BlobUdpMaxPacketSizeAPI	String	23	The maximum size of a single UDP Packet

Read Variable Response:				
sRA BlobUdpMaxPacketSizeAPI <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	BlobUdpMaxPacketSizeAPI	String	23	The maximum size of a single UDP Packet
Variable Data	data	UInt	2	

Write Variable:				
sWN BlobUdpMaxPacketSizeAPI <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	BlobUdpMaxPacketSizeAPI	String	23	The maximum size of a single UDP Packet
Variable Data	data	UInt	2	

Write Variable Response:				
sWA BlobUdpMaxPacketSizeAPI				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	BlobUdpMaxPacketSizeAPI	String	23	The maximum size of a single UDP Packet





## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 1C 73 52 4E 20 42 6C 6F 62 55 64 70 4D 61 78 50 61 63 6B 65 74 53 69 7A 65 41 50 49 20 0C	.....sRN Blob UdpMaxPacketSize API .
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 1E 73 52 41 20 42 6C 6F 62 55 64 70 4D 61 78 50 61 63 6B 65 74 53 69 7A 65 41 50 49 20 04 00 07	.....sRA Blob UdpMaxPacketSize API ...
<b>Write Variable:</b>	02 02 02 02 00 00 00 1E 73 57 4E 20 42 6C 6F 62 55 64 70 4D 61 78 50 61 63 6B 65 74 53 69 7A 65 41 50 49 20 04 00 0D	.....sWN Blob UdpMaxPacketSize API ...
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 1C 73 57 41 20 42 6C 6F 62 55 64 70 4D 61 78 50 61 63 6B 65 74 53 69 7A 65 41 50 49 20 06	.....sWA Blob UdpMaxPacketSize API .

### 2.22.1.7. Variable: BlobUdpIdleTimeBetweenPacketsAPI

The following section contains a detailed description of the variable BlobUdpIdleTimeBetweenPacketsAPI.

#### Variable Overview

Variable Name	Description
BlobUdpIdleTimeBetweenPacketsAPI	The time in uS the device waits before sending a new Packet

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

UInt	
Value Range	10..10000
Initialisation	10
Physical Unit	µs



## Variable Telegram Syntax

Read Variable:				
sRN BlobUdpIdleTimeBetweenPacketsAPI				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	BlobUdpIdleTimeBetweenPacketsAPI	String	32	The time in uS the device waits before sending a new Packet

Read Variable Response:				
sRA BlobUdpIdleTimeBetweenPacketsAPI <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	BlobUdpIdleTimeBetweenPacketsAPI	String	32	The time in uS the device waits before sending a new Packet
Variable Data	data	UInt	2	

Write Variable:				
sWN BlobUdpIdleTimeBetweenPacketsAPI <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	BlobUdpIdleTimeBetweenPacketsAPI	String	32	The time in uS the device waits before sending a new Packet
Variable Data	data	UInt	2	

Write Variable Response:				
sWA BlobUdpIdleTimeBetweenPacketsAPI				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	BlobUdpIdleTimeBetweenPacketsAPI	String	32	The time in uS the device waits before sending a new Packet

## Variable Telegram Examples

Example: Default Values				
Variable rest examples with data set to default values.				
Read Variable:	02 02 02 02 00 00 00 25 55 64 70 49 64 6C 65 54 65 6E 50 61 63 6B 65 74	73 52 4E 20 42 6C 6F 62 69 6D 65 42 65 74 77 65 73 41 50 49 20 55		.....sRN Blob UdpIdleTimeBetwe enPacketsAPI U
Read Variable Response:	02 02 02 02 00 00 00 27 55 64 70 49 64 6C 65 54 65 6E 50 61 63 6B 65 74	73 52 41 20 42 6C 6F 62 69 6D 65 42 65 74 77 65 73 41 50 49 20 00 0A 50		.....sRA Blob UdpIdleTimeBetwe enPacketsAPI ..P
Write Variable:	02 02 02 02 00 00 00 27 55 64 70 49 64 6C 65 54 65 6E 50 61 63 6B 65 74	73 57 4E 20 42 6C 6F 62 69 6D 65 42 65 74 77 65 73 41 50 49 20 00 0A 5A		.....sWN Blob UdpIdleTimeBetwe enPacketsAPI ..Z
Write Variable Response:	02 02 02 02 00 00 00 25 55 64 70 49 64 6C 65 54 65 6E 50 61 63 6B 65 74	73 57 41 20 42 6C 6F 62 69 6D 65 42 65 74 77 65 73 41 50 49 20 5F		.....sWA Blob UdpIdleTimeBetwe enPacketsAPI _

### 2.22.1.8. Variable: BlobUdpHeartbeatInterval

The following section contains a detailed description of the variable BlobUdpHeartbeatInterval.

#### Variable Overview

Variable Name	Description
BlobUdpHeartbeatInterval	The maximum Interval between two heartbeats in ms (0 = disabled)

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

UDInt	
Value Range	0..10000000
Initialisation	0
Physical Unit	ms

#### Variable Telegram Syntax

Read Variable:				
sRN BlobUdpHeartbeatInterval				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	BlobUdpHeartbeatInterval	String	24	The maximum Interval between two heartbeats in ms (0 = disabled)

Read Variable Response:				
sRA BlobUdpHeartbeatInterval <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	BlobUdpHeartbeatInterval	String	24	The maximum Interval between two heartbeats in ms (0 = disabled)
Variable Data	data	UDInt	4	

Write Variable:				
sWN BlobUdpHeartbeatInterval <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	BlobUdpHeartbeatInterval	String	24	The maximum Interval between two heartbeats in ms (0 = disabled)
Variable Data	data	UDInt	4	

Write Variable Response:				
sWA BlobUdpHeartbeatInterval				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	BlobUdpHeartbeatInterval	String	24	The maximum Interval between two heartbeats in ms (0 = disabled)



## Variable Telegram Examples

Example: Default Values			
Variable rest examples with data set to default values.			
<b>Read Variable:</b>	02 02 02 02 00 00 00 1D 55 64 70 48 65 61 72 74 72 76 61 6C 20 6A	73 52 4E 20 42 6C 6F 62 62 65 61 74 49 6E 74 65	.....sRN Blob UdpHeartbeatInte rval j
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 21 55 64 70 48 65 61 72 74 72 76 61 6C 20 00 00 00	73 52 41 20 42 6C 6F 62 62 65 61 74 49 6E 74 65 00 65	.....!sRA Blob UdpHeartbeatInte rval .....e
<b>Write Variable:</b>	02 02 02 02 00 00 00 21 55 64 70 48 65 61 72 74 72 76 61 6C 20 00 00 00	73 57 4E 20 42 6C 6F 62 62 65 61 74 49 6E 74 65 00 6F	.....!sWN Blob UdpHeartbeatInte rval .....o
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 1D 55 64 70 48 65 61 72 74 72 76 61 6C 20 60	73 57 41 20 42 6C 6F 62 62 65 61 74 49 6E 74 65	.....sWA Blob UdpHeartbeatInte rval ^

### 2.22.1.9. Variable: BlobUdpHeaderEnabled

The following section contains a detailed description of the variable BlobUdpHeaderEnabled.

#### Variable Overview

Variable Name	Description
BlobUdpHeaderEnabled	Enable Header in UDP Packets

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

Bool	
Value Range	False, True
Initialisation	True

#### Variable Telegram Syntax

Read Variable:				
sRN BlobUdpHeaderEnabled				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	BlobUdpHeaderEnabled	String	20	Enable Header in UDP Packets

Read Variable Response:				
sRA BlobUdpHeaderEnabled <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	BlobUdpHeaderEnabled	String	20	Enable Header in UDP Packets
Variable Data	data	Bool	1	



Write Variable:				
sWN BlobUdpHeaderEnabled <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	BlobUdpHeaderEnabled	String	20	Enable Header in UDP Packets
Variable Data	data	Bool	1	

Write Variable Response:				
sWA BlobUdpHeaderEnabled				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	BlobUdpHeaderEnabled	String	20	Enable Header in UDP Packets

## Variable Telegram Examples

Example: Default Values				
Variable rest examples with data set to default values.				
Read Variable:	02 02 02 02 00 00 00 19 55 64 70 48 65 61 64 65 20 77	73 52 4E 20 42 6C 6F 62 72 45 6E 61 62 6C 65 64	.....sRN Blob UdpHeaderEnabled w	
Read Variable Response:	02 02 02 02 00 00 00 1A 55 64 70 48 65 61 64 65 20 01 79	73 52 41 20 42 6C 6F 62 72 45 6E 61 62 6C 65 64	.....sRA Blob UdpHeaderEnabled .y	
Write Variable:	02 02 02 02 00 00 00 1A 55 64 70 48 65 61 64 65 20 01 73	73 57 4E 20 42 6C 6F 62 72 45 6E 61 62 6C 65 64	.....sWN Blob UdpHeaderEnabled .s	
Write Variable Response:	02 02 02 02 00 00 00 19 55 64 70 48 65 61 64 65 20 7D	73 57 41 20 42 6C 6F 62 72 45 6E 61 62 6C 65 64	.....sWA Blob UdpHeaderEnabled }	

### 2.22.1.10. Variable: BlobUdpFECEnabled

The following section contains a detailed description of the variable BlobUdpFECEnabled.

#### Variable Overview

Variable Name	Description
BlobUdpFECEnabled	Enable Forward Error Correction for UDP Packets

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

Bool	
Value Range	False, True
Initialisation	False



## Variable Telegram Syntax

Read Variable:				
sRN BlobUdpFECEnabled				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	BlobUdpFECEnabled	String	17	Enable Forward Error Correction for UDP Packets

Read Variable Response:				
sRA BlobUdpFECEnabled <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	BlobUdpFECEnabled	String	17	Enable Forward Error Correction for UDP Packets
Variable Data	data	Bool	1	

Write Variable:				
sWN BlobUdpFECEnabled <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	BlobUdpFECEnabled	String	17	Enable Forward Error Correction for UDP Packets
Variable Data	data	Bool	1	

Write Variable Response:				
sWA BlobUdpFECEnabled				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	BlobUdpFECEnabled	String	17	Enable Forward Error Correction for UDP Packets

## Variable Telegram Examples

Example: Default Values				
Variable rest examples with data set to default values.				
Read Variable:	02 02 02 02 00 00 00 16 55 64 70 46 45 43 45 6E	73 52 4E 20 42 6C 6F 62 61 62 6C 65 64 20 08	.....sRN Blob UdpFECEnabled .	
Read Variable Response:	02 02 02 02 00 00 00 17 55 64 70 46 45 43 45 6E	73 52 41 20 42 6C 6F 62 61 62 6C 65 64 20 00 07	.....sRA Blob UdpFECEnabled ..	
Write Variable:	02 02 02 02 00 00 00 17 55 64 70 46 45 43 45 6E	73 57 4E 20 42 6C 6F 62 61 62 6C 65 64 20 00 0D	.....sWN Blob UdpFECEnabled ..	
Write Variable Response:	02 02 02 02 00 00 00 16 55 64 70 46 45 43 45 6E	73 57 41 20 42 6C 6F 62 61 62 6C 65 64 20 02	.....sWA Blob UdpFECEnabled .	



### 2.22.1.11. Variable: BlobUdpAutoTransmit

The following section contains a detailed description of the variable BlobUdpAutoTransmit.

#### Variable Overview

Variable Name	Description
BlobUdpAutoTransmit	Enables Auto transmit to specified Client

Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

Bool	
Value Range	False, True
Initialisation	False

#### Variable Telegram Syntax

Read Variable:				
sRN BlobUdpAutoTransmit				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	BlobUdpAutoTransmit	String	19	Enables Auto transmit to specified Client

Read Variable Response:				
sRA BlobUdpAutoTransmit <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	BlobUdpAutoTransmit	String	19	Enables Auto transmit to specified Client
Variable Data	data	Bool	1	

Write Variable:				
sWN BlobUdpAutoTransmit <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	BlobUdpAutoTransmit	String	19	Enables Auto transmit to specified Client
Variable Data	data	Bool	1	

Write Variable Response:				
sWA BlobUdpAutoTransmit				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	BlobUdpAutoTransmit	String	19	Enables Auto transmit to specified Client



## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 18 73 52 4E 20 42 6C 6F 62 55 64 70 41 75 74 6F 54 72 61 6E 73 6D 69 74 20 08	.....sRN Blob UdpAutoTransmit .
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 19 73 52 41 20 42 6C 6F 62 55 64 70 41 75 74 6F 54 72 61 6E 73 6D 69 74 20 00 07	.....sRA Blob UdpAutoTransmit ..
<b>Write Variable:</b>	02 02 02 02 00 00 00 19 73 57 4E 20 42 6C 6F 62 55 64 70 41 75 74 6F 54 72 61 6E 73 6D 69 74 20 00 0D	.....sWN Blob UdpAutoTransmit ..
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 18 73 57 41 20 42 6C 6F 62 55 64 70 41 75 74 6F 54 72 61 6E 73 6D 69 74 20 02	.....sWA Blob UdpAutoTransmit .





## 2.22.2. Group: API\_DataChannelSelection

### 2.22.2.1. Variable: enableDistanceMapAPI

The following section contains a detailed description of the variable enableDistanceMapAPI.

#### Variable Overview

Variable Name	Description
enableDistanceMapAPI	Enables the distance map API channel

Communication Name	enDistanceAPI
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

Bool	
Value Range	False, True
Initialisation	True

#### Variable Telegram Syntax

Read Variable:				
sRN enDistanceAPI				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	enDistanceAPI	String	13	Enables the distance map API channel

Read Variable Response:				
sRA enDistanceAPI <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	enDistanceAPI	String	13	Enables the distance map API channel
Variable Data	data	Bool	1	

Write Variable:				
sWN enDistanceAPI <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	enDistanceAPI	String	13	Enables the distance map API channel
Variable Data	data	Bool	1	

Write Variable Response:				
sWA enDistanceAPI				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	enDistanceAPI	String	13	Enables the distance map API channel



## Variable Telegram Examples

Example: Default Values			
Variable rest examples with data set to default values.			
<b>Read Variable:</b>	02 02 02 02 00 00 00 12 73 74 61 6E 63 65 41 50	73 52 4E 20 65 6E 44 69 49 20 1F	.....sRN enDi stanceAPI .
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 13 73 74 61 6E 63 65 41 50	73 52 41 20 65 6E 44 69 49 20 01 11	.....sRA enDi stanceAPI ..
<b>Write Variable:</b>	02 02 02 02 00 00 00 13 73 74 61 6E 63 65 41 50	73 57 4E 20 65 6E 44 69 49 20 01 1B	.....sWN enDi stanceAPI ..
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 12 73 74 61 6E 63 65 41 50	73 57 41 20 65 6E 44 69 49 20 15	.....sWA enDi stanceAPI .

### 2.22.2.2. Variable: enableIntensityMapAPI

The following section contains a detailed description of the variable enableIntensityMapAPI.

#### Variable Overview

Variable Name	Description
enableIntensityMapAPI	Enables the intensity map API channel

Communication Name	enIntensityAPI
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

Bool	
Value Range	False, True
Initialisation	True

#### Variable Telegram Syntax

Read Variable:				
sRN enIntensityAPI				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	enIntensityAPI	String	14	Enables the intensity map API channel

Read Variable Response:				
sRA enIntensityAPI <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	enIntensityAPI	String	14	Enables the intensity map API channel
Variable Data	data	Bool	1	



Write Variable:				
sWN enIntensityAPI <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	enIntensityAPI	String	14	Enables the intensity map API channel
Variable Data	data	Bool	1	

Write Variable Response:				
sWA enIntensityAPI				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	enIntensityAPI	String	14	Enables the intensity map API channel

## Variable Telegram Examples

Example: Default Values				
Variable rest examples with data set to default values.				
Read Variable:	02 02 02 02 00 00 00 13 74 65 6E 73 69 74 79 41	73 52 4E 20 65 6E 49 6E 50 49 20 73	.....sRN enIn tensityAPI s	
Read Variable Response:	02 02 02 02 00 00 00 14 74 65 6E 73 69 74 79 41	73 52 41 20 65 6E 49 6E 50 49 20 01 7D	.....sRA enIn tensityAPI .}	
Write Variable:	02 02 02 02 00 00 00 14 74 65 6E 73 69 74 79 41	73 57 4E 20 65 6E 49 6E 50 49 20 01 77	.....sWN enIn tensityAPI .w	
Write Variable Response:	02 02 02 02 00 00 00 13 74 65 6E 73 69 74 79 41	73 57 41 20 65 6E 49 6E 50 49 20 79	.....sWA enIn tensityAPI y	

### 2.22.2.3. Variable: enableStateMapAPI

The following section contains a detailed description of the variable enableStateMapAPI.

#### Variable Overview

Variable Name	Description
enableStateMapAPI	Enables the state map API channel

Communication Name	enStateAPI
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

Bool	
Value Range	False, True
Initialisation	True



## Variable Telegram Syntax

Read Variable:				
sRN enStateAPI				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	enStateAPI	String	10	Enables the state map API channel

Read Variable Response:				
sRA enStateAPI <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	enStateAPI	String	10	Enables the state map API channel
Variable Data	data	Bool	1	

Write Variable:				
sWN enStateAPI <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	enStateAPI	String	10	Enables the state map API channel
Variable Data	data	Bool	1	

Write Variable Response:				
sWA enStateAPI				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	enStateAPI	String	10	Enables the state map API channel

## Variable Telegram Examples

Example: Default Values				
Variable rest examples with data set to default values.				
Read Variable:	02 02 02 02 00 00 00 0F 61 74 65 41 50 49 20 6B	73 52 4E 20 65 6E 53 74	.....sRN enSt ateAPI k	
Read Variable Response:	02 02 02 02 00 00 00 10 61 74 65 41 50 49 20 01	73 52 41 20 65 6E 53 74 65	.....sRA enSt ateAPI e	
Write Variable:	02 02 02 02 00 00 00 10 61 74 65 41 50 49 20 01	73 57 4E 20 65 6E 53 74 6F	.....sWN enSt ateAPI o	
Write Variable Response:	02 02 02 02 00 00 00 0F 61 74 65 41 50 49 20 61	73 57 41 20 65 6E 53 74	.....sWA enSt ateAPI a	



#### 2.22.2.4. Variable: enableXMapAPI

The following section contains a detailed description of the variable enableXMapAPI.

##### Variable Overview

Variable Name	Description
enableXMapAPI	Enables the X map API channel

Communication Name	enXAPI
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

Bool	
Value Range	False, True
Initialisation	False

##### Variable Telegram Syntax

Read Variable:				
sRN enXAPI				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	enXAPI	String	6	Enables the X map API channel

Read Variable Response:				
sRA enXAPI <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	enXAPI	String	6	Enables the X map API channel
Variable Data	data	Bool	1	

Write Variable:				
sWN enXAPI <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	enXAPI	String	6	Enables the X map API channel
Variable Data	data	Bool	1	

Write Variable Response:				
sWA enXAPI				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	enXAPI	String	6	Enables the X map API channel



## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
<b>Read Variable:</b>	02 02 02 02 00 00 00 0B 73 52 4E 20 65 6E 58 41 50 49 20 64	.....sRN enXA PI d
<b>Read Variable Response:</b>	02 02 02 02 00 00 00 0C 73 52 41 20 65 6E 58 41 50 49 20 00 6B	.....sRA enXA PI ·k
<b>Write Variable:</b>	02 02 02 02 00 00 00 0C 73 57 4E 20 65 6E 58 41 50 49 20 00 61	.....sWN enXA PI ·a
<b>Write Variable Response:</b>	02 02 02 02 00 00 00 0B 73 57 41 20 65 6E 58 41 50 49 20 6E	.....sWA enXA PI n

### 2.22.2.5. Variable: enableYMapAPI

The following section contains a detailed description of the variable enableYMapAPI.

#### Variable Overview

Variable Name	Description
enableYMapAPI	Enables the Y map API channel

Communication Name	enYAPI
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

Bool	
Value Range	False, True
Initialisation	False

#### Variable Telegram Syntax

Read Variable:				
sRN enYAPI				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	enYAPI	String	6	Enables the Y map API channel

Read Variable Response:				
sRA enYAPI <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	enYAPI	String	6	Enables the Y map API channel
Variable Data	data	Bool	1	



Write Variable:				
sWN enYAPI <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	enYAPI	String	6	Enables the Y map API channel
Variable Data	data	Bool	1	

Write Variable Response:				
sWA enYAPI				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	enYAPI	String	6	Enables the Y map API channel

## Variable Telegram Examples

Example: Default Values				
Variable rest examples with data set to default values.				
Read Variable:	02 02 02 02 00 00 00 0B 50 49 20 65	73 52 4E 20 65 6E 59 41	.....sRN enYA PI e	
Read Variable Response:	02 02 02 02 00 00 00 0C 50 49 20 00 6A	73 52 41 20 65 6E 59 41	.....sRA enYA PI .j	
Write Variable:	02 02 02 02 00 00 00 0C 50 49 20 00 60	73 57 4E 20 65 6E 59 41	.....sWN enYA PI .`	
Write Variable Response:	02 02 02 02 00 00 00 0B 50 49 20 6F	73 57 41 20 65 6E 59 41	.....sWA enYA PI o	

### 2.22.2.6. Variable: enableZMapAPI

The following section contains a detailed description of the variable enableZMapAPI.

#### Variable Overview

Variable Name	Description
enableZMapAPI	Enables the Z map API channel

Communication Name	enZAPI
Sopas Synchronisation	Variable is relevant for synchronisation with SOPAS ET.
Storage	Variable is stored in ApplicationParameters
Read-Access	Always
Write-Access	AuthorizedClient, Service

Bool	
Value Range	False, True
Initialisation	False



## Variable Telegram Syntax

Read Variable:				
sRN enZAPI				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRN	String	3	Read SOPAS Variable by Name
Command	enZAPI	String	6	Enables the Z map API channel

Read Variable Response:				
sRA enZAPI <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sRA	String	3	SOPAS Variable Read Acknowledge
Command	enZAPI	String	6	Enables the Z map API channel
Variable Data	data	Bool	1	

Write Variable:				
sWN enZAPI <data>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWN	String	3	Write SOPAS Variable by Name
Command	enZAPI	String	6	Enables the Z map API channel
Variable Data	data	Bool	1	

Write Variable Response:				
sWA enZAPI				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sWA	String	3	SOPAS Variable Write Acknowledge
Command	enZAPI	String	6	Enables the Z map API channel

## Variable Telegram Examples

Example: Default Values		
Variable rest examples with data set to default values.		
Read Variable:	02 02 02 02 00 00 00 0B 73 52 4E 20 65 6E 5A 41 50 49 20 66	.....sRN enZA PI f
Read Variable Response:	02 02 02 02 00 00 00 0C 73 52 41 20 65 6E 5A 41 50 49 20 00 69	.....sRA enZA PI i
Write Variable:	02 02 02 02 00 00 00 0C 73 57 4E 20 65 6E 5A 41 50 49 20 00 63	.....sWN enZA PI c
Write Variable Response:	02 02 02 02 00 00 00 0B 73 57 41 20 65 6E 5A 41 50 49 20 6C	.....sWA enZA PI l





## 2.23. Interface Block: BlobTransfer

### 2.23.1. Group: BlobClientConfig

#### 2.23.1.1. Method: GetBlobClientConfig

The following section contains a detailed description of the method GetBlobClientConfig.

#### Method Overview

Method Name	
GetBlobClientConfig	
Invocation Access	Always
Return Values	
TransportProtocol	
<b>FlexString</b>	
Length	0..20
Initialisation	TCP
DeviceIpAddress	
<b>FlexString</b>	
Length	0..15
MulticastIpAddress	
<b>FlexString</b>	
Length	0..15
TcpPort	
<b>UInt</b>	
Value Range	0..65535
Initialisation	2113
UdpPeerPort	
<b>UInt</b>	
Value Range	0..65535
Initialisation	2122
UdpLocalPort	
<b>UInt</b>	
Value Range	0..65535
Initialisation	2121
Active	
<b>Bool</b>	
Value Range	False, True
Initialisation	False
FragmentSize	
<b>UInt</b>	
Value Range	0..65535
Initialisation	1024



## Method Telegram Syntax

Method Invocation:				
sMN GetBlobClientConfig				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sMN	String	3	Request (SOPAS Method by Name)
Command	GetBlobClientConfig	String	19	

Method Return Value:				
sAN GetBlobClientConfig <TransportProtocol> <DeviceIpAddress> <MulticastIpAddress> <TcpPort> <UdpPeerPort> <UdpLocalPort> <Active> <FragmentSize>				
Telegram Part	Telegram	Type	Length [Byte]	Description
Command Type	sAN	String	3	Result (SOPAS Method Result)
Command	GetBlobClientConfig	String	19	
Return Value 1	TransportProtocol	FlexString	20	
Return Value 2	DeviceIpAddress	FlexString	15	
Return Value 3	MulticastIpAddress	FlexString	15	
Return Value 4	TcpPort	UInt	2	
Return Value 5	UdpPeerPort	UInt	2	
Return Value 6	UdpLocalPort	UInt	2	
Return Value 7	Active	Bool	1	
Return Value 8	FragmentSize	UInt	2	

## Method Telegram Examples

Example: Default Values		
Method telegram examples with parameter data and return value data set to default values.		
Method Invocation:	02 02 02 02 00 00 00 18 73 4D 4E 20 47 65 74 42 6C 6F 62 43 6C 69 65 6E 74 43 6F 6E 66 69 67 20 16	.....sMN GetBlobClientConfig.
Method Return Value:	02 02 02 02 00 00 00 2A 73 41 4E 20 47 65 74 42 6C 6F 62 43 6C 69 65 6E 74 43 6F 6E 66 69 67 20 00 03 54 43 50 00 00 00 00 08 41 08 4A 08 49 00 04 00 10	.....*sAN GetBlobClientConfig..TCP.....A.J.I....

## 3. User Types

### 3.1. Type: CidVersion

The following section contains a detailed description of the user type CidVersion.

Type
CidVersion

Struct			
MajorVersion			
		<b>UInt</b>	
Value Range		0..65535	
Initialisation		1	
MinorVersion			
		<b>UInt</b>	
Value Range		0..65535	
Initialisation		6	
PatchVersion			
		<b>UInt</b>	
Value Range		0..65535	
Initialisation		0	
BuildNumber			
		<b>UDInt</b>	
Value Range		0..4294967295	
Initialisation		29891	
VersionClassifier			
		<b>Enum8</b>	
Default Value		R	
	Value	Name	Description
	0	C	Release Candidate
	1	A	Alpha
	2	B	Beta
	3	R	Release
	4	S	Special

### 3.2. Type: DevInfoGenericEntryType

The following section contains a detailed description of the user type DevInfoGenericEntryType.

Type	Description
DevInfoGenericEntryType	Auxiliary entries which can be used to add user information to the SOPAS Scan.

Struct		
key		
	<b>String</b>	
	Length	4
value		
	<b>Array</b>	
	Length	0..32
	<b>UInt</b>	
	Value Range	0..255

### 3.3. Type: DeviceStatus

The following section contains a detailed description of the user type DeviceStatus.

Type	Description
DeviceStatus	Current state of the device.

Enum8			
	Value	Name	Description
	0	DS_UnknownState	
	1	DS_Startup	
	2	DS_ServiceMode	
	3	DS_NormalOperation	
	4	DS_SuspendedOperation	
	5	DS_ServiceRecommended	
	6	DS_ServiceRequired	
	7	DS_RecoverableError	
	8	DS_FatalError	

### 3.4. Type: RequiredUserAction

The following section contains a detailed description of the user type RequiredUserAction.

Type	Description
RequiredUserAction	A Hint what can be done if the DeviceStatus is not DS_NormalOperation.

Cont		
Bit Length		16
ConfirmConfiguration		
0.0	<b>Bool</b>	
	Value Range	False, True
	Initialisation	False
CheckConfiguration		
0.1	<b>Bool</b>	
	Value Range	False, True
	Initialisation	False
CheckEnvironment		
0.2	<b>Bool</b>	
	Value Range	False, True
	Initialisation	False
CheckApplicationInterfaces		
0.3	<b>Bool</b>	
	Value Range	False, True
	Initialisation	False
CheckDevice		
0.4	<b>Bool</b>	
	Value Range	False, True
	Initialisation	False
RunSetupProcedure		
0.5	<b>Bool</b>	
	Value Range	False, True
	Initialisation	False
CheckFirmware		
0.6	<b>Bool</b>	
	Value Range	False, True
	Initialisation	False
Wait		
0.7	<b>Bool</b>	
	Value Range	False, True
	Initialisation	False
Reserved		
1.0	<b>UInt8</b>	
...	Value Range	0..255
1.7		

### 3.5. Type: IpParameter

The following section contains a detailed description of the user type IpParameter.

Type	Description
IpParameter	Parameter to configure a IP interface.

Struct	
udiIpAddress	IP Address
UDInt	
Value Range	0..4294967295
udiNetMask	Network Mask
UDInt	
Value Range	0..4294967295
udiDefaultGateway	Default Gateway
UDInt	
Value Range	0..4294967295
bDhcpEnabled	Is DHCP enabled
Bool	
Value Range	False, True
Initialisation	False
bDhcpAvailable	Is DHCP generally available on the device
Bool	
Value Range	False, True
Initialisation	False

### 3.6. Type: DeviceInfo

The following section contains a detailed description of the user type DeviceInfo.

Type
DeviceInfo

Struct	
DeviceInfoVersion	
UInt	
Value Range	0..65535
CidName	
FlexString	
Length	0..32
CidVersionStruct	
UserType	
CidVersion	See the chapter "User Types" for details.
DeviceStatus	
UserType	
DeviceStatus	See the chapter "User Types" for details.



Struct		
RequiredUserAction		
<b>UserType</b>		
RequiredUserAction	See the chapter "User Types" for details.	
DeviceName		Name of device
<b>FlexString</b>		
Length	0..32	
ApplicationSpecificName		
<b>FlexString</b>		
Length	0..32	
ProjectName		Project name
<b>FlexString</b>		
Length	0..32	
SerialNumber		Serial number of this device.
<b>FlexString</b>		
Length	0..32	
TypeCode		This variable's value matches the SICK type code as it is used in SAP (first 18 characters).
<b>FlexString</b>		
Length	0..32	
FirmwareVersion		
<b>FlexString</b>		
Length	0..32	
OrderNumber		This variable's value matches the SICK order number (million number) in SAP.
<b>FlexString</b>		
Length	0..32	
Flags		
<b>SCont</b>		
Bit Length	8	
IsLittleEndian		
0.0	<b>Bool</b>	
	Value Range	False, True
	Initialisation	False
ComByIndex		
0.1	<b>Bool</b>	
	Value Range	False, True
	Initialisation	False
ComByName		
0.2	<b>Bool</b>	
	Value Range	False, True
	Initialisation	False
SddAvailable		
0.3	<b>Bool</b>	
	Value Range	False, True
	Initialisation	False
Reserved		
0.4	<b>UInt4</b>	
...	Value Range	0..15
0.7		



<b>Struct</b>			
auxEntries			
		<b>Array</b>	
		Length	0..12
		<b>UserType</b>	
		DevInfoGenericEntryType	See the chapter "User Types" for details.
ScanIF			
		<b>Array</b>	
		Length	0..1
		<b>Struct</b>	
		InterfaceNumber	
		<b>UInt</b>	
		Value Range	0..65535
		InterfaceName	
		<b>FlexString</b>	
		Length	0..64
GeneralComSettings			
		<b>Array</b>	
		Length	0..7
		<b>UserType</b>	
		DevInfoGenericEntryType	See the chapter "User Types" for details.
Endpoints			
		<b>Array</b>	
		Length	0..1
		<b>Struct</b>	
		Protocol	
		<b>Enum8</b>	
		Value	Name Description
		0	CoLaB
		1	CoLa2_0
		2	CoLa2_1
		3	CoLaA
		4	HTTP
		5	HTTPS
		EndpointSettings	
		<b>Array</b>	
		Length	0..1
		UserType	Struct[Endpoints].Array.Struct[EndpointSettings].Array.UserType
<b>UserType</b>		Struct[Endpoints].Array.Struct[EndpointSettings].Array.UserType	
DevInfoGenericEntryType		See the chapter "User Types" for details.	



### 3.7. Type: ErrTimeType

The following section contains a detailed description of the user type ErrTimeType.

Type	Description
ErrTimeType	TODO

Struct	
PwrOnCnt	
<b>UInt</b>	
Value Range	0..65535
Initialisation	0
OpSecs	
<b>UDInt</b>	
Value Range	0..4294967295
Initialisation	0
TimeOccur	
<b>UDInt</b>	
Value Range	0..4294967295
Initialisation	0

### 3.8. Type: ErrStructType

The following section contains a detailed description of the user type ErrStructType.

Type	Description
ErrStructType	TODO

Struct	
ErrorId	
<b>UDInt</b>	
Value Range	0..4294967295
ErrorState	
<b>UDInt</b>	
Value Range	0..4294967295
FirstTime	
<b>UserType</b>	
ErrTimeType	See the chapter "User Types" for details.
LastTime	
<b>UserType</b>	
ErrTimeType	See the chapter "User Types" for details.
NumberOccurance	
<b>UInt</b>	
Value Range	0..65535
Initialisation	0

Struct	
ErrReserved	
<b>UInt</b>	
Value Range	0..65535
Initialisation	0
ExtInfo	
<b>FlexString</b>	
Length	0..50

### 3.9. Type: V3SElectricalMonitoring

The following section contains a detailed description of the user type V3SElectricalMonitoring.

Type
V3SElectricalMonitoring

Struct	
LEDsCurrent	
<b>Real</b>	
Value Range	See specification IEEE 754
Initialisation	0.0
Physical Unit	A
OperationVoltage	
<b>Real</b>	
Value Range	See specification IEEE 754
Initialisation	0.0
Physical Unit	V
MinimalVoltage	
<b>Real</b>	
Value Range	See specification IEEE 754
Initialisation	0.0
Physical Unit	V
MaximalVoltage	
<b>Real</b>	
Value Range	See specification IEEE 754
Initialisation	0.0
Physical Unit	V

### 3.10. Type: V3SElectricalLimits

The following section contains a detailed description of the user type V3SElectricalLimits.

Type
V3SElectricalLimits

Struct	
MinAllowedLEDsCurrent	
<b>Real</b>	
Value Range	See specification IEEE 754
Initialisation	0.0
Physical Unit	A
MaxAllowedLEDsCurrent	
<b>Real</b>	
Value Range	See specification IEEE 754
Initialisation	5.0
Physical Unit	A
MinAllowedOpVoltage	
<b>Real</b>	
Value Range	See specification IEEE 754
Initialisation	20.0
Physical Unit	V
MaxAllowedOpVoltage	
<b>Real</b>	
Value Range	See specification IEEE 754
Initialisation	28.0
Physical Unit	V

### 3.11. Type: ThreeLevels

The following section contains a detailed description of the user type ThreeLevels.

Type
ThreeLevels

Enum8			
	Value	Name	Description
	0	INVALID	Unspecified, uninitialized, unknown
	1	ERROR	An error was detected
	2	WARNING	Reliability is questionable
	3	GOOD	Anything is like expected

### 3.12. Type: V3SProductionData

The following section contains a detailed description of the user type V3SProductionData.

Type
V3SProductionData

Struct		
MaterialNo		
	<b>String</b>	
	Length	7
ChangeNo		
	<b>String</b>	
	Length	4
DateCode		
	<b>String</b>	
	Length	4
SerialNo		
	<b>String</b>	
	Length	4
Flag		
	<b>String</b>	
	Length	1
ProdSite		
	<b>String</b>	
	Length	2
ProdFam		
	<b>String</b>	
	Length	2
TraceFU		
	<b>String</b>	
	Length	2
ModelCode		
	<b>String</b>	
	Length	1
AuxData		
	<b>String</b>	
	Length	4

### 3.13. Type: V3SHardwareInfo

The following section contains a detailed description of the user type V3SHardwareInfo.

Type
V3SHardwareInfo

Struct		
ProcessorBoard		
	<b>UserType</b>	
	V3SProductionData	See the chapter "User Types" for details.
PowerIOBoard		
	<b>UserType</b>	
	V3SProductionData	See the chapter "User Types" for details.
ImagerBoard		
	<b>UserType</b>	
	V3SProductionData	See the chapter "User Types" for details.
IlluminationBoard		
	<b>UserType</b>	
	V3SProductionData	See the chapter "User Types" for details.

### 3.14. Type: LedConfig

The following section contains a detailed description of the user type LedConfig.

Type
LedConfig

Struct			
Color1			
	<b>Enum8</b>		
	Default Value		
	Value	Name	Description
	0	OFF	
	1	RED	
	2	GREEN	
	3	YELLOW	
	4	BLUE	
	5	MAGENTA	
	6	TURQOIS	
	7	WHITE	
	8	FUCHSIA	
	9	AQUA	



Struct			
Color2			
Enum8			
Default Value		OFF	
	Value	Name	Description
	0	OFF	
	1	RED	
	2	GREEN	
	3	YELLOW	
	4	BLUE	
	5	MAGENTA	
	6	TURQOIS	
	7	WHITE	
Period			
Enum8			
Default Value		millisec500	
	Value	Name	Description
	1	millisec100	
	2	millisec200	
	3	millisec300	
	5	millisec500	
	10	millisec1000	
	15	millisec1500	
	20	millisec2000	
	25	millisec2500	
	30	millisec3000	
DutyCyclePercent			
UInt			
Value Range		0..100	
Initialisation		50	
Physical Unit		byte	

### 3.15. Type: KeyValue

The following section contains a detailed description of the user type KeyValue.

Type	Description
KeyValue	Key/Value item

Struct		
key		
	FlexString	
	Length	0..64
value		
	FlexString	
	Length	0..64

### 3.16. Type: E\_USER\_LEVEL\_TYPE

The following section contains a detailed description of the user type E\_USER\_LEVEL\_TYPE.

Type
E_USER_LEVEL_TYPE

Enum8			
	Value	Name	Description
	0	RUN	
	1	OPERATOR	
	2	MAINTENANCE	
	3	AUTHORIZED_CLIENT	
	4	SERVICE	
	5	SICKSERVICE	
	6	PRODUCTION	
	7	DEVELOPER	

### 3.17. Type: RemoteAddressDefine

The following section contains a detailed description of the user type RemoteAddressDefine.

Type
RemoteAddressDefine

FlexString	
Length	0..128

### 3.18. Type: CoLa2ClientIdentType

The following section contains a detailed description of the user type CoLa2ClientIdentType.

Type
CoLa2ClientIdentType

FlexString	
Length	0..32

### 3.19. Type: IOConfig

The following section contains a detailed description of the user type IOConfig.

Type
IOConfig

Struct			
Direction		0=input,1=output	
Enum8			
Default Value		Input	
	Value	Name	Description
	0	Input	
	1	Output	
PushPullMode		0=open-drain,1=push/pull	
Enum8			
Default Value		OpenDrain	
	Value	Name	Description
	0	OpenDrain	
	1	PushPull	
NPNorPNPMode		0=PNP,1=NPN	
Enum8			
Default Value		PNP	
	Value	Name	Description
	0	PNP	
	1	NPN	
InputReaction		0=react on rising edge,1=react on falling edge,2=react on both	
Enum8			
Default Value		RisingEdge	
	Value	Name	Description
	0	RisingEdge	
	1	FallingEdge	
	2	Both	
NotificationMode		0=Polling,1=IRQ	
Enum8			
Default Value		Polling	
	Value	Name	Description
	0	Polling	
	1	IRQ	
SoftwareFilterSetting			
USInt			
Value Range		0..255	
Initialisation		16	
ExternalTrigger		0=Disabled,1=Enabled	
Enum8			
Default Value		Disabled	
	Value	Name	Description
	0	Disabled	
	1	Enabled	



### 3.20. Type: IOConfigType

The following section contains a detailed description of the user type IOConfigType.

Type			
IOConfigType			
Struct			
Direction		0=input,1=output	
<div>Enum8</div>			
Default Value		Input	
	Value	Name	Description
	0	Input	
	1	Output	
InputConfigurationPart			
<div>UserType</div>			
IOConfig		See the chapter "User Types" for details.	

### 3.21. Type: IOFunctionType

The following section contains a detailed description of the user type IOFunctionType.

Type	
IOFunctionType	

Enum8			
Default Value		NoFunction	
Value	Name	Description	
0	NoFunction		
1	SteadyLOW		
2	SteadyHIGH		
3	DeviceStatus		
4	DataQualityCheck		
5	TemperatureWarning		
6	DONTUSE_PollutionWarning	Planned to signal a possible pollution of the optics. Not yet used, but might be available in future.	
7	Trigger		
8	DONTUSE_UserStart	Only needed to convert old data sets, don't use.	
9	DONTUSE_User2	Only needed to convert old data sets, don't use.	
10	DONTUSE_User3	Only needed to convert old data sets, don't use.	
11	DONTUSE_User4	Only needed to convert old data sets, don't use.	
12	DONTUSE_User5	Only needed to convert old data sets, don't use.	
13	DONTUSE_User6	Only needed to convert old data sets, don't use.	
14	DONTUSE_User7	Only needed to convert old data sets, don't use.	
15	DONTUSE_User8	Only needed to convert old data sets, don't use.	
16	DONTUSE_User9	Only needed to convert old data sets, don't use.	
17	DONTUSE_User10	Only needed to convert old data sets, don't use.	
18	DONTUSE_User11	Only needed to convert old data sets, don't use.	
19	DONTUSE_User12	Only needed to convert old data sets, don't use.	
20	DONTUSE_User13	Only needed to convert old data sets, don't use.	
21	DONTUSE_User14	Only needed to convert old data sets, don't use.	
22	DONTUSE_UserEnd	Only needed to convert old data sets, don't use.	
23	TriggerBusy		
24	PowerSaveMode		
27	TriggerTeach	Used to trigger Teach in DT application.	
28	IlluminationTrigger	Used to trigger an external illumination.	
30	DeviceWarning	Used to signal device warnings (in sync with yellow device LED).	
31	TemperatureCritical	Used to signal a critical device temperature.	

### 3.22. Type: V3SIOsState

The following section contains a detailed description of the user type V3SIOsState.

Type
V3SIOsState

Struct		
INOUT1		
		SInt
		Value Range
INOUT2		
		SInt
		Value Range

Struct		
INOUT3		
	<b>SInt</b>	
	Value Range	-128..127
INOUT4		
	<b>SInt</b>	
	Value Range	-128..127
INOUT5		
	<b>SInt</b>	
	Value Range	-128..127
INOUT6		
	<b>SInt</b>	
	Value Range	-128..127

### 3.23. Type: Matrix4x4

The following section contains a detailed description of the user type Matrix4x4.

Type
Matrix4x4

Struct		
Values		
	<b>Array</b>	
	Length	16
	Default Value	{1.0f,0.0f,0.0f,0.0f,0.0f,1.0f,0.0f,0.0f,0.0f,0.0f,1.0f,0.0f,0.0f,0.0f,0.0f,1.0f}
	<b>Real</b>	
	Value Range	See specification IEEE 754

### 3.24. Type: Vector3

The following section contains a detailed description of the user type Vector3.

Type
Vector3

Struct		
X		
	<b>Real</b>	
	Value Range	See specification IEEE 754
	Initialisation	0.0
	Physical Unit	mm
Y		
	<b>Real</b>	
	Value Range	See specification IEEE 754
	Initialisation	0.0
	Physical Unit	mm

Struct	
Z	
	<b>Real</b>
Value Range	See specification IEEE 754
Initialisation	0.0
Physical Unit	mm

### 3.25. Type: Plane

The following section contains a detailed description of the user type Plane.

Type
Plane

Struct	
Normal	Normal has to be of unit length
	<b>UserType</b>
Vector3	See the chapter "User Types" for details.
Point	
	<b>UserType</b>
Vector3	See the chapter "User Types" for details.

### 3.26. Type: RotationVector3i

The following section contains a detailed description of the user type RotationVector3i.

Type
RotationVector3i

Struct	
X	
	<b>Int</b>
Value Range	-180..180
Initialisation	0
Physical Unit	deg
Y	
	<b>Int</b>
Value Range	-180..180
Initialisation	0
Physical Unit	deg
Z	
	<b>Int</b>
Value Range	-180..180
Initialisation	0
Physical Unit	deg

### 3.27. Type: RotationVector3f

The following section contains a detailed description of the user type RotationVector3f.

Type	
RotationVector3f	

Struct	
X	
	<b>Real</b>
	Value Range
	Initialisation
	Physical Unit
Y	
	<b>Real</b>
	Value Range
	Initialisation
	Physical Unit
Z	
	<b>Real</b>
	Value Range
	Initialisation
	Physical Unit

### 3.28. Type: Box

The following section contains a detailed description of the user type Box.

Type	
Box	

Struct	
origin	
	<b>UserType</b>
	Vector3
x	
	<b>UserType</b>
	Vector3
y	
	<b>UserType</b>
	Vector3
z	
	<b>UserType</b>
	Vector3

### 3.29. Type: PowerMode

The following section contains a detailed description of the user type PowerMode.

Type
PowerMode

Struct			
mode			
	<b>Enum8</b>		
	Default Value		INVALID
	Value	Name	Description
	0	INVALID	Power mode is not set
	1	OFF	Device is/was powered off
	2	SUSPENDED	Device is in a suspended mode, with a longer wake-up time
	3	STANDBY	Device is in a stand-by mode, that allows a fast wake-up
	4	CONNECTED_STANDBY	Device is in a stand-by mode, that keeps command communications up and running
	5	STREAMING_STANDBY	Device is in a stand-by mode, that keeps streaming data albeit without usable data
	6	ACTIVE	Device is up and running



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Worldwide presence with subsidiaries  
in the following countries:

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Belgium  
Brasil  
Canada  
Chile  
China  
Czech Republic  
Denmark  
Finland  
France  
Germany  
Great Britain  
Hong Kong

Hungary  
India  
Israel  
Italy  
Japan  
Luxembourg  
Malaysia  
Mexico  
Netherlands  
New Zealand  
Norway  
Poland  
Romania  
Russia  
Singapore  
Slovenia  
South Africa  
South Korea

Spain  
Sweden  
Switzerland  
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