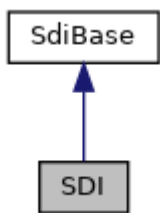


SDI Class Reference

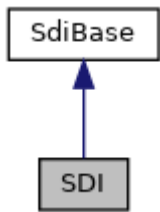
```
#include <sdi_if.h>
```

Inheritance diagram for SDI:



[\[legend\]](#)

Collaboration diagram for SDI:



[\[legend\]](#)

Public Member Functions

bool	getDateTime (unsigned char *buffer) Read numeric date/time. More...
bool	setDateTime (const unsigned char *dateTime) Write numeric date/time. More...
unsigned char	getLanguage () Call Sys Get Status (20-04), tag 'D6', DOL approach to read system default language. More...
bool	setLanguage (unsigned char languageId) Call Sys Set Status (20-09), tag 'D6', DOL approach to set system default language. More...

unsigned char	getCardDataEntryDeactivation () Call Sys Get Status (20-04), tag 'D7', DOL approach to read system default card data entry deactivation value. More...
bool	setCardDataEntryDeactivation (unsigned char value) Call Sys Set Status (20-09), tag 'D7', DOL approach to set system default card data entry deactivation value. More...
unsigned char	getCardDataEntryMode () Call Sys Get Status (20-04), tag 'D8', DOL approach to read system default card data entry mode. More...
bool	setCardDataEntryMode (unsigned char value) Call Sys Set Status (20-09), tag 'D8', DOL approach to set the system default card data entry mode. More...
bool	setIdleText (std::string text, bool epp=true) Command to set the idle text (20-13). More...
bool	showMacDesktop (bool epp=true) Switch from SDI to MAC Desktop (20-18). More...
int	getProperty (enum vfisysinfo::SYSPropertyInt p, bool epp=false) Get Integer Property by SYSINFO-ADK (20-1A, P2 = 00). More...
enum vfisysinfo::sysError	getProperty (enum vfisysinfo::SYSPropertyInt p, int & value , bool epp=false) Get Integer Property by SYSINFO-ADK (20-1A, P2 = 00). More...
enum vfisysinfo::sysError	setProperty (enum vfisysinfo::SYSPropertyInt p, int value , bool epp=false) Set Integer Property by SYSINFO-ADK (20-19, P2 = 00). More...
std::string	getProperty (enum vfisysinfo::SYSPropertyString p, bool epp=false) Get String Property by SYSINFO-ADK (20-1A, P2 = 01). More...
enum vfisysinfo::sysError	getProperty (enum vfisysinfo::SYSPropertyString p, std::string & value , bool epp=false) Get String Property by SYSINFO-ADK (20-1A, P2 = 01). More...
enum vfisysinfo::sysError	setProperty (enum vfisysinfo::SYSPropertyString p, const std::string & value , bool epp=false) Set String Property by SYSINFO-ADK (20-19, P2 = 01). More...
std::string	getVersionInfo (bool epp=false) read SDI version info via Get SDI version info (20-1C). More...
bool	checkForUpdate (unsigned char updateKind) Check if update available on Android platform and execute (20-1D). More...
bool	waitCardRemoval (unsigned seconds) Wait Card Removal (23-02). More...
int	sendWaitCardRemoval (unsigned seconds) Wait Card Removal (23-02), send only. More...
void	clearDataStore () Clear data, especially sensitive data related to last transaction (29-03). More...

bool	vclRegistartSRED (std::vector< unsigned char > &track1, std::vector< unsigned char > &track2, std::vector< unsigned char > &track3) Request VCL to turn on the encryption in SRED mode (28-00). More...
bool	vclStatusRequest (std::vector< unsigned char > &vclStatus) Get the current status of VCL (28-01). More...
bool	vclAdvanceDDK (std::vector< unsigned char > &track1, std::vector< unsigned char > &track2, std::vector< unsigned char > &track3) Request VCL to turn on the encryption in SRED mode (28-02). More...
bool	vclRequestEParms (std::vector< unsigned char > &eParms) Get the eParms of the last encryption from VCL (28-03). More...
std::string	vclGetDiagnosticData (unsigned char format=1, unsigned char pageNumber=0) Get the diagnostic data from VCL (28-06, VCL: DIAG_QUERY). More...
int	vclGetKeyDerivationMode () Extract key derivation mode from diagnostic data (28-07, VCL: DIAG_QUERY). More...
bool	vclOverrideMessageQuery (std::vector< unsigned char > &track1, std::vector< unsigned char > &track2, std::vector< unsigned char > &track3) VCL Override Message Query (28-08). More...
bool	vclKsnRequest (std::string &ksn) VCL KSN Request (28-09). More...
bool	vclKmailinRequest () VCL KMAILIN Request (28-0A). More...
libsdi::SDI_SW12	pluginCommand (const unsigned char plugin, const unsigned char cmd, const std::vector< unsigned char > &data, std::vector< unsigned char > &response) Send a plugin specific command (26-<plugin id>, P2 = <command id>). More...
bool	setManualPAN (const std::vector< unsigned char > &pan) PAN injection after manual card data entry on application's side for ISO-0 PIN block. More...
bool	setManualPAN (const std::string &pan) PAN injection after manual card data entry on application's side for ISO-0 PIN block. More...
libsdi::SDI_SW12	performValidationChecks (std::vector< MatchingRecord > &records, const std::vector< unsigned char > ¤tDate, const unsigned char options=0, const std::vector< unsigned char > IIN=std::vector< unsigned char >()) Perform the validation checks for the current card using the validation table (cardranges.json) stored on the device (29-05). More...
libsdi::SDI_SW12	getValidationInfo (std::string &info) Perform the get validation info command to get the header information of the validation table file (cardranges.json) stored on the device (29-06). More...
bool	sysRegisterLoggingCallback (void(*logCallback)(const char *, void *), void *context, unsigned char options=0) Register callback function to receive logging callback. More...
libsdi::SDI_SW12	sysUploadStart (const std::string &filename, SYSUploadType type, bool epp=false)

Start upload of a software package or a configuration file to the SDI Server (20-14).

[More...](#)

[libsdi::SDI_SW12](#)

[sysUploadTransfer](#) (const std::vector< unsigned char > &packet, unsigned packet_no, bool epp=false)

Transfer data packet to the SDI Server (20-15). [More...](#)

[libsdi::SDI_SW12](#)

[sysUploadFinalize](#) (const std::vector< unsigned char > *md5=NULL, const std::vector< unsigned char > *mac=NULL, bool epp=false)

Start upload of a software package or a configuration file to the SDI Server (20-16).

[More...](#)

bool

[sysShutdown](#) (bool epp=false)

Execute a system shutdown, (20-17, P2 = 00). [More...](#)

bool

[sysReboot](#) (bool epp=false)

Execute a system reboot, (20-17, P2 = 01). [More...](#)

bool

[sysSleep](#) (bool epp=false)

Execute a system sleep, (20-17, P2 = 02). Not supported on Android. [More...](#)

bool

[sysHibernate](#) (bool epp=false)

Execute a system hibernate, (20-17, P2 = 03). Not supported on Android. [More...](#)

bool

[installSponsorCert](#) (const std::vector< unsigned char > &cert)

Check and Install a Sponsor Certificate (20-1B). [More...](#)

bool

[getLastInstallError](#) (std::string &json, std::string &bundle, std::string &package, bool epp=false)

Get last installation error from secure installer (20-1E). [More...](#)

void

[externalButton](#) (void)

Send External Button command '20 20' always with P2 = 1 (suppress response) to inform the SDI-Server in Headless Mode that the external button is pressed. [More...](#)

bool

[enableEpp](#) (int &status)

Enables a connected EPP (20-21, P2 = 00). [More...](#)

bool

[disableEpp](#) (int &status)

Disables a connected EPP (20-21, P2 = 01). [More...](#)

bool

[factoryReset](#) ()

This command resets SDI server to factory defaults (20-22) [More...](#)

bool

[readCertificate](#) (const std::string &name, std::vector< unsigned char > &certificate)

Read Keystore Certificate (20-23) [More...](#)

bool

[setUseCurrencyAbbreviation](#) (const unsigned char *currency, bool useAbbreviation)

Make [SDI](#) use ISO-4217 instead of using a symbol like \$ or € [More...](#)

bool

[setUseCurrencyAbbreviation](#) (unsigned currency, bool useAbbreviation)

Make [SDI](#) use ISO-4217 instead of using a symbol like \$ or € [More...](#)

bool

[msrSwitchLeds](#) (int led1, int led2, int led3, int duration)

bool

[msrSetSensitivity](#) (unsigned char level, bool epp=false)

Set MSR sensitivity level. [More...](#)

enum [vfiprt::PrtError](#)

[setPrinterProperty](#) (enum [vfiprt::PrtPropertyInt](#) p, int [value](#))

Set Integer Printer Property by GUIPRT ADK (25-00, P2 = 00). [More...](#)

enum vfiprt::PrtError	setPrinterProperty (enum vfiprt::PrtPropertyString p, const std::string & value) Set String Printer Property by GUIPRT ADK (25-00, P2 = 01). More...
enum vfiprt::PrtError	getPrinterProperty (enum vfiprt::PrtPropertyInt p, int & value) Get Integer Printer Property by GUIPRT ADK (25-01, P2 = 00). More...
enum vfiprt::PrtError	getPrinterProperty (enum vfiprt::PrtPropertyString p, std::string & value) Get String Printer Property by GUIPRT ADK (25-01, P2 = 01). More...
enum vfiprt::PrtError	printHtml (const std::string &html, bool landscape=false) Perform the Print HTML command (25-02). More...
enum vfiprt::PrtError	printBitmap (const int width, const int height, const std::vector< unsigned char > &data) Perform the Print Bitmap command (25-04). More...
▶ Public Member Functions inherited from SdiBase	
	SdiBase ()
enum SDI_SW12	getSdiSw12 ()
int	getAdditionalResultValue () Access Additional Result Value if returned in SDI response. More...
SDICLIENT_ERROR	getClientError () Access client side error codes. More...
enum SDI_SW12	receiveSW12 () Receive SDI server response with no data. More...
void	clear () clear result data obtained from SDI communication More...
void	importResults (const SdiBase &intermediate) set result data obtained from intermediate SDI communication More...

Additional Inherited Members

▶ Protected Member Functions inherited from SdiBase	
void	setSdiSw12 (enum SDI_SW12 s)
void	setClientError (int libsdiprotocol_result)
▶ Protected Attributes inherited from SdiBase	
unsigned short	sw12
int	additionalResultValue
SDICLIENT_ERROR	clientErr

Member Function Documentation

? [checkForUpdate\(\)](#)

bool checkForUpdate (unsigned char *updateKind*)

Check if update available on Android platform and execute (20-1D).

Parameters

[in] updateKind e.g. 6 for SDI user config. See SDI server documentation.

Returns

true for success (SW12 = '9000')

? clearDataStore()

void clearDataStore ()

Clear data, especially sensitive data related to last transaction (29-03).

? disableEpp()

bool disableEpp (int & *status*)

Disables a connected EPP (20-21, P2 = 01).

Parameters

connection states in case of error. Possible values are: 0 -> EPP is disconnected 1 -> EPP
[out] status Sponsor Id mismatch 2 -> EPP Exchange of certificates failed 3 -> EPP EMV configuration
problem 4 -> EPP NFC configuration problem 5 -> EPP SDI configuration problem

Returns

true for success

? enableEpp()

bool enableEpp (int & *status*)

Enables a connected EPP (20-21, P2 = 00).

Parameters

connection states in case of error. Possible values are: 0 -> EPP is disconnected 1 -> EPP
[out] status Sponsor Id mismatch 2 -> EPP Exchange of certificates failed 3 -> EPP EMV configuration
problem 4 -> EPP NFC configuration problem 5 -> EPP SDI configuration problem

Returns

true for success

? externalButton()

void externalButton (void)

Send External Button command '20 20' always with P2 = 1 (suppress response) to inform the SDI-Server in Headless Mode that the external button is pressed.

? factoryReset()

bool factoryReset ()

This command resets SDI server to factory defaults (20-22)

Returns

true for success

? getCardDataEntryDeactivation()

unsigned char getCardDataEntryDeactivation ()

Call Sys Get Status (20-04), tag 'D7', DOL approach to read system default card data entry deactivation value.

Returns

default card data entry deactivation value current command execution

0 perform all input

1 skip card verification code

2 skip expiration and verification code

4 just enter CVV after card data read from mag. stripe

0xff error, use [getSdiSw12\(\)](#) for further analysis

? getCardDataEntryMode()

unsigned char getCardDataEntryMode ()

Call Sys Get Status (20-04), tag 'D8', DOL approach to read system default card data entry mode.

Returns

card data entry mode

0: Card Data Entry performed on one screen

1: Card Data Entry performed on separate screens

0xff an error occurred, use [getSdiSw12\(\)](#) for further analysis

? getDateTime()

```
bool getDateTime ( unsigned char * buffer )
```

Read numeric date/time.

Call Sys Get Status (20-04), tag 'D0', DOL approach. This is an alternative to `getProperty(vfisysinfo::SYS_PROP_RTC)` which returns a string. NOTE: In contrast to [SDI](#) serial interface format is numeric (7 bytes BCD).

Parameters

[out] buffer for date/time n14 (length 7, 'yyyymmddHHMMSS')

Returns

true in case of success

? getLanguage()

```
unsigned char getLanguage ( )
```

Call Sys Get Status (20-04), tag 'D6', DOL approach to read system default language.

Returns

languageId [%SDI language code](#) further analysis, 0xFF in case of error.

? getLastInstallError()

```
bool getLastInstallError ( std::string & json,  
                           std::string & bundle,  
                           std::string & package,  
                           bool          epp = false  
                           )
```

Get last installation error from secure installer (20-1E).

Parameters

[out] json new API output in JSON format.
[out] bundle old API output - name of failed bundle
[out] package old API output - name of failed package
[in] epp true if value shall be read from external PIN pad

Returns

true for success

? getPrinterProperty() [1/2]

```
enum vfiprt::PrtError getPrinterProperty ( enum vfiprt::PrtPropertyInt p,  
                                         int &                               value  
                                         )
```

Get Integer Printer Property by GUIPRT ADK (25-01, P2 = 00).

In case of error [vfiprt::PRT_FAIL](#) is returned and the details can be analyzed by calling [SdiBase::getSdiSw12](#) and [SdiBase::getAdditionalResultValue\(\)](#).

Parameters

[in] p integer property identifier
[out] value the value of that integer property

Returns

value returned by GUIPRT ADK, [vfiprt::PRT_FAIL](#) in case of error

? getPrinterProperty() [2/2]

```
enum vfiprt::PrtError getPrinterProperty ( enum vfiprt::PrtPropertyString p,  
                                         std::string &                               value  
                                         )
```

Get String Printer Property by GUIPRT ADK (25-01, P2 = 01).

In case of error [vfiprt::PRT_FAIL](#) is returned and the details can be analyzed by calling [SdiBase::getSdiSw12](#) and [SdiBase::getAdditionalResultValue\(\)](#).

Parameters

[in] p string property identifier
[out] value the value of that string property

Returns

value returned by GUIPRT ADK, [vfiprt::PRT_FAIL](#) in case of error

? getProperty() [1/4]

```
int getProperty ( enum vfisysinfo::SYSPropertyInt p,  
                 bool epp = false  
               )
```

Get Integer Property by SYSINFO-ADK (20-1A, P2 = 00).

If 0 is returned, call [SdiBase::getSdiSw12\(\)](#) to check if an error has occurred. If applicable call [SdiBase::getAdditionalResultValue\(\)](#) to read the error raised by SYSINFO ADK.

Parameters

[in] p integer property identifier
[in] epp true if value shall be read from external PIN pad

Returns

property value, 0 in case of failure

? getProperty() [2/4]

```
enum vfisysinfo::sysError getProperty ( enum vfisysinfo::SYSPropertyInt p,  
                                       int &value,  
                                       bool epp = false  
                                     )
```

Get Integer Property by SYSINFO-ADK (20-1A, P2 = 00).

In case of error [vfisysinfo::SYS_ERR_FAIL](#) is returned and the details can be analyzed by calling [SdiBase::getSdiSw12](#) and [SdiBase::getAdditionalResultValue\(\)](#).

Parameters

[in] p integer property identifier
[out] value the value of that integer property
[in] epp true if value shall be read from external PIN pad

Returns

value returned by SYSINFO ADK, [vfisysinfo::SYS_ERR_FAIL](#) in case of error

? getProperty() [3/4]

```
std::string getProperty ( enum vfisysinfo::SYSPropertyString p,  
                          bool                               epp = false  
                        )
```

Get String Property by SYSINFO-ADK (20-1A, P2 = 01).

If empty string is returned, call [SdiBase::getSdiSw12\(\)](#) to check if an error has occurred. If applicable call [SdiBase::getAdditionalResultValue\(\)](#) to read the error raised by SYSINFO ADK.

Parameters

- [in] p string property identifier
- [in] epp true if value shall be read from external PIN pad

Returns

property value, empty string in case of failure

? getProperty() [4/4]

```
enum vfisysinfo::sysError getProperty ( enum vfisysinfo::SYSPropertyString p,  
                                       std::string &                      value,  
                                       bool                               epp = false  
                                     )
```

Get String Property by SYSINFO-ADK (20-1A, P2 = 01).

In case of error [vfisysinfo::SYS_ERR_FAIL](#) is returned and the details can be analyzed by calling [SdiBase::getSdiSw12](#) and [SdiBase::getAdditionalResultValue\(\)](#).

Parameters

- [in] p string property identifier
- [out] value the value of that string property
- [in] epp true if value shall be read from external PIN pad

Returns

value returned by SYSINFO ADK, [vfisysinfo::SYS_ERR_FAIL](#) in case of error

? getValidationInfo()

[libsdi::SDI_SW12](#) getValidationInfo (std::string & *info*)

Perform the get validation info command to get the header information of the validation table file (cardranges.json) stored on the device (29-06).

Parameters

[out] info json string containing the details section of the validation table file

Returns

SW12 returned by the SDI Server

[? getVersionInfo\(\)](#)

std::string getVersionInfo (bool *epp* = false)

read SDI version info via Get SDI version info (20-1C).

Parameters

[in] epp true if value shall be read from external PIN pad

Returns

versions a single string "<component A>:<version A>;<component B>:version b>;..."

[? installSponsorCert\(\)](#)

bool installSponsorCert (const std::vector< unsigned char > & *cert*)

Check and Install a Sponsor Certificate (20-1B).

Parameters

[in] cert sponsor certification DER-encoded X.509 certificate

Returns

true for success

[? msrSetSensitivity\(\)](#)

```
bool msrSetSensitivity ( unsigned char level,
                        bool          epp = false
                        )
```

Set MSR sensitivity level.

Parameters

[in] level sensitivity level (DFA039)

[in] epp command destination (DFA150), optional, default false

? msrSwitchLeds()

```
bool msrSwitchLeds ( int led1,  
                    int led2,  
                    int led3,  
                    int duration  
                  )
```

Set LED states, see [MSR_SwitchLeds\(\)](#)

Parameters

[in] led1 LED 1 state

```
[in] led2    LED 2 state
```

[in] led3	LED 3 state
-----------	-------------

[in] duration Lighting duration in seconds. if > 0 all LEDs are switched off after this time.

? performValidationChecks()

libstdc++::SDI_SW12

performValidationChecks

```
( std::vector< MatchingRecord records,
  > &
  const std::vector< unsigned char > & currentDate,
  const unsigned char options = 0,
  const std::vector< unsigned char > IIN = std::vector< unsigned char >()
)
```

Perform the validation checks for the current card using the validation table (cardranges.json) stored on the device (29-05).

Parameters

[out] records	complete matching table record, first entry in the vector is the best matching record
---------------	---

[in] currentDate date (DDMMYY) against which the card is to be checked

[in] options	option to return all matching card ranges, 0 to return only the best match, 1 to return all matches
[in] IIN	Issuer Identification Number (IIN), this will be used as alternative for the PAN to find the best match

Returns

SW12 returned by the SDI Server

? pluginCommand()

```

libsdi::SDI\_SW12 pluginCommand ( const unsigned char      plugin,
                                   const unsigned char      cmd,
                                   const std::vector< unsigned char > & data,
                                   std::vector< unsigned char > &      response
                                   )

```

Send a plugin specific command (26-<plugin id>, P2 = <command id>).

Parameters

[in] plugin	id of the plugin which is supposed to execute the command (INS)
[in] cmd	plugin's command id (P2)
[in] data	command data
[out] response	entire SDI server response starting with SDI status word, followed by response data from the plugin at offset 2

Returns

SDI response status word (SW12)

? printBitmap()

```

enum vfiprt::PrtError printBitmap ( const int      width,
                                     const int      height,
                                     const std::vector< unsigned char > & data
                                     )

```

Perform the Print Bitmap command (25-04).

Parameters

[in] width	bitmap width in pixel
[in] height	bitmap height in pixel

[in] data bitmap raw data

Returns

value returned by GUIPRT ADK, [vfiprt::PRT_FAIL](#) in case of error

? printHtml()

```
enum vfiprt::PrtError printHtml ( const std::string & html,  
                                bool landscape = false  
                                )
```

Perform the Print HTML command (25-02).

Parameters

[in] *html* html string containing the text to print

[in] *landscape* enable landscape printing. default is false

Returns

value returned by GUIPRT ADK, [vfiprt::PRT_FAIL](#) in case of error

? readCertificate()

```
bool readCertificate ( const std::string & name,  
                      std::vector< unsigned char > & certificate  
                      )
```

Read Keystore Certificate (20-23)

Parameters

[in] *name* certificate reference name (DFA500)

[out] certificate target buffer for placing the certification in DER format

? sendWaitCardRemoval()

```
int sendWaitCardRemoval ( unsigned seconds )
```

Wait Card Removal (23-02), send only.

Send command Wait Card Removal. To be used with the data available callback. Once data is available call [receiveSW12\(\)](#) to get the result.

Parameters

[in] seconds wait time in seconds

Returns

return result of [SDI_Send\(\)](#)

[?](#) **setCardDataEntryDeactivation()**

bool setCardDataEntryDeactivation (unsigned char *value*)

Call Sys Set Status (20-09), tag 'D7', DOL approach to set system default card data entry deactivation value.

Parameters

temporary Card Entry Value deactivation during the current command execution

0 perform all input

[in] value **1** skip card verification code

2 skip expiration and verification code

4 just enter CVV after card data read from mag. stripe

Returns

true for success

[?](#) **setCardDataEntryMode()**

bool setCardDataEntryMode (unsigned char *value*)

Call Sys Set Status (20-09), tag 'D8', DOL approach to set the system default card data entry mode.

Parameters

Card Data Entry mode

[in] value **0**: Card Data Entry performed on one screen

1: Card Data Entry performed on separate screens

Returns

true for success

[?](#) **setDateTime()**

```
bool setDateTime ( const unsigned char * dateTime )
```

Write numeric date/time.

Call Sys Set Status (20-09), tag 'D0', DOL approach. This is an alternative to setProperty(vfisyinfo::SYS_PROP_RTC) which returns a string. NOTE: In contrast to [SDI](#) serial interface format is numeric (7 bytes BCD).

Parameters

[in] dateTime for date/time n14 (length 7, 'yyyymmddHHMMSS')

Returns

true in case of success

[**? setIdleText\(\)**](#)

```
bool setIdleText ( std::string text,  
                  bool      epp = true  
                  )
```

Command to set the idle text (20-13).

Parameters

[in] text idle text UTF-8 format, empty for deletion

[in] epp true if value shall be read from external PIN pad

Returns

true for success

[**? setLanguage\(\)**](#)

```
bool setLanguage ( unsigned char languageId )
```

Call Sys Set Status (20-09), tag 'D6', DOL approach to set system default language.

Parameters

[in] languageId [%SDI language code](#)

Returns

true for success

[**? setManualPAN\(\) \[1/2\]**](#)

```
bool setManualPAN ( const std::string & pan )
```

PAN injection after manual card data entry on application's side for ISO-0 PIN block.

This command will fail if VOS3-CARDS plugin is not loaded.

Parameters

[in] *pan* PAN from manual card data input (n ..19)

Returns

true for success

[?](#) **setManualPAN()** [2/2]

```
bool setManualPAN ( const std::vector< unsigned char > & pan )
```

PAN injection after manual card data entry on application's side for ISO-0 PIN block.

This command will fail if VOS3-CARDS plugin is not loaded.

Parameters

[in] *pan* PAN from manual card data input (cn ..19, ..10 bytes)

Returns

true for success

[?](#) **setPrinterProperty()** [1/2]

```
enum vfiprt::PrtError setPrinterProperty ( enum vfiprt::PrtPropertyInt p,  
                                           int value  
                                           )
```

Set Integer Printer Property by GUIPRT ADK (25-00, P2 = 00).

In case of error [vfiprt::PRT_FAIL](#) is returned and the details can be analyzed by calling [SdiBase::getSdiSw12](#) and [SdiBase::getAdditionalResultValue\(\)](#).

Parameters

[in] p integer property identifier
[in] value the value of that integer property

Returns

value returned by GUIPRT ADK, [vfiprt::PRT_FAIL](#) in case of error

? setPrinterProperty() [2/2]

```
enum vfiprt::PrtError setPrinterProperty ( enum vfiprt::PrtPropertyString p,  
                                         const std::string &          value  
                                         )
```

Set String Printer Property by GUIPRT ADK (25-00, P2 = 01).

In case of error [vfiprt::PRT_FAIL](#) is returned and the details can be analyzed by calling [SdiBase::getSdiSw12](#) and [SdiBase::getAdditionalResultValue\(\)](#).

Parameters

[in] p string property identifier
[in] value the value of that string property

Returns

value returned by GUIPRT ADK, [vfiprt::PRT_FAIL](#) in case of error

? setProperty() [1/2]

```
enum vfisysinfo::sysError setProperty ( enum vfisysinfo::SYSPropertyInt p,  
                                         int                               value,  
                                         bool                               epp = false  
                                         )
```

Set Integer Property by SYSINFO-ADK (20-19, P2 = 00).

In case of error [vfisysinfo::SYS_ERR_FAIL](#) is returned and the details can be analyzed by calling [SdiBase::getSdiSw12](#) and [SdiBase::getAdditionalResultValue\(\)](#).

Parameters

[in] p integer property identifier
[in] value the value of that integer property
[in] epp true if value shall be read from external PIN pad

Returns

value returned by SYSINFO ADK, [vfisysinfo::SYS_ERR_FAIL](#) in case of error

? SetProperty() [2/2]

```
enum vfisysinfo::sysError SetProperty ( enum vfisysinfo::SYSPropertyString p,  
                                     const std::string &      value,  
                                     bool                      epp = false  
                                     )
```

Set String Property by SYSINFO-ADK (20-19, P2 = 01).

In case of error [vfisysinfo::SYS_ERR_FAIL](#) is returned and the details can be analyzed by calling [SdiBase::getSdiSw12](#) and [SdiBase::getAdditionalResultValue\(\)](#).

Parameters

- [in] p string property identifier
- [in] value the value of that string property
- [in] epp true if value shall be read from external PIN pad

Returns

value returned by SYSINFO ADK, [vfisysinfo::SYS_ERR_FAIL](#) in case of error

? setUseCurrencyAbbreviation() [1/2]

```
bool setUseCurrencyAbbreviation ( const unsigned char * currency,  
                                  bool                  useAbbreviation  
                                  )
```

Make [SDI](#) use ISO-4217 instead of using a symbol like \$ or €

Parameters

- [in] currency BCD encoded currency code (ISO-4217) to be configured (5F2A)
- [in] useAbbreviation true: Use ISO-4217 (3 letters), false: Use symbol (default)

? setUseCurrencyAbbreviation() [2/2]

```
bool setUseCurrencyAbbreviation ( unsigned currency,  
                                  bool      useAbbreviation  
                                  )
```

Make [SDI](#) use ISO-4217 instead of using a symbol like \$ or €

Parameters

[in] currency binary currency (ISO-4217) to be configured. Conversion to BCD is applied (5F2A).

[in] useAbbreviation true: Use ISO-4217 (3 letters), false: Use symbol (default)

[?](#) **showMacDesktop()**

bool showMacDesktop (bool *epp* = true)

Switch from SDI to MAC Desktop (20-18).

SDI is still running in background.

Parameters

[in] *epp* true if value shall be read from external PIN pad

Returns

true for success

[?](#) **sysHybernate()**

bool sysHybernate (bool *epp* = false)

Execute a system hybernate, (20-17, P2 = 03). Not supported on Android.

Parameters

[in] *epp* command destination, false for Countertop, true for EPP

Returns

true for success

[?](#) **sysReboot()**

bool sysReboot (bool *epp* = false)

Execute a system reboot, (20-17, P2 = 01).

Parameters

[in] epp command destination, false for Countertop, true for EPP

Returns

true for success

? sysRegisterLoggingCallback()

```
bool sysRegisterLoggingCallback ( void(*) (const char *, void *) logCallback,
                                   void * context,
                                   unsigned char options = 0
                                   )
```

Register callback function to receive logging callback.

Supported by VR1 only

Parameters

[in] logCallback function to be called with logging data

[in] context pointer given as second parameter to invocations of logCallback

[in] options option flags (see [Sys Register Logging Callback](#))

? sysShutdown()

```
bool sysShutdown ( bool epp = false )
```

Execute a system shutdown, (20-17, P2 = 00).

Parameters

[in] epp command destination, false for Countertop, true for EPP

Returns

true for success

? sysSleep()

```
bool sysSleep ( bool epp = false )
```

Execute a system sleep, (20-17, P2 = 02). Not supported on Android.

Parameters

[in] epp command destination, false for Countertop, true for EPP

Returns

true for success

? sysUploadFinalize()

```
libsdi::SDI\_SW12 sysUploadFinalize ( const std::vector< unsigned char > * md5 = NULL,  
                                     const std::vector< unsigned char > * mac = NULL,  
                                     bool epp = false  
                                     )
```

Start upload of a software package or a configuration file to the SDI Server (20-16).

For Upload type [SYS_UPLOAD_SOFTWARE_UPDATE](#) a post installation action might be available and can be accessed with [getAdditionalResultValue\(\)](#).

Parameters

[in] md5 MD5 check sum

[in] mac MAC of the configuration file

[in] epp upload destination, false for Countertop (default), true for EPP

Returns

SW12 returned by the SDI Server

? sysUploadStart()

```
libsdi::SDI\_SW12 sysUploadStart ( const std::string & filename,  
                                   SYSUploadType type,  
                                   bool epp = false  
                                   )
```

Start upload of a software package or a configuration file to the SDI Server (20-14).

Parameters

[in] filename	filename including extension, mandatory in case of Software Update, not needed for configuration upload
[in] type	configuration type
[in] epp	upload destination, false for Countertop, true for EPP

Returns

SW12 returned by the SDI Server

? sysUploadTransfer()

```

libsdi::SDI\_SW12 sysUploadTransfer ( const std::vector< unsigned char > & packet,
                                     unsigned                                packet_no,
                                     bool                                epp = false
                                   )

```

Transfer data packet to the SDI Server (20-15).

Parameters

[in] packet	record data, size is limited to maximum message size of the underlying transport layer
[in] packet_no	packet number, first packet should be number 1
[in] epp	upload destination, false for Countertop, true for EPP

Returns

SW12 returned by the SDI Server

? vclAdvanceDDK()

```

bool vclAdvanceDDK ( std::vector< unsigned char > & track1,
                    std::vector< unsigned char > & track2,
                    std::vector< unsigned char > & track3
                  )

```

Request VCL to turn on the encryption in SRED mode (28-02).

For the case of error [getSdiSw12\(\)](#) or [getAdditionalResultValue\(\)](#) might contain further information.

Parameters

[out] track1	- track 1 data returned from VCL, hexadecimal
[out] track2	- track 2 data returned from VCL, hexadecimal
[out] track3	- track 3 data returned from VCL, hexadecimal

Returns

true in case of success

? vclGetDiagnosticData()

```
std::string vclGetDiagnosticData ( unsigned char format = 1,  
                                unsigned char pageNumber = 0  
                                )
```

Get the diagnostic data from VCL (28-06, VCL: DIAG_QUERY).

The diagnostic query result will be forwarded by the SDI-Server as obtained from VCL. Further processing is up to the payment application. Additional parameters can be the output format as well as the requested page number.

Parameters

[in] *format* output format, 1: verbose, 2: concise, 4:XML

[in] *pageNumber* page number 0..127

Returns

diagnostic data

? vclGetKeyDerivationMode()

```
int vclGetKeyDerivationMode ( )
```

Extract key derivation mode from diagnostic data (28-07, VCL: DIAG_QUERY).

Returns

key derivation mode: 0: shared key, 1: unique key, -1: error (call getSdiSw12) for closer analysis)

? vclKmailinRequest()

```
bool vclKmailinRequest ( )
```

VCL KMAILIN Request (28-0A).

Use [getAdditionalResultValue\(\)](#) or [getSdiSw12\(\)](#) in case of failure.

Returns

true in case of success

? vclKsnRequest()

```
bool vclKsnRequest ( std::string & ksn )
```

VCL KSN Request (28-09).

For the case of error [getSdiSw12\(\)](#) or [getAdditionalResultValue\(\)](#) might contain further information.

Parameters

[out] *ksn* KSN in format ans

Returns

true in case of success

? vclOverrideMessageQuery()

```
bool vclOverrideMessageQuery ( std::vector< unsigned char > & track1,  
                                std::vector< unsigned char > & track2,  
                                std::vector< unsigned char > & track3  
                                )
```

VCL Override Message Query (28-08).

For the case of error [getSdiSw12\(\)](#) or [getAdditionalResultValue\(\)](#) might contain further information.

Parameters

[out] *track1* - track 1 data returned from VCL, hexadecimal

[out] *track2* - track 2 data returned from VCL, hexadecimal

[out] *track3* - track 3 data returned from VCL, hexadecimal

Returns

true in case of success

? vclRegistartSRED()

```
bool vclRegistartSRED ( std::vector< unsigned char > & track1,  
                        std::vector< unsigned char > & track2,  
                        std::vector< unsigned char > & track3  
                        )
```

Request VCL to turn on the encryption in SRED mode (28-00).

For the case of error [getSdiSw12\(\)](#) or [getAdditionalResultValue\(\)](#) might contain further information.

Parameters

[out] track1 - track 1 data returned from VCL, hexadecimal

[out] track2 - track 2 data returned from VCL, hexadecimal

[out] track3 - track 3 data returned from VCL, hexadecimal

Returns

true in case of success

? vclRequestEParms()

```
bool vclRequestEParms ( std::vector< unsigned char > & eParms )
```

Get the eParms of the last encryption from VCL (28-03).

This command should be used by the payment application if eParms is activated only. The eParms will be forwarded from the SDI-Server as obtained from VCL. Further processing is up to the payment application. In case of error call [getSdiSw12\(\)](#) or [getAdditionalResultValue\(\)](#) for more information.

Parameters

[out] eParms VCL eParms

Returns

true in case of success

? vclStatusRequest()

```
bool vclStatusRequest ( std::vector< unsigned char > & vclStatus )
```

Get the current status of VCL (28-01).

In case of error call [getSdiSw12\(\)](#) to get the error reason.

Parameters

[out] vclStatus VCL status

Returns

true if status has been received from SDI server

[?](#) waitCardRemoval()

bool waitCardRemoval (unsigned *seconds*)

Wait Card Removal (23-02).

Parameters

[in] seconds wait time in seconds

Returns

true if card is absent

The documentation for this class was generated from the following file:

- sdiclient/client/[sdi_if.h](#)