

SmartLogger 3.3

Release Description

Build 3.3.14 (SR-2)

SL33REL, Rev. 5 , 2003-02-23

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1. Introduction

This document contains information about the current version of the SmartLogger program. It describes the changes since the previous version, capacity and performance guidelines, restrictions and other last minute notes, which are applicable for this version.

1.1 Related documentation

The following table lists all documents related to the SmartLogger product.

Title	Description
SmartLogger Release Description	This document.
SmartClient Release Description	Release Description for the SmartClient program.
SmartClient User's Guide	User's Guide for the SmartClient program.
SmartGuard User's Guide	User's Guide for the SmartGuard package.
SmartLogger User's Guide	User's Guide for the SmartLogger package.
SmartStatus User's Guide	User's Guide for the SmartStatus package.
SmartTranslator User's Guide	User's Guide for the SmartTranslator package.

1.2 Release history

The following table lists the milestones in the development of the SmartLogger™ product

Version	Date	Description
1.0	1998.02.15	First release.
1.0/1	1998.03.28	Service pack 1 included.
2.0	1999.01.11	Final release 2.0
2.1	1999.03.26	Final release 2.1
3.0	1999-08-18	Final release 3.0
SC3.1	2000-01-25	Release of stand-alone SmartClient
3.2	2000-09-24	Final release 3.2
3.2 SR-1	2001-01-19	Service Release 1
3.3	2002-02-01	Final release 3.3
3.3 SR-1	2002-05-31	Service Release 1
3.3 SR-2	2003-02-23	Service Release 2

Version index:

Application	3.0	3.2	3.2 P1	3.2 SR-1	3.3	3.3 SR-1	3.3 SR-2
SmartLogger	3.0.1	3.2.2	3.2.4	3.2.6	3.3.7	3.3.10	3.3.14
SmartBuilder	3.0.1	3.2.1	3.2.2	3.2.3	3.3.5	3.3.6	3.3.7

2. Product Overview

2.1 Product overview

The SmartLogger product suite consists of the following programs:

SmartLogger™: Main program that handles the basic event logging and data handling for up to 4 serial, TCP/IP or telnet ports concurrently.

SmartClient™: Client application used for viewing and analysing log tables generated by the SmartLogger/SmartTranslator.

SmartBuilder™: Program used for building and maintaining the templates used by SmartLogger/SmartTranslator.

SmartSim™: Event simulator that can be used for test and demonstration purposes by sending events via a serial or TCP/IP connection. The simulator is freeware.

SmartTranslator™: Program for translating plain text files into SmartLogger database tables.

SmartStatus™: Program for remote supervision/control of the SmartLogger/SmartTranslator programs.

SmartGuard™: NT Service application for supervising and automatically starting/re-starting SmartLogger/SmartTranslator as "background" tasks.

The listed programs are bundled in the following packages:

- **SmartClient package.** Contains a stand-alone SmartClient.
- **SmartLogger package.** Contains SmartLogger, SmartClient, SmartBuilder and SmartSim.
- **SmartTranslator package.** Contains SmartTranslator and SmartBuilder.
- **SmartStatus package.** Contains a stand-alone SmartStatus.
- **SmartGuard package.** Contains a SmartGuard Service program and the SmartGuard Setup program for off-line configuration.

2.2 Functionality overview

SmartLogger

- Support for serial data sources.
- Support for TCP data sources
- Support for Telnet data sources **NEW V3.3**
- Support for LPR data sources **NEW V3.3 SR-1**
- Multiple TCP listeners
- Native driver support (no ODBC) for Paradox7 databases.
- Native driver support (no ODBC) for MS Access 97 databases
- Native driver support (no ODBC) for Oracle8 databases
- Native driver support (no ODBC) for MS SQL Server 7 databases **NEW V3.3**
- Viewer for discarded events
- Online views.
- Backup utility.
- Text file import
- Optional password protection
- Color mapping **NEW V3.3 SR-1**
- Character stripping feature
- Data filters **NEW V3.3**
- System message log.

- Port status view.
- Data source and disk space supervision
- Database Alias Manager
- I/O Watchdog Add-on
- Remote Transfer Add-on
- Status Module Add-on
- Notification Module Add-on **NEW V3.3**
- Utility Server **NEW V3.3**
- Redundancy Module Add-on **NEW V3.3 SR-2**

2.3 Standard templates

The following templates are installed with this version of the product:

ABBMasterView	Template for use with ABB MasterView 850 systems.
ABBAvant	Template for use with ABB Advant 1.8/2 systems*
Simulator33Color	Template for use with SmartSim data source.
Simulator33Redunt	Template for redundant event collection from SmartSim data sources.

*) There are also templates available for ABB Advant 1.8/3 and 1.8/4 systems, but these require a minor patch to be installed in the ABB Operator Station. Please refer to <http://www.smartlogger.dk> in the section Support | Supplementary Documentation for more information.

3. Changes in SmartLogger

3.1 Release 3.3 (Build 3.3.7)

New functionality

Utility server

- New data server module that makes it possible via TCP/IP to subscribe on status information, system messages and user defined event groups. The Utility Server is the data server for the Notification Module and Status Module add-ons.

Support for MS SQL Server 7 databases

- Events can now be stored in MS SQL Server 7 databases.

Notification Module (Add-on)

- New module for remote notification on specific events. Supports notification via Email, SMS via mail and SMS via GSM network.

Status Module (Add-on)

- Former Status Server add-on. Required add-on in order to use the SmartStatus application for remote status and event subscription. In addition to status subscription it is now possible to subscribe events and subsets of events.

Telnet data source

- Support for telnet servers added. It is now possible to let a SmartLogger port connect to a telnet server and receive events through this connection.

Improvements

General

- Miscellaneous system messages made more informative.

Date conversion

- Error messages generated during date conversion have been improved and made more informative.

Event storage

- Support for table structure with a single LogDate field added. This field contains both date and time information.

Common directories

- Directories containing configuration data, like the Templates directory, are now shared between the different Smart* applications.

System log viewer

- Improved grid features: Copy to clipboard and Export to text, Excel, HTML and XML.

Online view

- Online views now support coloured event lines for fast identification of event type.

Watchdog

- Watchdog module is no longer an Add-on, but an integrated part of the SmartLogger.

Log files

- All log files are now limited to a maximum size (default 1 MB). When this limit is reached the log file is copied to *.old and a new one is created.

Corrected errors

Registration

- If Status Server option was registered as the only option, then the text on the registration form would show "No options detected" - although the option was registered.

Date conversion

- Errors in the year part of a timestamp were not handled correctly in all cases. The event was discarded as it should, but the error message might have been misleading

Status Server (now Utility Server)

- Warnings in the Status Server module could not be reset, causing the status icon to be static yellow in case of a warning.

Status view

- If the last port was disabled while the Status View was visible, an error message was shown
- If port 1 was not configured and View | Port Status was selected from the menu a "Subscription not available" message box was shown.

Tray Icon

- There have been a few reports about that the SmartLogger tray icon sometimes disappeared. It has not been possible to reproduce this behaviour in any test environment, but the tray icon code has been redesigned in order to (hopefully) solve this problem.

3.2 Release 3.3 SR-1 (Build 3.3.10)

New functionality

Support for LPR data sources

- A Line Printer Daemon (LPD) has been implemented which makes it possible to support LPR printing via TCP/IP network. This can, for example, be used when creating a 'Remote Printer' on a Unix system.

Color mapping

- It is now possible to specify an integer field to be used for Color Mapping. This feature can be used to present different event types with user defined colors. When logging from ABB Advant systems, the "Priority" parameter can be used for this purpose.

Improvements

Port configuration

- It is now possible to stop an active port from within the Port configuration dialog.

Options | TCP listeners

- It is no longer necessary to enable or disable TCP listeners manually in the Tools | Options dialog. They will be enabled automatically when needed.

Module supervision

- In some network configurations PC's can be locked out from the network temporarily causing the TCP listeners to stop listening. TCP listeners are now added to the internal module supervision and will automatically be restarted. The module supervision is executed every 10th minute.

Online Views

- The menu is now hidden by default in order to have more space for events. The menu can be toggled on/off from an icon on the tool bar.

Corrected errors

Event buffer full message

- If the "Event buffer full" message was received this would lead to unpredictable results like system crash or "Invalid pointer addition" messages. This could happen if a serial port was configured and the port settings were incorrect.

Improper use of Windows system resources

- Every time a status icon on the toolbar changed state (i.e. from green to yellow) a small amount of Windows system resources were allocated and not freed until the application was terminated. This could lead to Windows system warnings, if the SmartLogger was running continuously for a very long time.

Erroneous log names for ports with weekly log changes

- In years where January 1st is not a Monday (like year 2002), the SmartLogger would calculate the week number with an offset of -1. I.e. the first week of the year starts with the number 00 instead of 01.

Log change

- From version 3.3.7 an error in the log change module was introduced. This error caused potential risk of "Abnormal Program Termination" at each log change after the second log change.

3.3 Release 3.3 SR-2 (Build 3.3.14)

New functionality

Redundancy Module

- Now module introduced that makes it possible to collect events from two identical data sources on the same port. This feature is extremely useful if very high data availability is required.

Improvements

Character stripping

- The stripping feature now supports character sequences. Character sequences with system codes can now be pasted into the configuration dialog.

Line Print Deamon (LPD)

- Print requests are now rejected if a print job for an unknown printer queue is requested. Previously all print jobs were accepted and processed. If no SmartLogger port was associated with the specified printer queue then a warning was triggered and the print job lost.

Log Change

- Support for "Never" log change added.
- Catch-up from several days is now possible for ports set to DAILY log change. This is relevant if a data source for some reason has been buffering events for several days and then sends them all within short time. Previously only catch-up from 1 day would be successful.

Notification

- In rare cases "good" SMS transmissions were treated as bad due to unexpected pauses in modem reply and resulting in unwanted re-transmissions. It is therefore now possible to configure the communication parameter "Max allowed delay between 2 characters". Default setting has been changed from 0 to 200 msec.

- Raw event notifications are now treated as formatted events with one field. This makes it possible to create your own message body and insert the event text anywhere.
- If someone tried to "Get Modem Information" and no modem were connected then the Notification Module would keep retrying every <retry interval>.

Port configuration

- Layout redesigned. Status bar with hints added.
- It is now possible to set "Log change" to "Never". Default setting has been changed to "Weekly"
- When a new port is configured the user is prompted for port activation when the dialog is closed.

Start-up improvements

- Templates with old table structures are automatically upgraded to new structure.
- Existing tables with incompatible table structures are automatically renamed.

Start-up splash screen

- During start-up of SmartLogger a splash screen informing about the start-up sequence is shown. This is very informative if some of the modules takes long time to start.

System Log

- LogDate and LogTime fields merged to a single "Timestamp" field containing both date and time.
- New Severity type added "Alerts" for identification of serious warnings or supervision alerts like "Disk capacity is low" or "No data received within supervision period".

Templates / Table structure

- The mandatory fields "LogDate" and "Id" is no longer fixed to the beginning of the table structure, but can placed anywhere.
- Template version is now stored within the template definition.
- Fields used for index is now configurable.

Text import

- Configuration dialog rearranged.
- Irrelevant messages during conversion removed.

Toolbar

- Buttons for quick access to "System Log", "Configure Ports" and "User's Guide" added.

Utility Server

- More server specific information (memory, operating system) is send to clients.
- New data sources available for subscription: System Messages and System Alerts.
- The most recent events for each data source are now buffered enabling clients to request and show the recent history when initiating the subscription.
- The notification output log is now be requested by clients.

Corrected errors

Notification

- Options dialog: The modem trace file could not be stored in a directory where any part of the file path contained spaces.
- Options dialog: The default file extension for the modem trace file was not set to ".log" as it should have been.
- The Data Source Browser did not always show a correct data source list if new data sources were added after the initial reception.
- If "MaxSendAttempts" was set to 1 then a modem re-initialise was performed at every sent attempt
- When adding new notifications the validation of the notification name were case sensitive This would allow notifications like "My notification" to be accepted although a notification named "My Notification" already existed.
- Lines in the input and output grids could be deleted by pressing CTRL+DEL..

Toolbar

- In special cases buttons on the toolbar looked corrupted. This only applied for SmartLogger Light versions.

Utility Server

- If a port was disabled then a user-defined filter for that port were still loaded and send to subscribers.
- If a new port was configured after a subscriber was connected to the Utility Server then the data source list send to the subscriber was incorrect.

4. Changes in SmartBuilder

4.1 Release 3.3 (Build 3.3.5)

New functions

Timestamp settings

- Choosing between local timestamp or timestamp from event can now be specified individually for date and time parameters.

Improvements

Template

- Field types can now be modified.
- Support for table structure with a single LogDate field added. This field contains both date and time information.

Corrected errors

Event mask editing

- "Range check error" message box could show up when editing the last character in edit field.

4.2 Release 3.3 SR-1 (Build 3.3.6)

New functionality

New layout

- The application layout has been redesigned for a more intuitive approach to creating templates.

Support for LPR and Telnet data sources

- It is now possible to sample events from LPR and Telnet data sources.

Alarm identification mask

- Setting up an alarm mask can now identify an event as an alarm.

Exclude mask

- The exclude mask can be used to filter unwanted text lines

Color mapping

- It is now possible to specify an integer field to be used for Color Mapping. This feature can be used to present different event types with user defined colors. When logging from ABB Advant systems the "Priority" parameter can be used for this purpose.

Improvements

Event sampler

- Event sampler has been improved. The dialog is no longer modal and events are stored in a text box rather than in a pick list.

Storage of event samples

- Event samples are now stored with the template.

Mask editor

- The mask editor controls have been moved to a separate dialog.
- Valid characters for input are now shown below the edit controls.

Fixed sizes

- Handling of templates with the "Fixed sizes" feature enabled has been improved.

Corrected errors**Print**

- The print feature did not work for templates based on the new standard with only one DateTime field.

4.3 Release 3.3 SR-2 (Build 3.3.7)**New functionality****Indexed tables**

- Fields to be used in indexed tables is now configurable

Improvements**Samples**

- Samples can now be pasted into the samples list.
- A close button is added to the Sample dialog.

Load/Save

- When loading or saving the selected path is now remembered. Previously it was reset to <SmartBuilder>/Templates every time a Load/Save dialog was shown.

Toolbar

- The SmartBuilder User's Guide is now accessible from the toolbar.

Corrected errors**Table grid**

- Moving or exchanging rows only changed the sequence on the screen. The next time the table structure was redrawn the modification were gone.

5. Recommendations and Restrictions

5.1 Notification Module

Supported mobile phones

Although the SmartLogger supports GSM Standard (Text mode only), it is recommended to use one of the following devices, which have been tested with the SmartLogger.

- Nokia 22 modem
- Nokia 6210 cell phone

SMS reliability

Due to the fact that no phone operator guarantee the transmission of a SMS message, the SmartLogger cannot do it either. The following table shows how the SmartLogger handles different error cases:

Error case	SmartLogger behaviour
SMS mobile number is invalid	Status for the notification is set to 'Error' and a warning is raised.
Destination mobile is turned off	The phone operator normally accepts the SMS and sends an "OK" message back to SmartLogger. When the phone is turned back on, the operator transmits the message.
Destination mobile is out of reach	As above.
Local modem is turned off (or disconnected)	The Notification Module will report a modem connection error and will try to re-connect with a user-defined interval. All notifications are set to 'Pending'

5.1.1 Windows Address Book

The Notification Module uses to the Windows Address Book (WAB) for storage of recipients, e-mail address and mobile numbers.

The SmartLogger installation does not install this product as it is already installed on most systems. In the unlikely event that your system does not contain the WAB, you can get the WAB by installing the e-mail client Outlook Express. Outlook Express can be downloaded from <http://www.microsoft.com/>. Please also refer to section 7 "FAQ".

5.2 Redundancy Module restrictions

- In this version redundant event collection is only available for LPR data sources.
- Port configured for redundant data sources cannot be used with the Notification Module, as the Utility Server does not yet support redundancy. I.e. all notifications will be triggered twice.

5.3 Microsoft Access 97 database restrictions

- There is no MS Access 97 license included in the SmartLogger package. This product must be purchased separately in order to use MS Access 97 as database.
- MS Access 97 (or at least MS DAO drivers) must be installed/configured on the PC using the SmartLogger.

5.4 Oracle8 database restrictions

- There is no Oracle license included in the SmartLogger package. This product must be purchased separately in order to use Oracle as database.
- Oracle version must be version 8.0.5 or later.

Important note: Although newer versions of Oracle should be compatible with Oracle 8.0.5, SmartLogger has only been tested with Oracle 8.0.5.

- Oracle Net8 client software must be installed/configured on the client PC running the SmartLogger.
- Fields names in Oracle tables must always be in uppercase.

5.5 MS SQL Server 7 database restrictions

- There is no SQL Server 7 license included in the SmartClient package. This product must be purchased separately in order to use SQL Server as database.
- SQL Server version must be version 7.0.
Important note: Although newer versions of SQL Server might be compatible with version 7.0, SmartClient has only been tested with version 7.0.
- SQL Server 7.0 client software must be installed/configured on the client PC running the SmartClient.
- Fields names in SQL Server tables must always be in uppercase.

5.6 Table size

It is recommended that the tables are kept relatively small, i.e. less than 150.000 entries. This ensures good performance for the SmartClient when executing sorting and querying operations.

The table sizes can be managed by changing the "Log Change" setting in the SmartLogger Port configuration. Recommended settings are:

Events(x) from data source	Log change setting
x < 5.000 per day	Monthly
5.000 < x < 20.000 per day	Weekly
x > 20.000 per day	Daily

6. Known Issues

6.1 Windows 2000

Watchdog

- National Instruments NIDAQ driver must be updated to version 6.6 or newer. For more information see www.natinst.com.
- SmartLogger and National Instruments (NI) configuration utility cannot access the NIDAQ32.dll at the same time.

Workaround: If SmartLogger reports an initialization error on the Watchdog module, you will have to close NI's configuration software and restart the SmartLogger.

7. FAQ

Q. It takes about 15-20 seconds for the SmartLogger to start.

A. You probably have the dongle software installed and a dongle is currently not attached to the parallel port. If you no longer need a dongle, you should uninstall the dongle software by using the dongle setup program.

Q. I get the error "Unable to load WAB32 DLL.....".

A. This error occurs when you have a registered Notification Module and the Windows Address Book can not be found on your system. The Windows Address Book comes with some Microsoft products, like Outlook Express. To solve the problem you can install Outlook Express, which can be downloaded for free from <http://www.microsoft.com/>.