

# Sauer-Danfoss PLUS+1 GUIDE Software

## Release Notes

This file contains important supplementary and late-breaking information that may not appear in the main product documentation. We recommend that you read this file in its entirety.

### Product License

**If you do not have a PLUS+1 License:** Please order your PLUS+1 License through your local Sauer-Danfoss sales person. You will be sent an email with a Product Key that will allow you to activate a License Key. Please follow the instructions under Help in the License Manager.

**For existing PLUS+1 License holders with PLUS+1 version 5.0 or later installed:** After installation of PLUS+1 GUIDE, your License Key is automatically activated in this version.

**For existing PLUS+1 License holders with PLUS+1 version 3.x/4.x installed:** Please use the upgrade key emailed to you in December 2010 or send an email requesting your upgrade key (including your license ID) to:

[plus1license@sauer-danfoss.com](mailto:plus1license@sauer-danfoss.com)

Support for all PLUS+1 License related issues can be obtained by sending an email to:

[plus1license@sauer-danfoss.com](mailto:plus1license@sauer-danfoss.com)

## **VERSION 6.1.6 (April 2013)**

### **-New Features and Functionality (see the GUIDE User Manual for more detailed information)**

- [F00152] A vector based Screen Editor has been introduced. This feature is HWD dependent.
- [F00200] Licensing of function block libraries is now possible.
- [F00203] When changing the SYS file in a project, all System Parameters which exists both in the new and in the old SYS file will retain their user selected values, instead of reverting to default values as in previous versions. The user will be notified about this when applicable.
- [F00212] Structured Text Compiler improvements, including support for POINTER data type. In non-strict mode there is now more forgiveness from the compiler side for syntactical and semantical user errors.
- [F00224] When compiling without a Toolkey in the project, a new notification message has been added that warns about a potential security issue. It is possible to disable this notification message.

### **-Important Advisory—Potential User Issues**

- Due to new features affecting the SCS format, GUIDE version 6.0 and earlier will not open SCS files saved with GUIDE version 6.1 and later.
- GUIDE cannot handle non-Latin characters in project folder names.
- SCS files placed in the Desktop folder might not be available in the import SCS dialog
- See the following website for a workaround if you are experiencing problems accessing network locations in Windows 7: [http://technet.microsoft.com/en-us/library/ee844140\(W.S.10\).aspx](http://technet.microsoft.com/en-us/library/ee844140(W.S.10).aspx)
- The user must exit GUIDE to install/uninstall other GUIDE versions.
- It is advisable to complete all GUIDE processes before locking or hibernating your computer.
- PLUS+1 GUIDE is only intended to work with one single user account.
- In projects using several modules and objects, the Compile changed command can end with a failure due to the order in which the files are compiled. The workaround is to do another Compile changed.
- In the text editor, strings longer than 509 characters in Classic Screen Editor and Application Log may not compile.
- The CAN components are always processed on each loop. This is true even when the CAN components are placed in a module and that module is not called by the main loop.
- Double spacing in file names: Some issues have been found in projects where file names have double spaces. Single spaces in file names are not known to cause any problems.  
Workaround: Only use single spaces in file names.
- Components without output types (e.g. Hardware Input) cannot be directly connected to a class instance. This will generate a compile error.  
Workaround: Use a retype connection in between.

- Autotyped constants will not work when connected directly to Objects. This will generate a compile error.

Workaround: Use a Typed constant

- Compatibility issues involving display projects using non-Roman fonts created in GUIDE version 3.0 may occur. It is strongly advised that the user make a backup of these files before using GUIDE 6.1 and contact the PLUS+1 GUIDE Help Desk for further information before proceeding.

- When working with read-only P1P files it is possible to end up in a scenario where the following 3 files exist at the same time: [ProjectName].P1P, [ProjectName].~P1P and [ProjectName].P1X. This happens when a user repeatedly opens and closes to P1P, and the original P1P file is read-only.

Workaround: Either make sure that the original P1P is not read-only before opening it initially, or delete the ~P1P manually.

- When working with projects that contain a high number of files, or files with very long file names, and the sum of the lengths of the file names of these files exceeds thirty thousand characters it is possible that the C linker fails to link the project. (P100002678)

Workaround: remove or shorten the names of the project files until the total length of file names are well under thirty thousand characters.

- In the Vector Based Screen Editor, when working with texts using more than four input values, and the last one uses octal format and is located at the very end of a text, then that value may not be displayed correctly.

Workaround: place a space character after an input value that fulfills the above criteria.

- In the Vector Based Screen Editor, the TouchArea Component has a priority property which can be set in the GUI, but that has no effect when used. It will be removed in future versions.

- In the Vector Based Screen Editor, the ImageList Component has a touch behavior which does not take the size of the currently selected image into account. Instead, the whole area reserved for the ImageList will be able to receive touch events, not just the part currently used by the active image even if it is smaller than the ImageList area.

Workaround: if possible, use images of the same size in all ImageLists where touch is used

- In the Vector Based Screen Editor, when transparency has been selected by clicking on a specific pixel in an image, and that image is then scaled, it is possible that the transparent color will change. Furthermore, it is also possible when the image is scaled to a smaller size that the selected pixel position will end up outside the image.

Workaround: use images where the transparency data is part of the file format (such as .png) instead.

- In the Vector Based Screen Editor, when using "curly fonts" such as Forte and Edwardian Script ITC in oblique mode, it is possible that some characters are cut off when displayed on hardware, although it looks correct in the Screen Editor preview.

Workaround: avoid using a combination of "curly fonts" and oblique mode.

- In the Vector Based Screen Editor, some Unicode characters will be displayed correctly in the preview, but will then only be displayed as squares on display hardware.

- Only one instance of the Component "Write Applog" can be used in a project.

- In the Vector Based Screen Editor, using copy+paste on screen definitions only works within a single project, not from one project to the next.
- In the Vector Based Screen Editor, it is not possible to compile if unused format codes exist in a text definition.

#### **-What is Fixed**

- [P100002675] In some cases the Install HWD Window was too small to fully display the name of an HWD. The Install HWD Window is now resizable. This also applies to the Install SDL Window.
- [P100002674] In Structured Text, multiple VAR\_IN\_OUT sections in the same function header did not work correctly, This has now been fixed.
- [P100002593] In some cases it was not possible to adjust line width in Design Screen page using version 6.0. This is now fixed.
- [P100002637] LCD5x7 font appeared incorrectly in some cases on DPxxx hardware. This has now been fixed.
- [P100002668] Document icons were sometimes not updated correctly in the project manager. This has now been fixed.
- [P100002650] Empty ROP types caused compile errors that were difficult to understand. This has now been fixed by not including empty ROP types in compilation.
- [P100002647] CAN RX components with protected flag set, and set to receive the same CAN ID, which are placed in different modules did not have a well defined order for capturing CAN messages in the case where multiple CAN messages with that particular ID are received from one loop to the next. Now the order is defined as the order in which the modules are listed in the project manager.
- [P100002525] Some functions of GUIDE were not compatible with conferencing with WebEx. This is now fixed.
- [P100002643] In some cases the key combination Ctrl+X in the Project Manager could result in an error. This is now fixed.
- [P100002472] Compile Changed did not work correctly for very large modules. This is now fixed.
- [P100002613] In some cases it was not possible to disable page view on imported pages. This is now fixed.
- [P100002559] A single page set to Object in one module did not compile. This is now fixed.
- [P100002558] In some cases it was not possible to get out of the GUIDE drawing area. This is now fixed.
- [P100002632] If the SYS file is accidentally deleted, then a bad error message was given on project open. This error message now states the name of the missing file.

- [P100002628] Multiple instances of the same CCP method using buffered array input with different lengths did not compile. This is now fixed.
- [P100002545] When opening a project created by a newer, and not compatible version of GUIDE, the error message was not easily understandable. That error message has now been improved.
- [P100002611] An occasional issue where the Compare SCS comparison dialog was not possible to close has now been resolved.
- [P100002580] Pressing "delete" while editing a POU name deleted the whole POU. This is now fixed.
- [P100002610] In some cases it did not work to add the template. This is now fixed.
- [P100002608] There was no warning when GUIDE was not run as admin. Now a warning is added.
- [P100002621] In some cases when closing GUIDE with unsaved changes in a read only SCS file those changes might be lost. Now GUIDE does not close if the user expresses an intent to save that file.
- [P100002571] The Screen Editor preview did not show transparent gif images correctly. This is now fixed.
- [P100002570] Buttons were partly invisible in Screen Library. This is now fixed.
- [P100002587] Some of the features used in the CCP tutorial no longer worked correctly in GUIDE 6.0.8. This is now fixed.
- [P100002538] In some cases the Component names shown in query dialogs did not match the names for the same Components in the Component tree. This is now fixed.
- [P100002575] In some cases when opening a P1P file with GUIDE an existing file on disk with the same name as a project file could be overwritten. This is now fixed.

## Product Information on the Web

For technical support, visit the Sauer-Danfoss support pages:

<http://www.sauer-danfoss.com/Products/MobileElectronics/PLUS1Guide/PLUS1GuideSupport/index.htm>

Telephone support:

North America: 1.888.50PLUS1 (1-888-507-5871)

Europe: +46 476-569 06

Email support: [helpdesk@sauer-danfoss-plus1.com](mailto:helpdesk@sauer-danfoss-plus1.com)

Please report all suggested enhancements and great ideas to:

PLUS+1 Help desk

Please report all defects to:

PLUS+1 Help desk

Many thanks for all of your support.

The System Development Tools Team.

## Disclaimer

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# Previous Release Notes

Release notes dating back to 2.0.3 follow:

## VERSION 6.0.8 (December 2012)

### -New Features and Functionality (see the GUIDE User Manual for more detailed information)

- [F00164] Support for using a version control tool when working in GUIDE. This includes indicating which files that are source files, temporary files and other files. It also enhances the ability to work on a project with read-only files. Since this feature relies on open projects (no P1P) there is now an option to not get any Pack To P1P prompt on project close. There is now also an option to zip the project to 7z/zip without closing it. Future restriction: This feature is provided for evaluation purposes only. In future releases of PLUS+1 GUIDE this feature will be part of an additional package of features that will require an additional license to be purchased.
- [F00174] A new component called "Call POU" is added to call structured text from graphical GUIDE code. Existing or new structured text code can be added to the project and an integrated structured text editor allows the user to edit the code from within GUIDE.
- Known limitations:
- Editing of data types and global variables is not available.
  - Limited support for date, time and string data types.
  - Limited support for RETAIN variables. Only local variables of basic integer types in function block POUs called directly from graphical code are currently supported.
  - Some opportunities for optimization remain to be implemented.
  - Avoid placing large local variables in functions, these are currently placed on the stack.
  - Unicode characters can be used in comments, but double width characters may not always be displayed correctly.
  - Save As can in some cases not work correctly for a single POU where the interface has incorrect modifications.
  - Program POUs cannot be called from graphical code.
  - The arithmetic overflow and underflow runtime error flags might not always be set correctly after a POU call.
- Use of this feature requires the Microsoft .NET Framework 4 (Standalone Installer). It is available from Microsoft at: <http://www.microsoft.com/en-us/download/details.aspx?id=17718>
- [F00150] Array support for CCP calls. The GUIDE user can decide if arrays should be buffered or not. This is done by either connecting constant TRUE to an input bus signal named "#Unbuffered", or not. Idl version must be 004A or higher for this feature to be available.
- [F00092] It is now possible to compare two SCS files either on the complete SCS level or on page level by setting root node. The result can be shown as a combined view or as two separate views highlighting the differences. The user can then step between differences of different types. A report of the comparison result can be generated. Future restriction: This feature is provided for evaluation purposes only. In future releases of PLUS+1 GUIDE this feature will be part of an additional package of features that will require an additional license to be purchased.
- [F00171] Beta: A new functionality "Dependency View" is now available. It is used to determine dependencies between different signals to detect unexpected dependencies or missing dependencies. It is intended to be used during troubleshooting or to understand what impact a change in



the code can have and to prove that no unexpected dependencies exists for safety critical signals. Future restriction: This feature is provided for evaluation purposes only. In future releases of PLUS+1 GUIDE this feature will be part of an additional package of features that will require an additional license to be purchased.

[F00145] Beta: A new functionality “GUIDE to Simulink S-Function” is now available. It is used for converting a subset of a PLUS+1 GUIDE project to a Simulink S-Function. Future restriction: This feature is provided for evaluation purposes only. In future releases of PLUS+1 GUIDE this feature will be part of an additional package of features that will require an additional license to be purchased.

### ***-Important Advisory—Potential User Issues***

GUIDE cannot handle non-Latin characters in project folder names.

### **-What is Fixed**

[P100002499] Missing signals in bus could sometimes be reported when compiling even though the signals actually did exist. View logical net did not work either for these signals. This has now been fixed.

[P100002493] View Logical Net window could in some cases be too big for the monitor it was displayed on. This has now been fixed.

[P100002505] It was sometimes not possible to reopen compiler messages from toolbar. This has been fixed.

[P100002453] The "Next/Previous Page" functionality could slow down GUIDE after some time of usage. This has been fixed.

[P100002002] It is now possible to change the HWD used in a project even if the API-specification is opened

[P100002117] Using CCPs where a single method has a huge argument list now works

[P100002483] Starting GUIDE while a function block PDF file is open now works.

[P100002369] Illegal numerical values in screen object properties can no longer corrupt a screen page.

[P100002292] Infinite loop across bus: bus members connecting back to top level caused GUIDE to hang up. This has been fixed.

[P100002431] File times are now preserved when unpacking the SYS file during compile.

[P100002415] Typed constants in Application Log will now be output correctly to the log.

[P100002347] Array signals in module busses are now handled correctly.

[P100002379] A corrupt DDT file no longer prevents a GUIDE project from being opened.

[P100002352] Negative S8 values from NV memory on TI platform are now interpreted correctly

- [P100002395] Spaces now appear correctly on the screen and the display when the font has been reinstalled in the PLUS+1 GUIDE, deleted from the project and added to the project again. [P100002324]
- [P100002416] App log texts no longer lose their data values when the format code is changed.
- [P100002351] Assigned font no longer disappears when the screen editor is entered.
- [P100002334] Signal for Y coordinate is retained when a line is copied.
- [P100002333] Long Text in DP600 application now shows up correctly
- [P100002337] Undo now works correct in Page Interface Editor
- [P100002418] Missing Windows library Normaliz.dll is now detected when opening a P1P file.
- [P100002402] GUIDE compile chain now supports multiple application diagnostic data structures.
- [P100002387] Header file for CCPs are now removed on project pack.
- [P100002384] Remaining time for expired licenses is now reported correctly.
- [P100002079] The code generated from the switch component is now terser.
- [P100002380] Confile.exe now reports an error if the input file is missing.
- [P100002307] The License Manager window could stop working when starting GUIDE without a license and then later reopening the License Manager, this has now been fixed.
- [P100001307] Hardware Input/Output needed to have a connection on the output side in order to compile. This has now been fixed.
- [P100002328] The Read Application Log symbol generated a very difficult to find error if an incorrect Application Log name was used. This has now been fixed with an error message that is displayed earlier in the compile process.
- [P1dev00001315] Using some of the graphical themes of Windows 7, the text of the Project Management Utility was sometimes not fully visible. This has now been fixed.
- [P100002406] When GUIDE was not started in maximized mode, the Compiler Messages window was displayed incorrectly in some cases. This has now been fixed.
- [P100002396] The Warning message that is shown when installing fonts was not shown in some cases where it should have been shown. This has now been fixed.
- [P100002375] Naming in application log pages has been corrected
- [P100002374] Old application log area name changes are now reflected in the area selection dialog
- [P100002373] When entering an Application Log page after its assigned area had got a new name there was an access violation. This has not been fixed.
- [P100002358] Assign Application Log area popup menu is no longer available when an Application Log area page is already selected.

- [P100002371] Edit menu items can now be used when editing texts in the screen editor.
- [P100002339] Change of the value on a constant symbol was sometimes ignored when using Windows 7. This has now been fixed.
- [P100002297] GUIDE was not always possible to activate using Alt+Tab. This has now been fixed
- [P100002311] While adding components in GUIDE, the toolbar and menus were not accessible. This has now been fixed.
- [P100002295] In some cases an access violation error was thrown by the SCS viewer. This has now been fixed.
- [P100002385] Some bus member names that are normally allowed were not allowed if the bus was connected to a screen page. This has now been fixed.
- [P100002435] GUIDE Screen Editor could not import Double Byte Character Set fonts as Unicode. This has now been fixed.
- [P100002515] Unicode fonts were not processed correctly. This has now been fixed.
- [P100002510] Very old screen pages cannot be entered in more recent versions of PLUS+1 GUIDE. In order to be able to enter such screen pages, the following workaround must be performed: 1. Open the project in 4.0.3. 2. Visit all screen pages. 3. Save the project.

## **VERSION 5.1.10 (May 2012)**

### **-What is Fixed**

- [P100002292] Infinite loop across bus: bus members connecting back to top level caused GUIDE to hang up. This has been fixed.
  
- [P100002337] Undo now works correct in Page Interface Editor
  
- [P100002324] Spaces now appear correctly on the screen and the display when the font has been reinstalled in the PLUS+1 GUIDE, deleted from the project and added to the project again. (P100002395)
  
- [P100002416] App log texts no longer lose their data values when the format code is changed.
  
- [P100002351] Assigned font no longer disappears when the screen editor is entered.
  
- [P100002334] Signal for Y coordinate is retained when a line is copied.
  
- [P100002333] Long Text in DP600 application now shows up correctly
  
- [P100002415] Typed constants in Application Log will now be output correctly to the log.
  
- [P100002347] Array signals in module busses are now handled correctly.
  
- [P100002352] Negative S8 values from NV memory on TI platform are now interpreted correctly
  
- [P100002431] File times are now preserved when unpacking the SYS file during compile.
  
- [P100002379] A corrupt DDT file no longer prevents a GUIDE project from being opened.

## **VERSION 5.1.9 (November 2011)**

### ***-Important Advisory—Potential User Issues***

If an ActiveX registration error is displayed when starting PLUS+1 GUIDE in Windows 7, select the properties for the PLUS+1 GUIDE shortcut and enable “Run this program as an administrator” in the Compatibility tab.

Display applications containing images with an unsupported color depth will no longer compile in version 5.1, this is done to avoid unexpected behavior in the display. The image will be updated to default color depth when inspected in the image repository, by this only supported color depth will be used and the application will be able to compile.

### **-What is Fixed**

- [P100002301] Connecting the Y-coordinate of an image to a signal now works correctly.
- [P100002302] The correct default font name is now applied on Text lists in Screen Editor.
- [P100002308] Screen Editor texts with multiple lines are now displayed correctly in the layout pane.
- [P100002306] Problems upgrading from a 4.x license have been resolved.
- [P100002329] Export text in Screen Editor now works correctly.
- [P100002332] When new GUIDE applications using Read Only Parameter (ROP) are created in 5.1.8, the method described in the manual will not work. No ROP template file is created on first compile. This has now been fixed.

## VERSION 5.1.8 (September 2011)

### **-New Features and Functionality (see the GUIDE User Manual for more detailed information)**

Compile speed is improved. Depending on the project and the PC that is used, the average compile speed increases 10%–100%. Large display projects with many images now compile much faster.

- [F00093] A System ID can be embedded in a GUIDE application. The Service Tool program uses the embedded System ID to automatically open a P1D file with a matching System ID.
  
- [F00101] The Screen Editor now supports Unicode fonts. All display projects now store text in a Unicode format.  
A user upgrading a Screen Editor project to GUIDE 5.1 must select a code page for each language that is used in their project. Code pages choices are 1250–1257 (Latin 2, Cyrillic, Latin 1, Greek, Turkish, Hebrew, Arabic, Baltic) and 874 (Thai).  
Combined Unicode characters are only supported in cases where precomposed Unicode character forms exist. This can for example affect languages such as Hebrew, Thai and Arabic.  
An HWD is required to provide Unicode support for new projects that display such languages as Japanese, Chinese, and Korean.
  
- [F00128] The compiler now supports Sauer-Danfoss SC controllers.
  
- [F00129] A user can now rename a P1P file and then open it with the GUIDE program.  
The “Save Project As” command now works without a user first having to use the “Save Project” command. Previously, a user had to save changes into their current project before they could save these changes into a new project.
  
- [F00136] An input field in the Screen Editor’s Inspector panel now holds a new value when the cursor moves out of the input field. Previously if the cursor moved out of the input field, the input field returned the old value.
  
- [F00140] The Screen Editor’s Screen Library tab no longer requires a folder for images.
  
- [F00143] The User Messages panel in the Compile Progress dialog box now lists a count of View Disabled pages and Read-only pages. (Show Compiler Statistics in the Options dialog box must be checked to display the page count.)

### ***-Important Advisory—Potential User Issues***

Upgrading a GUIDE project to GUIDE 5.1 is a one-way process. Once a project is upgraded to GUIDE 5.1, it cannot be opened by earlier versions of the GUIDE program.

Projects containing objects saved with GUIDE versions 4.0 or earlier must be compiled before they can be saved as P1P files.

See the following website for a workaround if you are experiencing problems accessing network locations in Windows 7:

[http://technet.microsoft.com/en-us/library/ee844140\(WS.10\).aspx](http://technet.microsoft.com/en-us/library/ee844140(WS.10).aspx)

The user must exit GUIDE to install/uninstall other GUIDE versions.

It is advisable to complete all GUIDE processes before locking or hibernating your computer.

Compatibility issues involving display projects using non-Roman fonts created in GUIDE version 3.0 may occur. It is strongly advised that the user make a back-up of these files before using GUIDE 5.1 and contact the PLUS+1 GUIDE Help Desk for further information before proceeding.

PLUS+1 GUIDE is only intended to work with one single user account.

In projects using several modules and objects, the Compile changed command can end with a failure due to the order in which the files are compiled. The workaround is to do another Compile changed.

In the text editor, strings longer than 509 characters in Screen Editor and Application Log may not compile.

#### **-What is Fixed**

- [P100002163] In big applications, GUIDE could sometimes crash or corrupt the source file when pasting large graphical blocks, this has now been fixed. (P100002271)
- [P100002202] Renaming bus member variables, sometimes made GUIDE to hang up, this has now been fixed.
- [P100002142] In an Array without end parenthesis the compilation was successful but the last value was interpreted wrong, now an error message is given.
- [P100002242] In some cases the use of the Repeat-Until components gave an error in the compilation, this has now been fixed.
- [P100002196] The page numbering in a project has been fixed, some projects was showing the same page number on two different pages. The page numbering is now according to the execution order.
- [P100002139] Issues related to the designs with Application Log has been fixed (P100002141)
- [P100002149] Export/Import text in Screen editor can now handle commas
- [P100002176] Issues with editing the Page interface of a Screen editor page and then leave the Screen page has been resolved.
- [P100002088] In previous version 5.0, A "Compile changed" always resulted in that all C-files were compiled, this has now been fixed.
- [P100002110] Application Log write bit now only accepts Boolean as a data type.
- [P100002166] It is now possible to connect a constant array to the component "Write Array to File" (entry A2)

[P100002093] The default layout now also reflects the Toolbar

[P100001527] Temporary files in the project folder are now removed also from projects with Read Only Parameters.



## **VERSION 5.0.9 (January 2011)**

### **-What is Fixed**

- Issues related to reading PC information in the License Manager have been fixed (GetMacAddress failed). [P100002130]
- GUIDE Screen editor now imports 8-bit images with correct palette information [P100002123]
- In the GUIDE Screen editor, the Screen Manager occasionally showed text order incorrectly or hung up; this issue has now been fixed. [P100002131] [P100002132]

## VERSION 5.0.8 (December 2010)

### -New Features and Functionality (see the GUIDE User Manual for more detailed information)

- The License Manager now supports re-hosting and subscription services.
- The License Manager User Manual is available via Tools menu > License Manager > Help.
- Note: PLUS+1 Tools products supported by License Manager version 4.x are not compatible with version 5.x [F00098]
- Support has been enhanced for imported compiled code libraries. The user can now add a code library to a project that has been developed outside GUIDE, e.g., C language. The graphical application can call the objects and thus data can be passed to/from the objects. This feature is HWD dependent. [F00059]
- Added the Application Keying component to give users the ability to lock a specific application to hardware. [F00125]
- It is now possible to use bus member names, port names, page names and namespaces longer than 16 chars. [F00124]
- Several Screen Editor improvements [F00105]:
  - A new sorting order in Screen Manager has been introduced. This change shows the stacking order of objects and makes drag and drop objects possible.
  - In the Screen Manager tab, when right-clicking a variable-expansion (the variable expanded with the object it is connected to) in the connected Data bus, an Edit option has been added.
  - Improved support for multi selection function has been added.
  - When selecting multiple objects in the Screen Page Layout pane/Screen Manager, It is now possible to move objects using arrow keys.
  - Improved support for starting dialogues with default values has been added.
  - Automatic choice of HW Ports (when applicable) has been added.
  - Automatic increase of screen area that occupies the whole port area has been added (when applicable).
  - Dialogues have been changed to use standard Windows buttons
  - Improved use of the Tab-key function has been added.
  - Auto scroll has been added to Screen Manager and Screen Library.
- The 64 bit version of Windows 7 is now supported. [F00063]
- The icons have been updated and large icon support has been added. [F00123]
- The white color scheme has been updated. [F00116]
- Shortcuts for Compile All, Compile Changed, Error Check All, Error Check Changed, Break Reference Link to Page and Page Interface Editor have been added. [F00103]

- Additional compiler support for Displays has been added. [F00054]
- Additional download support for Displays has been added. [F00099]
- Encode 8 has been updated. It is now possible to output arrays longer than 8 positions. Also, the generated C-code is more compact than previously. [F00110]
- Support for graphical terminal applications that were created before the Screen Editor became available have been removed. [F00122].

### ***-Important Advisory—Potential User Issues***

- See the following website for a workaround if you are experiencing problems accessing network locations in Windows 7: [http://technet.microsoft.com/en-us/library/ee844140\(WS.10\).aspx](http://technet.microsoft.com/en-us/library/ee844140(WS.10).aspx)
- Due to new features affecting the SCS format, GUIDE versions 4.3 and earlier will not open SCS file types created with GUIDE versions 5.0 and later.
- Due to new features affecting the project format, GUIDE versions 4.1 and earlier will not open P1X/P1P files created with GUIDE versions 4.3 and later. GUIDE version 4.2 will open projects created with 4.3 with a warning message (if enabled)
- Projects containing objects saved with GUIDE versions 4.0 or earlier must be compiled before they can be saved as P1P files.
- The user must exit GUIDE to install/uninstall other GUIDE versions.
- It is advisable to complete all GUIDE processes before locking or hibernating your computer.
- Do not rename GUIDE P1P/P1X files outside of the GUIDE program. Only rename projects using the GUIDE Save Project As... function.
- Compatibility issues involving display projects using non-Roman fonts created in GUIDE version 3.0 may occur. It is strongly advised that the user make a back-up of these files before using GUIDE 4.3 and contact the PLUS+1 GUIDE Help Desk for further information before proceeding.
- PLUS+1 GUIDE is only intended to work with one single user account.
- In projects using several modules and objects, the Compile changed command can end with a failure due to the order in which the files are compiled. The workaround is to do another Compile changed.
- In the text editor, strings longer than 509 characters in Screen Editor and Application Log may not compile.

### **-What is Fixed**

- Several fixes to the User Manual have been implemented. [P100002061], [P100002060], [P100002040], [P100002038], [P100002054], [P100001971], [P100001940], [P100001777], [P100002068]
- Performing many changes when working with large display projects sometimes caused a critical error. This has now been fixed. [P100002011]

- Under certain circumstances a compiler error could occur in a large application that uses a Compiled Code Package (CCP). This has been fixed [P100002058].
- The Shift Left and Shift Right components can malfunction when the number of positions to shift is variable and is greater than number of bits in the data type. This error affects MC hardware [P100002051] and has been fixed.
- The Get Array Element component did not typecast to data type S8 (the User Manual described this error). This has been fixed. [P100002071].
- The Arithmetic/Boolean Switch, Connect, Memory and Retype components has been changed to typecast to data type U8 and S8. This affects MC hardware [P100002090].
- Dynamic NV components with data types U8 or S8 now work correctly in projects that uses MC hardware, [P100001799]
- Error handling has been improved when renaming a P1P file and opening it. [P100001644]
- The result of renaming a screen area in an area page is now handled in a more user friendly way. [P100001967]
- Issues with having the API document from the HWD opened for viewing while exchanging the SYS-file have now been resolved. [P100002002]
- An error message is now presented if more than 20 format codes are used in a string for displays or application log. [P100001970]
- When using Query in the Module Viewer, the focus is now kept to the Module Viewer [P100002041]
- Issues involving applications that contains pages with a page name longer than 16 chars have been fixed. [P100001607] [P100001491] [P100001587]
- Array constants can now handle more than 48 characters. [P100001848]
- Improved detection of not supported component versions [P100001862]
- The boundary output on the Switch 16 Capped component only worked when connected to another boundary output. Otherwise a compiler error was generated. This has been fixed [P100001821]
- On the Advanced Checkpoint component there was no check to see if the input was constant or not. This has been fixed. [P100002067].
- Forward/Backward functionality has been fixed to function as standard applications. [P10000195]
- Undo/Redo functionality in Screen Editor-Text/Image Register is now removed. Before it performed erroneous operation. [P100001991]
- Changing language in a display application in the Screen Editor has been sped up significantly. [P100001978]
- Moving multiple Screen Editor objects with the snap to grid option on now only snaps to the object with the lowest order. The other objects keep their relative positions. [P100002014]

- Mouse wheel scrolling now works when a dialogue contains a vertical scrollbar. [P100001960]
- Navigations within Screen editor pages using the Page Navigator now works correct when leaving pages. [P100001939]
- Working with images in a copied folder containing images in a screen editor screen library previously created an error. This has now been resolved [P100002032]
- Mouse wheel zoom problems when using a second monitor have been fixed. [P100001791]
- The Error Messages tab displays compiler error messages. When a user clicks a compiler error message caused by an error within a view-disabled page, the closest view-enabled parent page displays along with an appropriate message. [P100000901].
- An un-docked Inspector is now working correctly. [P100001934]
- When canceling an Installation of HWD's, (i.e. not overwrite) the user information was misleading, this has now been fixed. [P100002031]
- When adding images in screen editor, the default color depth is now controlled from the HWD. [P100002070]

## **VERSION 4.3.7 (April 2010)**

### **-What is Fixed**

- The TI compiler, version 5.2.2, has been replaced with version 5.2.5 [F00108]
- Issue with transparency and monochrome bitmaps has been fixed. [CQ100002000]
- Linked pages using a bus with same name on wire and sub-bus now compiles. [CQ100001995]
- Issues with access levels and Checkpoints and Set value/pulse components have been fixed. [CQ100001993]
- Several issues with Compiled Code Packages have been fixed. [CQ100002003] [CQ100002008] [CQ100002007]
- Screen Editor options File Transparency and Visible were not able to uncheck, this is now fixed. [CQ100002012]
- The Screen Editor preview for grayscale images has been fixed. [CQ100002021]
- In the Screen Editor a conversion from an image with palette to an image without palette now works. [CQ100002024]
- Component Limit has been replaced in Component tree to resolve compatibility issues with older versions of this component. [CQ100001918]

## **VERSION 4.3.6 (February 2010)**

### **-New Features and Functionality (see the GUIDE User Manual for more detailed information)**

- PLUS+1 GUIDE now runs on Windows 7 (32-bit).
- A new version of the TI compiler, version 5.2.2, is now supported. This compiler will be introduced in HWD files. This feature is HWD dependent. [F00053]
- A new component to read out Application Log data into arrays. This feature is HWD dependent. [F00058]
- A new component to write arrays to USB memory stick. This feature is HWD dependent. [F00057]
- User settings will now be automatically imported from the previously installed version. When editing a GUIDE project, it is now possible to choose to remove files instead of deleting them from the project. In previous versions it was only possible to delete files from the project folder with remove command. the files will now be removed from the project but remain in the project folder. [F00072]
- The project will now always include the API document from the HWD/SYS. [F00071]
- In Screen Editor; The user can now perform Move To Back and Move To Front on objects in the screen. [F00079]
- The install of Hardware and Function Libraries has been improved. Multiple files can be installed with one action. The user can also select which files within a PAC file to install. [F00080]
- Shortcuts: Leave Page, Zoom In and Zoom Out are now also working in the screen editor. [F00074]

### **-Important Advisory—Potential User Issues**

- See the following website for a workaround if you are experiencing problems accessing network locations in Windows 7: [http://technet.microsoft.com/en-us/library/ee844140\(WS.10\).aspx](http://technet.microsoft.com/en-us/library/ee844140(WS.10).aspx)
- Due to new features affecting the project format, GUIDE versions 4.1 and earlier will not open P1X/P1P files created with GUIDE versions 4.3 and later. GUIDE version 4.2 will open projects created with 4.3 with a warning message (if enabled)
- Projects containing objects saved with GUIDE versions 4.0 or earlier must be compiled before they can be saved as P1P files.
- The user must exit GUIDE to install/uninstall other GUIDE versions.
- It is advisable to complete all GUIDE processes before locking or hibernating your computer.
- Do not rename GUIDE P1P/P1X files outside of the GUIDE program. Only rename projects using the GUIDE Save Project As... function.
- Compatibility issues involving display projects using non-Roman fonts created in GUIDE version 3.0 may occur. It is strongly advised that the user make a back-up of these files before using GUIDE 4.3 and contact the PLUS+1 GUIDE Help Desk for further information before proceeding.
- PLUS+1 GUIDE is only intended to work with one single user account.

- In projects using several modules and objects, the Compile changed command can end with a failure due to the order in which the files are compiled. The workaround is to do another Compile changed.
- In the text editor, strings longer than 509 characters in Screen Editor and Application Log may not compile.

#### **-What is Fixed**

- Miscellaneous updates and clarifications have been added to the user manual. [P100001794] [P100001804] [P100001802] [P100001875] [P100001846]
- In some complex page structures, links to Referenced Pages were erroneously broken. This has been corrected [P100001805]
- Unconnected Connect Nets from Objects now generates correct code. [P100001819]
- Moving folders or moving images/texts in folders in Screen Editor sometimes corrupted the image/text ID and/or settings were lost. This has now been fixed [P100001912] [P100001909] [P100001913]
- Odd numbers of the length of data in a Read Only Parameter file for Displays now work. [P100001822]
- The installation size in Microsoft Windows' Add/Remove Programs is now correctly reported. [P100001656]
- Improvements has been made when working with large projects that potentially run out of memory [P100001891]
- Using brackets in image names in display projects now works. [P100001783]
- It is now possible to import text containing commas in the Screen Editor (display projects and application log). [P100001792]
- Issues have been fixed with texts containing only characters (%c) [P100001827]
- It is no longer possible to erroneously exit a bit map setup in Screen Editor without setting transparency [P100001906]
- Previously, when the Module viewer was opened, the drawing was zoomed out, the Module viewer now opens the drawing correctly. [P100001814]
- Changing components from group Counters with Query, to specific component Loop Counter with Carry now works correctly. [P100001782]
- It is now possible to double click on an LHX ReadMe file and have it opened by the correct Microsoft Windows associated software. [P100001842]
- Compile changed now works after diagnostic data has changed. [P100001894]
- "ModuleConnectionLog:Enabled" now works in projects using the screen editor. [P100001904]



## **VERSION 4.2.6 (June 2009)**

### **-New Features and Functionality (see the GUIDE User Manual for more detailed information)**

- The component Initialize Hardware Output can now be connected to components within a component group; Non Volatile memory dynamic. Previous, it was only possible to connect to constants. For example, this feature enables the same application to have the same node ID as a parameter. Note: it is the user's responsibility to take care of non initialized non volatile memory cells. Some older Display HWD's do not support this feature.
- Full color support for displays. This feature enables displays to work with higher color depth. With this feature the colors are taken from the image and there will be no separate palette. This also enables a better preview for both color and monochromatic images, thus it is easier to design. This feature is HWD dependent.
- Supports the possibility for the user to add precompiled code that is executed by the operating system. This feature is HWD dependent.
- Design speed has been improved (enter screen pages)
- It is now possible to directly access the PLUS+1 Support Web Page and launch Remote Desktop from the Help Support menu.

### ***-Important Advisory—Potential User Issues***

- Due to new features affecting the project format, GUIDE versions 4.1 and earlier will not open P1X/P1P file types created with GUIDE versions 4.2 and later.
- Projects containing objects saved with GUIDE versions 4.0 or earlier, must be compiled before they can be saved as P1P files.
- The user must exit GUIDE to be able to install/uninstall other GUIDE versions.
- It is advisable to complete all GUIDE processes before locking or hibernating your computer.
- Do not rename GUIDE P1P/P1X files outside of the GUIDE program. Only rename projects using the GUIDE Save Project As... function.
- Compatibility issues involving display projects using non-Roman fonts created in GUIDE version 3.0 may occur. It is strongly advised that the user make a back-up of these files before using GUIDE 4.2 and contact the PLUS+1 GUIDE Help Desk for further information before proceeding.
- PLUS+1 GUIDE is only intended to work with one single user account
- In projects using several modules and using objects, the Compile changed command can end with a failure because of what order the files are compiled. The workaround is to do another Compile changed

### **-What is Fixed**

- In Screen Editor – in an Area page the order was not saved or loaded when doing Undo/Redo, this is now fixed. [P100001736]

- In Screen Editor – Undo/Redo now reflects order in Area pages [P100001736]
- In a display project – If the project contained an image with the same name as the project, the compilation failed with an error message that was hard to interpret, this has now been fixed. [P100000974]
- In a display project – In the selector when copy and paste text folders, the text inside the pasted folder were not correct, this has now been fixed. [P100001770]
- The preview feature of the screen editor will now show black text on white images correctly. [P100001652]
- Better error handling in cases of an application using objects but the hardware file (SYS) in the project doesn't support it. [P100001216]
- Changes in an array constant file will now be detected by a Compile changed command. [P100000628]
- Validation of array values in Multi-character constant component has been fixed [P100001663]
- Validation for maximum length of Application ID:Description/Type/Version naming has been introduced. [P100001733]
- Component Non-volatile Memory Dynamic Input is now correct when it is changed by Query from some other component in the group Non-volatile Memory Dynamic [P100001711] [P100001238]
- It is now possible to access the GUIDE from the taskbar or using Ctrl-Tab when one or more Module viewers were started. [P100001769]
- The component Accessrights App Log Statistics has now the correct name in Component tab, preview and in the graphical source. [P100001157]
- In the screen editor it is now possible for the user to right click and delete text/image list objects. [P100001722]
- It is now not possible to drag in scs files/blocks from the Hardware tab if the project has no hardware. [P100001697]
- Improvements have been made to better support GUIDE when being used on 2 monitors. [P100001704]
- In screen editor in the Screen Library tab in Selector, the preview now shows transparency correctly. [P100001717]

## **VERSION 4.1.7 (April 2009)**

### ***-Important Advisory—Potential User Issues***

- If the patch does not install correctly and 4.1.6 is still your current version, first reinstall version 4.1.6 and then install the 4.1.7 patch.

### **-What is Fixed**

- Page Name and Namespace properties for a page can now be changed regardless of linked sub-pages. [P100001698]
- Application log port pages can now have names other than the default name. [P100001703]
- The graphical editor has been enhanced to allow the pasting and loading of blocks into large applications. A warning message has been introduced to avoid out of memory situations in large applications. [P100001710]
- Applications containing very complex bus and wire hierarchies would occasionally not compile. This has been fixed [P100001712]

## **VERSION 4.1.6 (January 2009)**

### **-New Features and Functionality (see the GUIDE User Manual for more detailed information)**

- The feature Page View Access has been extended.
- It is now possible to perform Force Enable/Read-Only/Disable operations. Because of this feature the SCS format has changed.
- Object Support for Advanced Checkpoint with Namespace and all Non-Volatile Memory Dynamic Components has been added.
- Compilation speed is improved; up to 20% faster.
- Design speed is improved (enter pages, insert blocks, etc)
- Startup speed is improved Module (SCS) file size has been reduced.
- Two new Page View Access settings have been added to options tab
- An unnecessary window has been eliminated when adding new wire/bus-port.
- When exiting the screen editor, the prior state of the Manager tab is now retained.

### ***-Important Advisory—Potential User Issues***

- Due to new features affecting the SCS format, GUIDE versions 4.0 and earlier will not open SCS file types created with GUIDE versions 4.1 and later. It is also possible that earlier version may not recognize the 4.1 files as older SCS files.
- The Component Insert Array Elements has been corrected. In previous versions the case where input A4 was larger than the number of elements in input A3, the missing elements were omitted. Now the missing elements are inserted as zeros (up to maximum length of A4).
- Projects containing objects saved with earlier versions need to be compiled before they can be saved as P1P files.
- When attempting to install or uninstall a new version of GUIDE while another version of GUIDE is running, a message may tell the user to exit a version of GUIDE that is not running. The user must exit any version of GUIDE to be able to install/uninstall.
- It is advisable to complete all GUIDE processes before locking or hibernating your computer.
- Do not rename GUIDE P1P/P1X files outside of the GUIDE program. Only rename projects using the GUIDE Save Project As... function.
- Compatibility issues involving display projects using non-Roman fonts made in GUIDE version 3.0 may occur. It is strongly advised that the user make a back-up of these files before using GUIDE 4.1 and contact the PLUS+1 GUIDE Help Desk for further information before proceeding.

### **-What is Fixed**

- The following error messages have been improved;

- when an input of an object page is not connected [P100001566]
  - when multiple pages contain same area name. [P100001487]
  - now case sensitive for signal names [P100001547]
  - when access levels on Bios signals [P100001505]
- Occasional errors when using the Next/Previous Arrows in the GUI caused exception errors. This has been corrected [P100001601]
  - “Error check all/changed” now functions when objects are in the project. [P100001554]
  - An error message is now generated when the “Set Pulse” component output is connected to other component outputs. [P100001613] [P100001615]
  - In texts in the text editor, if a user uses a quotation mark [“] it will automatically be converted to a [“], this method will prevent an error in the compilation. [P100001409]
  - Occasionally the Project Manger/Navigator tabs and/or some tool buttons were not visible, this has been fixed. [P100001605] [P100001606]
  - Under some circumstances there were problems compiling display projects; no LHX file was generated. This has now been fixed [P100001637]
  - A U32 variable can now be retyped to the COLOR data type. [P100000888]
  - When the application attempts to use more than the available amount of NV-memory, the compilation is now aborted with an error message. [P100001541]
  - When using Save Project As. . . , the GUI will warn the user that the project must to be saved before the operation can be performed. [P100001496]
  - Fonts with numbers at the beginning of the font name will now be corrected [P100001116]
  - Problems related to the screen editor when changing to another type of display hardware has been corrected. [P100001537]
  - Changes made by user in Icon Menu will now remain changed [P100001546]
  - Issues with starting the Icon Menu while the auto save is in operation have now been fixed [P100001552]
  - In Page Navigator Window the Forward and Backward arrows now work [P100001321]
  - Operating issues involving screen saver functions have been corrected [P100001526]
  - Instances involving the screen editor indicating a change even if no change was made has now been corrected [P100000561]
  - It is now possible to use Save as. . . on document Tech info Controllers in Selector. [P100001532]
  - The Screen editor inspector default size has been adjusted to accommodate all properties. [P100001533]
  - After deleting a screen area in a screen editor layout panel, the screen area will now be updated correctly [P100001542]

- In screen editor the “Y” field is now correct for line objects. [P100001600]
- In screen editor, for text lists and image lists, the inspector window now shows values on properties like “AutoIndex” ,“Color”, etc. [P100001603]
- Grid settings are now saved when exiting GUIDE [P100001497] When using multi screen environments, GUIDE is now opened on the 2nd monitor if it was closed there. [P100000229]
- Using the option to make module connections visible for the Service Tool did not work, this has been fixed [P100001632]
- The last used preview font in screen editor is now saved [P100001545]

## **VERSION 4.0.3 (October 2008)**

### **-What is Fixed**

- Some defects in GUI – SCS format changed. [P100001575]
- Compile sequence error is not always reported and make job does not terminate correctly. [P100001613]

## **VERSION 4.0.2 (June 2008)**

### **-New Features and Functionality (see the GUIDE User Manual for more detailed information)**

- This version supports Application keying
- The user can now lock pages to prevent viewing.
- GUIDE now supports Multiple Application Log Files. Require support from HWD
- GUIDE now supports Multiple Read Only Parameter Files. Require support from HWD
- New Repeat-Until, Loop Counter and Time measurement components
- Support for text variable @NS for as NameSpace property container (like @PAGENAME).
- In My Blocks tab it is now possible to define a link to a folder.
- It is now possible to select a page (Enter, Stretch, Query etc) by clicking inside its boundary box.
- Forward and backward arrow added in the Toolbar, also on keys Alt+Right/Left and Mouse's where supported. The forward and backward function controls the navigation in pages.
- In Options it is possible to enable Auto-generation of interface ports to/from the Page Interface Editor.
- The SYS file and the template can be added by right click functionality.
- It is now possible to use different text font styles in module files (scs)
- . In Options it is possible to enable warning messages to warn the user about conflicting file formats.
- Memory on different file browser dialogues
- When adding signals in Screen Editor the Drop down list is in Alphabetic order.
- Possible to add files to project that already is in project folder.
- Possibility to copy text from Compiler Messages windows by right click in the window.
- Print dialogue options have been enhanced.
- Error Messages have been enhanced.
- GUIDE installs default in a new folder structure containing the version.
- In Options it is possible to disable zoom on mouse wheel.
- In Options it is possible to enable zoom fit to page after leaving the Page Interface Editor.
- In Options it is possible to enable partial compiler statistics.

### ***-Important Advisory—Potential User Issues***

- The CAN components are always processed on each loop. This is true even when the CAN components are placed in a module and that module is not called by the main loop.



- When installing an older version of GUIDE, the program will not automatically uninstall the current version (4.x and later). The current version of GUIDE must be manually uninstalled. This is done by using Add/Remove Programs in the Windows Control Panel.
- Double spacing in project file names: Some issues have been found in projects where file names have double spaces. Single spaces in file names are not known to cause any problems. Work-around: Only use single spaces in project file names (CQ P100000374).
- Components without output types (e.g. Hardware Input) cannot be directly connected to a class instance. This will generate a compile error. Work-around: Use a retype connection in between.
- Autotyped constants will not work when connected directly to Objects. This will generate a compile error. Work-around: Use a Typed constant
- Old display applications (not using the screen editor) will not work in this version. Please contact the Sauer-Danfoss Help Desk.
- The linked page feature must not be used with older HWDs. For each released HWD, the table below lists the versions that do not work:
  - MC24-10: 10101528v150 and older
  - MC24-20: 10102117v120 and older
  - MC50-10: 10101674v150 and older
  - MC50-20: 10102569v110 and older
  - DP600: 10102102B and older
  - DP610: 10102903B and older

#### **-What is Fixed**

- Error Check works correct, without forcing a Compile first. [P100001319]
- Switch time bases now works correct. [P100001393]
- After undo in Screen Editor, objects are now displayed in correct. [P100001394]
- Screen capture now works correct [P100001402]
- Default layout now works correct [P100001404]
- It is now possible to drop a Text in a Text List on the Screen Area also if it is zoomed in. [P100001344]
- It is now possible to mark (High light) an Image List also if images are marked. [P100001311]
- Unconnected output of Add Capped symbol causes compile to fail, has been corrected [P100001332]
- Page Navigator now shows linked pages correctly [P100001416]
- Problems with updating graphics when shifting between normal and maximum window are now fixed [P100001381, P100001258, P100001310]
- Adding a non-linked page does not show icon for linked page; refresh no longer needed [P100001460]

- The Manager/Inspector and Selector windows retracts correct [P100001372, P100001377]
- Having an open project but all modules closed, the component selector have no been disabled [P100001397]
- An issue updating the Page Navigator have been corrected [P100001398]
- When drawing area is empty and open a module from Project Manager is now working correct [P100001399]
- After closing and reopening a module, some commands didn't work correct, this has been fixed [P100001400]
- Change template file name form is always shown when replacing a template [P100000819]
- Compiler messages are always hidden after a successful compile if it was hidden when the compile started [P100001309]
- A situation when exiting screen editor and clicked exit button twice, could sometimes caused an error, this has now been fixed [P100001407]
- Mouse wheel now only zooms when mouse pointer is on drawing area [P100001428]
- Errors in generated Data Template for Read Only Parameters have been corrected [P100001251]

## **VERSION 3.2.5 (April 2008)**

### **-What is Fixed**

- Some large display application did not compile a LHX file; this have been resolved (P100001437)
- It is now possible to compile an object inside a module other than the main module (P100001432)

## **VERSION 3.2.4 (January 2008)**

### **-New Features and Functionality (see the GUIDE User Manual for more detailed information)**

- Enhanced error messages.
- New Set Pulse component.
- New Array Constant from Binary File component.
- Upgraded Page Interface Editor now has the same look as the main PLUS+1 GUIDE window.
- The SCS Viewer now has a Menu and Toolbar. It is also possible to do a Query as in Editor mode but the properties cannot be edited.
- A Print window replaces the Plotter Output Setup window. Use the mouse scroll wheel to zoom in and zoom out.
- Classic, Windows and Custom short cut key schemes.
- The Transfer between Pages feature is available from menu and custom short cut keys
- . Some components that were restricted to use in Objects now work in Objects (see User Manual for details). Objects inside Objects now work.

### **-Important Advisory—Potential User Issues**

- The CAN components are always processed on each loop. This is true even when the CAN components are placed in a module and that module is not called by the main loop.
- Buses should not be connected to themselves. A bus connected to itself will cause problems when used together with block by reference.
- Double spacing in project file names: Some issues have been found in projects where file names have double spaces. Single spaces in file names are not known to cause any problems. Work-around: Only use single spaces in project file names (CQ P100000374).
- In the Screen Editor, the Preview pane does not correctly display the LCD5x7e 8 system font (CQ P100001083). This is fixed in later Display HWDs. Workaround: Install the lcd5x7e 8 font in the Windows Fonts folder. Typical font location: Program files\Sauer-Danfoss\PLUS1\Misc\LCD7X5.FON  
To install the font: Start > Settings > Control Panel > Fonts Folder > File menu > Install New Font > browse to and install LCD5x7e 9font.
- Components without output types (e.g. Hardware Input) cannot be directly connected to a class instance. This will generate a compile error. Work-around: Use a retype connection in between.
- Autotyped constants will not work when connected directly to Objects. This will generate a compile error. Work-around: Use a Typed constant
- Old display applications (not using the screen editor) will not work in this version. Please contact the Sauer-Danfoss Help Desk.

- The linked page feature must not be used with older HWDs. For each released HWD, the table below lists the versions that do not work:
  - MC24-10: 10101528v150 and older
  - MC24-20: 10102117v120 and older
  - MC50-10: 10101674v150 and older
  - MC50-20: 10102569v110 and older
  - DP600: 10102102B and older
  - DP610: 10102903B and older

### **-What is Fixed**

- Bad error messages, all fixed as part of the job to enhanced error messages [ P100000445, P100000485, P100000700, P100000855 and P100000925]
- After a Project Save As operation and rename of scs file, the changes are now not lost [P100001375]
- It is now possible to have underscore, ( \_ ), in module names [ P100000946 and P100000844]
- In Screen Editor, a defect when selecting multiple objects has been fixed [P100001118]
- A defect regards Missing/Wrong Shortcut Keys in the Edit and View Menus has been corrected[P100001131]
- In Screen Editor: When Holding the shift key while clicking on an object made a copy; this has now been fixed [P100001134]
- In Screen Editor: A problem with Area orders was fixed [P100001160]
- A defect when pressing 'Break' during build process could possibly cause GUIDE to hang; this has been fixed [P100001198]
- An application/project named "check" will give an error message from the GUI [ P100001210]
- It is now not possible to set the Object flag for an App log page [P100001219]
- In some cases a compile of an empty project gave wrong behavior of GUIDE; this has now been fixed [P100001246]
- Linked pages in a project and right clicked in Page Navigator caused an exception; this has been fixed [P100001263]
- The “Hardware Output” symbol sometimes did not work properly with bidirectional signals. This has now been fixed [ P100001308]
- Page Navigator in GUIDE Forward and Backward Arrows now works [P100001321]
- “Compile changed” and Error Check changed” now works correctly; before it behaved like “Compile All” and “Error Check All” [P100001322]
- Color scheme now works correctly [P100001023]

- All plotting of sub pages is now possible because of the new Print Interface [P100000187]
- A module name can now contain an underscore (\_) combined with non-volatile memory components [P100000844]
- Hardware Output symbol now works with bidirectional signals properly [P100001308]

## VERSION 3.1.5 (October 2007)

### -New Features and Functionality (see the GUIDE User Manual for more detailed information)

- GUIDE is an IEC61508 SIL2 certified code generation tool.
- GUIDE now has a page-by-reference functionality.
- GUIDE now has cut to clipboard, copy to clipboard, and paste from clipboard functions.
- GUIDE can attach a readme file to an LHX application file. The GUIDE Service Tool software displays this readme file before the LHX file download starts.
- GUIDE has a “lock lhx” feature that restricts the download of an LHX application file by either hardware part number or hardware serial number.
- GUIDE software saves backup files (~\*\*\*.scs) to the current project folder.
- The installation of GUIDE now follows Microsoft Windows installation guidelines.
  - User Data files can now be found in the %UserProfile%\My Documents\Sauer-Danfoss folder.
  - Application Data files are now in the %AppData%\Sauer-Danfoss folder.
- If previous versions of GUIDE are installed, the installation software will automatically copy all necessary user and application data to the 3.1.5 installation.

Notes for directory structure:

- %AppData% is typically: C:\Documents and Settings\\Application Data
- %UserProfile% is typically: C:\Documents and Settings\- {InstallPath} is typically: C:\Program Files

This pertains to the following GUIDE files:

- Hardware Files
  - From: {InstallPath}\Sauer-Danfoss\PLUS1\P1ToolData\Hardware\
  - To: %AppData%\Sauer-Danfoss\PLUS1\GUIDE\Hardware\
- Library Files
  - From: {InstallPath}\Sauer-Danfoss\PLUS1\P1ToolData\Library\
  - To: %AppData%\Sauer-Danfoss\PLUS1\GUIDE\Library\
- Font Files
  - From: {InstallPath}\Sauer-Danfoss\PLUS1\P1ToolData\Fonts\
  - To: %AppData%\Sauer-Danfoss\PLUS1\GUIDE\Fonts\
- MyBlocks Blocks

- From: {InstallPath}\Sauer-Danfoss\PLUS1\P1ToolData\MyBlocks\Blocks\
- To: %UserProfile%\My Documents\Sauer-Danfoss\PLUS1\GUIDE\MyBlocks\Blocks\
- MyBlocks Pages
  - From: {InstallPath}\Sauer-Danfoss\PLUS1\P1ToolData\MyBlocks\Pages\
  - To: %UserProfile%\My Documents\Sauer-Danfoss\PLUS1\GUIDE\MyBlocks\Pages\

If this auto copy doesn't work, (e.g. access rights problems), the copy process can be done manually with GUIDE not running.

### ***-Important Advisory—Potential User Issues***

- Due to a change in P1P format, GUIDE versions 3.0 and earlier will not open P1P files created with GUIDE versions 3.1 and later.
- Due to a change in SCS format, GUIDE versions 3.0 and earlier will not open SCS files created with GUIDE versions 3.1 and later.
- A module name should not contain an underscore (\_). An underscore in a module name combined with non-volatile memory components will cause compiler errors.
- The CAN components are always processed each loop. This is true even when the CAN components are placed in a module and that module is not called by the main loop.
- Buses should not be connected to themselves. A bus connected to itself will cause problems when used together with block by reference.
- A project/application cannot have the name "Check".
- Double spacing in project file names: Some issues have been found in projects where file names have double spaces. Single spaces in file names are not known to cause any problems. Work-around: Only use single spaces in project file names (CQ P100000374).
- Predefine Type component: A logical net that connects the Predefine Type, Read-only Parameter Input, and Module Bus Output components will cause a compiler error (CQ P100001038). Work-around: Use the Retype component instead of the Predefine Type component.
- In the Screen Editor, the Preview pane does not correctly display the LCD5x7e 8 system font (CQ P100001083). Workaround: Install the lcd5x7e 8 font in the Windows Fonts folder. Typical font location: Program files\Sauer-Danfoss\PLUS1\Misc\LCD7X5.FON To install the font: Start > Settings > Control Panel > Fonts Folder > File menu > Install New Font > browse to and install LCD5x7e 9font.
- Components without output types (e.g. Hardware Input) can't be directly connected to a class instance. This will generate a compile error. Work-around: Use a retype connection in between.
- Autotyped constants will not work with Objects. This will generate a compile error. Work-around: Use a Typed constant



- Old display applications (not using the screen editor) will not work in this version. Please contact the Sauer-Danfoss helpdesk.
- If old NV memory symbols are used and their access levels are set and the HWD is new, it will not be possible to compile the project.
- The linked page feature must not be used with older HWD's. For each released HWD, the table below lists the versions that do not work:
  - MC24-10: 10101528v150 and older
  - MC24-20: 10102117v120 and older
  - MC50-10: 10101674v150 and older
  - MC50-20: 10102569v110 and older
  - DP600: 10102102B and older
  - DP610: 10102903B and older

#### **-What is Fixed**

- In the GUIDE User Manual: Errors were corrected in the description of the Loop Counter with Carry component; in the Compare in Window component example; a description was added explaining how the Import command strips out the contents of Define Screen pages; a description of read-only parameters function was added; the Array Constant from File component description now states that no periods are allowed in the file name; and graphical errors were corrected in the Keyboard shortcuts chapter (CQ P100000887, P100000849, P100001077, P100001004, P100001035, P100001061).
- The Loop Counter with Carry component now carries without needing an OUT connection (CQ P100001123).
- The Accessrights History component now requires a BOOL input.
- In earlier GUIDE versions, the Accessrights History component required an INT input. An INT input now causes a compiler error (CQ P100001079).

## **VERSION 3.0.5 (June 2007)**

### ***-Important Advisory—Potential User Issues***

- Note: Query a value or data type without closing the Query window and switch to another PC program, if the scs autobackup performs a backup it will hide the Query behind the GUIDE. To workaround this: Try to minimize all programs, try to switch with Alt-Tab or close all programs except PLUS+1 GUIDE to place the Query back on top.

### **-What is Fixed**

- Documentation has been fixed for some defects and the descriptions of some features have been enhanced.
- Fixed defect so Checkpoint can be used on data type Array [CQ P100001178, P100001179].

## **VERSION 3.0.4 (April 2007)**

### **-What is Fixed**

- Documentation has been fixed for some defects. Sections Install Additional Fonts, Components for Read Only Parameters have been added.
- A defect in the maker has been fixed; it fixes a problem with large display applications containing many images [CQ P100001007].
- Fixed defect where old NV-symbols give an error message when compiling with newer HWD's [P100001114, P100001135]
- Fixed defect where interaction between GUI and graphical engine caused system lock-up [P100001139, P100001122, P100001106, P100001092]
- Fixed defect that, when closing and compacting a PLUS+1 GUIDE project with unresolved read-only parameter file links, corrupted the project file and the project file could not be reopened. [P100001117]
- Fixed defects where Access violation errors occurred within the Screen Editor [P100001124, P100001136]
- Fixed defect in Screen Editor where errors occurred when the Area orders were changed [P100001160]

## VERSION 3.0.3 (January 2007)

### -New Features and Functionality (see the GUIDE User Manual for more detailed information)

- NOTE: To access many of the new features it is necessary to update the Hardware HWD files. These can be downloaded from the Sauer-Danfoss website.
- NOTE: Please review the relevant section of the manual for further details of the new features added to the PLUS+1 GUIDE program in this release.
- Over 30 new components are included in this version of the PLUS+1 GUIDE program. These include:
  - A Family of Switch Components so any number of inputs from 2 to 16 can be selected.
  - Rounded and Modulo Divide Arithmetic components with Capped and Uncapped varieties.
  - The Modules Connection components have been extended to include Bus connections.
  - A Family of Password Components that also control the access level. See User Manual for further details of this powerful new feature.
  - A Family of Components to support Read Only Parameter files.
- The Graphical User Interface of the PLUS+1 GUIDE program has been updated with new toolbars, icons and menus.
- Application Logging has been added. This allows the Application to log data to memory that can be subsequently downloaded by the Service Tool (requires hardware that supports this new feature).
- Context sensitive help has been added for all the Components of the Component Selector and Menus. Thus, highlighting a component or a menu item and pressing F1 will open the User Manual at the correct section.
- A “Viewer” has been added. This allows any graphic source file to be viewed by right-clicking it in the Project Manager. It is possible to navigate in the viewer in the normal way and export blocks of data from the viewer. Multiple Viewers may be open at one time, giving multiple views of the same source file if required.
- The Screen Editor now supports the import of fonts. Thus, fonts created or licensed by the user can be imported into the PLUS+1 GUIDE program and used in the screen editor. This includes Arabic, Cyrillic and Asian fonts.
- The Screen Editor allows import of several new image file formats including JPEG, TIF, and GIF.
- The Screen Editor now supports Image and Text Lists. Simple animation can now be supported together with the conversion of a number into a text string from a list of strings.
- Read-Only Parameter files are now supported. This allows read-only constant files to be created and downloaded separately from the application. This feature has many useful implementations, see the User Manual for further details.
- The compile process is now displayed in a single pop-up window.

- The memory consumption statistics provided for the Controllers after the compile process in the Compile Message Tab has been extended to Displays.
- The method of storing data for the PLUS+1 GUIDE Service Tool program has been changed so, in most Applications, additional memory is available. When extended diagnostic information is required it can now be accommodated by this new method.

***-Important Advisory—Potential User Issues***

- Note: The P1P file format has been updated in PLUS+1 GUIDE v2.3. Therefore files created with PLUS+1 GUIDE version 3.0 cannot be opened with earlier versions of the PLUS+1 GUIDE program. It is however possible to export pages and then re import them to earlier versions as the SCS file format has not be changed.
- Note: The LHX download file format has been updated in PLUS+1 GUIDE v3.0. Therefore files created with GUIDE version 3.0 cannot be opened with earlier versions of PLUS+1 GUIDE Service Tool program. Version 3.0 or higher must be used.
- Note: Some new PLUS+1 Compliance, PLUS+ 1 HWD, and PLUS+1 Library files require GUIDE version 3.0.
- Some of the PLUS+1 GUIDE features are determined by the Hardware (HWD) file. It is therefore important to verify that a particular feature is supported by the HWD file. For example: # Application Logging, or Read Only Parameter Files.
- Note: When using Modules the Module name should not include the underscore “\_” symbol, otherwise a compile error will be generated when using NV symbols.
- Note: The CAN Symbols are always processed each loop. This is true even when the CAN Symbols are placed in a Module and that Module is not called by the main loop.
- White Space in Filename: Some issues have been found in projects using two or more spaces in a row in the file names. A single white space in the directory name is not known to cause any problems. [CQ P100000374] Work-around: Do not use two or more white spaces in a row in the File Name of a project.
- Component Predefine Type: When the Predefine Type is used on a Read-Only Parameter Input net that is connected to a Module Bus Output the code produced would not compile. [CQ P100001038] Work-around: Instead of Predefine Type use the Retype.
- Incorrect type on GUIDE AccessRights History component [P100001079] In version 3.0.3 this component requires an integer as input; this is a defect and will be corrected in a future version so data type Bool will be used as the required input. In version 3.0.3 use integer value 0 to represent False and value 1 to represent True. In a future version this will generate a compile error and the data type has then to be changed to Bool.
- LCD5x7e 8 system font is not shown correct in preview [P100001083] In Display applications where the font LCD5x7e 8 is delivered as a system font the preview doesn't work. Workaround: Install font ..\Sauer-Danfoss\PLUS1\Misc\LCD7X5.FON into Windows (Control Panel – Fonts – File Menu – Install New Font)

## **VERSION 2.2.7 (September 2006)**

### **-What is Fixed**

- The Component Inspector of the Screen Editor allows properties to be changed without generating errors [CQ P100000932, P100000934, P100000942].
- When leaving Modules with large file sizes on PCs with restricted memory, the data is correctly stored [CQ P100000937].
- In some cases, use of the File/Open Recent projects left the existing project open. This has been corrected [CQ P100000945].

## VERSION 2.2.6 (June 2006)

### -What is Fixed

- In some cases it was not possible to drag a Function Block onto the drawing area after a compile. This defect has been corrected and the Project Manager Tree is left as it was before the compile began [CQ P100000904, P100000884].
- In some cases the names of NV symbols produced an incorrect compile error. This has been corrected [CQ P100000905].
- The Text Editor Preview displays text correctly regardless of the background colour chosen [CQ P100000910].
- The Undo Function has been updated to support Text strings that contain a data value correctly [CQ P100000911].
- PLUS+1 Compliances HWD Files are now installed in the correct locations in the Tree of the Hardware Tab [CQ P100000907].
- The init connect symbol does not terminate the compile process when it is connected to type ARRAY[259]U8 [CQ P100000912].
- In some cases the memory optimization of Arrays did not work correctly, including the use of the Array Set Component. This has been corrected [CQ P100000919, P100000926].
- It is now possible to connect a checkpoint directly to the output of a CAN Symbol [CQ P100000921].
- The Screen Editor value for clBlack was incorrect (\$01010100), this has been updated to black [CQ P100000924].

## **VERSION 2.2.5 (May 2006)**

### **-New Features and Functionality (see the GUIDE User Manual for more detailed information)**

- NOTE: Data relating to the GUIDE Service Tool has been moved to a separate GUIDE Service Tool Readme file.
- NOTE: To access some of the new features it is necessary to update the Hardware HWD files. These can be downloaded from the Sauer-Danfoss Website when they are available.
- The Hardware Tab of the Component Selector has been significantly enhanced and now supports multiple levels of folders and hardware. This update is specifically targeted as the support of Sauer-Danfoss PLUS+1 Compliant products.
- The Hardware Tab now includes a search function that allows parts to be found by keyword and part numbers. It is possible to collapse the whole tree with a single click. “Next”/“Previous” navigation keys are also provided.
- A “My Blocks” Tab has been added to the Component Selector. This allows the user to create blocks to be sorted, stored and shared. It is also possible to send complete sections of “My Blocks” to other users using file-zipping tools.
- The Component Inspector pop ups have been extended to the “Hardware” and “My Blocks” Tabs.
- The GUIDE Compiler has been enhanced to significantly reduce the amount of RAM consumed with Arrays.
- The Encode symbol supports conversion of up to 8 bytes of U8 or S8 to an Array, and the Decode symbol supports conversion from Array to U8.
- An online context sensitive windows Help file is now included in addition to the pdf Manual.
- It is now possible to update a Display Application using one type of screen to an Application using a different screen type.
- The operation of the Pop Up Editor has been refined and enhanced, for example it is now possible to enter values before entering the type.
- GUIDE now opens much faster than in previous version.
- This version of GUIDE support Application Hardware and Software Personalities and Application Blocks using the hardware’s property: “Target Part Number” in the Inspector tab.
- A bug report facility has been added to GUIDE to make bug reporting easier and more comprehensive including a facility that allows keystroke and operations to be logged.

### **-Important Advisory—Potential User Issues**

- Note: The P1P file format has been updated in GUIDE v2.2.5. Therefore files created with GUIDE version 2.2 cannot be opened with earlier versions of GUIDE. It is however possible to export pages and then re import them to earlier versions as the scs file format has not been changed.



- Note: The LHX download file format has been updated in GUIDE v2.2.5. Therefore files created with GUIDE version 2.2 cannot be opened with earlier versions of GUIDE Service Tool. Version 2.2 or higher must be used.
- Note: Some new PLUS+1 Compliance, HWD and Library files require GUIDE version 2.2.5.
- Some of the GUIDE features are determined by the Hardware (HWD) file. It is therefore important to verify that a particular feature is supported by the HWD file. For example: CAN and NV symbols, write access levels for NV symbols.
- Note: When using Modules the Module name should not include underscore “\_”, otherwise a compile error will be generated when using NV symbols.
- Note: The CAN Symbols are always processed each loop. This is true even when the CAN Symbols are placed in a Module that is not called.
- White Space in Filename: Some issues have been found in projects using two or more spaces in a row in the file names. A single white space in the directory name is not known to cause any problems. [CQ P100000374] Work-around: Do not use two or more white spaces in a row in the File Name of a project.
- Adobe Acrobat Reader version 5 does not work with the GUIDE pdf files. Adobe Acrobat Reader should be updated to a later version.

#### **-What is Fixed**

- In some conditions Application Files were not saved or memory problems at the beginning of the compile process or generate exception errors were reported when handling file data. These issues have been resolved [CQ P100000065, P100000261, P100000340, P100000413, P100000496, P100000529, P100000681, P100000547, P100000575, P100000727, P100000748]
- In some conditions Access violation errors when opening or closing projects appeared. These issues have been resolved [CQ P100000767].
- A problem when using the constant clBlack in Display applications has been resolved. The constant is redefined so it will show Black in Sauer-Danfoss Displays [CQ P100000754, P100000488, P100000477 ].
- In some cases the names of the wire were displayed in error. This has been corrected [CQ P100000127, P100000573].
- It is possible to add a Module that is already in the project directory [CQ P100000250].
- Cut and Paste in the Screen Editor works correct when used from the menu and toolbar [CQ P100000307].
- Setting images with the transparent property now works [CQ P100000328].
- Changing the names of images in the Screen Editor now behaves as anticipated [CQ P100000422].
- Operation of the toolbar when resizing the screen is improved [CQ P100000434].
- Issues with the Pop Up Query Window displaying a list of data have been resolved [CQ P100000587]

- When undo is active other operations are prohibited to ensure incorrect operations do not occur [CQ P100000598].
- Double clicking a P1P file in windows now launches GUIDE and opens the project correctly [CQ P100000600].
- The operation of the pop up panels on the side of the screen has been refined [CQ P100000661].
- Copy and paste of images in the Screen Editor now works correctly [CQ P100000667].
- Operation of toolbar functions has been enhanced [CQ P100000680].
- Drag and drop operation the screen editor has been enhanced to make it easier to drop at the desired location [CQ P100000684, P100000481].
- Hourglass is sometimes displayed when all operations are completed. This has been corrected [CQ P100000688]
- Display of extended characters in the screen editor has been reviewed. All characters with ASCII code below 32 (except 8, 10 and 13) have been removed [CQ P100000713]
- Un install screens have been changed so all data can be displayed [CQ P100000720].
- Turning the grid on and off has an immediate effect [CQ P100000728]
- Operation of keystrokes Ctrl-O and Ctrl-N have been made consistent [CQ P100000512]
- Operation of the Page Navigator now works in the Screen Editor [CQ P100000416]
- Operation of the lists in the Screen Editor have been improved when expanding and collapsing them [CQ P100000525]
- It is possible to enter a “d” or “D” to disable a checkpoint or NV Symbol form diagnostic access [CQ P100000705].
- It is possible to delete a namespace and make it blank after it has been added [CQ P100000733].
- Top View editor is now disabled when in the Screen Editor editing text or images [CQ P100000735].
- The License Manager is disabled when in the Screen Editor [CQ P100000745].
- Error reporting of invalid Page Port names have been improved [CQ P100000431, [CQ P100000432].
- Operation and behavior of the Pop Up menus has been improved and enhanced [CQ P100000466, P100000761].
- Several compiler issues and refinements have been made to make the compile process more robust [CQ P100000601, P100000751, P100000760, P100000762, ].
- An error is generated if a Null constant is used as a connection to a checkpoint [CQ P100000616].
- The GUI text entry editor correctly tests for an array with 0 elements [CQ P100000630].
- The Hardware BIO Symbols has been resized to be consistent with other symbols, other symbols have been reviewed and now align with the standard grid [CQ P100000657, P100000747].

- The operation of the Shift Left Symbol (AF\_SHL) has been corrected. Previously with a U8 output data type some bits were incorrectly shifted resulting in a result larger than the U8 limit [CQ P100000703].
- Errors reporting associated with connections to an INIT BIOS symbol have been improved, particularly when no connection is present [CQ P100000722].
- If GUIDE is used with a demo license and a project opened, then the P1P file will not be deleted [CQ P100000739].
- Text Color issues between the DP6xx and the preview in GUIDE has been aligned so text does not “disappear” [CQ P100000750]
- Zooming in and out of the screen editor could in some instances move objects. This has been corrected [CQ P100000772].
- The screen editor now validates extended characters. Previous versions did not and this could lead to data corruption [CQ P100000775].
- It was possible to have two Set symbols (IC\_SET) with the same name but of a different type. This has been corrected and will generate a compile error [CQ P100000776].
- When GUIDE was processing other commands clicking the icon toolbar sometimes did not result in the action being carried out. This has been reviewed so icons are only available when actions can be executed [CQ P100000780].
- COS and SIN calculations for U32 inputs which should result in a negative result now do so. Also an input of -2147483648 for Controllers which resulted in an error of approximately 1/10,000 been corrected [CQ P100000781]
- The alias names on EEPROM locations have been made more robust [CQ P100000788].

## **VERSION 2.1.3 (November 2005)**

### **-What is Fixed**

- The SWITCH16 Symbols works correctly when switching arrays [CQ P100000730].
- Deleting Images from the Screen Editor's Image Register deletes only the file selected, not the whole folder [CQ P100000693].
- It is possible to connect Capped Symbols to BIOS connections without generating compiler errors [CQ P100000731, P100000679].

## VERSION 2.1.2 (September 2005)

### -New Features and Functionality (see the GUIDE User Manual for more detailed information)

- NOTE: To access many of the new features it is necessary to update the Hardware HWD files. These can be downloaded from the Sauer Danfoss Website.
- Over 30 new symbols are included in this version of GUIDE. These include:
  - A Family of CAN symbols implementing virtual mailboxes.
  - A Family of Array symbols to allow array data to be manipulated.
  - A Family of Non Volatile symbols.
  - A Family of “capped” symbols so data does not overflow or underflow in calculations.
  - A Family of User Compiler Error symbols.
  - A Family of User defined Compiler Error symbols.
- The operation of the Symbols Tab in the Component Inspector has been significantly enhanced:
  - The cursor is moved the branches of the tree open automatically and where components have options these are presented.
  - Symbols with multiple configurations like “compare” has been radically extended and can now be selected directly before a symbol is placed on the drawing.
- The Hardware tab of the Component Inspector now contains a preview window for the Hardware selected.
- It is now possible to install HWD files for IO Modules and other Plus 1 Compliant Hardware and drag and drop them into an application.
- “Namespace” has been added. This provides an automatic prefix to alias names for example names with Checkpoints. Thus checkpoints can be placed in a page, the page copied and pasted, and by using the “Namespace” in a page’s properties, each checkpoint can be uniquely accessed.
- The range of Security Access Levels has been extended to include “D”, which inhibits access from the Service Tool. Thus it is possible to construct secure passwords within an application.
- The Setup > Options screen has been extended and enhanced to include options not only for the Screen Editor but also the Component Inspect.
- P1P and P1X files are now associated with GUIDE in the Windows registry and will open GUIDE directly from Explorer.
- It is possible to install and uninstall GUIDE and the GUIDE Service tool independently. [CQ P10000553]
- When using newer HWD files, compilations that have been successfully completed will show memory used for the Application in the Compile Messages Tab at the bottom of the screen [CQ P10000632].
- Using the CTRL key it is possible to select multiple objects. Once selected, it is possible to move the objects or edit the common properties collectively.

- Images and Text strings are shown in a preview window similar to the symbols tab.
- Scroll bars have been added to the Screen Editor to allow the screen to be panned [CQ P100000419]
- It is possible to export text from the Screen Editor, so it can be translated, and the modified text then imported back into the Screen Editor of an application.
- Image selection has been improved, so it is possible to select an image even from the transparent part of an image.
- When adding an image file the description is automatically complete as the files name, this can then be changed by the User.
- The names used for properties and labels used in panel is much more descriptive of there function. The functionality remains the same in all instances.
- Undo and Redo have been added to the Screen Editor. Multi line text strings can now be easily added by using the <CR> when entering text, (previously it was CTRL <CR>).
- The right click menu of an object has been enhanced to include cut, copy and paste [CQ P100000479]
- Right clicking on an object will cause the properties to be displayed, but will not move the object.

#### ***-Important Advisory—Potential User Issues***

- Note: The p1p file format has been updated in GUIDE v2.1. Therefore files created with GUIDE version 2.1 cannot be opened with earlier versions of GUIDE.
- Note: The LHX download file format has been updated in GUIDE v2.1. Therefore files created with GUIDE version 2.1 cannot be opened with earlier versions of GUIDE Service Tool. Version 2.1 or higher must be used. Note: Some “newer” LHX Files require GUIDE version 2.1.
- Note: The Enable/Disable of Preview in the Component Inspector has been moved to the Setup ; Options dialog box.
- Note: A Retype symbol must be added to all application when using some CAN bios connections because the compiler error detection has been enhanced. [CQ P100000646].
- Note: In some cases version 2.1.2 produces larger application code size than version 2.0.x. This is because some symbol defects have been fixed so the code produced is larger. This specifically affects the Scale Symbol and one application was found to be 3% larger. [CQ P100000645].
- White Space in Filename: Some issues have been found in projects using two or more spaces in a row in the file names. A single white space in the directory name is not known to cause any problems. (CQ P100000374) Work-around: Do not use two or more white spaces in a row in the File Name of a project.
- In some instances a project is not saved correctly. Work-around: No work-around is known. Keeping drawing file small by using Modules, is known to help reduce the occurrence dramatically.

#### **-What is Fixed**

- The pop up menus of the Component Inspector are disabled when the GUIDE is not the active application.
- The Time data type is correctly validated for all symbols so errors cannot be generated [CQ P100000574].
- It is possible to change an application from one display to another. For example a DP600 application to a DP620 or DP610. This is achieved by removing the link to the Port Name of the display, see manual for further details [CQ P100000551].
- The Compare Symbol behaves as expected when it is changed to different types [CQ P100000557].
- HWD Function Blocks can now be correctly inserted into GUIDE [CQ p100000569].
- Modules can be named by the user as desired. It is not necessary to use the default settings of Module1, Module2 etc. [CQ100000572].
- The Switch Symbols now work correctly with Arrays [CQ P100000591].
- The Receive CAN with ID Mask symbol now behaves correctly when the ID is connected to a variable [CQ P100000619].
- When quotation marks are used in the text of the Screen Editor error messages are reported corrected, ANSI C Syntax should be used to insert quotation mark [CQ P100000620].
- Applications using large arrays will work with the Service Tool [CQ P100000621].
- Arrays now work correctly with the Connect Symbol [CQ P100000624].
- The Get Array Symbol behaves correctly when incorrect indexes are used [CQ P100000625].
- The NV Symbols behaves correctly when the Alias name is changed [CQ P100000626].
- The Memory Used display in the Compile Messages Tab now reports the correct results [CQ P100000632].
- BIOS "CAN Buffers" supported Overrun in the new Library [CQ P100000634]
- When copying a language in the Screen Editor it behaves correctly [CQ P100000635].
- Moving backward and forward in the Screen Editor Define Page is now directionally correct. [CQ P100000639].
- Applications created in 2.0.x will compile in 2.1.2 in all but the most exceptional cases (small amounts of additional memory are required to the defect fixes of some symbols) [CQ P100000641].
- The Switch symbols are now able to switch colour types [CQ P100000642].
- The compiler reports duplicate Alias names correctly [CQ P100000644].
- All transition symbols are available from the pop up query menu once they are placed on the drawing [CQ P100000653].

## **VERSION 2.1.1 (July 2005)**

### ***-Important Advisory—Potential User Issues***

- White Space in Filename: Some issues have been found in projects using two or more spaces in a row in the file names. A single white space in the directory name is not known to cause any problems. (CQ P100000374) Work-around: Do not use two or more white spaces in a row in the File Name of a project.
- In some instances a project is not saved correctly. Work-around: No work-around is known. Keeping drawing file small by using Modules, is known to help reduce the occurrence dramatically.
- Adobe Acrobat Reader version 5 does not work with the GUIDE pdf files. Adobe Acrobat Reader should be updated to a later version.

### **-What is Fixed**

- The GUIDE Compile function now works consistently for applications [CQ P100000566, P100000576].
- LHX Files are produced correctly and the “INTERNAL: UNKNOWN KEY VALUE” error report from the Service Tool is fixed [P100000581]
- Component “Find Array” corrected regarding data types on input and output
- Component “Loop Counter with Carry” fixed regarding; Outputs always static in corrected version [CQ P100000583]



## VERSION 2.1.0 (June 2005)

### -What is Fixed

- The shift right component operates consistently for all data types when truncating data [CQ P100000533]
- New Symbols can be used in old application where the hardware supports them, for example the Compare symbol. (CQ P100000377).
- The User can determine the number of lines the Menu Toolbar will use [CQ P100000225]
- GUIDE will compile projects in all cases where errors do not exist [CQ P100000483]
- Files that are write protected behave as expected including those in MS-Visual-Source-Safe with meaningful warnings from GUIDE [CQ P100000521]
- File compression of p1p files works in all cases [CQ P100000405]
- Module names can be longer than 16 characters, even when the scale symbol is used [CQ P100000505]
- The compile tests that alias names are unique in all instances [CQ P100000538]
- When updating to different EQ symbols the symbol behaves as expected [CQ P100000377]
- Clicking F1 opens the GUIDE Manual. A new chapter has been added with further details about the use and operation of the Screen Editor.
- It is possible to rename the screen areas without losing the object on them [CQ P100000478]
- The Image register does not allow an image file with the same name to be added twice to a project [CQ P100000500]
- The insertion point of images is always shown in the same way using EntryX/ValueX, EntryY/ValueY [CQ P100000441].
- Text is displayed correctly in the preview mode, even when placed on a dark background (CQ P100000484).
- The operation of the cursor keys has been corrected so they do not move objects when they should not (CQ P100000457).
- Fast operation when dragging and dropping images or text is now supported (CA P100000470).
- The maximum number of screens in an application is now limited only by memory space The maximum number of images in a project is now limited only by memory space. Deleting text from the Text Editor also removes it from the screen [CQ P100000476].
- When a screen area is renamed the objects associated with the screen area are retained [CQ P100000478].
- An image must have a description before it is possible to save an image [CQ P100000417].
- Images are correctly rotated in the preview screen [CQ P100000442, P100000459, P100000495].
- The Graphic editor keyboard commands are disabled in the Screen Editor [CQ P100000457, P100000425, P100000418].

- The Image Register now ensures only a single instance of an image with the same file name is present in the register [CQ P100000500].
- The manual has been extensively updated to provide detailed use of the screen editor [CQ P100000312].
- The positioning and selecting of objects has been made more precise with “intelligent” control of mouse movement [CQ P100000414];
- The insert point of images is always displayed even after the screen is minimized and restored [CQ P100000441];
- The Transparent setting is disabled when it does not perform a function [CQ P100000469].
- When exiting the Screen Editor it behaves as expected and does not start a compile [CQ P100000427].

## **VERSION 2.0.4 (March 2005)**

### **-What is Fixed**

- The compile speed on some PCs types was extended this has been corrected. [CQ P100000464].

## **VERSION 2.0.3 (February 2005)**

### **-New Features and Functionality (see the GUIDE User Manual for more detailed information)**

- The installation process automatically removes the previous installation of GUIDE, with the user's confirmation.
- GUIDE Libraries and Hardware Files (HWD) are no longer supplied with GUIDE, they should be downloaded from the website as required. A demonstration library and hardware file is included. These files should be uninstalled when not required. They cannot be used in "real" applications on real hardware.
- The Compile operation has been enhanced to improve the compile speed. It is now 40 times faster than the previously released version of GUIDE.  
New symbols have been added to the GUIDE. These include: Module Bus Input, Module Bus Output (allowing Buses to be passed between modules instead of individual wires), Value Initialization, Set Value, Compare (which has 6 options), and may more.
- A preview for the Function Blocks has been added.
- GUIDE now automatically opens with the last project loaded, if it was not compressed to a p1p file.

### ***-Important Advisory—Potential User Issues***

- White Space in Filename: Some issues have been found if projects use two or more spaces in a row in the file names. A single white space in the directory name is not known to cause any problems. (CQ P100000374) Work-around: Do not use two or more white spaces in a row in the File Name of a project.
- When working in the screen editor the key of the graphics engine are not disabled. Thus if "L" is pressed then when the screen editor is closed the graphic engine does not show the expected page. (CQ P100000425) Work-around: Do not press keys that are not used in the Screen Editor.
- When working with the DP600 Display the application loop time should not exceed 300mS. If it does, the GUIDE Service Tool will have difficulty communicating with it. Work-around: Keep the loop time below 300mS.