

# Version Overview

The following table contains the overview about the compatibility between the Panel Design Tool **Galileo** and the Runtime System **GRSW**.

<b>Galileo</b>	<b>GRSW</b>	<b>Compiler Version</b>
5.0.0 – 5.0.4	5.0.0 – 5.0.4	3.42
5.1.0 – 5.1.5	5.1.0 – 5.1.5	3.44
5.2.2	5.2.2	3.50
5.2.3	5.2.3	3.51
5.2.4 – 5.2.5	5.2.4 – 5.2.5	3.52
5.3.0	5.3.0	3.77
5.3.1 – 5.3.13	5.3.1 – 5.3.13	3.78

The following table contains the overview about the compatibility of the language text files between the Panel Design Tool **Galileo** and the Workshop **GWS**.

<b>Galileo</b>	<b>GWS (Workshop)</b>
3.00 – 5.3.13	5.3.13

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# V5.0.0

**Compiler Version 3.42** (necessary for the compatibility with GRSW)

## Galileo

➔ **Only panels with windows CE operating system supported!**

➔ New protocols:

- CAN Open (Onboard) – polling
- Modbus RTU
- Modbus TCP
- HIMA HiMatrix Modbus TCP
- Sensotec 1799

➔ Portrait mode supported for the panel types MC2-4x0-10C and MC2-4x0-12C.

➔ 65535 colors supported for the panel types MC2-4x0-10C and MC2-4x0-12C.

➔ In Galileo: the color depth of imported bitmaps would not be reduced.

➔ New image import formats supported: GIF, PNG

➔ New object "camera": display continuously the pictures of a web camera.

➔ New Special function group "camera" with functions:

- Start/Stop Camera 0..30
- Refresh
- Image Load
- Image Load From
- Image Save
- Image Save As

➔ New Special function

- Save Error History as File

➔ Import of tag information's from CoDeSys or EIB.

➔ Tag number expanded: 0 – 2147483647

➔ Tag help number expanded: 0 – 2147483647

➔ Tag data direction:

- The option was split in "Read"- and "Write"-options.
- Possibility the set the polling options for error tags.

➔ Char-Array: a preset value can be defined.

➔ CE-Configuration: possibility to activate the components and to modify the start-up reaction from Galileo.

➔ System keyboards optimized.

➔ Tag overview: multiple selection for the operations "copy", "paste" and "cut".

➔ The objects "value entry" and "value display" would be combined to one object. The attribute "keyboard" differentiate the type.

➔ Error window:

- The row height can be defined by user.
- The error number of the actual selected entry can be stored in a tag.

➔ Parameter list:

- The row height can be defined by user.
- The user id of the actual selected entry can be stored in a tag.

➔ Recipe list:

- The row height can be defined by user.
- The index of the actual selected entry can be stored in a tag.

➔ Button object: possibility to change the bit x of a tag.

➔ New Fonts: "Arial Bold", "Arial Italic" and "Arial Bold Italic".

➔ New function "Backup and Send": archive the project and create an e-mail with version information's and the archive file as attachment.

➔ Project settings: the options "default color and font" is new saved in the project files.

➔ When opening the project only the used fonts would be installed.

➔ Errors rectified:

- Compiler window: scrolling with the mouse wheel flicker free.

## Galileo Runtime (GRSW)

- ➔ **Only panels with windows CE operating system supported!**
- ➔ New protocols:
  - CAN Open (Onboard) – polling
  - Modbus RTU
  - Modbus TCP
  - HIMA HiMatrix Modbus TCP
  - Sensotec 1799
- ➔ Portrait mode supported for the panel types MC2-4x0-10C and MC2-4x0-12C.
- ➔ 65535 colors supported for the panel types MC2-4x0-10C and MC2-4x0-12C.
- ➔ New object "camera": display continuously the pictures of a web camera.
- ➔ New Special function group "camera" with functions:
  - Start/Stop Camera 0..30
  - Refresh
  - Image Load
  - Image Load From
  - Image Save
  - Image Save As
- ➔ New Special function
  - Save Error History as File
- ➔ System keyboards optimized.
- ➔ Char-Array: a preset value can be defined.
- ➔ Error window:
  - The row height can be defined by user.
  - The error number of the actual selected entry can be stored in a tag.
- ➔ Parameter list:
  - The row height can be defined by user.
  - The user id of the actual selected entry can be stored in a tag.
- ➔ Recipe list:
  - The row height can be defined by user.
  - The index of the actual selected entry can be stored in a tag.
- ➔ New Fonts: "Arial Bold", "Arial Italic" and "Arial Bold Italic".

## Workshop (GWS)

- ➔ When opening the project only the used fonts would be installed.

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## V5.0.1

**Compiler Version 3.42** (necessary for the compatibility with GRSW)

## Galileo

→ Errors rectified:

- Fatal Error: a fatal error is occurred, when in a script too much "else" commands are used.
- Project conversion: tag names which begin with numbers cause problems at project conversion.
- At moving of small mask objects the mask was not correctly refreshed.
- The temporary directory "prt\_temp" in the project directory was not deleted.
- Mask import: a wrong message was displayed always.
- Delete masks: a mask could not be deleted, when the mask file does not exist.
- Tag limits: at the conversion of tag types, the tag limit "open" was not correctly converted.
- Text search: in some cases the text search function finds texts in graph objects mistakenly.
- The refresh of small mask objects was not correct.
- Delete mask: the function delete mask fails, when the mask file does not exist.

## Galileo Runtime (GRSW)

→ Error rectified:

- Recipes: the confirmation masks of the function "Save As –userdef" and "Save As and Load - userdef" was not displayed.
- Confirmations in recipes: the sequence of the recipe function with a confirmation was wrong.
- Graph archive: problem with graphs which have defined more than one archive file. The archive file number was not correctly saved, when the function "Save Archive" was used.
- Double touch event optimized.
- System message: the background was not refreshed correctly in all cases.
- Keyboard moving: if a double touch event is occurred during the keyboard moving, then the mask background was not correctly refreshed.
- PMAC communication: the parameter "I3" implemented.

## Workshop (GWS)

No changes.

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## V5.0.2

**Compiler Version 3.42** (necessary for the compatibility with GRSW)

### Galileo

→ Errors rectified:

- Polling rate: the tag address attribute "Polling rate" was not always accessible with more than one communication.
- Conversion of old projects: the tag address attribute "explicit read on demand" was not correct converted.
- Object type line: it was possible to move a line out of a mask.

### Galileo Runtime (GRSW)

→ Error rectified:

- Memory leak: a memory leak was occurred, when system bitmaps were displayed.
- Modbus TCP: the TCP port is new changeable.
- TP3 onboard: protocol is new RS485 compatible.

### Workshop (GWS)

No changes.

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## V5.0.3

**Compiler Version 3.42** (necessary for the compatibility with GRSW)

### Galileo

➔ String referenced tag addresses: structures in structures are now allowed.

➔ Errors rectified:

- Conversion of old projects: the data direction of tags in structures are wrong under certain circumstances. Only at direct addressed tags.
- Address tag direct: the command 'address tag direct' work not correct, when structures inside structures are used.
- Conversion of arrays to structures: not all data direction properties were not set correctly.
- Bitmap: problem to display bitmaps from some editors.

### Galileo Runtime (GRSW)

➔ "GRS Remote Server" renamed in "GRS Services".

➔ Error rectified:

- EIB (3<sup>rd</sup> Release) don't work (since 5.01).
- CANopen (DSP403) don't work (since 5.01).

### Workshop (GWS)

No changes.

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## V5.0.4

**Compiler Version 3.42** (necessary for the compatibility with GRSW)

### Galileo

- ➔ Tag tree: the functions 'copy', 'paste' and 'cut' can be executed by keys. 'copy' by Ctrl+C or Ctrl+Insert. 'paste' by Ctrl+V or Shift+Insert. 'cut' by Ctrl+X or Shift+Delete.
- ➔ New extras option for stopping the data transfer to PCMCIA/CF drive.
- ➔ Size of option pages changeable.
- ➔ Mask import: no more available.
- ➔ Tag addresses for string referenced PLC's: search and replace functions available.
- ➔ Errors rectified:
  - Problem to display bitmaps, when the width in pixel is not divisible by 4 and the number of colors is unequal 256.
  - Mistakenly limitations in Win XP:
    - ➔ Grid with dots was not available.
    - ➔ Maximum number of open masks was 32.
    - ➔ PCMCIA/CF drive can't stopped after download.
  - Tag import: crash with array size 0.
  - Limitation check of object overlapping changed.
  - Script: during the copy/paste of script the tag names still present.

### Galileo Runtime (GRSW)

- ➔ Error rectified:
  - Camera function 'Save Image As': the moment of the snapshot was too late.
  - Graph: problem with the lineal position after scrolling in Y direction.
  - Flagdisplay: wrong state display for negative values.

### Workshop (GWS)

No changes.

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## V5.1.0

**Compiler Version 3.44** (necessary for the compatibility with GRSW)

### Galileo

- ➔ The size of the error history is new changeable.
- ➔ New keyboard mask type "alphanumeric system". The labeling of the keys is created automatic.
- ➔ Tag import: new import options to address the structures.
- ➔ Print forms: new functions for moving print form printer entries implemented.
- ➔ Format attribute on Char-Array tags.
- ➔ Print form title support new multi line texts.
- ➔ Errors rectified:
  - Fatal error: at mask function "Mask Number" when no mask are selected.
  - Fatal error: on tag limit property page, under certain circumstances.
  - An existing project could not be overridden by the command "Project New".
  - Sub mask objects was not displayed in masks, when the zoom factor was smaller than 100%.
  - Compiler: the message maximum length of string referenced communications was not checked.
  - Error window: the font size was not all the time saved correctly.
  - Print forms: the paste function form a clipboard create a new print form mistakenly.

### Galileo Runtime (GRSW)

- ➔ New protocols:
  - OPC Remote
- ➔ New bitmap is displayed during the recipe load and recipe save functions.
- ➔ PLC to PLC message no longer available.
- ➔ Error rectified:
  - Mask refresh problem of keyboards when a external mask change is reached.
  - Panel was not touchable during the preset phase.
  - Refresh problem of objects after closing a keyboard.

### Workshop (GWS)

No changes.



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## V5.1.1

**Compiler Version 3.44** (necessary for the compatibility with GRSW)

### Galileo

→ Errors rectified:

- Tag deleting: the compiler show a error message, when a tag was deleted, which was used in a recipe.

### Galileo Runtime (GRSW)

→ Error rectified:

- Fatal error in error list under certain circumstances.
- The time/date object was not drawn in all cases.

### Workshop (GWS)

No changes.

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## V5.1.2

**Compiler Version 3.44** (necessary for the compatibility with GRSW)

## Galileo

No changes.

## Galileo Runtime (GRSW)

➔ New protocols:

- Moeller XControl CAN Open HMI (Onboard)

➔ Date/Time structure from 3S PLC implemented.

➔ Error rectified:

- The special function "Key 'Ret' and call script function" don't work correctly, when the keyboard event "Return" is reached by the remote client.
- User defined keyboards: the maximum and minimum limits was set to 0, when on the mask a special function "Call script on mask entry" was defined (since V5.1.0).

## Workshop (GWS)

No changes.

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## V5.1.3

**Compiler Version 3.44** (necessary for the compatibility with GRSW)

### Galileo

→ Errors rectified:

- Fatal error: when the key combination 'Ctrl-C' is pressed on a mask and no objects are selected.
- Error array: the address option 'read at startup' was not set on a new error array.
- Mask save as: the mask resolution of the saved mask was set to the panel resolution always.
- Recipe overview: it was possible to create a recipe inside an other recipe.
- The modified flag of the project was not set, when in the text list some texts are replaced.
- Codesys tag import: the sort order of the tags in a structure was alphabetic sorted.

### Galileo Runtime (GRSW)

→ Driver update:

- Siemens - MPI protocol version 2.0: alignment from 2 byte to 1 byte reduced.
- Siemens - Industrial Ethernet (Beta) implemented

→ SPA bus: arrays are new supported.

→ Galileo Open: 4 serial communication are new supported.

→ License administrator in the demo mode implemented.

→ Error rectified:

- Print Unicode error texts: printing of error texts with Unicode character doesn't worked correctly.
- Printing: the form feed at the end of the print was not sent to the printer.
- Printing: memory leaks occur during printing. After a lot of prints, the panel print only empty pages.
- Special function 'RET with Call Script': the script was not called, when this function was called inside a user defined keyboard.
- Float tags: rounding problems on limited value entry.
- User defined keyboard 'Show User': a user defined keyboard of the type 'Show User' doesn't work correctly.
- Backlight off: the screen saver has switched on the backlight.
- Refresh problems when the special function 'Call Script on Mask entry' was used in user defined keyboards.
- Parameter list: a focus rectangle around the parameter list was visible, if the object was drawn as 3D or without a frame.

### Workshop (GWS)

No changes.

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## V5.1.4

**Compiler Version 3.44** (necessary for the compatibility with GRSW)

### Galileo

➔ Errors rectified:

- Fatal error: in some cases, when the property dialog of a structure tag was open.
- Tag address: when the tag has only read attributes, then the tag can't addressed to more than one PLC.

### Galileo Runtime (GRSW)

➔ Error rectified:

- GRS Services: wrong memory allocation when a lot of sessions are started.
- Special function: the function "Display scroll Window" was displayed with the default font size and font type.
- Special function: when the function "Key RET and call script" was used in a user defined keyboard, then the object refresh was not correct in each case.
- Modbus TCP: timeout communication error was displayed at startup.
- User defined login: at the second login the user name was not used cogent.

### Workshop (GWS)

No changes.

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## V5.1.5

**Compiler Version 3.44** (necessary for the compatibility with GRSW)

### Galileo

→ Errors rectified:

- The program language of Galileo was not set correctly.
- Drag and drop tags: the drop position was not correct, when an array element was moved inside of the array.
- Download problem, when the Galileo installation path don't start with a drive letter.
- Error at upload of the project backup from the panel.
- Search object: the object type 'camera' was not available.
- PLC parameters: the parameters was set to a wrong value when the PLC type was changed.
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### Galileo Runtime (GRSW)

→ Siemens - MPI protocol version 2.01: CPU's with credit number unequal 1 supported.

→ Error rectified:

- Fatal error: Galileo Open doesn't work.
- All recipe scroll functions don't works, when the function are used in scripts.
- Moeller XControl Ethernet PRG: PLC parameter 'Level' changed to 2.
- Bridge Communication: problem when a synchronization is started from the PLC again.
- Camera: in some cases the storing of picture breaks by an error message.
- Script: some special functions with on/off states toggle by each call. The parameter for the on/off state was ignored.

### Workshop (GWS)

→ Errors rectified:

- Function 'set charset': the range of the text numbers was limited to 65'535 instead of 2'147'483'648.
- The program language of GWS was not set correctly.

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## V5.1.6

**Compiler Version 3.44** (necessary for the compatibility with GRSW)

## Galileo

→ Errors rectified:

- Fatal error: copy/paste of structures, if the structure and an element of the structure is selected.
- Tags with dynamic limits: problem with recursive definitions of dynamic limits.
- Project upload: project bitmaps are overwritten by uploaded bitmaps with 256 colors.
- Undo and redo don't work in all cases.
- MPB driver for GPI could not copy by the compiler.
- Refresh problem with grouped objects after the undo function is used.
- When a polygon object is grouped with other objects, then the selection of the polygon is never displayed as grouped.
- Refresh problem when the mask object types are displayed.

## Galileo Runtime (GRSW)

→ Error rectified:

- Fatal error: the GPI crash with the function "Call Script on Mask entry" in some cases.
- Fatal error: at startup on panels without WinCE, when too many graph samples are defined.
- The character 'space' was allowed in passwords erroneously.
- Keyboard with limits: if the function "Key Ret and Call Script F." was used and the entered value is out of the limits, then the script was called erroneously.
- Decimal keyboards: if the function "Call Script on mask entry" is used, then the input of values with decimal points was not possible.
- CAN Open: small baud rates: 20kbaud and 50kbaud implemented.
- Printer forms with multi lines: only the first line was printed.
- Mask print: horizontal pixel lines are missing.
- Bar graph: a blinking disabled bar graph was drawn not correctly.
- GRSServices hasn't worked correctly behind a firewall.
- Refresh problem of system messages during a print job is active.

## Workshop (GWS)

No changes.

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## V5.2.0

**Compiler Version 3.50** (necessary for the compatibility with GRSW)

### Galileo

- ➔ Mask objects settings: simplified handling with the settings dialog. Selection of mask objects without to close the settings dialog.
- ➔ All object states as grid implemented.
  - Functions copy/paste of a cell or a block supported.
  - Multi selection supported.
  - Multi define by block, column or cells supported.
  - Sequence of texts or bitmaps supported.
- ➔ Accessibility and visibility settings as grid implemented.
- ➔ Size and Position as an new object property page implemented.
- ➔ Fix attribute for all mask objects implemented.
- ➔ Settings of static objects as grid implemented.
- ➔ Project version detection implemented. The Galileo version is displayed at loading of an old project.
- ➔ Automatic project save implemented.
- ➔ Automatic security backup save implemented.
- ➔ User management:
  - Size of the user name increased to 20 characters.
  - Size of the password increased to 20 characters.
  - Dynamic user password supported.
  - Dynamic level password supported.
- ➔ New password script function:
  - UserLogin
  - NewUser
  - LoginAtLevel
  - ChangePWOther
  - ChangePWOwn
- ➔ Recipe:
  - Confirmation for the special functions 'Change Recipe Entry Name', 'Protect Recipe Entry Name', 'New to Next' and 'Save As to Next' implemented.
- ➔ New special functions:
  - Group Recipes: 'Save As to Next'
  - Group Recipes: 'Copy to Next'
- ➔ Possibility to protect the backup by password.
- ➔ A text filter in all text lists available.
- ➔ User defined color restriction for the color selection.
- ➔ FTP download:
  - Possibility to quit the running Galileo Runtime before the download start.
  - Possibility to reboot the panel after the download.
- ➔ Errors rectified:
  - Recipe: recipe file format problem when the last recipe entry was copied to another entry.

## Galileo Runtime (GRSW)

- ➔ User management:
  - Size of the user name increased to 20 characters.
  - Size of the password increased to 20 characters.
  - Dynamic user password supported.
  - Dynamic level password supported.
- ➔ New password script function:
  - UserLogin
  - NewUser
  - LoginAtLevel
  - ChangePWOther
  - ChangePWOwn
- ➔ Recipe:
  - Confirmation for the special functions 'Change Recipe Entry Name', 'Protect Recipe Entry Name', 'New to Next' and 'Save As to Next' implemented.
- ➔ New special functions:
  - Group Recipes: 'Save As to Next'
  - Group Recipes: 'Copy to Next'
- ➔ New print modes: RAW and LPR added to print directly to network printers.

## Workshop (GWS)

- ➔ Serial download deleted.



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## V5.2.1

**Compiler Version 3.50** (necessary for the compatibility with GRSW)

### Galileo

→ Error rectified:

- The paste functions of static mask objects don't work correctly, if the object was copied from an Galileo version < 5.2.0.
- Refresh problem in the mask object property page 'text', if a text number is entered.
- The active language was not displayed in the status bar.
- The sorting of mask numbers in the project settings was alphabetic instead numeric.

### Galileo Runtime (GRSW)

→ Error rectified:

- Projects which have a dot inside of the project name could not start on the panel.
- Problem to print a multi line text with the function 'Print History'.
- Graph: continuously saving of a graph archive don't work if the project name is longer than 8 characters.
- A fatal error occurred if a not existing print report is started.
- Graph archive: problem if not enough free memory is available to store the archive file on the storage card.
- Graph archive: after loading of a graph archive, the sand glass is not deleted.
- The logon dialog for printing to an PC was displayed in the background.
- Confirmation mask: if a script is called by the special function 'Key 'Ret' and 'Call Script F."', then the script not started.

### Workshop (GWS)

→ No changes.

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## V5.2.2

**Compiler Version 3.50** (necessary for the compatibility with GRSW)

### Galileo

➔ New special functions: 'Connection x persistent ON/OFF'

➔ Error rectified:

- User management: passwords with more than 6 characters don't work, if the user is created in Galileo.
- Compiler: if a picture size was bigger than the panel resolution, an error occurred.
- Problem with multi monitor mode and mask property object dialog.
- The program hangs in some cases, if the properties of a static object are displayed.
- Copy/paste of an accessibility or visibility variables in the object property grid not possible.
- The accessibility option of a standard recipe was not available.

### Galileo Runtime (GRSW)

➔ Driver update:

- Siemens - MPI protocol version 2.02: works only with rack 0 slot 2.

➔ Error rectified:

- Change Language from PLC: a system window is not removed before the project language is changed.
- In some cases the MxPro dialog is visible after the GRSW runtime is started.
- Industrial Ethernet: works only with rack 0 slot 2.
- Problem with the special function 'Display Project Name' inside of a print report.
- Bargraph: the color of bargraph not changed, if the value is outside the limit due limit value change.
- Problem with user defined keyboards for hexadecimal input.

### Workshop (GWS)

➔ No changes.

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## V5.2.3

**Compiler Version 3.51** (necessary for the compatibility with GRSW)

## Galileo

➔ Error rectified:

- Tag search: tags for saving the user level are not found at searching of tags.
- Problem to load a project of V5.2.2 in V5.2.1.

## Galileo Runtime (GRSW)

➔ Driver update:

- Siemens - MPI protocol version 2.03: performance increased.
- Onboard MODBUS: twisted mode added.
- Siemens - Industrial Ethernet: routing to PROFIBUS possible.
- MODBUS TCP, MODBUS RTU, MODBUS RTU (OnBoard): increase the message size up to 254 Byte.

➔ Error rectified:

- Help window: problem to display big characters.
- Script: when the special function 'Last mask' is uses in a script, then it works not in all cases.

## Workshop (GWS)

➔ No changes.

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## V5.2.4

**Compiler Version 3.52** (necessary for the compatibility with GRSW)

### Galileo

➔ Error rectified:

- Fatal error: Galileo crashes in some cases if a script is imported with a wrong syntax.
- Compiler window: some errors can't be opened by a double click.
- The option 'save continuously' in enhanced graphs was always active.
- The mask object property dialog could not be closed, if the object was defined in a print report mask with a bigger resolution than the panel resolution.
- The size and position property dialog of mask objects was not refreshed after an undo/redo command.
- At copy a paste of grouped objects from on mask to another mask the group definition can be lost.
- Clean the selection of all mask objects with the command 'Deselect All' has not worked.

### Galileo Runtime (GRSW)

➔ Error rectified:

- Fatal error: GRSW crash if a mask contains a large number of overlapping objects ( > 1000).
- Fatal error: GRSW crash at 'RET' key in a user defined keyboard if it is called from a special function.
- No refresh of character arrays if the tag was not addressed and defined as read only.
- Wrong color palette in the GRSW after a call of an external program in GRSW.
- A call of a recipe function by script on mask entry fails the first time.
- In enhanced graphs the values of float tags are rounded to integer numbers.
- Refresh problem in standard graphs with ruler.
- Error window: the special function "Error scroll on/off" confirmed an error erroneously, if the error is no longer active.
- Submasks: the position a polyline object in a submask was wrong.

### Workshop (GWS)

➔ Error rectified:

- Compiled text files: error and help texts are loaded, displayed and saved only from language 0.

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## V5.2.5

**Compiler Version 3.52** (necessary for the compatibility with GRSW)

### Galileo

→ Error rectified:

- The script function 'ReReadTag' does not work with tag of type 'char-array'.
- The compiler checks the char-array preset value length.

### Galileo Runtime (GRSW)

→ Error rectified:

- Fatal error: the runtime crashed if system error messages printed out.
- Fatal error: the runtime crashed in some cases if the function "Show System History" was called.
- Problem to display pictures under certain circumstances.
- Not all system messages were displayed.
- Camera objects are started always automatic.
- The camera object was stopped if the project language was changed.
- Problem to load a selected recipe if the command is called from a script.
- WinGRS: the persistent data was lost under certain circumstances. Persistent data are: error history, project language, system language, time format, summer time, unit group, communication on/off, backlight value and so on.

### Workshop (GWS)

→ No changes.

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## V5.3.0

**Compiler Version 3.77** (necessary for the compatibility with GRSW)

### Galileo

- ➔ New panels:
  - New monochrome 5.7" panels in 3 variant types: MPI, CAN, BAS
  - New color 5.7" panel with integrated Suconet K communication.
- ➔ New protocols:
  - Moeller easy 800/MFD PC-CAB (OnBoard)
  - A. Bradley – EtherNet/IP
- ➔ New slider object supported.
- ➔ Search replace of object attributes.
- ➔ Number of communications increased to 8.
- ➔ New are folder supported in the following trees: masks, scripts, print forms, recipes, graphs.
- ➔ Masks: show each mask as a tabbed window.
- ➔ 2D/3D style of buttons and views is freely definable.
- ➔ Recipe
  - Tags overview of multiple recipes.
  - Confirmation for unsaved recipe entries.
- ➔ New special functions:
  - Print Parameter List: to print the content of the parameter list.
  - Connection x persistent ON/OFF: switch a connection persistent ON/OFF.
- ➔ Help window: hide the help window automatic, if the corresponding error is not any longer active.
- ➔ Error window: sorting order freely definable.
- ➔ Texts: moving of a text range supported.
- ➔ User management: logout time stored in tag or constant.
- ➔ Project settings: standard button to set the settings to the default values.
- ➔ For each plc is a free definable description text available.

### Galileo Runtime (GRSW)

- ➔ New panels:
  - New 5.7" monochrome panels in 3 variant types: MPI, CAN, BAS
  - New 5.7" color panel with integrated "Suconet K" communication.
- ➔ New protocols:
  - Moeller easy 800/MFD PC-CAB (OnBoard)
  - A. Bradley – EtherNet/IP
- ➔ New slider object supported.
- ➔ Number of communications increased to 8.
- ➔ 2D/3D style of buttons and views is freely definable.
- ➔ New special functions:
  - Print Parameter List: to print the content of the parameter list.
  - Connection x persistent ON/OFF: switch a connection persistent ON/OFF.
- ➔ Help window: hide the help window automatic, if the corresponding error is not any longer active.
- ➔ Error window: sorting order freely definable.
- ➔ User management: logout time stored in tag or constant.
- ➔ Error rectified:
  - Automatic start of the camera objects doesn't work at the first time.

### Workshop (GWS)

- ➔ No changes.

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## V5.3.1

**Compiler Version 3.78** (necessary for the compatibility with GRSW)

### Galileo

➔ Error rectified:

- Fatal error if the Baltic character set is used in the text definition.
- Fatal error in the text grid page with a great many states (>5000).
- Problem to resizing the enhanced language dialog.

### Galileo Runtime (GRSW)

➔ Error rectified:

- All script functions of the group 'Password' don't work.

### Workshop (GWS)

➔ No changes.

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## V5.3.2

**Compiler Version 3.78** (necessary for the compatibility with GRSW)

### Galileo

➔ Error rectified:

- Fatal error at tag import, if an array with size 1 was imported.
- Text grid: the text preview with transparent background was displayed with a background color.
- PLC description was missing in the tag information's.
- If the texts in the text list is filtered, then an icon is displayed in the list header. This icon was not visible always.

### Galileo Runtime (GRSW)

➔ Error rectified:

- Fatal error if float tag with dynamic limits was used in a graph object.
- EtherNet/IP: problem with structure alignment.
- EtherNet/IP: problem to reconnect the communication, if the Ethernet cable was disconnect for a short time.
- Add default unit identifier to Modbus/TCP.
- Special function 'Save Mask as Bitmap' don't work.
- Keyboard input was broken if the TAB key was pressed.
- The line with ( > 1) in GRS was not exactly the same as in Galileo.

### Workshop (GWS)

➔ No changes.



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## V5.3.3

**Compiler Version 3.78** (necessary for the compatibility with GRSW)

### Galileo

➔ Error rectified:

- Fatal error: if a tag and a struct is selected for data type conversion.
- Copy paste of more the one tag was not supported.
- Refresh problem in DEMO mode with zoom value > 100%.
- Endless loop if the question for the optimized color palette was answered with no.
- Compiler error for string referenced PLCs: wrong error if CONTROL/STATUS have a none ARRAY-address.
- Recipe confirmation masks: if an old projects (< 4.20) were load, the confirmation settings were wrong.
- The tag information's are loosing if a camera objects was copied from one project to another project.
- Search replace: font type and font size was not found in error windows.
- Search replace: parameter list group was not found as standard texts.
- Search replace: color definitions in the accessibility settings were not found.
- Problem to display bitmaps inside of a grid, if the bitmap file has a wrong file size in the bitmap header.
- The synchronization of error text id's from error numbers and error numbers from error text id's don't worked, if an array or a struct is selected.
- Tag import: the imported tags have wrong addresses, if the tag is a part of a array of structs of array of array.

### Galileo Runtime (GRSW)

➔ Driver update:

- SymARTI: new version 2.5.2.0

➔ Error rectified:

- Fatal error in GrsDateTime: if no 'Date\_Time' structure is defined.
- Refresh delay if a camera object is defined on the mask.
- The control structure was not read, if an other communication has a lot of communication errors.
- ASCII key with umlaut characters was not correctly displayed.
- Automatic continue of online error printout after finishing another print job failed.
- Recipes: general recipe problem if the sum of all tag name lengths > 65535.
- System font size: in some cases the font size was 0.

### Workshop (GWS)

➔ Error rectified:

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## V5.3.4

**Compiler Version 3.78** (necessary for the compatibility with GRSW)

## Galileo

➔ No changes.

## Galileo Runtime (GRSW)

➔ Driver:

- Reverted SymARTI back to version 2.5.0.3 (2.5.0.1 for CE/X86).

## Workshop (GWS)

➔ No changes.

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## V5.3.5

**Compiler Version 3.78** (necessary for the compatibility with GRSW)

### Galileo

➔ Error rectified:

- Fatal error: during double click on a struct which include an addressed tag with address syntax <struct>.<tag>.<array index>[].
- Tag import: too much tag deleted with option 'delete always'.
- Object conversion problem: if a value display object is imported by copy/paste.
- Error window: frame type 'no frame' not displayed in the object property dialog.
- Project overview: problem with identical folder names in masks, scripts, graphs, recipes and printer forms.
- Online Help: content tab window empty in some cases.

### Galileo Runtime (GRSW)

➔ New panels:

- New 5.7" color panels with integrated MPI
- New 10" color panel with integrated MPI
- New 12" color panel with integrated MPI

➔ Driver update:

- Profibus PDP-TP: new version 3.01

➔ New protocols:

- MxPro: speed optimized protocol for communication with CoDeSys. Use this instead 'CoDeSys' and 'CoDeSys (local)'.

➔ Profibus DP: parameter 'Default Station No' added to 'Siemens - S7 Profibus DP' communication.

➔ New program 'Communication check' added. Display the communication errors as a list.

➔ Error rectified:

- Fatal error: if CoDeSys communication use a bit array with more than 1024 element.
- Fatal error: if the length of all recipe tag names was smaller as the length of all recipe values.
- Fatal error: creation of empty TAB file failed.
- Camera object: refresh problem after calling the commands 'Image Save' and 'Image Save As'.
- Recipe: problem to select a recipe entry if more than one recipe object are defined on the same mask.

### Workshop (GWS)

➔ No changes.

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## V5.3.6

**Compiler Version 3.78** (necessary for the compatibility with GRSW)

### Galileo

→ Error rectified:

- Tag import: problem to reimport arrays. The existing tags are not found and new tags are created.
- Copy/past of mask objects: if a polyline object is grouped with other objects, then the relative position of the polyline object is moved against the other objects.

### Galileo Runtime (GRSW)

→ Error rectified:

- 'Siemens - Industrial Ethernet': WinGRS and GPI display 'S7: Protocol' error.

### Workshop (GWS)

→ No changes.

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## V5.3.7

**Compiler Version 3.78** (necessary for the compatibility with GRSW)

### Galileo

→ Error rectified:

- If error arrays in an addressed structure with polling attribute is used, then the array was not polled.
- Tag import: wrong address at arrays of PLC texts.

### Galileo Runtime (GRSW)

→ Error rectified:

- Fatal error in communication MxPro: if parameter 'ip address' is set to 'localhost'.

### Workshop (GWS)

→ No changes.

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## V5.3.8

**Compiler Version 3.78** (necessary for the compatibility with GRSW)

## Galileo

- ➔ New panels:
- New 5.7" color panels in 2 variant types: MPI, CAN

## Galileo Runtime (GRSW)

- ➔ New protocol:
- Siemens - PPI (Onboard)
- ➔ Error rectified:
- Fatal error: after the Ethernet connection is unplugged longer than one minute. At communications: ADS, MxPro and CoDeSys.
  - Memory leak: at mask object accessibility with style 'pattern 1 (chessboard)', 'pattern 2 (raster)' or 'pattern 3 (diagonal)'.
  - Endianess changed for communication 'Seitec Seebacher ISYGLT' from Intel to Motorola.

## Workshop (GWS)

- ➔ No changes.

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## V5.3.9

**Compiler Version 3.78** (necessary for the compatibility with GRSW)

### Galileo

➔ Panel type names changed from Mnx... to XV...

➔ Error rectified:

- Redo/undo: fatal error if a mask object is outside the mask resolution and the undo or redo function is used.
- Move error and help texts: at buttons '...' the dialog for standard texts is displayed.
- Move address: the attributes 'read on demand', 'read at startup', polling settings, 'write on demand' and 'write at startup' are reset.
- Project download: if the project name is longer than 8 characters, then all files are cleared before downloading.
- Siemens tag import: the comment column is new optional.
- Parameter list: problem with identical names of parameter list groups.
- Default language was loose in some cases.
- 'CANopen Onboard (Event)': arrays in structures was not allowed.
- Upload password file: the dynamic defined passwords are lost after an upload of the password file.
- Value display: limits are not refreshed, after modifying the limits.

### Galileo Runtime (GRSW)

➔ Error rectified:

- Graph: refresh problem of curve in some cases.
- Graph archive files: the tag names are not saved in the graph archive file.
- Error window: wrong error states are visible, if the visibility of the error window is defined by an error tag.
- Status: inaccurate status bit with startup delay.
- Memory leak: loss of memory, if objects with active accessibility is draw (only pattern mode).
- Serial communication: the serial communication on the system port at panel XV-/MK2-252-57MPN doesn't work.
- 'CANopen Onboard (Event)': set the maximal message size to 8 Byte.

### Workshop (GWS)

➔ No changes.

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## V5.3.10

**Compiler Version 3.78** (necessary for the compatibility with GRSW)

### Galileo

➔ Error rectified:

- Error at loading project: if the project is not saved after uploading password data's, then the project can't be opened in some cases.

### Galileo Runtime (GRSW)

➔ Error rectified:

- Memory leak in camera objects.
- Start of EIB projects failed on panels, if central commands are used (since V5.3.8).
- Object 'Switch': incorrect setting of "set two mask" function.

### Workshop (GWS)

➔ No changes.

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## V5.3.11

**Compiler Version 3.78** (necessary for the compatibility with GRSW)

### Galileo

- ➔ New PLC address possibility of multidimensional / nested arrays: f.e. ' name[1,4,7] ' instead of ' name[1][4][7] '
- ➔ Special function 'Restart Runtime' implemented.
- ➔ Special function 'Backlight: Learn Dim Value' implemented: sets a user defined reduction value of the backlight for the screen saver.
- ➔ Special function 'Operating System Version' improved:
  - HMI panel with Windows CE: added the version of Windows CE to the string with the image release number, f.e. 'CE 3.0 / 2.14.2 (934)'
  - Desktop Windows: display the OS version under desktop, f.e. 'Windows XP / 5.1 (2600)'
- ➔ PLC communication:
  - BETA release of the communication 'Allen Bradley – Logix – DF1' implemented ( 120 license points required )
  - BETA release of the communication 'Siemens – SIMOTION MIIF' implemented ( 120 license points required )
  - PLC communication 'Allen Bradley – Logix – EtherNet / IP' : the required license points were reduced from 160 to 120.
  - PLC communication 'Selectron Modbus over CAN Open (OnBoard)' : added the memory alignment option 'little endian twisted'.
  - PLC communication 'Mininet SPS / SPSIO Mode' : added the baudrates 4800 and 9600.
- ➔ New compiler messages:
  - Compiler check of dynamic limits, if the format of the tags and its limit tags do not correspond.
  - Compiler check for not existing keyboard masks.
- ➔ Error rectified:
  - Under certain circumstances the 'user defined keyboard' wasn't displayed.
  - The problem rectified of using the special function 'Execute' in scripts, if the script was called from the special function 'Call script on mask entry'.
  - Search tags in mask: each tag was only listed once even if the tag was used several times inside the same mask.
  - Parameter list: the problem of parameter groups rectified, if the group name of the parameter list was defined several time inside the standard text list.
  - Parameter list: the list inside the overview dialog of all parameter list numbers was falsely empty.
  - Tag import: under certain circumstances the flag 'polling' wasn't set correctly while importing the symbol file. The problem exists only, if the project uses more than one PLC communication and one of them is an 'event driven' protocol.
  - Tag address dialog: the GUI was confusing, if the PLC address were not permitted due to the message size.
  - FTP transfer: minor problems with third party FTP server and while uploading data (password or recipe files) rectified.

### Galileo Runtime (GRSW)

- ➔ Error rectified:
  - GPI and GALILEO OPEN: the problem with external graph archive files and the option 'save continuously' rectified.
  - GPI and GALILEO OPEN: mask refresh speed optimizations according f.e. changing masks or languages.
  - Graph object: the problem of the tags with dynamic limits rectified. The value was drawn wrong, if the format of the tag and its limit tags were different.
  - Camera object: the session was falsely closed after a failed read access to the camera.
  - PLC communication 'OPC Remote' : improved the error messages of the communication and allowing the character ' : ' inside the PLC address.



- PLC communication: the problem with leading zeros in the IP address of the PLC rectified (f.e. 192.168.0.033)
- PLC communication 'Allen Bradley – Logix – EtherNET/IP' : minor problems with strings and the maximum fragment size rectified.
- Special function 'Show System info': display the correct value of 'unused RAM'.

## Workshop (GWS)

➔ No changes.

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## V5.3.12

**Compiler Version 3.78** (necessary for the compatibility with GRSW)

## Galileo

➔ New panel:

- New 5.7" color panels with integrated EIB: XVH-/MH2-342-57EIB

➔ Error rectified:

- Fatal error: if in the address range dialog a communication was activated and an empty structure was addressed.
- Sub masks was drawing transparent always if the original mask is defined transparent.
- The selected printer was unselected if a new printer was created.
- Tag import of arrays to value referenced PLC's have not worked.
- FTP transfer: a port number in the IP address was ignored.
- Error history size was not stored in the project. We recommend a maximum history size of 1024 entries.

## Galileo Runtime (GRSW)

➔ New protocols:

- XVH-/MH2-342-57SKS: 'Moeller PS3x6 Suconet K1' added.

➔ Error rectified:

- Fatal error: if a system error is occurred at startup and a bit tag was assigned to this system error.
- Problem to print a mask in landscape mode.
- A mask change does not work, if it is called by a script at panel start.
- The function key 'Key Clear' does not work in user defined keyboards.
- Problem while load/save graph archive files to/from an external PC drive (GPI and WinGRS only).
- Password management with dynamic passwords: a password change was not stored to the tag.
- The export of tag address ranges have saved the file in a wrong format.
- Wrong display of parameter list if the object is smaller than text height.
- Camera object: refresh problem if a dynamic object overlap the camera object.

## Workshop (GWS)

➔ No changes.

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## V5.3.13

**Compiler Version 3.78** (necessary for the compatibility with GRSW)

### Galileo

- ➔ New panel:
  - KEBA KeTop T50/T100 VGA (Windows CE)
- ➔ Error rectified:
  - No response from Galileo if more than one sub masks are selected and one of the functions 'Same Height' or 'Same Width' is called.

### Galileo Runtime (GRSW)

- ➔ New protocols:
  - Omron - SYSMAC - Host Link
- ➔ Error rectified:
  - Fatal error: at recipe conversion under certain circumstances.

### Workshop (GWS)

- ➔ No changes.