

# GTStudio

## RELEASE NOTES

Version 3.6.0

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Subject to change – Data without tolerance limits is not binding.



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## Version 3.6.0

16 Features • 24 Bugfixes

### GTS

#### Feature

1026	GTS now also supports dark mode on Windows 10 and 11. The user interface has been redesigned in a modern style.
1138	Implement new licensing system (VX Connect)
1328	Allow test package as zip format
1333	Start with company name for GTS installer name
1385	Automatically expand validations and all attributes in Item Properties when selecting an element in loaded program
1425	Save site/nest/subdut information in STDF report
1426	Write binning information to STDF reports
1434	Rework scaling and display of graph, histogram and measurement table in test program / debug view (also logarithmic)
1449	New view to show runtime attributes and validations at one glance
1450	Transfer attributes at runtime from one test method to another
1483	Make Enabled available for measurement/result/validation via test plan

#### Bugfix

1025	Build GTQ / Report Viewer again in GTS 3.x.x
1383	Fix multiple bugs in GTEDataBase.cpp and DBGui.cpp
1417	Select test package should use {DataDir}\Testpackages as default folder
1423	Make STDF report conform to spec
1439	Fix dark mode theme switching for toolbar icons and widget backgrounds
1453	Datatype of measurement id in DB does not allow more than 8 million entries
1487	GTbuilder - New Project - Hardware Scan - Crash

### GTSWaveform

#### Bugfix

1350	Saving a waveform with an empty unit - results in sample interval line used as unit
1433	GTbuilder Tools / Waveform Viewer: Pressing enter in input field closes window

### GTAnalyzer

#### Bugfix

1386	Improve performance, add multi-DB support and failed steps overview
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### GTbuilder

#### Bugfix

1381	Component Box should not be shown in Debug View of GTbuilder
1384	In GTbuilder Debug View automatically collapse when coming back from other application
1415	Don't add ABUS device to HW.ini for none GTML projects
1416	GUI states of GTbuilder are now saved
1429	GTbuilder - Copy project does not copy <project>.binning file
1430	GTbuilder - Copy project: Register in recent projects
1438	Disable toolbar actions in debug mode and add setup files action

**Bugfix**

1486 Menu states in GTbuilder before opening any project is not correct

**GTengine****Feature**

1241 only Report Steps in Machine Capabilities Analyses

1387 Local SQLite statistics database for lot test results with FPY and retest metrics

1441 New (workspace) parameter for STDF report path

1448 New placeholder %customer for configuration of report path

1471 New blockable plugin event trigger when station waits on other station

**Bugfix**

1419 Result, lower and upper limit stored in STDF record Parametric Test Record (PTR) are wrong

1421 In GTengine is not identifiable which workspace is loaded

1424 Remove fixed global font size from QWidget style to restore dynamic text scaling

1444 HeartBeat problem, when you log out from GTengine

1454 Fix nullptr disconnect warning in MainViewTestProgress::SetTest

1463 Fix blurry table cell editors and inconsistent row heights in Test Execution tree

## Version 3.5.1

2 Features • 6 Bugfixes

### GTS

**Feature**

1296 Build Type should be visible in GTS login screen and about dialog

**Bugfix**

1351 Editing real attribute value with range double min - max results in value INVALID (nan)

### GTbuilder

**Feature**

962 Create test package from GTbuilder project

### GTengine

**Bugfix**

1376 PPP1 Demo program no longer has a demo program via the installer

### GTincircuit

**Bugfix**

1334 Can not load cdf with different bench name then DUT in GTi GUI

1342 All parts are executed, even when only one part should be tested

### ICTX

**Bugfix**

1375 Resistance measurement on open pins shows 0kOHM

### UCM

**Bugfix**

1349 UCM\_Init fails to find device when using standard FTDI PID/VID due to description check before EEPROM read

## Version 3.5.0

28 Features • 28 Bugfixes

### BASEML

#### Feature

1295 Add simple dialogs to BASEML

#### Bugfix

1324 Deadlock when closing BASE ML dialog using ESC

### COMML

#### Feature

1229 Introduce COMML with LIN and CAN support to GTS

1284 Add SPI and I2C to COMML

#### Bugfix

1259 Setup and cleanup of test method library is not shown correctly

1287 Birtate cannot be set for CAN communication

### GTE API

#### Feature

1303 gte\_DeleteSubResult to delete only a specific result/validation by ID

1318 Allow access to values (testplan) of measurements/results from test program

1320 Provide consistent GTE API for waveform functionality independent of BASEML

#### Bugfix

1265 Rework AdjustROpen and AdjustIOpen functions, to make sure a value compare works

### GTML

#### Feature

1282 Add generic URM module to GTML

1302 Rework SET\_DCPWR method for sink modes

#### Bugfix

1269 FREQ\_SIGANL cannot handle change of Sample Count on run time

### GTS

#### Feature

1014 Show only one line for result id 0 and step in PDF report

1233 Make all testplans adjacent to testprogram selectable on load

1260 Write and show scope data in graph, support for envelope curves

1262 Licensing for test method libraries

1271 Also show bin id additionally to bin name in test program view

1285 Sign GTS Installer.exe on Jenkins

1299 Make result/validation name overwritable from test plan

**Feature**

1300	Property to make real and int validations use an absolute value
1301	Make "Log in Report" available for measurement/result/validation via test plan
1304	Show id of bins first before bin name, show id also in testplan properties for binning
1312	New standard group PrepareTestOnce only executed on first run

**Bugfix**

880	If attribute string list is disable the value can still be changed via the combobox
1240	Resource Manager is not thread safe and prepared for multiple init calls
1263	Error DeleteFile caddy.exe and nssm.exe on second install of GTS
1264	Test method libraries should not use gte_ResourceManagerCleanUp
1270	Soft Bins collected from test program contain duplicate bins
1274	Users Tester and Admin initially do not have all rights in GTBuilder
1275	Use default FTDI Vendor/Product ID to avoid custom driver issues on Windows 10/11
1308	Waveform Viewer crashes if sample interval of waveform is to small

**GTbuilder****Feature**

404	Create reports from GTbuilder
1043	Display SW.ini name in error routing message
1171	Keep empty lines and comments in C file
1191	Route info output after each test step

**Bugfix**

1098	Display of the "Build Toolchain" with unavailable rights
1257	Error "Could not open file 'HW_Setup.ini'" on first start while try to deactivate simulation for devices
1268	Starting a debug session on a second project while another project is already loaded should be permitted
1279	Copy and paste does not work, when not clicking on a new item in program tree
1290	GTbuilder crashes when steps are deleted and other steps are selected
1291	Char variable is created as a string when copying a method

**GTengine****Feature**

1242	Show step numbers in Machine Capabilities Analysis
1317	UUT scan verification using regular expression

**Bugfix**

1239	Nest count of station is not resetted on product load
1309	GTengine crashes on second login
1321	Abort / Terminate not possible on Retest
1322	Error when double clicking on DUT in Production View / REPORT
1323	Tester can set breakpoint without debug permissions

**GTincircuit****Feature**

1141	New GUI for simple creation of ICTx tests
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**LED-TML**

**Bugfix**

1250 The scan of the LED\_TML also detects other COM ports that are not FEASA devices

**PROGML****Feature**

1232 Introduce test method library for programmer

**SCPI-TML****Feature**

1261 ACQ\_SCPI added to get multiple values from scopes

**Bugfix**

1118 SCPI query compares with empty string

**VX\_PROG****Bugfix**

1251 The VX\_Prog scan function does not verify whether a real Flash Runner device is detected; instead, it selects one at random

**VX\_SPI\_I2C****Bugfix**

1293 Missing timeout in IO-Warrior56 Dongle can lead into timeout and blocking test execution

## Version 3.4.0

8 Features • 10 Bugfixes

### CSB

**Feature**

1173 Rework VX\_Lin library to be consistent and independent of peak hardware

**Bugfix**

1159 API call init with resource name return success

### Documentation

**Feature**

1131 Create documentation of ICTX (.cdf) format

### GTE API

**Feature**

772 Take over multstation functionality (Siemens) from Version 2.1 to current version

1210 New API function to start process with timeout and exit code

**Bugfix**

1209 Arguments of exec process API call can now be quoted to all spaces

### GTML

**Bugfix**

1142 Reworked USB scan in GTML test method GETI\_SYSTEM

1188 PAM silent mode introduced (no popup dialogs)

### GTS

**Feature**

1174 Fixture Position analogous to Test Index and Test Repetitions as GUI element

1187 Program item double click plugin event (Custom Action)

### GTbuilder

**Bugfix**

1175 When variables are adjusted in GTbuilder program does not recompile

1193 Opening brackets in step description disappears when saving / loading program

### GTengine

**Bugfix**

1176 Loading same order/lot in GTengine does not reload product/test program

### ICTX

**Bugfix**

- 1170 Resistor adjust limit allows max. up to 10
- 1211 ICTx discharge is very slow in simulation mode

**SCPI-TML****Bugfix**

- 1169 WRITE\_SCPI should not display a error msg box, instead add the error to the result

**VX URM****Feature**

- 1217 Implement reading input pins in VX URM

**VX Uart****Feature**

- 1063 reworked UART driver and added new unit bit/s

## Version 3.3.0

11 Features • 4 Bugfixes

### GTE API

**Feature**

1109 Extension of GTE API for process execution and regular expression search

### GTML

**Bugfix**

1137 MEAS\_DMM with limits in uA Range has configuration error for resolution

### GTS

**Feature**

1129 Migrate GTS to Python 3

1143 Implement PLC Demo Plug-In for Snap7 and Siemens PLC

**Bugfix**

1091 Make test packages runnable in multiple stations. Dont use subfolder

1107 Provide GTS routing library as separate package

1119 Repeatedly performing MEAS\_DMM causes GTS to crash.

### GTbuilder

**Feature**

1092 GTbuilder-Project: Show in Explorer

1093 GTbuilder new element under group for code area, allow usage of TML methods

1094 GTbuilder-Project: Show in Explorer is disabled after compile test program

1105 Activate alternating row colors for drag-and-drop tree model

1132 Shortcut for log in report in GTbuilder

1145 ProjectItemCodeArea in GTbuilder is now editable

### SCPI-TML

**Feature**

1081 Simulation mode for SCPI TML added

### VX URM

**Feature**

1114 Simulation mode for urm drivers added

## Version 3.2.0

6 Features • 4 Bugfixes

### GSTL

**Feature**

1080 SM160 self test - matrix relay off - second measurement negative because of under-range

### GTML

**Feature**

1076 Add function to GTML to determine frequency and amplitude of signals

### GTS

**Feature**

1059 Allow serial execution of different stations in multipanel test

**Bugfix**

1058 Real attribute in milli ampere shown in ampere after loading from testplan

1074 Compilation error on GT4000 VXT analysis system

### GTbuilder

**Feature**

491 Provide "Copy Project" replacing "Save Project As"

1070 Add function to load a GTbuilder project in simulation mode

### GTengine

**Feature**

1041 Don't execute panel item in second cluster level if first cluster level had ABORT

**Bugfix**

1078 GTengine Debug: Splashscreen Action "Display User Interface" takes very long after login

### SCPI-TML

**Bugfix**

1069 SCPI TML now only scans for instruments, to make sure to add controllable devices to the ini files

## Version 3.1.1

2 Bugfixes

### GTbuilder

**Bugfix**

837 Self-Test (GSTL) shows errors: Device not found, Invalid session handle

### SCPI-TML

**Bugfix**

1079 All ...\_SCPI methods overwrite comment of step with SCPI command

## Version 3.1.0

15 Features • 14 Bugfixes

### CSB

#### Feature

951 add I2C functionality to VX SPI IIC URM Driver

### GTE API

#### Feature

990 Add GTE API functions to get parameters of fixture and fixture type

996 Add GTE API functions to get lower and upper compare operator from test result

#### Bugfix

851 KiCad routing: If multiple Connector pins are connected to the same net they are not handled as one net

### GTS

#### Feature

933 Create Test Method library for LED Tests

942 Added Binning support

964 Update GTS to VS2022 and Qt 6.8.2 for 32-Bit

967 remove VxiloClient\_w32 and VxiloClient\_SFP.exe from GTS installation

1004 Add information to step result about method / component name and device name

1038 Additional scalings for units voltage and current

#### Bugfix

979 Remove VISA dependency from GTESystemControl - Move scan to SCPI-TML

1000 Duration of retest is always zero and it is not waited until event TEST\_RESULT is processed

1022 multipanel test have no start time and duration is zero

1024 Login does not show information if license has expired

1035 Saving test plan should only be allowed after program run

### GTbuilder

#### Feature

654 Resolve environment variable placeholders in path to HW.ini and SW.ini

816 Make GTbuilder projects independent of folder

889 Each test method library should have its own root entry

#### Bugfix

972 Add Includes and Libraries of TML not before a method of it is used in a GTbuilder project

1067 Creating new self test crashes when clicking on finish

### GTengine

**Feature**

- 409 GTESystemControll must also be executable if GTSL from R&S is not installed.
- 928 Allow loading test package also in test program view

**ICTX****Bugfix**

- 980 ICTX Capacitor: Unit is F and values smaller than uF can not be entered
- 995 "Use comparator ""<="" for ICTX components to make upper and lower limit inclusive"
- 1006 ICTx CONTACT component does not show FAILS (count) as result id 0 anymore
- 1032 ICTX resistor with compensation sometimes is negative

**SCPI-TML****Bugfix**

- 1048 WaitingTime in WRITE\_SCPI uses ms instead of seconds

**VXUrm****Bugfix**

- 1027 Device not found error from URM when closing handles in wrong order

**VX\_PROG****Feature**

- 1021 Flashrunner programmer added to VX\_Prog C API

## Version 2.7.2

6 Bugfixes

### GTML

**Bugfix**

- 1023 it will be ensured that all GTML comments in the method are passed on to the result with ID 0
- 1045 MEAS\_SCOPE show timeout error most of the time

### GTbuilder

**Bugfix**

- 966 path is no longer set to the project order after the test programme has been unloaded
- 1036 the colors of error message in the output windows is now red

### GTengine

**Bugfix**

- 1046 After test run with 100 iterations the machine capability runs 5000 times

### VX\_SPI\_I2C

**Bugfix**

- 1053 Simulation mode for SPI and I2C drivers added

## Version 2.7.1

2 Bugfixes

### GTbuilder

**Bugfix**

1009 Add ICT\_SETUP to CDF File if no ICTx components were selected

### ICTX

**Bugfix**

1007 Rename Transistor and FET to ensure that UBE - UBC and ON - OFF are clearly recognizable

## Version 2.7.0

28 Features • 32 Bugfixes

### Documentation

Feature	
651	Document that STEP_EXIT can not be used in loops
860	Include GT4000 and SSC manual in the installer

### GTE API

Feature	
201	API function to get target path of report from test program
646	Provide information about device utilization in resource manager
672	The nominal value shall be made available via API.
674	Support to use a class as step memory
682	Add GTE Resource Manager function to try to get handle for a device
921	Add API functions to Test Prg Info to get name and creator of program
934	API function for fetching GTS paths added

Bugfix	
729	introduce gte_StationCount() API Call
748	GTE Routing API: Ignore additional connection in first and last NET
777	Introduce gte_StationForIndex() API Call

### GTML

Bugfix	
848	Typo in comment of GTML method "GET INT"

### GTS

Feature	
735	Display Current Workspace after closing GTe, GTb oder GTa GUI
795	Allow deletion of measurement history also in graph and histogram
866	Allow resources in resource manager that are not bound to a device
870	add DriverOption = "Simulate=1 and RangeCheck=1 to SM160 in HW_Setup.ini
923	Save all values to test plan not only changed, add save test plan to GTbuilder

Bugfix	
576	In new workspace some necessary parameters are missing
686	Installer does not contain Version and Copyright Information
764	Step result warning not propagated to group result
914	GTengine hangs when aborting or terminating running test
929	Test method attributes with e.g. milli ampere are not set correctly in attribute
960	Test Program Tree View is blocking when auto select current item is activated

### GTAnalyzer

**Feature**

734 Implement Multipanel support for GTanalyzer and GTEDBControl

**Bugfix**

634 GTanalyzer does not save Settings of tables

724 GTanalyzer does not switch language setting correctly

741 Dockwidget windows are not always shown

742 Search combo boxes are not always filled correctly

762 Orders with Multipanel-Tests are not correctly shown on Lot-/Order-View

827 GTanalyzer: importing UUT test with two test results only shows last result set

828 GTanalyzer: Graph shows only first value when selecting measurement / result for multiple (sub) UUT tests

857 GTanalyzer crashes if imported .gtr file contains skipped test

**GTbuilder****Feature**

42 Simplified DISABLE/ENABLE of groups / steps (testprogram editor)

590 Warn if GTbuilder project is named like a depending dll

709 Introduce alias names in GTbuilder

749 in GTbuilder standard groups can now also be inserted via drag and drop

786 GTbuilder: Scroll output window to bottom when compiling

804 Rework Third-Party-Importer

821 Always use macro CST\_ in attributes to provide line number

**Bugfix**

139 Scaling of unit HERTZ not show correctly in GTbuilder (API: gte\_VerifyI)

778 GTbuilder: Making step / group disabled with context menu "Toggle Enable" does not mark project as changed

798 Recently projects in GTbuilder are strangely ordered

856 ICTX/CDF file should not look different depending if save from ICTX-TML or GTbuilder-Editor

873 In GTbuilder state of dock widgets Details, Table, Graph, Histogram are not saved and restored

**GTengine****Feature**

780 Allow saving and loading step attributes to test plan

824 Load test program directly after selection in test program view of GTengine

**Bugfix**

652 Fix behaviour if "number of stations" and "number of test program" of product does not match

779 Limit station id greater equal 1 for plugin GTETestExec.dll and test programs

**ICTX****Feature**

773 ICTx short test show all pins having a short

875 Rework selection of test pins in contact/short test to be more user friendly and have better performance

878 ICTX should save all component value also if unchanged

**Bugfix**

- 629 Don't reorder ICTX component when it is loaded
- 847 ICTX transistor PNP: Rework initial setup and defaults
- 882 Rework pin list selection for ICTX DISCHARGE and TRACK
- 922 ICTX capacitor allow more than 10 repetitions
- 940 ICTX-Short test show short pins without partner pin
- 945 ICTX short test: If last channel of a SM160 is exclude from short previous channel is not removed

**SCPI-TML****Feature**

- 890 Move SCPI methods to a own test method library

**VXUrm****Bugfix**

- 883 In the URM Panel the bit numbering now starts at 0 and a rescan function was added

## Version 2.6.2

2 Features • 10 Bugfixes

### GTML

#### Bugfix

815 NO\_LIMIT in MEAS\_DCPWR set the lower limit to 0

### GTS

#### Feature

761 support for Aardvark I2C/SPI Host Adapter added

768 VX\_PROG Library is to be tidied up and initially only support the PICkit5

#### Bugfix

822 SCPI Scan incorrectly finds RBM32 as SCPI Device

823 VX\_SPI\_I2C\_Close crashens if open function was not succesfull

825 VX\_PPROG\_Close crashens if open function was not succesfull

843 VX SPI I2C Driver is now fully compatible with C Standard

844 SPI IO Warrior always sends one 00 byte to much

### GTbuilder

#### Bugfix

801 Allow expression as preconditions also for groups like steps

818 GTbuilder crashes in Function OnActivateMultiItems

837 Self-Test (GSTL) shows errors: Device not found, Invalid session handle

### GTengine

#### Bugfix

776 Deleting test programs and changing station id of test program does not work as expected

## Version 2.6.1

3 Features • 8 Bugfixes

### GTEAPI

#### Feature

- 515 Introduce skip test feature. See gte\_UUTSetSkipPanelltem for more informations
- 727 new API gte\_LotSetAutoIncrementFlag method introduced.
- 759 new API method introduced to get a Result object via the GroupStep and Result ID. See gte\_TestGetResultForIds for mire informations.

### GTS

#### Bugfix

- 746 GTengine DB Control plugin and GTanalyser will now work with Maria-DB version 11.4

### GTbuilder

#### Bugfix

- 669 Filter selection dialog for test methods shows incorrect method name for ICTX

### GTengine

#### Bugfix

- 714 GTE API gte\_LotBegin does not cause the order shopping cart to appear
- 760 Using Auto-Login with GTengine always restarts application on close
- 766 GTengine crashes on second test in production that is no multipanel

### ICTX

#### Bugfix

- 708 PSU cannot be initialized when reloading the ICTx test program
- 713 Error Message Component File Backup Error
- 740 ICTx Contact cannot be used separately from Short test

## Version 2.6.0

36 Features • 40 Bugfixes

### GTEAPI

#### Feature

- 415 gte\_CheckGTSVersion checks whether a DLL in the dependency path was delivered without a version specification
- 431 The display of measured values outside the display window has been improved in gte\_AdjustRUpdate\_Ex
- 515 The gte\_UserMessageBoxPicture dialog has been revised
- 518 extend route management by routing via resistors
- 520 Generate hardware ini from KiCad EDA net file for test system configuration
- 527 Generate software ini from KiCad EDA net file for application configuration
- 554 Extend GTE device API by get device for name
- 568 API description for GTE API test programm revised
- 577 ResourceManager API extended to get devices of bench

#### Bugfix

- 607 gte\_AdjustRUpdate\_Ex shows invalid zero values until fifo is not completely filled
- 622 Setting relative test program file over GTE API incorrect if other test program not in folder Work is loaded

### GTML

#### Feature

- 447 CONF\_GTML now displays station index, step name and panel index of the DUT

### GTS

#### Feature

- 342 Add GTS Resource Management in GTE API
- 345 Signal routing via KiCad introduced
- 348 The dialog gte\_AdjustR has been revised
- 390 The GTS login screen checks if the same DLLs are found in the Bin directories of the GTS
- 550 The About-Dialogs of GTS now contains the version
- 573 Hardware scan has been extended by IO-Warrior56-DG dongle for SPI communication

#### Bugfix

- 332 An error has been fixed that causes the parameter "\_REPORT\_FORMAT\_" not to be read correctly
- 416 Error "No workspace with app usage" if GTstudio has no license
- 417 Install license: Cannot select license files with extension .lic
- 418 After "Install License" on Login Screen the workspace combobox is still empty
- 433 The setupICTX parameter is set in physical.ini as soon as ITCx is used in GTbuilder
- 448 GTengine crashes as soon as an ICTx component of the type capacitor is clicked
- 552 In TML method arguments (const char\*) characters "%" are wrongly replaced by "per-cent"
- 633 Data of test step does not display well in the graph when out of limits

### GTAnalyzer

**Feature**

- 252 Login screen for GTAnalyzer has been added
- 475 GTAnalyzer dialog of configure DB access has been revised

**Bugfix**

- 472 Height of dock widgets on right side of GTAnalyzer has been adjusted
- 473 The bug that double-clicking on parent in search results leads to a crash has been fixed
- 477 The image of the GTAnalyzer setup screen has been revised
- 630 Now multiple test result for the same serial number can be found

**GTbuilder****Feature**

- 41 Allow expression as preconditions for steps and groups
- 44 Display of variable values and definitions in the tree of the test programme editor
- 292 Allow jumping between property values in "Item Properties" using TAB
- 303 Extend property values of programme steps by unit and make unit range selectable
- 340 Improve presentation of disabled Steps and Groups
- 428 Groups can now also be copied
- 429 Operations Delete, Cut, Copy, Move up and down allowed for program items
- 436 Replace internal source code view by opening Code::Blocks
- 451 Opening or bringing Code::Blocks to front should also work if path contains spaces
- 456 Use Panel Count from Software Setup of new project in SETUP\_GTML
- 511 HW.ini should be configurable for the whole test system and not be related to the test project
- 556 Generate SW.ini AppChannelTable with pins for groups and specific devices (EDA)
- 586 PRG-Steps support Compile and Run-Mode
- 623 Insert pasted program item beneath select item
- 624 Implement units for upper and lower limits of GTML methods
- 632 Various improvements in the operation of ICTx in GTbuilder

**Bugfix**

- 273 Variables are put into quotes if selected in TML-Method-Parameter of type "const char\*\*"
- 293 Hardware setup filename with spaces leads to source code file with syntax error
- 317 BDL Converter: Fixed output error when converting and added missing components Transistor, FET and Z-Diode
- 329 ICTx resistors only allow correction of +/- 5 ohms
- 430 Don't show horizontal scrollbar in Item Properties of GTbuilder
- 446 GTbuilder crashes as soon as an include path is set
- 460 GTbuilder crashes when test program .dll is loaded the second time
- 488 Selection colour change inconsistency
- 489 GTbuilder compiler settings are only saved after "Auto Detect"
- 496 For new steps dragged to tree in GTbuilder the item properties are not shown
- 504 FET, Transistor, Diode and Z-Diode added to the BDL Exporter
- 579 Context menu "Toggle Enable" allowed for Defines and Variables
- 580 Drag & Drop of Defines is now possible
- 581 Group type of user groups can not be changed after creation
- 591 SW.ini is not generated correctly if global HW.ini is selected
- 600 Precondition combobox always changes to value 0 regardless of previous value
- 601 Switching to "Show ICT" shows "Reload project?" dialog
- 656 The Property "Value" should only be editable for Defines and for variables

**GTengine**

**Feature**

540 GTS Test Packages introduced

**Bugfix**

13 A bug has been fixed that causes the multi panel test not work with the ICTx

385 New Workspace will not be listed automatically

392 Creation of a product in the GTengine has been improved

494 Rework GTengine error message "Invalid UUT Scan" if product code is not formatted as expected

498 Rework GTengine handling of UUT scan delimiter

521 Test Report does not contain date of test

522 Filepath of reports exported from GTEDBControl was sometimes not correct

575 Login screen flickers when returning from GTengine

**VXUrm****Feature**

435 VX Urm - universal relay module - Driver introduced

## Version 2.5.3

4 Bugfixes

### GSTL

**Bugfix**

- 529 Test limits of the VF voltages adjusted.
- 530 AOS AC Test per default deactivated. use `_PICT_AOS_AC_TEST_ = 1` in Workspace to run test again

### GTEAPI

**Bugfix**

- 524 The Graph-R dialog crashes under certain conditions.
- 538 If the test path NONE is entered for a product in both stations, the NONE can no longer be overwritten.

## Version 2.5.2

1 Feature • 5 Bugfixes

### GSTL

#### Bugfix

529 Tolerances for VF2 adjusted to +/- 5%.

### GTS

#### Feature

420 Install current Code Blocks Setup with GTS Setup

#### Bugfix

449 The GTS Installer now copies the CreateDB.sql script into the GTS Media folder

524 If demo.lic exists without internet connection other license files are not considered.

### GTbuilder

#### Bugfix

490 If MinGW/bin is not in path then you get no meaningful compilation error in GTbuilder

493 GTbuilder builds forever in loop if you press Load but get a compilation error.

## Version 2.5.1

1 Feature • 8 Bugfixes

### GTEAPI

#### Bugfix

- 315 gte\_GraphRxxx was very slow when opening large amounts of data.
- 323 gte\_GraphRxxx now uses the correct scaling for the X axis.
- 324 gte\_GraphRConfig - Offset values are now also taken into account for the display
- 432 gte\_ExecProcess now accepts the command line arguments correctly

### GTML

#### Bugfix

- 296 If the PAC module of the PSU is not switched on, an error message will indicate the possible cause
- 462 Timeout in ACQ\_SCOPE no longer results in a test programm having to be reloaded

### GTS

#### Feature

- 423 A 30-day demo licence is generated during installation. An Internet connection is required for this function.

#### Bugfix

- 442 R&S ICT Correction is able to use SM160 with thread safe UCM Driver

### GTbuilder

#### Bugfix

- 461 Convert BDL dialogue uses project name for the generated BDL file.

## Version 2.5.0

30 Features • 15 Bugfixes

### GTML

#### Feature

- 357 implement SCPI Methods
- 382 auto select Bench method in GTML implemented

#### Bugfix

- 383 Resource table is full error message

### GTanalyzer

#### Feature

- 37 GTanalyzer history table sortable

#### Bugfix

- 176 No feedback during data import
- 177 Data import fails when importing various special characters

### GTbuilder

#### Feature

- 20 GTbuilder licencing revised
- 40 Improved display of groups/steps that have been set to disabled
- 174 If the user exports projects from GTbuilder to the Work Directory, these are now stored in a separate directory. This provides a better overview
- 205 Login Screen for GTbuilder
- 207 Undo framework introduced
- 250 Workspace concept introduced
- 251 User roles added in GTbuilder
- 278 Improved handling of umlauts in the source code view
- 280 Using environment variables in GTbuilder
- 284 ICTx/ CDF to BDL converter
- 301 Display the current row and column number in the source text view
- 337 Whitelist area for SourceReader / Writer added in GTbuilder. This ensures that no costum c-functions are lost

#### Bugfix

- 117 Displayed results are deleted when the focus changes to a dialogue
- 271 Revise logo for splash screen
- 279 ICTX components Unit of Upper, Nominal and Lower not clear, Nominal Tolerance not allowed negative
- 288 When creating a project, "GTML Setup And Cleanup" should be active by default
- 295 Loading a programme is permitted even though it has not been compiled or modified after compilation
- 339 Display "Component Box" and "Item Properties" only in drag-n-drop editor view

### GTengine

**Feature**

- 103 The order of the stations in the plugin view is now always ascending
- 193 Report path now configurable
- 202 Passwords are encrypted
- 254 Backup path now configurable
- 316 STDF V4 support added to GTEReportGenerator.dll
- 318 gte\_GraphRxxxx Minor improvements
- 320 New GTE-API function gte\_CheckGTSVersion implemented to check whether the dependencies of GTengine still correspond to the installation status
- 352 VI Resources are recognised in the hardware scan and written to Physical and Application.ini
- 357 The GTML can now also control devices and measure values using SCPI commands.

**Bugfix**

- 184 PXI card recognition GT5000 chassis
- 206 Tolerance values adjusted in the SSC self-test
- 213 Pin location window did not open after first use

**Other****Feature**

- 105 Update images in PDF documentation
- 228 Generic CAN driver added, add support for Peak PCAN-USB and Vector CAN Board XL
- 307 Set Baudrate for Melexis Chips
- 319 Path to HW.ini should be globally configurable in the workspace
- 351 VxiloClient.exe mit in den Installer aufnehmen
- 358 VisaVX driver extended by a write multi function. SCPI commands can be sent separated by a semicolon (;)

**Bugfix**

- 129 Transistors are not generated correctly in the ICTx
- 347 VX\_CAN Treiber: Geräteerkennung auf Seriennummer umbauen
- 353 UCM SPI calls not thread safe

## Version 2.4.0

8 Features • 4 Bugfixes

### GTAnalyzer

#### Feature

- 105 Documentation: update documentaion
- 176 A progress bar appears when importing data
- 177 Special characters that interfere with the import are filtered out

### GTbuilder

#### Feature

- 105 Documentation: update documentaion| Documentation

#### Bugfix

- 117 GTbuilder: GTbuilder Debug-View: Displayed results are deleted when the focus changes to a dialogue.

### GTengine

#### Feature

- 31 GTEAPI: add gte\_AdjustROpen\_Ex redesigned
- 32 GTEAPI: add gte\_GraphAddArrayR\_Envelope Functionen
- 105 Documentation: update documentaion
- 196 GTEAPI: add gte\_GraphEnvelope Functionen

#### Bugfix

- 82 GTengine: Existing reports are not overwritten
- 173 GTengine: Login to GTengine not possible by pressing ENTER after changing language
- 178 GTEAPI: Function gte\_UserMessageBoxPicture does not open a dialogue if the picture is not found

## Version 2.3.0

2 Features • 2 Bugfixes

### GTS

#### Feature

- 56 GTbuilder: UI crashes when routing editor is used
- 105 Documentation: update documentaion

#### Bugfix

- 27 GTEAPI: add gte\_ExecProcess
- 82 GTEAPI: add Graph\_R funtion

## Version 2.2.0

61 Others

### GTS

#### GTengine

104	API: Opaque Pointer Memory Management
124	DebugView: Feature Break On Fail
143	GTengine: Umstellung APC-Events auf Signal-Slot-Mechanismus
216	API: Funktion zum Unstellen des aktuellen DUTS aus Prüfprogramm
220	GTEAPI: gte_verifyX - Neue Step Result Typen
227	GTEAPI/GTengine: SAVE-Funktion für ICTX (GTML)
234	Debug-View: Machine Capabilities Anlalysis Enhancement
238	Report: Modify Testreport Export Format TXT
239	GTengine: Service Report
240	GTEAPI: Callback-Funktionen für STEPs
242	GTengine: Aster Testway Integration
252	GTengine: extending logging
263	GTEAPI: new functions for CheckBox Attributes
271	GTE GUI: Unload Testprogram before closing User Interface
278	ICTX/Aster: Automatic Creation of Application Channel Table
291	ICTX: Software Memory usage and performance
300	Redesign: Tool for creating HW- and SW-Setup Files
305	GTengine: Open Report from GTengine Production View
317	DebugView: make debug column first column in tree
320	GTE API: Recursion in Attribute Callback
322	DebugView: Redesign Section "Program"
328	DebugView/API: Neues Step Attribute Element "ACTION BUTTON"
332	Report: Generate Report in PDF Format
340	GTengine: Install Licence Button does not work
344	GTengine: Assign testprogram to specific CPU Cores
345	GTEAPI: new functions setting Attribute tooltip and backgroundcolor
346	GTEAPI: New Step Attribute REAL GRAPH (RG)
347	GTEAPI: additional Category-Levels for Step-Attribute
359	Report: Decimals representation of floating Points
360	Report: No new Directory with day change
369	GTengine: Display Execution Times for Results
385	GTengine: Report Formate JSON
390	GTengine: Include Slot Index in Device Info
391	GTengine: New Standard Group Funktion CompensationRun
393	GTengine: API Funktion to Expand Plugin TreeView
394	GTengine: GTSLicense does not handle multiple files properly

#### GTbuilder

138	GTbuilder: After debugging the item properties are not displayed but debug information
142	GTbuilder: Selftest Wizzard
341	GTbuilder: ICTX On-The-Fly Compensation Support
356	GTbuilder: Display Component in Boardview when selected
392	GTbuilder: DND for ICTX
420	GTbuilder: GUI crash after changing limits of MEAS_DCPWR method
421	GTbuilder: default ID of compensate ICTX leads to ID violation
424	GTbuilder: GTbuilder crashes after closing a project

**Andere**

- 228 GTEAPI: Neuer Returnwert für "gte\_EnterSTEP"
- 245 Erweiterung gte\_Verifyx Funktionen
- 261 API: Progress Dialog
- 262 API: Function to GET Step-Enabled-Flag

**GTML**

- 264 GTML: ICTX implementation
- 275 GTML: Overrange DCPWR warning not handled
- 284 GTML: GET\_TIMER always has negativ value
- 286 GTML: Bug in SETUP Route and Bench Count > 1
- 330 GTML: Dynamischer Aufruf einer externen IVI-Funktion bei SETUP
- 342 ICTX: System Compensation
- 387 GTML: Get ICT ProgramID with GETI\_GTML function
- 415 ICTX: Varianten werden nicht in cdf gespeichert.
- 416 ICTX: Summery for all CDF errors instead of individual Popups

**Dokumentation**

- 277 Documentation: Toolstip in User Interface
- 313 Documentation: GTbuilder Doku in Doxygen

**PDM30**

- 380 PDM30: Driver update to Hardware Revision 2

**ReportViewer**

- 398 Report Viewer: Reports from Testprogram View can not be diplayed

## Version 2.1.14

1 Other

### GTS

#### enhancement

460 GTengine: MSG\_XXX API function will also be logged into the GTE standard log file

## Version 2.1.13

2 Others

### GTS

enhancement	
452	GSTL: Anpassung Messtimings SM160
454	GSTL: PICT Shortcut CMU for SFT

## Version 2.1.12

1 Other

### GTS

**defect**

441 GTML: Limit for AppChannelTable entries of 2560 is too less

## Version 2.1.11

1 Other

### GTS

defect	
439	GTGUI: Display Multipanel Faults

## Version 2.1.10

1 Other

### GTS

defect	
402	SM160: Debounce Times

## Version 2.1.9

1 Other

### GTS

defect	
375	SSC: Use Device Name GDSSC in physical.ini

## Version 2.1.8

3 Others

### GTS

#### enhancement

- |     |  |
|-----|--|
| 365 | GTengine: Don't require a fixture when requesting a cluster levels |
| 366 | GTengine: API function for Setting Image File                      |
| 368 | GTE GUI: Automatically abort Lot on window close                   |

## Version 2.1.7

4 Others

### GTS

#### defekt

354 GTML: SSC OD port initialized with 0x0009 (VFX disable)

#### task

355 SSC: Set Type Ident to "SSC" instead of "IVI\_SWITCH"

#### enhancement

361 GUI: Display Product Identifikation with a larger Font

362 GTengine: Inform about Retest before finishing Test, new Event  
TEV\_UUT\_TEST\_RETEST\_IDENTIFIED

## Version 2.1.6

6 Others

### GTS

#### task

319 GSTL: Selftest for SSC

#### enhancement

324 GTE API: Additional Function to modify product MultiPanel attributes

325 ProductionView: Display Multipanel Items on Image

326 DebugView: Display Test index in Table Section

330 GTML Version 2.1.12: dynamic calls of external IVI-Functions during Setup

339 Report: Generate reports when retesting

## Version 2.1.5

2 Others

### GTS

**task**

100 fixed typos and translations

**defect**

314 GTML: Fixed not working Pin Location Use application Ini Flag to disable ICTX-Setup and use eGTSL ICT

## Version 2.1.4

6 Others

### GTS

#### defect

- 287 GTML: GTML Cleanup does not close handles with bench count > 1
- 307 GTengine: Reportfile Names containing CR LF
- 308 GTengine: Retest Multipanel does not wait for all stations

#### enhancement

- 306 GUI: Display Panel Index in Message window when retesting
- 309 GTengine: Display scaled values in machine capability analysis and report
- 310 GTEAPI: API function to get current Step Result

## Version 2.1.3

4 Others

### GTS

#### defect

- |     |   |
|-----|---|
| 299 | GUI: Testprogram tree LogInReport color covers disable color            |
| 301 | GTEngine: Trigger Test on Thread directly                               |
| 303 | GTEngine: MCA Report does not display very small lower and upper limits |

#### enhancement

- |     |  |
|-----|--|
| 302 | GTEAPI: scaled values from PRESULT structure |
|-----|--|

## Version 2.1.2

11 Others

### GTengine

#### enhancement

- 250 RFID: Debug Output and Documentation for RFID Fixture needed
- 288 GTEAPI: new function for UUT Panel Item Count

#### defect

- 254 GUI: Station Display has white Color after Multipanel Test
- 267 GTengine: Stopping Lot during Multipanel
- 269 Logging: RollingFileAppender not working?
- 281 GTengine: Engine crashes when uut and/or uutest manger has items
- 283 UCM: Parallel opening devices
- 287 GTML: GTML Cleanup does not close handles with bench count > 1
- 294 GTengine: Retest Multipanel does not work
- 295 GTAPI: SetPanelIndex on MultiPanel
- 296 GTengine: Deadlock/Crash when polling gte\_Isrunning in Event funktion and closing GTengine

## Version 2.1.1

5 Others

### GTengine

#### enhancement

- 219 GTEAPI: Dynamic/Changable limits via RESULT functions
- 273 GTengine: Save Report without Lot Information

#### defect

- 251 Report: Real envelope Data
- 272 GTML: wrong connexion of VF1...3 ENABLE signals
- 274 GSTL: PSU Selftest not stable

## Version 2.1.0

55 Others

### GTS

#### enhancement

133	API: Testprogram-Attribute fuer Steps und Gruppen via API Funktionen
141	GTML: Methoden für ICT mit R&S Messtechnik
145	Benutzerverwaltung: Log-In Event & Benutzerwechsel nach Start-Up
146	Production View: Neugruppierung der Bedienelemente
147	Production View: Userabhängige/konfigurierbare Bedienelemente
148	Production View: Farbe des Hintergrunds einstellbar/programmierbar
149	Alle Views: Dynamisches Erzeugen von Anzeige-und Bedienelementen
152	GTbuilder: ICTX-Methoden einbinden
154	API: Funktionen zum Anlegen Produkte aus Plugin\
167	DEBUG-View: Toolbar-Button für PINLOCATION
170	DEBUG-View: Testindex in Toolbar verschieben\
171	API: Funktionen für Logging
174	Main-View: Anzeige Fixture als SystemParameter
177	Hardwareerkennung: Rohde&Schwarz PSM4 Karten
181	GTengine-GUI: Theme und Look&Feel anpassen
182	Hardwareerkennung: Namensvergebung SM160 bei Enumeration
185	GTML: fehlende Methode PINTEST_ICT
189	DEBUG-View: Testplan Speichern Dialog abschaltbar
190	Main-View: Anzeige TEST TIME in zyklisch updaten
201	Neue Methodengruppe ICTX in GTbuilder
202	DEBUG-View: Anzeigen/Modifizieren eines Testplans
203	DEBUG-View: Laden/Speichern eines Testplans
206	DEBUG-VIEW & WINDOWS START: Anzeige von PDF-Dateien
207	DEBUG-View: CSV-Export des Testergebnisses
210	API: Neue Attribute-Funktionen für String-Listen
211	API: Rückgabewert der Attribute-Funktionen
217	GTML: Abfrage Seriennummer aus GTML
221	API: Auto ID Generation
222	GTengine: Hardwarescan über mehrere Controller
226	GTEAPI: Attribute SList Funktionen überarbeiten
229	GSTL: Optimierungen Selbsttest
231	GTengine: leerer Testplan
233	GSTL: Versionsnummer Anzeige
243	GTengine: Floating Point Exceptions mit NaN values

#### defect

153	BUG: Löschen eines geladen Auftrags
159	GTML: Parallelsystem kann ICT nicht erneut laden\
172	UCM: Fehler bei mehrfachem Öffnen eines Gerätes
187	Report: Whitespaces und Zeilenumbrüche in Kommentaren
188	GSTL: Pseudofehler bei PSM2 Selbsttest
192	BUG: nach AbortNow wird Unload Gruppe nicht ausgeführt
193	GTML: möglicher Absturz bei GETS_ROUTE
197	BUG: Test wird in Gruppe PrepareTest und negativem TEV_TP_GROUP_PREPARE nicht abgebrochen
204	BUG: Änderung Testplans nur mit ALL_RIGHT möglich
205	DEBUG-View: Anzeige für Toggle ENABLE
208	BUG: Leerstring als Passwort verhindert Login
213	GTML: PIO2 entladen über GTML 1.6

**defect**

- 225 DebugView: Attribut-Ausgabe mit Steuerzeichen
- 230 GTengine: Invert Result führt zu Fehler beim Laden eines Programms
- 232 DebugView: Kommentare mit Steuerzeichen und Tooltip
- 237 GTengine: Configuration Testprogram ohne Stations
- 241 GTML: SET\_DCPWR CurrentBehaviour für PWM-Mode
- 244 API: Attribute Methoden in Private Header umziehen
- 247 GTML: PSU device not closed in ICTX method
- 248 DebugView: Reset to Defaults not working with results ID 0

**task**

- 194 GTengine: Splashscreen aktualisieren