

Polar Instruments : CGen Version History

Version 24.06.12

Enhancements / changes / additions

- New Style 1M – supporting true mixed layers
- New Style Delta-L 4.0 (Final) – Also supporting true mixed layers
- Trace Lengths for Long, Medium and Short are no longer fixed to 10 inches, 5 inches, 2 inches.
- Improvements and bug fixes to Styles 2 and 3
 - Option added to allow user to **ignore default minimum default values** for specific properties to go down to zero.
- Higher Visibility Warning and Error Messages
- "Add Impedance Structures" Form refactored and redesigned
- Convenience Features
 - Esc key Shortcut to quickly close all dialog windows (except main application window)
 - Show Settings Files Location in Tools Menu
 - Shortcut to open most recently used file (F12)
 - Quick selection and movement between stack layers using the Up/Down arrow keys (stack grid needs to have focus)
 - Refresh Current Style (F5)
 - Changing layer types no longer deletes structures. Turning them off is now the default behaviour regardless of which type of layer is being switched to and from.
 - Ability to duplicate an existing structure added to Structures Grid View context menu
 - If file being opened was created with an earlier CGen , Now offers to save a backup of file before proceeding (they might be evaluating, or sharing with other users with older version of CGen)
 - Validation Report now contain incompatible structures information. before it was in a separate window after generation
 - When switching styles now, it asks user if they would like any disabled structures to be re-enabled. reason : structures that might be incompatible for one style might be okay for another, but user may wish to keep them disabled
- Added more structure parameter columns to Structures Grid View
 - customizable - right-click on the column headers to reveal toggles for most of the columns that can be turned on and off
- Structure Validation Checker now has a more prominent role with improved guidance on getting the layer configurations correct (or as correct as possible) now always on top and will auto-update as corrections/mistakes are made
- Additional Copper Colours.

Fixes

- Inner-Layer text refactored and improved for style 2 and 3. including bug fixes in this area

- Fixed a bug where, depending on layer configuration, a structure's 2nd layer property (reserved for broadsides) might still contain a value if the broadside is selected first, and then another structure is selected. i.e. the value is not being cleared.
- bug where copper thieving pads were added to mixed-layer-planes
- Improved structure filtering in the Add Impedance Structure form
- 001-00-000945 - Diff Offset Coplanar Strips error
- 001-00-000942 - Inner layer text bug on style 1
- 001-00-000944 - Didn't fix this explicitly but refactoring of style 1 code seems to have resolved this issue where coplanar copper blocks clash into each other - esp when diagonal 2pin probe is selected (single-ended (IP-XX/0.14"))
- Add Impedance Structure Form : Some structures showing 2nd signal layer (broadside) when it shouldn't.
- Improved messages for when Speedstack import fails (old data, unrecognised format, not text data etc)

Misc

- Improved implementation of checking if data has changed
- Removed all references to Hatched Planes (can't be implemented)
- Suppressed annoying Ding sound whenever return key was hit in the textbox fields in coupon property form
- Removed *CouponEngine._CopperThievingPadsLayer_StartIndex_ArrLst* List that was used to speed up rendering of theiving pads on older PCs.
- Added a message to Probe Selection Form informing that SE and Diff Probe selection only applies to Style 1 and 1M
- GraphicsEngine as a subproject is removed. the only file inside is now part of CouponGen project. Cursors have also been moved
- Inner-layer text now supported in Style 1 and 1M

Version 24.01.01

Enhancements / changes / additions

- Support for .Net Framework 4.8

Version 23.07.25

Fixes

- Improvements to Delta-L 4.0 Coupons
- Updated Sample File

Version 23.06.02

Enhancements / Changes

- Delta-L 4.0 Support added.
- Loss Message will appear each time exporting from a Loss Style.

Fixes

- Fixed copper thieving bug in Delta-L 3
- Fixed Style 1 Text
- Fixed Si licencing feature bug

Version 23.04.04

Enhancements / Changes

- Added inline structure placements for style 2 and 3 (SE structures along the bottom, Diff Structures along the top
 - For easier CITS testing
 - CITS export now has option to order structures by structure-type to work with the above.
- Inner layer text out of beta with bugs fixed
- Style 1 Now shows structure ID in text
- Minimum Trace Length For Style 1 set to 60mm (2.362205 Inch)
- Tol% (tolerance) included in impedance text (via the global tab in properties)
 - New default values to accommodate longer impedance text (style 1)
- Style 1 will now auto-adjust its length according to the structure length.

Version 21.06

Enhancements / Changes

- Fixed Inner-layer-text bugs
- Fixed bug where Coplanar Offset structures were not fully supported in Styles 2 / 3

Version 21.02

Enhancements / Changes

- FlexNet Publisher / FLEXIm v11.17.2.0 supported

Version 20.11

Enhancements / Changes

- Added ability to show impedance text for relevant layers that contain structures
- Improved handling of structures when assigned to mixed layers. New structure validation report will verify layer assignment in real-time

Version 20.03

Enhancements / Changes

- Fixed a bug where SPP properties were not being set properly.

Version 19.07

Enhancements / Changes

- Fixed an issue when a file is opened with Copper Thieving Spacing has a setting of 0 and this value is not respected.

Version 19.03

Enhancements / Changes

- Added a utility in to change multiple Structure Descriptions (CITS test data) in a single process

Version 18.08

Enhancements / Changes

- DELTA-L Coupons Supported
- Added support for new Offset Strips and Offset Waveguide structures
- Ability to include text on inner layers (Beta.. Styles 2 & 3 only)
- Help Contents URL link fixed
- Fixed crash when generating coupon styles when there is no data
- Fixed copper thieving not rendering correctly on Ingun Style Coupons
- Fixed bug situation where app gets stuck in RIE Style when there no structures or no structures supported

Version 18.03

Enhancements / Changes

- License feature change. The new 2018-style license features support additional data such as Polarcare Contract information. **Please note**, 2018 features will not support pre-v18.x versions of our products

Version 16.03

Enhancements / Changes

- Splash screen updated
- Structure image control updated
- Security components updated

Version 15.11

Fixes

- Fixed bug where switching to any style other than style 1 might turn off a few structures, then turning back to style 1 can't be done.
- Fixed bug where if an older language pack is found, it will keep saying it will revert to English on every start-up
- further fixes to the Ingun coupon style (clashing structures remained after previous fix)

Version 15.10

Enhancements / Changes

- Application configuration files now moved to the Windows-compliant folders.
 - Windows Vista, 7, 8, 10:
 - \Users\<UserName>\AppData\Roaming\Polar
 - Windows XP:
 - \Documents and Settings\<UserName>\Application Data\Polar
- Support for Windows 10
- FlexNet Publisher / FLEXIm v11.13 now supported

Fixes

- Fixed bug where app starts up with form in the background on some machines

Version 15.07

Enhancements / Changes

- Added support for the new SI Structure export data stream format
- Added warning when reference planes cannot be found due to mixed layers set to Signal
- Language settings are not changed when opening CXF files saved from different locales.

Fixes

- Fixed bug when cancelling New or Open File operation results in current project data being discarded

Version 15.02

Enhancements / Changes

Fixes

- CITS test export now only contain structures that have been selected (checked)
- Broadside impedance text wrong in style 1 and looking cramped in styles 2 & 3

Version 14.10

Enhancements / Changes

Fixes

- Fixed a bug in Ingun Test Fixture Coupon where some structures clashed with each other on the same effective layers

Version 14.09

Enhancements / Changes

- Added support for opening Speedstack XML files.
- Style 1 : Spacing Between Structures maximum increased to 350 mils (from 250)
 - Helps coplanar strip structures

Fixes

- Fixed soldermask problem when exporting, bottom-side mask did not reflect elements placed on bottom layer

- Further fixes to the text rendering on bottom side addressed in previous version
- Fixed SET2SEIL fibre-weave not working for surface layers in regular (non in-line) mode
- % and Ω symbols correctly displayed for tolerance modes in CITS Test data dialogs
- Gerber IDENT files are now excluded from export if IDENT is done in Copper
- "M02" - END OF FILE marker now added to all gerber output files

Version 14.03

Enhancements / Changes

Fixes

- Fixed a bug where text on the bottom side of coupon was being rendered incorrectly in Style 2 & 3

Version 14.02

Enhancements / Changes

- SPP Style Updated
- SETSEIL support added (single-ended structures)
- Loss coupons warning message added (warning user of knowledge and adherence of design rules)

Fixes

- NC Drill export bug fixed (encoding problem)
- Coupon Outline Thickness bug fixed
- Refresh Re-generate called after a probe change (mostly for style 1)
- STYLE 1 bugs fixed (property values did not reflect accurately in coupon)
- Coupon Outline bug fixed when switching units
- All Impedance text stroke size now consistent in default value
- Impedance Text shown in Inches now has increased decimal accuracy
- Style 2/3 Text will now align double-digit Structure ID Numbers vertically

Version 13.07

Enhancements / Changes

- SPP Style (Beta) added.

Fixes

- Various minor fixes

Version 13.02

Enhancements / Changes

- Added App Version Attribute to configuration files
- GGB SET2DIL fully renamed to GGB SET2DIL REV 2
- GGB SET2DIL REV 3 Reinstated

Fixes

Version 12.04

Enhancements / Changes

- Added an option to turn off feature that resets coupon properties for every new project started

Fixes

Version 12.03

Enhancements / Changes

- UI improvements for German / Japanese languages
- Further improvements to the Ingun Test Fixture Coupon
- Consolidation of 12.01 and patches

Fixes

Version 12.01

Enhancements / Changes

- INGUN Test Fixture Coupon Style
- CITS Test Data editable per structure
- Improved feedback messages for when structures have not been added
- Application will now continue to startup, even if no license is found or license is invalid

Fixes

- Fixed an issue where Application will crash when attempting to **save** a file that is set as Read-Only.

Version 11.04

Enhancements / Changes

- POLAR SET2DIL In-Line style
- GGB SET2DIL (VNA) In-Line style
- Mixed Layer toggle for individual layers
- Option to cancel application shutdown
- All references to VNA SET2DIL changed to GGB SET2DIL (439-01-000297)

Fixes

- Fixed CITs Test Bug (439-01-000296)

- Layer Selection Bug (439-01-000297)
- Removed Apply / Refresh Context Menu item for structures (439-01-000299)
- Ability to cancel application shutdown added.
- Excess drill holes in Style 3 fixed

Version 11.01

Enhancements / Changes

- Licensing feature amendments
- GUI Refresh.

Version 10.08

Enhancements / Changes

- Loss Coupons (SET2DIL) Finalised
- S21 Removed as a style (Incorporated into SET2DIL)
- SDD21 Removed as a style (Incorporated into SET2DIL)
- Editable Loss Parameters per structure
- Impedance Text can now be Ident or Copper
- Loss Licensing
- Resetting of Properties can now be for specific style only or full global reset
- Deskew Launch footprint added to VNA SET2DIL
- Specific style only or global resetting of properties

Fixes

- Auto-width fixed
- Units switching bug fixed

Version 10.05

Enhancements

- Application renamed/rebrand : CGen
- MRU (Most Recently Used) file list functionality added
- Coupon Error Messaging Handling (Impedance Coupons only) – Reports errors unobtrusively, appearing in red at the lower part of the Coupon View area. This red error box is clickable which will detail the problem further and offer a solution to correct it.
- Impedance Coupons now have their own signal, anti-pad, ground and hole size properties (no longer global settings)
- Tracks changes made to a file (data check against the initial state of a project after loading. Determines need to prompt to save)

- Improved Copper Thieving algorithm. The thieving pads will hug themselves closer to pad and trace elements than before.
- Copper Thieving Overlay graphics (purely a visual-aid to check keep-out regions)
- Improved Application Startup (delay issues removed)
- Generation routines optimized
- Text can appear on both surface layers, with additional ability to turn them off completely
- File association added for CXF files
- Launch directly from CXF files
- Stack data now editable (right-click context menu on a layer)
 - Insert Layers
 - Remove Layers
 - Change layer types
- Impedance Structure parameters can be edited after adding to a layer (right-click context menu)
- Impedance structures can be bulk-removed. Remove all structures for the current layer, or remove all structures for the entire stack.
- Coupon properties and application settings have been separated
 - Application settings stored in Windows registry in addition to application form metrics : width/height/location (it remembers where it last was).
 - Coupon properties stored in config & CXF files
- Directly import Si data straight into a stack layer
- Ruler Tool updated – now includes angle information
- CITs Test Export Added
- New Loss Measurement Coupon Styles
 - ATLAS POLAR SET2DIL (Beta)
 - ATLAS VNA SET2DIL (Beta)
 - ATLAS POLAR S21 (Beta)
 - ATLAS POLAR SDD21 (Beta)

Note ** These will appear to be in a Beta (unfinished state)

Fixes

- Structure disabled state now saved in coupon files
- Mixed Layer Processing state now saved in coupon files

Version 10.01

Enhancements

- Enhanced properties form controls
 - Jumps to relevant style being generated
 - Auto-switching between styles
 - Numeric properties scrubber tool
- Less obtrusive warning messages
- New toolbar buttons for mixed-layer processing

Fixes

- Only Coplanar Strips to be allowed on Signal Layers.

- SMA2 bug fixed where if a structure (coplanar strips) is ignored, it does not treat the next allowable structure generated as the first structure .
- Warning when Coplanar Strips are encountered on generating Styles 2,3,4, SMA1, SM2
- Display indicator showing what Mixed Layer Mode is currently set
- Remove unfiltered structures - only show allowable structures for a given layer
- Style 1 bug where Coplanar Strips and Waveguide holes are not plated on signal layers other than the layer the structure is placed

Version 9.04

Enhancements

Fixes

- Fixed RIE/SMA probe selection bug when loading in older coupon files
- Changed default values for Style 1 (First Structure Offset & Text Offset)
- Wrong tooltip string in impedance properties units text box
- Units bug fixed.

Version 9.02

Enhancements

- RIE Coupon Style
- External XML Import support
- Multilingual support for German, Japanese, Korean and Chinese
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Fixes

Version 9.01

Enhancements

- Saving and Opening of coupon project files
- Manual creation and editing of coupon layer and impedances
- Import impedance data from Si8000/Si9000

Fixes

- Missing solder side when exporting gerber with reversed polarity of inner layers

Version 1.3

Enhancements

- New Coupon Style 4
- Soldermask over-sizing
- Plane-to-Edge cutback property added
- Removal of redundant inner layer pads on export
- Alternating copper balancing pattern property

- Positive/Negative inner layers on export
- Fixes
- Exception when SMA1 is generated with no structures imported

Version 1.2

Enhancements

- SMA Coupon Support (two styles) for Japanese Market
- Split Coupons. Ability to select / deselect impedance structures to be included on generated coupon.
- This will provide a method for Split Coupon testing, where only selected structures will be generated
- Alternative Gerber Export. Alternative file naming convention for exported files.

Fixes

- Adjusted gerber export format to support CAM350
- Gerber outline file (.OL) - aperture size problem fixed
- Decimal format problem fixed in gerber Gerber output under certain locales fixed
- Spelling error on probes dialog corrected

Version 1.1

Enhancements

- Added support coplanar waveguide on coupon style 2 and 3. Coplanar strips are supported with style 1
- Customisable file name suffixes on Gerber output
- Export the coupon outline as a separate gerber file
- Add trace width (W1) to impedance text.
- Move the user defined coupon text property from the Coupon Configuration to the main toolbar
- Ruler tool displays currently selected units
- Display surface area of coupon
- When using power planes on outer layers - displays negative polarity text
- Autoselect the correct probe configuration
- Switchable mixed layer processing
- Copper thieving spacing minimum now zero
- Retain current viewable layer when altering coupon properties

Fixes

- General interface fixes.

Version 1.0 Release.