



## UcamX v2021.12

### Fixed issues

Your continued feedback is important and appreciated. This version resolves the following issues you have raised with our Customer Care department.

#### CAD Output

- Extended support for gerber.input.merge\_con, containing integer value.
- Additional precheck for 0 size values preventing crashes when outputting ODB++.
- The introduction of new odbxx\*profile\_exp\_arc option in Cad resource file allows influencing the generation of the ODB++ profile file, provides the usage of arcs when the outline layer of the job is used for the ODB++ profile (odbxx\*outline\_profile: 1).

#### Editing Tools

- In some configurations, a short track in a selected chain could cause slightly modified image. The original image is respected while applying a dynamically calculated value for the margin used by arc expand.
- Padmaker extension for optimized pad conversion.
- Padmaker is finding all required pads in contoured data.
- FlashMaker could introduce thermal pads that can cause shorts between the nets.
- Pad Shave between pads and tracks was not always respecting the requested clearance. Issue was noticed on locations with different apertures were flashed at the same location and some of these flashes were partially covered by negative data (on which True Objects were allocated). Shaving is correctly done on all overlapping objects.
- Not needed mask cut outs eliminated.

#### Editing

- Hexagon pattern in contour is now following a honeycomb pattern instead of a regular grid.
- Aperture Replace was not always correctly updating the apertures when the function was running on multiple layers. Aperture Replace is correctly affecting all layers again.
- Insert Easy Draw, when using snap to Point mode, was sometimes not correctly snapping to the closed point. The snapping has been improved for obtaining the expected result.

#### Electrical Test

- Issues where a single testpoint contains multiple holes are solved.

#### FaultStation

- Faultstation can read the data correct again.
- Existing machpar.par and fs.ini files are respected.
- Faultstation is enabled to read in the latest DLOG fault codes.
- Click on Net 1 and then click on the appropriate object in the data. When the click on the object happens, the user is placed back into Zoom mode. Click on Net 2 and then click on the appropriate

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object in the data. When the click on the object happens, the extents of the select nets is displayed, the clearance scanning window is displayed and the user is placed back into Zoom mode.

- FaultStation now reading L&M log files and L&M Barcodes.
- FaultStation enabled to load the .FLT files.
- Barcode scanning optimized.

## General

- Snap to outline with 'to line' will work also with stacked contours and in blocks (If option "In Blocks" is on).
- Snap to outline with 'to line' will work also with stacked contours.

## Hyperscript

- New toolbox frame with the existing name is registered and working after unregister the old frame.

## Hypertool

- Hypertool method is regrouping block apertures.

## Input

- Loading a DPF file could cause crash, issue has been noticed layers having open contours on which True Objects are allocated. Loading these files is notifying for the open contours, and the layer is loaded without crash.
- Conversion of empty Excellon drill file no longer gives a confusing warning message about Coordinate format not found.
- XAR analysis is handling the file format specification in the drill file properly, resulting in correct format applied during conversion.
- Deprecated %MI command is no longer supported, deprecated command was causing too much confusion for getting the expected image.
- If the new ucam.db key "gerber.input.fail\_on\_error" is set to true", behavior of Gerber importer is changed so if some Gerber file doesn't end with the mandatory "M02\*" command an error message is provided: Unterminated Gerber file "path\name of file" (M02 missing). Ignoring the whole layer.
- Certain configurations of input.jobpath.odbbox were suffering with problems saving the resulting job after importing an ODB++ job compressed in a .tgz file. These configurations are correctly interpreted again.
- Pending vector text fonts could be used during the conversion of ODB++ text features, which could give incorrect representation of text strings. The old vector text fonts are updated according to the currently applied build.
- Short track in surface definition of an ODB++ job was initially resulting in closed contour region, but after saving and reloading the DPF file the contour could disappear (flagged as an open contour). These regions remain properly closed after save and load of the resulting layer.
- A short track in definition of an island of a negative surface feature of an ODB++ job could confuse the conversion and could cause that all islands, made with that surface definition, were lost during conversion. These short tracks are correctly interpreted and these islands are converted properly.
- Surface definitions composed by almost full arc and some tracks representing almost 0-area spike could get skipped during ODB++ conversion. The conversion of these surfaces has been optimized to prevent that these arcs could be ignored.
- Full circle arc, as part of an ODB++ surface definition, could get lost during conversion. These arcs are correctly converted.
- DXF entities ELLIPSE and SPLINE are supported by the DXF input conversion tool.



## Job Management

- Saving the layer, after running Pad Shave on a layer containing True Objects, could cause UcamX crash. The True Objects, of the data before shaving, are no longer causing UcamX crash.

## Netlist

- Flash Quit is prevented in case of wrong specified outline.

## Panelization

- Summary of PCBs per Panel and PCBs per job and Panel is added to the .prf file.

## Rout Manager

- Save Order, after reviewing the sequence of the rout groups by running Top-Bottom, Left-Right Order in Rout Group Order section of tab Tools in Rout Manager, was ignoring all proposed modifications. Save Order is applying the proposed modifications to the sequence of the objects.
- Insert Fillet is now also possible on (chained) intersection of an arc and a track, previously only intersections between tracks were supported.
- Inserting a rout tab, on a track that was almost horizontal/vertical, could allocate a inappropriate angle to the tracks of the rout tab. The rout tabs is now respecting the angle of the original rout track.
- The middle of the overlap is now the point chosen on the draw. If this point is too close to the start or endpoint of the draw, the overlap is in the middle. If the overlap is larger than the length of the draw, the overlap is in the middle and the 50% of length of the chosen draw is used.

## SmartPlot

- The accuracy of calculating the job size in SmartPlot has been increased, which influences the size of the background object generated for negative plotted layers.

## Soldermask

- Solder mask is cutting only where needed now.

## Verification

- Image Compare could be missing differences on layers where ambiguous contours are involved. Differences caused by the interpretation of ambiguous contours are found now.
- Adding horns during Secure Etch Compensation could introduce slivers. These slivers are no longer created.
- The creation of horns during Secure Etch Compensation was not always respecting the requested clearance between the objects.
- AutoFinalize is finishing the process and eliminates all negative objects.

## Undo/Redo

- UNDO/REDO on inserting Chamfer, Fillet and Round, in the BGA Tracks tab of Transform Objects has been enabled.

## YELO

- Copper Adjuster Expanding pads could create a short between a copper pad and the surrounding copper region.



- Copper Adjuster is skipping several adjustment steps after clearing copper around NPTH holes.
- Copper Adjuster shaving copper region to outline is working for all outlines regardless of the attachment settings (Top, Bottom or None).
- Copper Adjuster Plane Adjust performance has been improved.
- Copper Adjuster same net clearance checks are respecting the Via/Non-Via pad thresholds.
- Copper Adjuster performs a pre-test to validate the outline layer. When the outline is unusable (outline without contour, open contour) a proceed/cancel possibility is proposed to the user.
- In Copper Adjuster the term Land has been replaced by non-Via pad. Furthermore the iamcam AutoDfm ticket has been reviewed.
- Plated drill hole clearance faults are reported/adjusted in case of same net too.
- Copper Adjuster pad shaving could cut a complex pad in different parts. These complex pads are no longer cut in parts.
- The Copper Adjuster has been extended with separate pad to trace and pad to region clearance values for Via pads and Land pads.
- In case two tracks with different aperture size are not connected, copper adjuster connects these using the smallest aperture.
- Copper Adjuster was reporting false in-plane clearance issues.
- In Copper Adjuster performance has been improved for pad to region and trace to region faults.
- Top and Bottom mask clipping is working identical as expected.
- Via openings are handled as expected again.
- Embedded vias without dedicated via mask opening are getting new openings respecting the specified via ring value.
- Outline removal is prevented in Mask Adjuster.
- Workflow is running through without JobProfiler failings.
- Copper Adjuster has been extended with a new feature: clear copper under NPTH holes.
- New toggle "Change Aperture Size" has been introduced to Scale the words in the Adjust tab of YELO Legend Adjuster, which allows specifying if the involved aperture size should be influenced by the applied scale factor
- Mask Adjustments for non-plated holes added.