# Integr8tor v2023.12

Fixed issues

Your continued feedback is important and appreciated. This version solves the following issues you have raised with our Customer Care department.
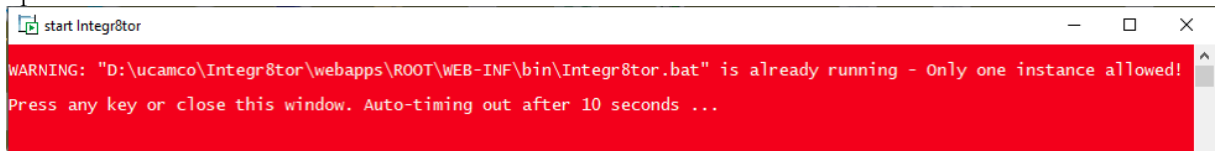
- QED Edit functionality stopped working. After an attempted edit, jobs remained locked and the Queue Position field in Cockpit remained empty. The functionality has been restored.
- Line width calculation could fail with an "Internal error / Process got terminated unexpectedly" on large data sets, following a memory reallocation failure. This is no longer the case.
- Occasionally, incorrect trace-to-trace minimum values were reported between trace ends completely embedded in pads. These false calls do no longer appear.
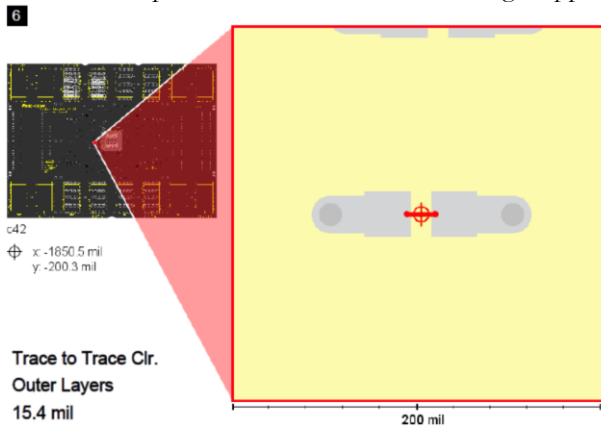
- Tool classification could potentially run out of memory and cause a running job to terminate unexpectedly. Code has been reworked to lower the function's memory footprint and improve the function's speed.
- Several cases where FlashMaker was seen to spend an excessive amount of time on optimizing pads have been addressed, resulting in noticeabley faster processing times.
- The creation of .swf images for use in Cockpit > Job Editor > Layer structure editor is no longer hampered by the presence of tiny arcs in the data.
- Image-based mask polarity recognition has been improved so that the polarity of the solder mask is no longer wrongly guessed when using the ucam.db key gerber.input.merge_con: 1.
- A case has been corrected where the Gerber X2 FileFunction attribute was processed incorrectly, pushing an outer copper out of the stack to become a drawing.
- A recovered job export should never have any data optimization, but in an exceptional case, it was found to contain rectangular flashes on inner layers that were generated by FlashMaker during data processing. This malfunction has been addressed.
- Data sets with a shadow outline in their copper layers could show inconsistent copper count/area results after changing the board's thickness via the Modify Job function. This will no longer happen.
- Square-shaped drill holes in an incoming ODB++ data set were causing an "Unexpected error during DesignAnalysis" issue. They no longer do.
- Single quote characters (') used in files names are not allowed for storage in Mysql. Code has been added to circumvent this database limitation and to allow Integr8tor to process these files correctly.
- Code refinements have been implemented for a number of cases where Integr8tor was choosing the wrong one from 2 potential outline candidates.

- The (unsupported) Set/Netshort elements in certain Revision C sets of the IPC-2581 data format are no longer causing Integr8tor to terminate ungracefully. Processing of such files can now successfully be completed.
- An empty solder mask layer that was initially pushed out of the stack was causing a failure when attempting to bring it back into the stack interactively in Job Editor. The initial issue has been taken care of and a software extension has been made available to keep empty (solder mask, legend, paste, …) layers in the stack if desired.
- An issue with the contourize.analytic.arc.expand.margin tolerance has been remedied and will no longer upset the outline detection process.
- Certain Altium .pcb ASCII files were incorrectly analyzed as Gerber file because they contained text strings that identified positively as valid Gerber commands. File format analysis has been upgraded to prevent these files from being recognized and processed as Gerbers.
- Improvements have been done for several cases where drill tools were incorrectly classified.
- A race condition during manual startup of the Integr8tor server has been identified and cured. In rare occasions, it allowed for the JobHandler to be started twice, leading to "No License" failures for every job processing attempt afterwards.
- An extra level of security has been built in to warn against - and prevent from - multiple server start-ups.


```
start Integr8tor                                                    —    □    ×

WARNING: "D:\ucamco\Integr8tor\webapps\ROOT\WEB-INF\bin\Integr8tor.bat" is already running - Only one instance allowed!
Press any key or close this window. Auto-timing out after 10 seconds ...
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- In one single installation, the Integr8tor Email polling thread responsible for connecting to the POP3 Email server and collecting the mails was seen to die every 10 to 15 days for no obvious reason. Code has been added to monitor the thread and to restart it automatically in case it goes down.
- Data sets where the drill tool sizes were correctly defined in both the excellon drill file header and an external .drr file could end up being processed with no drill tool sizes at all … From now on, one set of information is discarded, allowing its twin counterpart to be used for further processing.
- One single annual ring missing on one side of a plated tool was causing the tool to be questioned and qualified as unplated, even though many other drill hits of the same tool were having annular rings on both sides as expected. This behavior has been modified in that the tool is still questioned, but it is marked as plated by default.
- A regression has been fixed where whitespace characters in the Gerber file names were causing the drill files' spans to be set incorrectly from layer1 to layer1.
- On some data sets, the drill tool diameters that were initially read in correctly were rescaled later during processing, producing incorrect QED results. This has been patched.
- A case was witnessed where the 4 clearances of a thermal relief were removed during the creation of the Rebuilt job. The built-in image compare security feature correctly detected the discrepancy and blocked the job from further usage, but the code has been reviewed to repair the inadvertent removal.