

## Integr8tor v2023.01

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The fast and most accurate AI and web-based Sales & Engineering solution

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QED

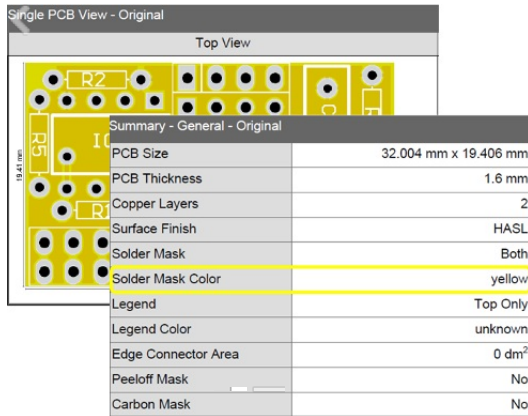
Additions and extensions

## Yellow solder mask color

### QED additions and extensions

- Option yellow added to list solder mask colors
- Supported from Cockpit / Email / Hotfolder / Web integration input
- With QED PDF pictures and documentation
- Perfect companion for the coverlay on your flex-rigid products

*(Available free of charge to customers with a Cockpit/Email submit/Hotfolder submit or Web Integration input license)*



The screenshot shows a PCB design interface. On the left, a 'Top View' of a PCB is displayed with various components and a yellow solder mask. On the right, a 'Summary - General - Original' table lists the following properties:

Summary - General - Original	
PCB Size	32.004 mm x 19.406 mm
PCB Thickness	1.6 mm
Copper Layers	2
Surface Finish	HASL
Solder Mask	Both
Solder Mask Color	yellow
Legend	Top Only
Legend Color	unknown
Edge Connector Area	0 dm <sup>2</sup>
Peeloff Mask	No
Carbon Mask	No

# Plated/non-plated/backdrill-to-copper clearance analysis

## QED additions and extensions

- Plated/non-plated/backdrill-to-copper minimum clearance values drill-down
- Individual minima for drill holes versus pads/traces/regions
- "Overall" column with the lowest minimum across different feature types
- Extended Summary Copper Layer Minima section in QED PDF to accommodate extra info
- Conditional-formatting enabled
- Additional snapshots in the Detailed images section
- Indispensable aid to help judge about reparability of tight clearance issues in CAM

(Free-of-charge extension to the AutoAnalysis license)

Summary - Copper Layer Minima - Original									
Type	Copper Width	Critical Copper Width	Trace Width	Critical Trace Width	Copper to Copper Clr.	Trace to Trace Clr.	Same Net Clr.	Annular Ring	Copper to Outline Clr.
	mm	mm	mm	mm	mm	mm	mm	mm	mm
Outer	1 0.026 2	0.127 3	0.127 4	0.127 5	0.102 6	0.102 7	0.034 8	0.063 9	0.500
Inner	10 0.028 11	0.102 12	0.102 13	0.102 14	0.102 15	0.102 16	0.092 17	0.000 18	0.508

Summary - Copper Layer Minima - Original												
Type	Copper to Plated Clr.				Copper to NPTH Clr.				Copper to Backdrill Clr.			
	Overall	to Pad	to Trace	to Region	Overall	to Pad	to Trace	to Region	Overall	to Pad	to Trace	to Region
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
Outer	19 0.181 20	0.249 21	0.181 22	0.229 23	0.382 24	0.531 25	>1.600 26	0.382 27	0.203 28	0.203 29	0.343 30	0.458
Inner	30 0.227 31	0.254 32	0.229 33	0.227 34	0.382 35	0.531 36	0.418 37	0.382 38	0.333 39	0.439 40	0.333 41	0.455

Type	Copper to Plated Clr.			
	Overall	to Pad	to Trace	to Region
	mm	mm	mm	mm
Outer	19 0.200 20	0.250 21	0.250 22	0.200
Inner	27 0.100 28	0.250 29	0.250 30	0.100

## Conditional formatting

### QED additions and extensions

- Number of cells supported under conditional formatting vastly increased
- Now available for entire Copper Summary section, including all newly added cells for drill-to-copper clearance minima
- Additionally, a further wide selection of existing cells throughout the report, based on "popular demand"
- Check out the file QedConditionalFormatting.example\_mm.xml, located under WEB-INF\setups\system for full details and "how-to" instructions
- Ideal tool for catching critical values in the blink of an eye

(Free-of-charge extension to the AutoAnalysis license)

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File	Pos.	Copper Width	Critical Copper Width	Trace Width	Critical Trace Width
		mm	mm	mm	mm
gbl	1	0.026	0.127	0.127	0.127
L2	2	0.127	0.139	>0.400	>0.400
L3	3	0.028	0.111	0.127	0.127
L4	4	0.032	0.139	>0.400	>0.400
L5	5	0.028	0.127	0.127	0.127
L6	6	0.028	0.127	0.127	0.127
L7	7	0.032	0.139	>0.400	>0.400
L8	8	0.028	0.102	0.102	0.102
L9	9	0.032	0.139	>0.400	>0.400
L10	10	0.031	0.127	0.127	0.127
L11	11	0.032	0.139	>0.400	>0.400
gbl	12	0.096	0.127	0.127	0.127

## Agile job queue handling

- Ability to change the priority of a scheduled job or a job waiting to be processed
- Avoids having to abort jobs and resubmit them with a lower priority
- Added scheduler functionality to allow Job Abort, even at high polling intervals
- Combines into a nice convenience to reshuffle jobs manually in case of unforeseen imminent deadlines

*(Free-of-charge extension to the Cockpit user license)*

Location	Progress
● Auto Input Processing	02:27
■ Auto Input	New
■ Auto Input	New
■ Auto Input	Scheduled
■ Auto Input	Scheduled
● Auto Input Processing	02:28

## Performance and security

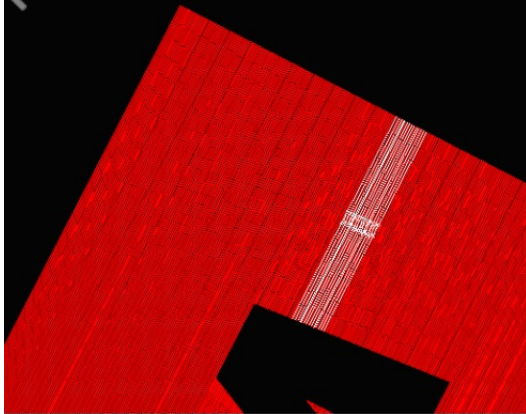
- Legend layer analysis heavily optimized to better deal with awkwardly constructed logos
- Cases witnessed with up to 80% reduction of the processing time
- Designs with large portions of the outer layers uncovered by solder mask now require only a fraction of the processing time needed before
- Built-in Image Compare functionality to watchdog the integrity of the Rebuilt job export
- Significant improvements to the outline recognition algorithm
- Extensions to the layer naming and span recognition engines for regular and backdrill programs
- Added naming recognition schemes for Gerber data sets
- Contributes considerably to more automation, higher first-pass hit rates, and therefore reduced processing times

*(Free-of-charge extensions to the AutoAnalysis license)*

*(The added security feature for the Rebuilt job assumes the presence of a Rebuilt job output license)*

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## DPMX import

- Added support for GlobalFiducial and LocalFiducial sections in incoming DPMX archives
- Storage of fiducial information for further use downstream, e.g. in UcamX' YELO Solder Mask Adjuster
- Auto-correction of "non-standard" drill span description in certain DPMX files

*(Free-of-charge extension to the DPMX import option)*



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## And more ...

Integr8tor v2023.01 features an important series of [code fixes](#) for issues you have cared to report.

Please keep on doing so. Your feedback is highly appreciated.

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## Install v2023.01

Integr8tor v2023.01 is now available for download from <ftp.ucamco.com>.

We recommend installing this update at your earliest convenience.

For any further questions you may have, please contact our local business partner or the Ucamco helpdesk.

We thank you for choosing a Ucamco product.

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**Detailed demo**

The video below provides a more technical, in-depth look at the newest version of Integr8tor. Click play to start the video, or watch it directly on our [YouTube channel](#).

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