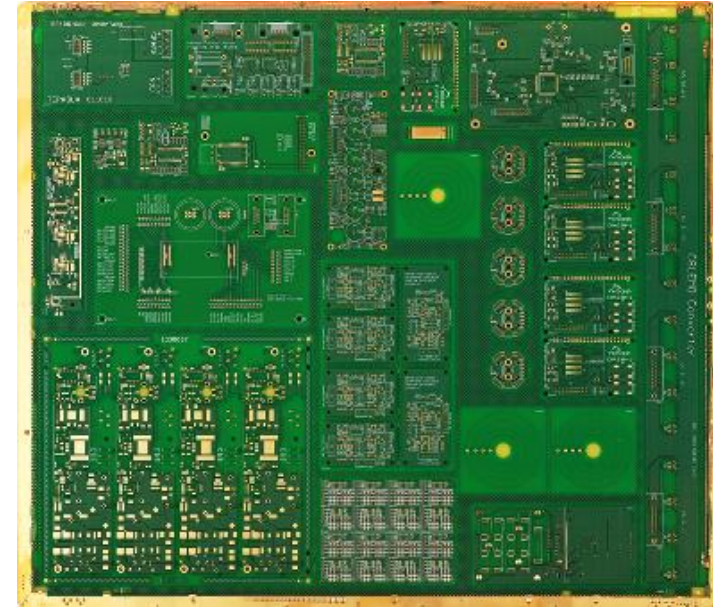


Van CAD-data tot en met bestukte printplaat in de eC-cloud

- Eurocircuits neemt u mee in de virtuele wereld van de eC-cloud. Vertrekkende van uw CAD-data produceert Eurocircuits uw print virtueel inclusief bestukking. DRC en DFM tot op het niveau van de bestukte print nog voor u iets bestelt vermijdt dure fouten. En nadien is er de levering van het geheel. Een overzicht.
- Dirk Stans, Eurocircuits

What services - Eurocircuits

- PCB prototypes & small series
- Specialized in order pooling
- Up to 16 layers – pooling until 8 layers
- Standard technology boards (90µm, not HDI)
- From 1 WD onwards
- Online customer account:
 - Online price calculator for all services
 - Smart menus avoid the use of catalogues
 - PCB and PCBA visualization prior to order
 - Many smart tools: panel, marking, buildup, PCB PIXture, BOM, etc...
 - Online DRC/DFM
 - Online communication platform (incl Live Chat) and history data base




Defining your Circuit

- Defining your BOM (Bill Of Material)
 - Functionality of components.
 - Availability of components ?
 - Package to use ? Footprint definition.
 - Testing implications ?
 - Heat Management ?
 - Pricing ?
 - Etc ...
- Schematics

Defining your Printed Circuit Board

- What are the PCB cost drivers ?
- What makes a PCB hard/impossible to make ?
- Which tools are available to help me ?
 - Offline direct consulting Quotation - All
 - Online capability catalogues - All
 - Online smart menus - Eurocircuits



Delivery format

Single PCB

PCB quantity

10

Delivery term

7 working days

Number of layers

6

PCB width (X) (mm)

100.00

PCB height (Y) (mm)

80.00

eC-registration compatible PCB

☐

Stencils

Material definition

Select pre-defined buildup

Board thickness

1.55 mm

Board buildup

Standard

Material Tg

145-150 °C

Outer layer copper foil

18 µm (end 35 µm)

Inner layer copper foil

35 µm

Extra PTH runs

0

Extra press cycles

0

Board technology

Select classification

Outer layer trackwidth (OL-TV)

0.150 mm

Outer layer isolation distance (OL-TT-TP-PP)

0.150 mm

Outer layer annular ring (OAR)

0.125 mm

Inner layer trackwidth (IL-TV)

0.150 mm

Inner layer isolation distance (IL-TT-TP-PP)

0.150 mm

Inner layer annular ring (IAR)

0.125 mm

Smallest final hole

0.25 mm

Hole density

< 1000/dm²

Technology class

6C

Holes <= may be reduced

0.45 mm

Board definition

Top soldermask

Green

Bottom soldermask

Green

Top legend

White

Bottom legend

White

Surface finish

Any lead free finish

Milling

No

Bare Board Testing

☒

UL marking

☐

Advanced options

Summary

Business customer? Select here.

Service

STANDARD pool

Delivery term

7 working days

Estimated shipment date

01-10-2013

Quantity

10 PCBs

Board surface / Order surface

0.80 dm² / 8.00 dm²

Prices

Net

Gross*

Single PCB

€ 31.79

€ 38.47

Total boards

€ 317.92

€ 384.68

Express transport

€ 12.48

€ 15.10

Economy transport

€ 10.49

€ 12.69

Total

€ 330.39

€ 399.77

* The gross prices include 21.00% VAT.

Add to basket

Useful documents

PCB Calculator user guide

Read more...

PCB design guidelines

Read more...

Alternatives

Customized matrix

10 PCBs

7 working days

Net

Gross*

€ 31.79

€ 38.47

€ 317.92

€ 384.68

Select

20 PCBs

7 working days

Net

Gross*

€ 21.17

€ 25.62

€ 423.49

€ 512.43

Select

30 PCBs

7 working days

Net

Gross*

€ 17.00

€ 20.58

€ 510.13

€ 617.26

Select

10 PCBs

6 working days

Net

Gross*

€ 39.90

€ 48.28

€ 399.02

€ 482.81

Select

20 PCBs

6 working days

Net

Gross*

€ 26.58

€ 32.16

€ 531.53

€ 643.15

Select

30 PCBs

6 working days

Net

Gross*

€ 21.34

€ 25.82

€ 640.27

€ 774.73

Select

* The gross prices include 21.00% VAT.

The transport costs and total price are calculated and shown in the summary according to the selection.

Smart menu

- Technical support
 - Build wizard
 - 892 builds

Buildup selector - (STANDARDpool)

Material

Number of layers: 6 Board thickness: 1.55 mm

Reversed buildup: ☒ Blind/Buried via runs: 3

Extra press cycles: 0 Special buildup: ☐

Top soldermask: Green Bottom soldermask: Green

Top legend: White Bottom legend: None

Peelable mask: No Carbon contacts: No

Viafill: No Top heatsink paste: No

Bottom heatsink paste: No

Core thickness	Outer layer copper foil	Inner layer copper
0.360 mm	12 µm (end 30 µm)	12 µm
0.360 mm	18 µm (end 35 µm)	18 µm
0.360 mm	35 µm (end 60 µm)	35 µm
0.200 mm	12 µm (end 30 µm)	12 µm
0.200 mm	18 µm (end 35 µm)	18 µm
0.200 mm	35 µm (end 60 µm)	35 µm
0.200 mm	70 µm (end 95 µm)	70 µm
0.100 mm	12 µm (end 30 µm)	12 µm
0.100 mm	18 µm (end 35 µm)	18 µm
0.100 mm	35 µm (end 60 µm)	35 µm
0.100 mm	70 µm (end 95 µm)	70 µm

Buildup

Total material thickness: 1.548 mm

Top legend

Top soldermask

Top copper

Core - FR4-Improved - 0.2mm

Inner copper 1

Prepreg - PR2116 - 0.12mm

Prepreg - PR2116 - 0.12mm

Prepreg - PR7628 - 0.18mm

Inner copper 2

Core - FR4-Improved - 0.2mm

Inner copper 3

Prepreg - PR7628 - 0.18mm

Prepreg - PR2116 - 0.12mm

Prepreg - PR2116 - 0.12mm

Inner copper 4

Core - FR4-Improved - 0.2mm

Bottom copper

Bottom soldermask

Plated drill

Non Plated Through Hole (NPTH)

Blind/buried via (Top - Inner 1)

Blind/buried via (Inner 2 - Inner 3)

Blind/buried via (Inner 4 - Bottom)

Smart menu

Build-up validation!

- faster prices, faster deliveries, lower costs

Virtual production in the eC-cloud - Your Populated Board produced “right first time”

- Technical support
 - Technical validation
 - > 300 rules

Material definition

Select pre-defined buildup

Board thickness

1.55 mm

Board buildup

Standard

Material Tg

145-150 °C

Outer layer copper foil

70 µm (end 95 µm)

▼ Board technology

Select classification

Outer layer trackwidth (OL-TW)

0.100 mm

Outer layer isolation distance (OL-TT-TP-PP)

0.125 mm

Outer layer annular ring (OAR)

0.100 mm

Smallest final hole

0.25 mm

Hole density

< 1000/dm²

Technology class

8C

Order detail conflicts

The selected outer layer copper foil (70 µm (end 95 µm)) requires a minimum outer layer trackwidth of 0.200 mm. The current value for outer layer trackwidth is 0.100 mm. Press accept to adapt the outer layer trackwidth setting to the required value.

Accept

The selected outer layer copper foil (70 µm (end 95 µm)) requires a minimum outer layer isolation of 0.250 mm. The current value for outer layer isolation is 0.125 mm. Press accept to adapt the outer layer isolation setting to the required value.

Accept

Smart menu

Technical validations!

- No production delays

Virtual production in the eC-cloud - Your Populated Board produced “right first time”

- Technical support
 - Classification wizard
 - Pattern
 - Holes
 - Copper weight

Classification wizard

Pattern class

	Design values	3	4	5	6	7	8	9
Outer layer trackwidth (OL-TW)	0.150	≥ 0.250 mm	≥ 0.200 mm	≥ 0.175 mm	≥ 0.150 mm	≥ 0.125 mm	≥ 0.100 mm	≥ 0.090 mm
Outer layer isolation distance (OL-TT-TP-PP)	0.150	≥ 0.250 mm	≥ 0.200 mm	≥ 0.175 mm	≥ 0.150 mm	≥ 0.125 mm	≥ 0.125 mm ⚠	≥ 0.125 mm ⚠
Outer layer annular ring (OAR)	0.125	≥ 0.200 mm	≥ 0.150 mm	≥ 0.150 mm	≥ 0.125 mm	≥ 0.125 mm	≥ 0.100 mm	≥ 0.100 mm
Inner layer trackwidth (IL-TW)	0.150	≥ 0.250 mm	≥ 0.200 mm	≥ 0.175 mm	≥ 0.150 mm	≥ 0.125 mm	≥ 0.100 mm	≥ 0.090 mm
Inner layer isolation distance (IL-TT-TP-PP)	0.150	≥ 0.250 mm	≥ 0.200 mm	≥ 0.175 mm	≥ 0.150 mm	≥ 0.125 mm	≥ 0.100 mm	≥ 0.100 mm ⚠
Inner layer annular ring (IAR)	0.125	≥ 0.200 mm	≥ 0.150 mm	≥ 0.150 mm	≥ 0.125 mm	≥ 0.125 mm	≥ 0.125 mm	≥ 0.125 mm

⚠ The selected outer copper foil thickness (18 µm) requires a minimum outer layer isolation of 0.125 mm.

⚠ The selected inner copper foil thickness (18 µm) requires a minimum inner layer isolation of 0.100 mm.

Drill class

	Design values	A	B	C	D	E
Smallest final hole	0.25	≥ 0.50 mm	≥ 0.35 mm	≥ 0.25 mm	≥ 0.15 mm	≥ 0.10 mm

Cancel
Apply

Smart menu

Classification aide!

- Poolable options
 - Extra cost expressed as single coin symbol

Board definition	
Top soldermask	Green
Top legend	White
Surface finish	Che Ni/Au selectif
Bare Board Testing	<input checked="" type="checkbox"/>

Smart menu

Price guidance!

- Non-poolable options
 - Extra cost expressed as multiple coin symbol and remark

Material definition	
Board thickness	1.55 mm
Material Tg	145-150 °C
Outer layer copper foil	18 µm (end 35 µm)
Extra PTH runs	1

Remarks
<p>⚠ Pooling conditions no longer met due to the following order details:</p> <ul style="list-style-type: none"> • Extra PTH runs

Virtual production in the eC-cloud - Your Populated Board produced “right first time”

Make your board layout

- Place your components
 - Footprints
- PCB Layout
 - Tracks, vias, ...

PCB data CAD (Computer Aided Design) to CAM (Computer Aided Manufacturing)

PCB - details	Possible issues	Clearly defined in:			PCB Visualizer defines
		Gerber X	Gerber X2	Native EAGLE/KiCAD	
Base material	On stock / on offer	no	no	no	PCB Configurator
Number of layers	Layers complete or not	no	no	yes	Buildup editor
Definition of the layers	Clear definition / assignment	no	yes	yes	Buildup editor
Board size	Possible open or more contours	no	no	no	Outline editor
Customer panel	Definition not standardized	no	no	no	Panel editor
Copper thickness	Definition base/end Cu	no	no	no/yes	Buildup editor
build up	Definition not standardized	no	no	no/yes	Buildup editor
PTH		no	yes	yes	Drill Editor
Via / component hole		no	yes	yes	Drill Editor
NPTH		no	yes	yes	Drill Editor
Slots & Cut outs	Definition not standardized	no	yes	yes	Outline editor / Drill editor
blind & burried vias	Define the layer name correct	no/yes	yes	yes	Buildup editor
Thermal pads	Defined in CAD or not	no	no/yes	no/yes	-
Surface finish		no	no	no	PCB Configurator
Soldermask colour		no	no	no	PCB Configurator
Legend colour		no	no	no	PCB Configurator
press fit holes	Definition not standardized	no	no	no	PCB Configurator parameter
peelable mask	Definition not standardized	no	no	no	Buildup editor
Carbon contacts	Definition not standardized	no	no	no	Buildup editor
edge connector / beveling	Definition not standardized	no	no	no	PCB Configurator parameter
depth routing	Definition not standardized	no	no	no	PCB Configurator / Drill editor
via-fill	Definition not standardized	no	no	no	PCB Configurator / Drill editor
chamfered holes	Definition not standardized	no	no	no	PCB Configurator / Drill editor
PTH on the board edge	Definition not standardized	no	no	no	PCB Configurator parameter
round-edge plating	Definition not standardized	no	no	no	PCB Configurator parameter
heatsink paste	Definition not standardized	no	no	no	Buildup editor

Virtual production in the eC-cloud - Your Populated Board produced “right first time”

PCB Visualizer® v1.3-152-151013

PCB Configurator PCB Checker

Board name LSA-tstEagle (B0503230) Data set: Customer data

Customer data

Imported 21 layers

STANDARD pool

Delivery format: eC-panel by Eur Panel quantity: 10
 Delivery term: 7 working days Number of layers: 6
 Measured: 6
 PCB width (Q) (mm): 158.75 PCB height (Y) (mm): 69.85
 Measured: 158.75 mm Measured: 69.85 mm
 eC-registration compatible PCB
 Commercial details

Stencils

Panel

Repeat in X: 2 Repeat in Y: 2
 Panel width (Q) (mm): 333.50 Panel height (Y) (mm): 155.70
 PCBs per panel: 4 PCB separation method: Break routing
 Panel border: 5.00 mm PCB spacing: 2.00 mm
 Panel without cross outs
 Panel outline: Routing

Material

Technology

PCB definition

Top soldermask: Green Bottom soldermask: Green
 Measured: Detected Measured: Detected
 Top legend: White Bottom legend: None
 Measured: Detected Measured: Not detected
 Surface finish: Any lead free fi Milling: No
 Bare Board Testing

Advanced options

Board buildup

Top view
 Top solderpaste
 Top legend
 Top soldermask
 Top copper
 Inner copper 1
 Inner copper 2
 Inner copper 3
 Inner copper 4
 Bottom copper
 Bottom soldermask
 Plated drill
 Non Plated Through Hole (NPTH)
 Bottom view
 Total material thickness: 1.56 mm

Detailed View

0. All Order details of your PCB.
1. Imported layers and the Buildup editor.
2. Graphical presentation of the Buildup.
3. Panel editor to define customer panels.
4. Classification wizard to determine the technology class of the PCB.
5. PCB PIXtute editor to integrate graphics onto your PCB.
6. Marking editor to manipulate all markings on the board.
7. The Visualization of your data, your virtual PCB.
8. The shown data set, customer data or production data.
9. The PCB Visualizer help function.
10. The price for your chosen combination of quantity and delivery term.
11. Save all changes to the basket item.
12. Launch an inquiry to be processed by our engineers and sales.
13. Remarks on your data versus order details, actions required.
14. Customized matrix to input your choice of quantity and delivery terms.
15. Automatically chosen alternatives for Quantities and delivery terms.
16. On page online chat support.

Summary

Service: STANDARD pool
 Delivery term: 7 working days
 Estimated shipment date: 22-10-2015
 Quantity: 10 panels
 Board surface / Order surface: 5.19 dm² / 51.93 dm²
 Price: Net
 Single panel: € 113.62
 Total boards: € 1136.18
 Express transport: € 0.00
 VAT 11 %: € 238.60
 Total gross: € 1374.78
 Save changes
 Launch Inquiry

Remarks

The panel is marked as eC-registration compatible, but no stencils are ordered.
 The measured value for Outer layer annular ring (OAR) (0.050 mm) does not match any of the available options.
 The measured value for Inner layer annular ring (IAR) (0.050 mm) does not match any of the available options.

Alternatives

Customized matrix

10 panels 10 working days Net € 985.89 Select	20 panels 10 working days Net € 1369.10 Select	30 panels 10 working days Net € 1688.76 Select
10 panels 8 working days Net € 108.61	20 panels 8 working days Net € 75.41	30 panels 8 working days Net € 62.02

Contact support

PCB Configurator : Remove data ambiguities online

Virtual production in the eC-cloud - Your Populated Board produced "right first time"

Confusing layer naming corrected with buildup editor

Buildup selector - WDG outline (B1065760)

Material

Number of layers: 2

Board thickness: 1.55 mm

Top soldermask: Green

Bottom soldermask: Green

Top legend: White

Bottom legend: None

Peelable mask: No

Carbon contacts: No

Viafill: No

Top heatsink paste: No

Bottom heatsink paste: No

Core thickness	Outer layer copper foil	Inner layer cop
1.550 mm	12 µm (end 30 µm)	-
1.550 mm	18 µm (end 35 µm)	-
1.550 mm	35 µm (end 60 µm)	-
1.550 mm	70 µm (end 95 µm)	-
1.550 mm	105 µm (end 130 µm)	-

Buildup

Total material thickness: 1.586 mm

Top view

Top solderpaste (31 - tCream)

Top legend (21 - tPlace)

Top legend (25 - tNames)

Top soldermask (29 - tStop)

Top copper (1 - Top)

Core - FR4-Improved - 1.55mm

Bottom copper (16 - Bottom)

Bottom soldermask (30 - bStop)

Plated drill (1-16_plated)

Non Plated Through Hole (NPTH) (1-16_unp)

Bottom view

Imported Layers

File name	Function
Detected Outline	Outline/Milling Editor
Detected Milling	Outline/Milling Editor
1 - Top	Top copper
1-16_plated	Plated drill
1-16_unplated	Non Plated Throug
100 - szam	Non-assigned
16 - Bottom	Bottom copper
20 - Dimension	Mechanical
21 - tPlace	Top legend
25 - tNames	Top legend
27 - tValues	Non-assigned
29 - tStop	Top soldermask
30 - bStop	Bottom soldermasl
31 - tCream	Top solderpaste
35 - tGlue	Non-assigned
39 - tkeepout	Non-assigned
41 - tRestrict	Non-assigned
44 - Drills	Mechanical
45 - Holes	Mechanical
51 - tDocu	Non-assigned

Layer image

Viewport

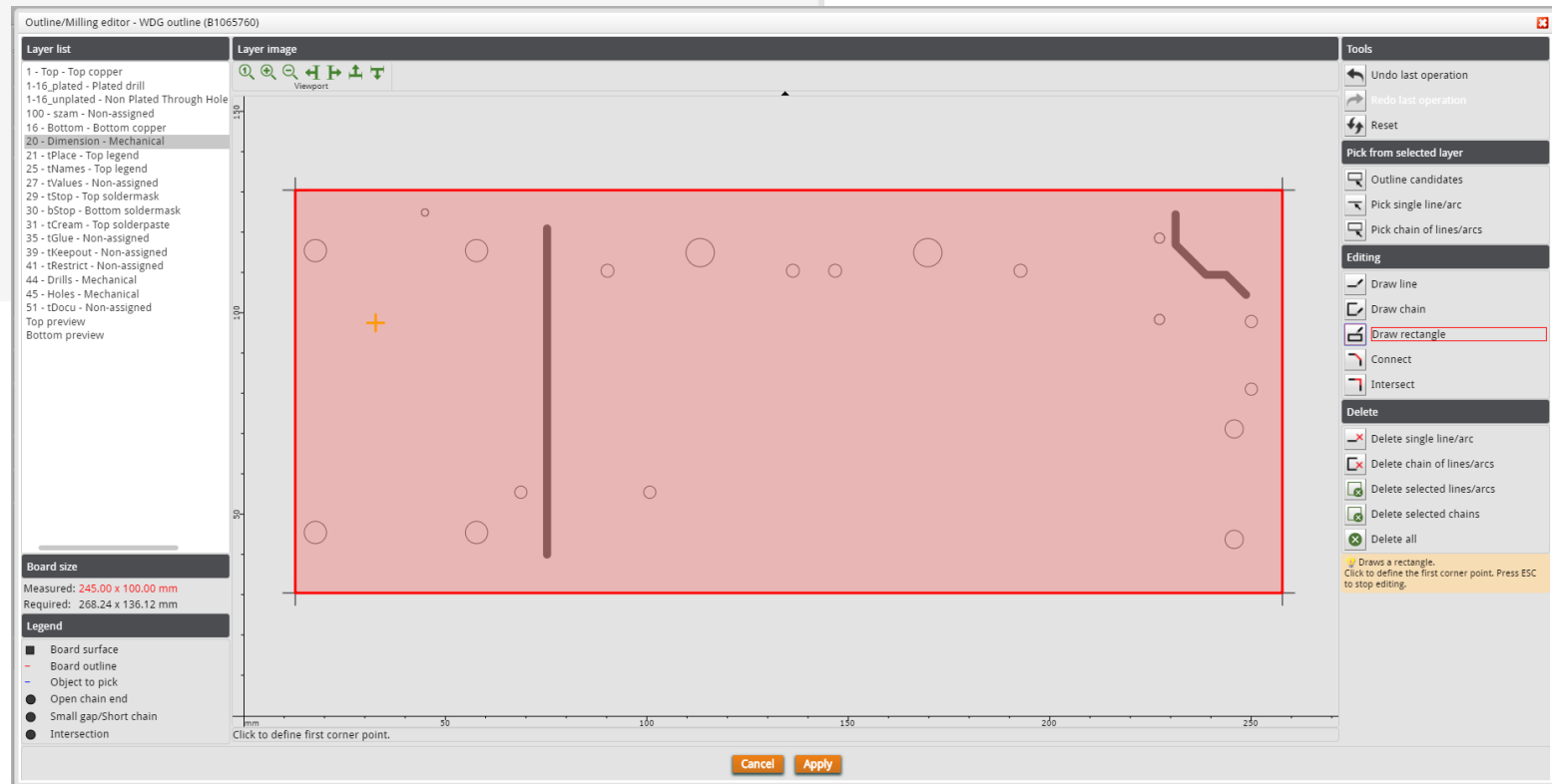
Measure

View

Cancel Apply

[Click here for more information](#)

Bad outline corrected with outline editor



Buildup selector - (STANDARDpool)

Material

Number of layers: 4
Reversed buildup: ☐
Extra press cycles: 1
Top soldermask: Green
Top legend: White
Peelable mask: No
Viafill: No
Bottom heatsink paste: No

Board thickness: 1.55 mm
Blind/Buried via runs: 1
Special buildup: ☐
Bottom soldermask: Green
Bottom legend: None
Carbon contacts: No
Top heatsink paste: No

Buildup

Total material thickness: 1.536 mm

Top legend
Top soldermask
Top copper
Prepreg - PR7628 - 0.18mm
Prepreg - PR7628 - 0.18mm
Inner copper 1
Core - FR4-Improved - 0.71mm
Inner copper 2
Prepreg - PR7628 - 0.18mm
Prepreg - PR7628 - 0.18mm
Bottom copper
Bottom soldermask
Plated drill
Non Plated Through Hole (NPTH)
Blind/buried via (Top - Inner 1)

Core thickness	Outer layer copper foil	Inner layer copper
0.710 mm	12 µm (end 30 µm)	12 µm
0.710 mm	12 µm (end 30 µm)	18 µm
0.710 mm	18 µm (end 35 µm)	18 µm
0.710 mm	18 µm (end 35 µm)	35 µm
0.710 mm	35 µm (end 60 µm)	35 µm
0.710 mm	35 µm (end 60 µm)	70 µm
0.710 mm	70 µm (end 95 µm)	70 µm
0.360 mm	12 µm (end 30 µm)	12 µm
0.360 mm	12 µm (end 30 µm)	18 µm
0.360 mm	18 µm (end 35 µm)	18 µm
0.360 mm	18 µm (end 35 µm)	35 µm
0.360 mm	35 µm (end 60 µm)	35 µm
0.360 mm	35 µm (end 60 µm)	70 µm
0.360 mm	70 µm (end 95 µm)	70 µm
0.200 mm	12 µm (end 30 µm)	12 µm
0.200 mm	12 µm (end 30 µm)	18 µm
0.200 mm	18 µm (end 35 µm)	18 µm
0.200 mm	18 µm (end 35 µm)	35 µm
0.200 mm	35 µm (end 60 µm)	35 µm
0.200 mm	35 µm (end 60 µm)	70 µm
0.200 mm	70 µm (end 95 µm)	70 µm
0.100 mm	12 µm (end 30 µm)	12 µm
0.100 mm	12 µm (end 30 µm)	18 µm
0.100 mm	18 µm (end 35 µm)	18 µm
0.100 mm	18 µm (end 35 µm)	35 µm

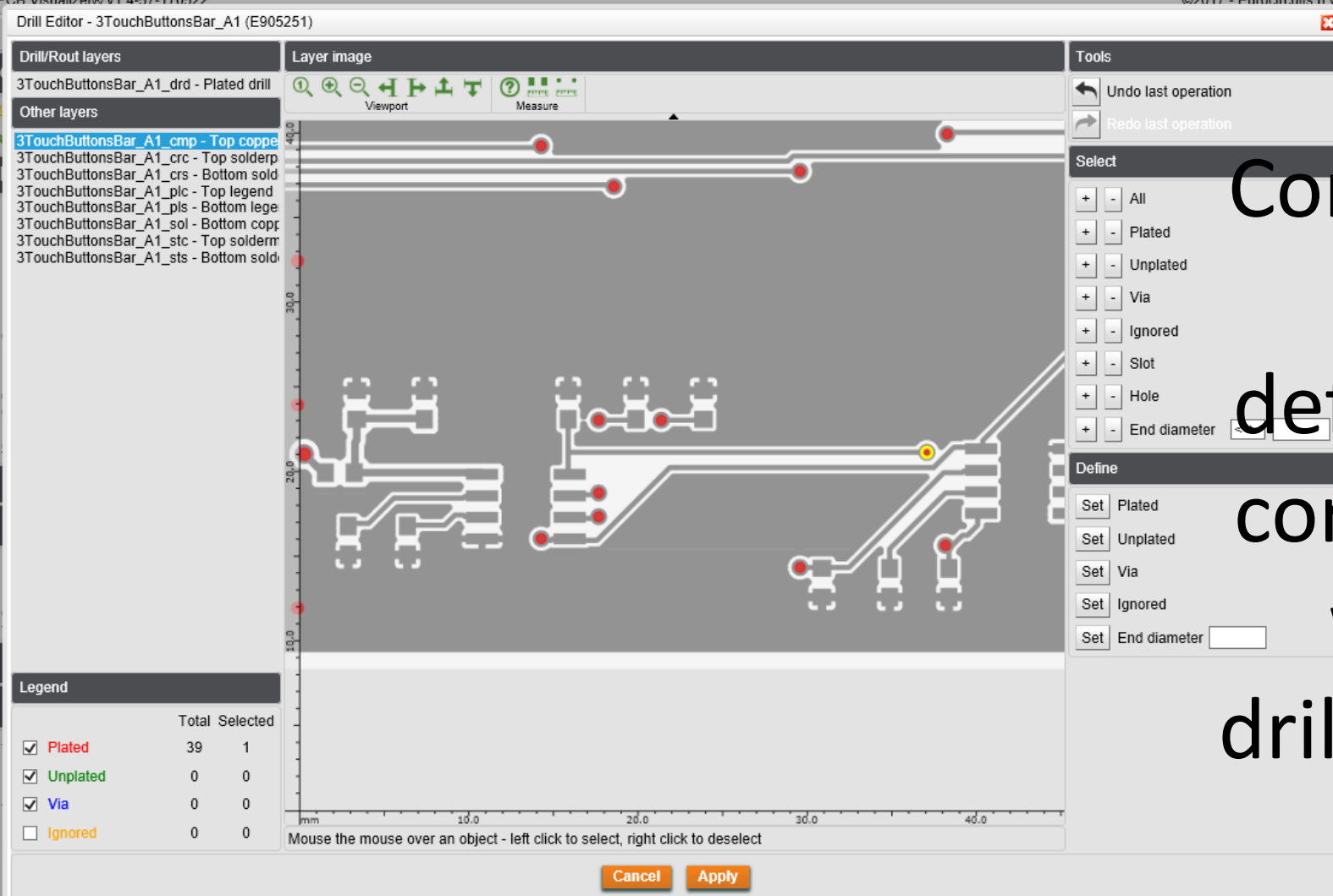
Remarks

Blind/buried via (Top - Inner 1) ends at the top side of a core. Select the via in the buildup and use the buttons in the toolbar to correct the drill span or choose a different board buildup.

Cancel Apply

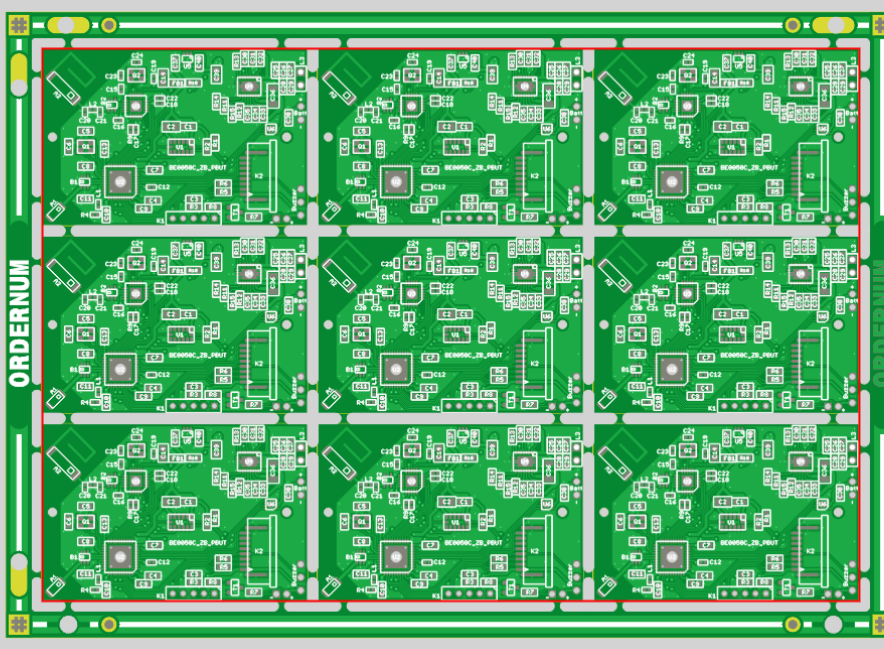
[Click here for more information](#)

Bad buildup edited with buildup editor



Confusing
hole
definition
corrected
with
drill editor





Panel and board properties

Panel size (161 x 110 mm)

X size (mm) ☒ Automatic

Y size (mm) ☒ Automatic

Panel border

Left border (mm) Right border (mm)

Top border (mm) Bottom border (mm)

Board size Measured: 51.0 x 34.0 mm

X size (mm) Y size (mm)

Board separation method

Board spacing in X Board spacing in Y

X board separation Y board separation

Tools

- Select the object to edit
- Delete the selected object
- Undo the last operation
- Redo the last operation
- Add a step/repeat block
- Add a spacer
- Add a drill hole border element
- Add a copper clearance border element

Block properties

☒ Simple block ☐ Nested block

Repeat in X Repeat in Y

Board rotation

Edit the properties of the selected object or click another object to edit it.

Panel editor

Cancel Apply

“Panel editor”

Virtual production in the eC-cloud - Your Populated Board produced “right first time”

PCB Visualizer® v1.3-152-151013

PCB Configurator PCB Checker

Board name LSA-tstEagle (B0503230) Data set: Customer data

DRC - DFM Information

DRC information DFM information

Layer	Required	Measured		
Outer layer trackwidth (OL-TW)				
Top copper	0.150 mm	0.150 mm		
Bottom copper	0.150 mm	0.150 mm		
Outer layer isolation distance (OL-TT-TP-PP)				
Top copper	0.125 mm	0.141 mm		
Bottom copper	0.125 mm	0.150 mm		
Outer layer annular ring (OAR)				
Top copper	0.125 mm	0.050 mm	32	10
Bottom copper	0.125 mm	0.050 mm	32	10
Inner layer trackwidth (IL-TW)				
Inner copper 1	0.150 mm	0.150 mm		
Inner copper 2	0.150 mm	0.150 mm		
Inner copper 3	0.150 mm	0.150 mm		
Inner copper 4	0.150 mm	0.150 mm		
Inner layer isolation distance (IL-TT-TP-PP)				

Fault view

Outer layer annular ring (OAR) - Top copper

Current issue

Measured annular ring : 0.050 mm
Required annular ring : 0.125 mm
Tool diameter : 0.25 mm
Hole diameter : 0.15 mm
Calculated pad diameter : 0.350 mm

Annular ring

More information can be found [here](#).

Board buildup

Top view

Top solderpaste

Top legend

Top soldermask

Top copper

Inner copper 1

Inner copper 2

Inner copper 3

Inner copper 4

Bottom copper

Bottom soldermask

Plated drill

Non Plated Through Hole

Bottom view

Total material thickness: 1.56 mm

Bird's Eye View

Detailed View

0. PCB Checker - DRC Information
1. Detailed PCB parameter overview with fault indication
2. Bird eye view of all faults and repaired issues
3. Detailed zoom of the fault in the board
4. Remarks stay in sight
5. Remarks stay in sight
6. On page online chat support

Summary

Service STANDARD pool
Delivery term 7 working days
Estimated shipment date 22-10-2015
Quantity 10 panels
Board surface / Order surface 5.19 dm² / 51.93 dm²

Prices Net
Single panel € 113.62
Total boards € 1136.18
Express transport € 0.00
VAT 21.00% € 238.60
Total gross € 1374.78

Save changes

Launch inquiry

Click the "Launch inquiry" button in case you are having troubles configuring your PCB. Our sales team will review your input and generate an offer.

Remarks

The panel is marked as eC-registration compatible, but no stencils are ordered.

The measured value for Outer layer annular ring (OAR) (0.050 mm) does not match any of the available options.

The measured value for Inner layer annular ring (IAR) (0.050 mm) does not match any of the available options.

Alternatives

Customized matrix

10 panels 10 working days Net € 98.59 € 985.89 Select	20 panels 10 working days Net € 68.45 € 1369.10 Select	30 panels 10 working days Net € 56.29 € 1688.76 Select
10 panels 8 working days Net € 108.61	20 panels 8 working days Net € 75.41	30 panels 8 working days Net € 62.02

Contact support

PCB Checker :
Evaluate possible Design Rule Check issues

PCB Configurator

PCB Checker

Board name LSA-tstEagle (B0503230) Data set: Customer data

DRC - DFM information

DRC information

DFM information

Layer	Values
Plating	
Top copper	0.80
Bottom copper	0.71
Solderpaste surface	
Top solderpaste	1335.75 mm ²
Not-connected soldermask-free pads - Potential fiducials	
Top copper	16
Bottom copper	0
Copper free of soldermask	
Top copper	14.80%
Bottom copper	3.04%

Fault view

Plating - Top copper

Current issue

Plating index : 0.80

The plating index measures the uniformity of copper density on the board. A completely uniform board has an index of 1 which means that no plating problems are expected. Lower values show less uniformity, highlighted on the visual image by the red and blue areas. If the index falls to 0.4 or less, then special attention is required.

More information can be found [here](#).

Plating

Top plating index 0.8

0. PCB Checker - DFM information

1. Plating index

2. Detailed info on the plating index of the chosen layer

3. Image of the plating index of the chosen layer

4. Calculated solder paste surface (SMD)

5. Potential fiducials

6. % Copper, free of soldermask against the board surface

7. On page online chat support

Summary

Service	STANDARD pool
Delivery term	7 working days
Estimated shipment date	22-10-2015
Quantity	10 PCBs
Board surface / Order surface	1.11 dm ² / 11.09 dm ²
Prices	Net
Single PCB	€ 42.27
Total boards	€ 422.69
Express transport	€ 0.00
VAT 21.00%	€ 88.77
Total gross	€ 511.46

Save changes

Click the 'Launch inquiry' button in case you are having troubles configuring your PCB. Our sales team will review your input and generate an offer.

Launch inquiry

Remarks

- The measured value for Outer layer annular ring (OAR) (0.050 mm) does not match any of the available options. ☐ Ignore
- The measured value for Inner layer annular ring (IAR) (0.050 mm) does not match any of the available options. ☐ Ignore

Alternatives

Customized matrix

10 PCBs 7 working days Net € 422.69 <div>Select</div>	20 PCBs 7 working days Net € 27.92 € 558.34 <div>Select</div>	30 PCBs 7 working days Net € 22.87 € 686.09 <div>Select</div>
10 PCBs 6 working days Net € 52.95 € 529.50 <div>Select</div>	20 PCBs 6 working days Net € 34.07 € 699.46 <div>Select</div>	30 PCBs 6 working days Net € 28.65 € 859.58 <div>Select</div>

Contact support

PCB Checker : Evaluate possible Design For Manufacturing issues

PCBAAssembly data - CAD to CAM

PCBA - details	Possible issues	Clearly defined in:			PCBA Visualizer defines
		BOM	CPL	Native EAGLE/KiCAD	
File format	Definition not standardized	no	no	yes	BOM editor / CPL editor
Component description	Definition not standardized	no	no	no	BOM editor
Manufacturing Part Number	Not clear or partial description	no	no	no	BOM editor
Supplier Part Number	Not clear or partial description	no	no	no	BOM editor
Component package	Poor definition leads to different package link in manufacturing DB	no	no	no	BOM editor
Component origin (Offset)	Different origin than manufacturing DB	no	no	no	CPL editor
Component Rotation (pin 1)	Different rotation than manufacturing DB	no	no	no	CPL editor
Component centroid	Different centroid than manufacturing DB	no	no	no	CPL editor
Component footprint	Poor definition leads to different footprint link in manufacturing DB	no	no	no	-
IPC definition of the footprint	Almost never available	no	no	no	show
Component Packaging	Need to be decided by the manufacturer	no	no	no	removed in BOM editor

Choose columns to be used

Mapping of at least one column out of MPN, Description or Package name. And, one out of Quantity and Reference designators is mandatory.

Back

Submit

Row Nr.	Qty	Value	Description	Device	Package	Parts
	Quantity	Value	Description	Comment	Package name	Reference Designator
2	1	JP_1X14	CONNECTOR	Control Board	JP_1X14	CN1
3	1	JP_1X4	CONNECTOR	Control Board	JP_1X4	CN5
4	1	JP_1X5	CONNECTOR	Control Board	JP_1X5	CN3
5	1	JP_1X6	CONNECTOR	Control Board	JP_1X6	CN4
6	1	15EDGRC-3.5/6P	CONNECTOR	Control Board	CON_TERMINAL_3.5MM_6-PIN	CN6
7	1	15EDGK-3.5/6P	CONNECTOR	Control Board	CON_TERMINAL_3.5MM_6-PIN	CN6-pair
8	0	40_PIM_CON_0.5_MMHIROSE	CONNECTOR	Control Board	40_PIN_CON_0.5_MM_02	CN2
9	1	40_PIM_CON_0.5_MM	CONNECTOR	Control Board	40_PIN_CON_0.5_MM_02	CN2
10	2	18p SMD-0603	CAPACITOR	Control Board	0603_TYPE_B	C56, C57
11	6	10n 50V SMD-0603	CAPACITOR	Control Board	0603_TYPE_B	C45, C46, C47, C48,C49,C50
12	40	100n 16V X7R SMD-0402	CAPACITOR	Control Board	0402_TYPE_C	C2, C3, C4, C5, C6,C7,C8, C9, C10, C11, C12, C13,C14, C15, C16, C17, C18, C19, C20, C21, C22, C23, C24, C26, C27, C29, C30, C32, C38, C40, C41, C42, C43, C44, C51,
13	2	1u 25V SMD-0603	CAPACITOR	Control Board	0603_TYPE_B	C36, C39
14	1	1u Tantal	CAPACITOR	Control Board	SMC_A	C31
15	2	2.2u Tantal	CAPACITOR	Control Board	SMC_A	C25, C28
16	4	4.7u Tantal	CAPACITOR	Control Board	SMC_A	C1, C33, C35, C37
17	1	10u 16V X5R SMD-0805	CAPACITOR	Control Board	0805_TYPE_A	C34
18	1	8MHz	CRYSTAL	Control Board	CRYSTAL_3.2MM_2PIN	Q1
19	1	SMLVT3V3	DIODE	Control Board	DO-214AA	D1
20	2	PMEG4005AEA.115	DIODE	Control Board	SOD123FL	D2, D3
21	1	STM32F429NI - MCU	IC	Control Board	TFBGA	IC1
22	1	AS4C4M165-6BIN - SDRAM	IC	Control Board	TFBGA-54	IC2
23	1	MCP130T-300 - RESET	IC	Control Board	SOT-23-II	IC3

- BOM editor:
 - Detect BOM list format
 - Assign column types
 - Automated search
- Virtual production in the eC-cloud - Your Populated Board produced “right first time”

Search parts

Your part:

MPN	Manufacturer	Description	Package	Supplier	SPN	Library	Value	Mounting	Comment	URL
		IC	SO8BW				W25Q32FV5SIG - FLASH			Control Board

MPN Package Description

Search result (Eurocircuits):

	MPN	Manufacturer	Description	IPC	Datasheet	Supplier	Price	Stock	Verified
<input type="checkbox"/>	AD633JNZ	Analog Devices	Multiplier IC [Analog Devices] AD633JNZ Multiplier IC	DIP762W45P254L1016H533Q8		Eurocircuits	0	0	No
<input type="checkbox"/>	SN74LVC1G32DBVR	Texas Instruments	Logic IC [Texas Instruments] SN74LVC1G32DBVR Logic IC	SOT23-5P95_280X145L45X40		Eurocircuits	0	0	No
<input type="checkbox"/>	SN74AHC1G04DBVR	Texas Instruments	Logic IC [Texas Instruments] SN74AHC1G04DBVR Logic IC	SOT23-5P95_280X145L45X40		Eurocircuits	0	0	No
<input type="checkbox"/>	SN75LBC176DR	Texas Instruments	Logic IC [Texas Instruments] SN75LBC176DR Logic IC	SOIC8P127_490X600K175L83X41N		Eurocircuits	0	0	No
<input type="checkbox"/>	ADM232JURZ	Analog Devices	Interface IC [Analog Devices] ADM232JURZ Interface IC	SOIC16P127_990X600K175L83X41N		Eurocircuits	0	0	No
<input type="checkbox"/>	SN74AHC1G32DBVR	Texas Instruments	Logic IC [Texas Instruments] SN74AHC1G32DBVR Logic IC	SOT23-5P95_280X145L45X40		Eurocircuits	0	0	No
<input type="checkbox"/>	SN74LVC1G08DBVT	Texas Instruments	Logic IC [Texas Instruments] SN74LVC1G08DBVT Logic IC	SOT23-5P95_280X145L45X40					
<input type="checkbox"/>	SN74AHC1G32DBVR	Texas Instruments	Logic IC [Texas Instruments] SN74AHC1G32DBVR Logic IC	SOT23-5P95_280X145L45X40					
<input type="checkbox"/>	LMD18200T/NOPB	Texas Instruments	Motor Driver IC [Texas Instruments] LMD18200T/NOPB Motor Driver IC	TO170P2002X462X479-11					
<input type="checkbox"/>	L293DNE	Texas Instruments	Motor Driver IC [Texas Instruments] L293DNE Motor Driver IC	DIP762W46P254L1931H508Q16B					

Search result (Octopart):

MPN	Manufacturer	Description	IPC
<input type="checkbox"/>	MAX232CPE+	Maxim Integrated	Dual Transmitter/Receiver RS-232 16-Pin PDIP N
<input type="checkbox"/>	MCP2122-E/P	Microchip	Infrared Encoder/Decoder 8-Pin PDIP Tube
<input type="checkbox"/>	CS5460A-BSZ	Cirrus Logic	IC ENERGY METERING 1PHASE 24SSOP - CS5460A-BSZ



Search

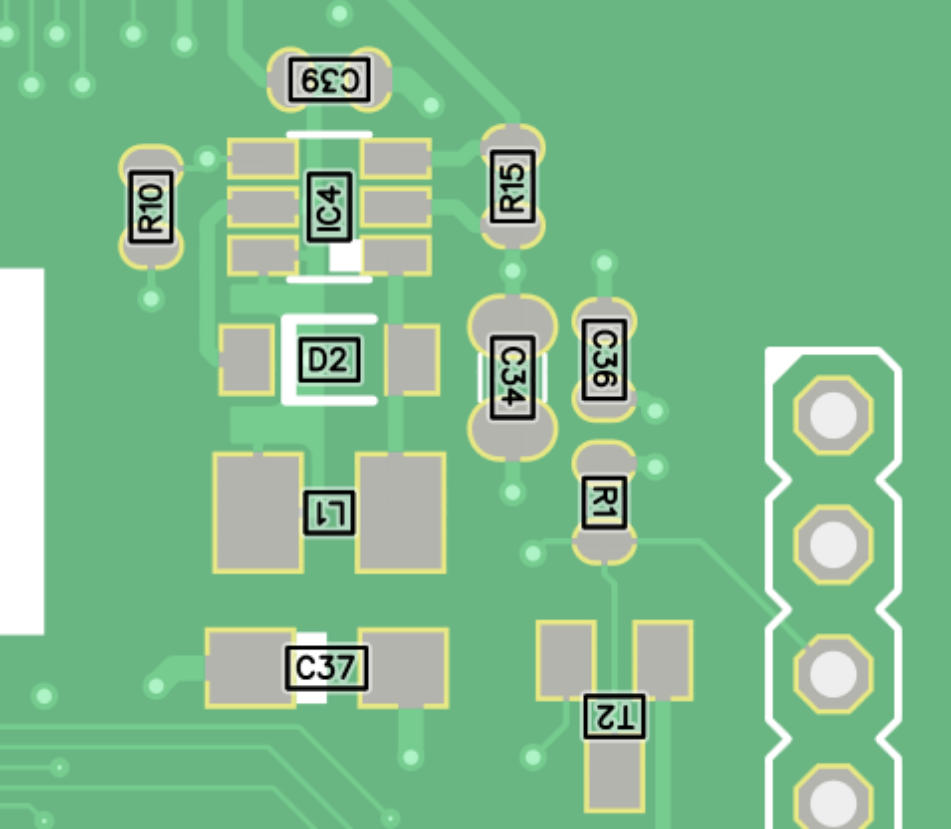
Resistor 5.62k 1%

Search results (5) - double click to replace identified part.

	Found part	Datasheet	Image
	CRCW06035K62FKEA - Vishay 5.62k Ohm ±1% 0.1W, 1/10W Chip Resistor 0603 (1608 Metric) Automot		
	ERA6AEB5621V - Panasonic 5.62k Ohm ±0.1% 0.125W, 1/8W Chip Resistor 0805 (2012 Metric) Autor		
	RC0201FR-075K62L - Yageo 5.62k Ohm ±1% 0.05W, 1/20W Chip Resistor 0201 (0603 Metric) Moistu		
	RC0402FR-075K62L - Yageo 5.62k Ohm ±1% 0.063W, 1/16W Chip Resistor 0402 (1005 Metric) Moist		
	CRCW08055K62FKEA - Vishay 5.62k Ohm ±1% 0.125W, 1/8W Chip Resistor 0805 (2012 Metric) Automot		

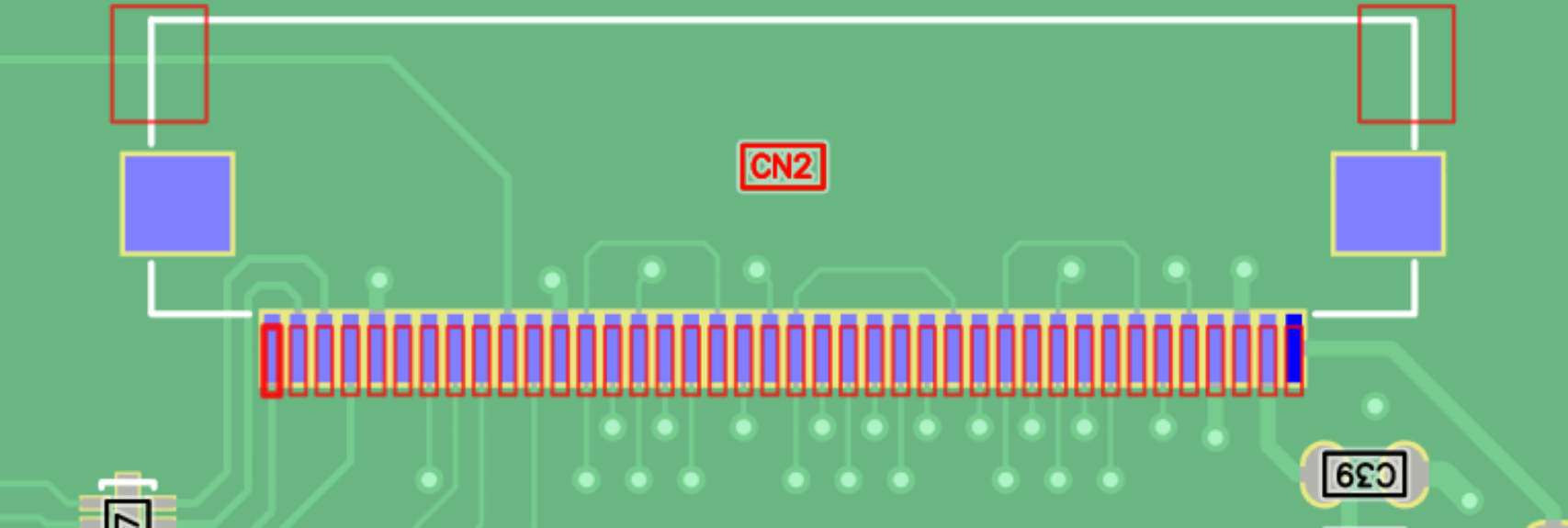
- BOM editor - Manual search
 - Integrated search on different sources
 - Eurocircuits component database
 - Supplier/Manufacturer websites
 - Direct access to spec sheets
- Virtual production in the eC-cloud - Your Populated Board produced “right first time”





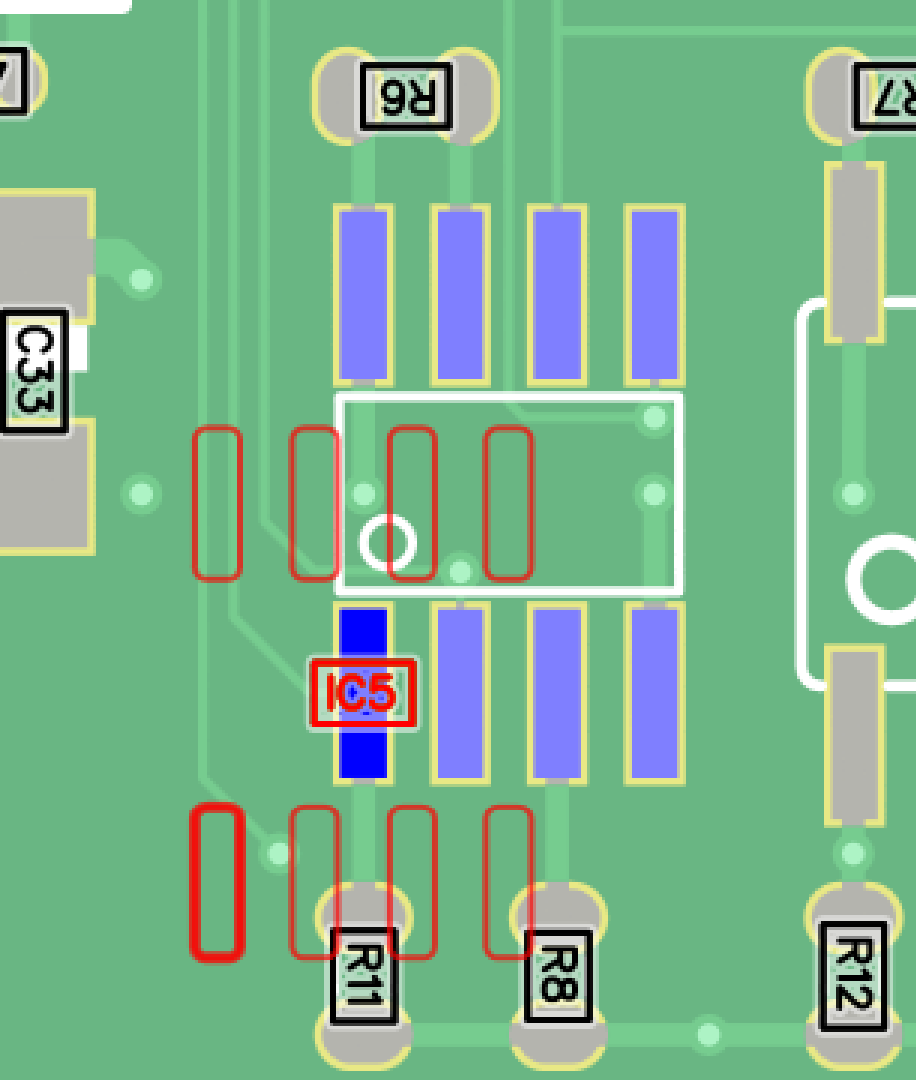
- Component Placement List editor (Read and Visualize)
 - Detect CPL format
 - Assign column types
 - Visualize component locations on PCB data

- Virtual production in the eC-cloud - Your Populated Board produced “right first time”

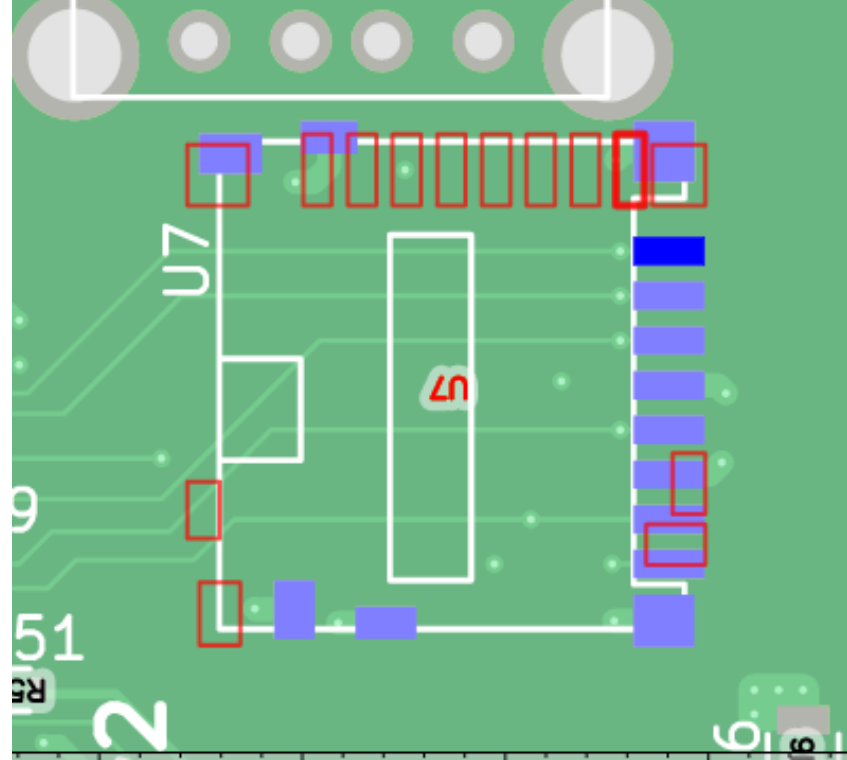
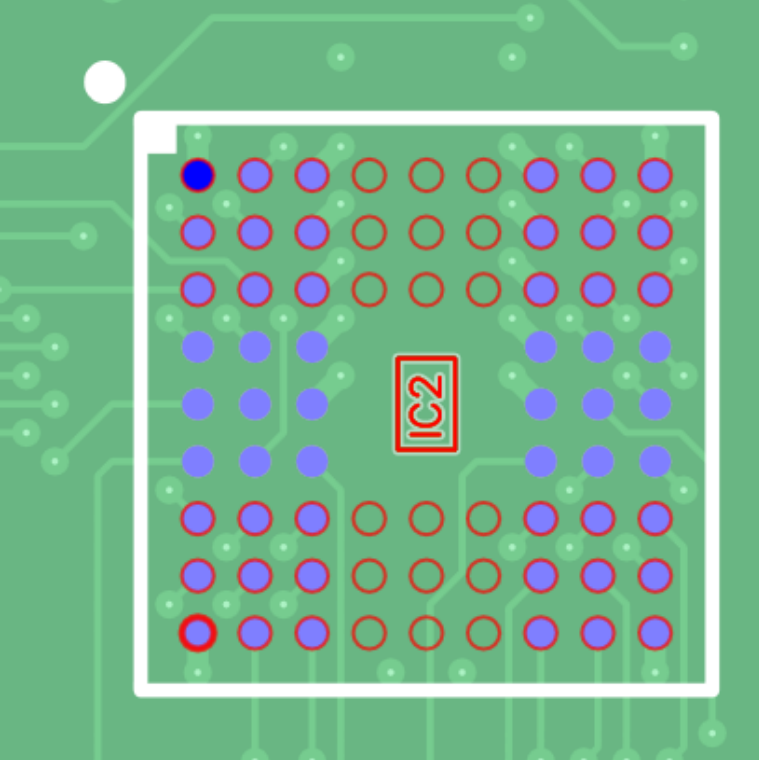


- Footprint – we check CAD-info against the eC-verified database
 - Incorrect component chosen. Same device available with different packages
 - Incorrect footprint definition in CAD library

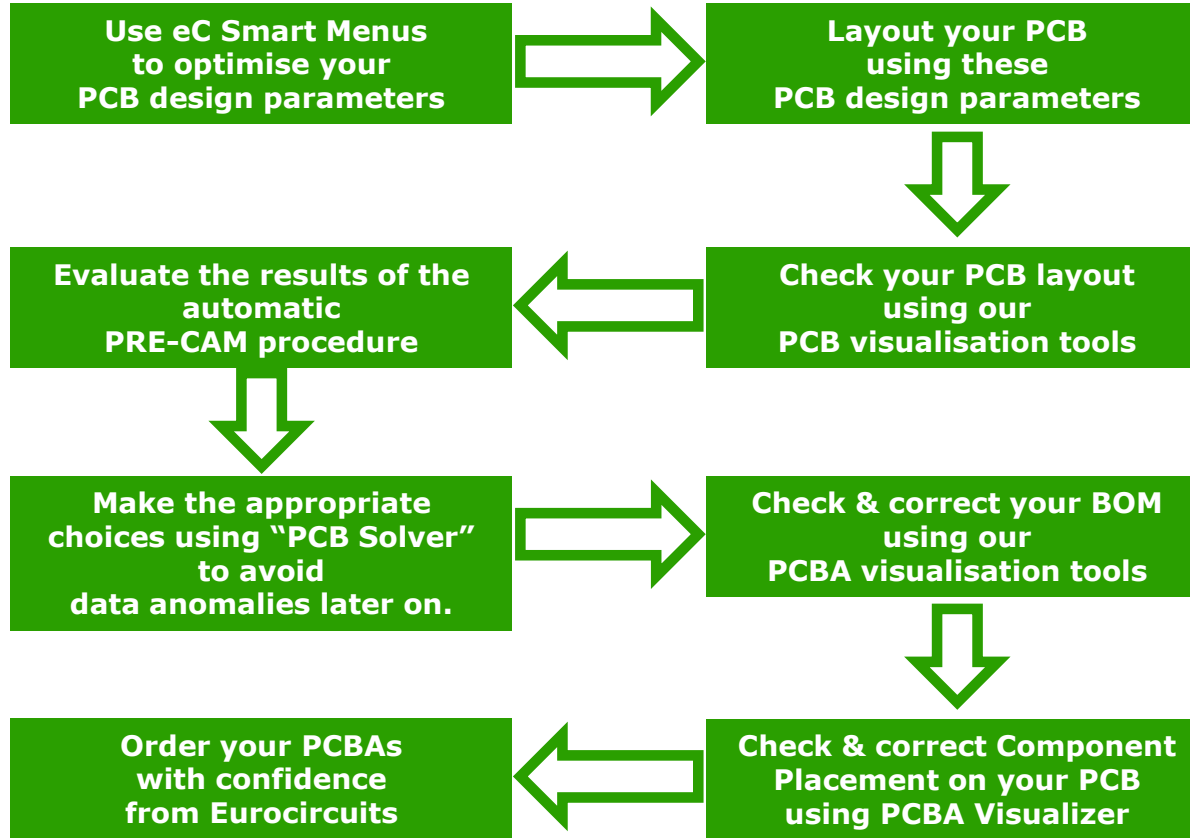
- **Virtual production in the eC-cloud** - Your Populated Board produced “right first time”



- Location
 - PIN1 vs centroid location in CPL file



- Rotation
 - Each library can define its own default rotation
 - Verified against eC standard rotation
- **Virtual production in the eC-cloud** - Your Populated Board produced “right first time”



Virtual PCBA production How?

- **Virtual production in the eC-cloud** - Your Populated Board produced "right first time"

Package name: *

HTSSOP-28

IPC name: *

SOP29P65_970X640X120L60X24T340X970N

SOP29P65_970X640X120L60X24T340X970N.lib [edit file](#)

Description:

Type:

SMD

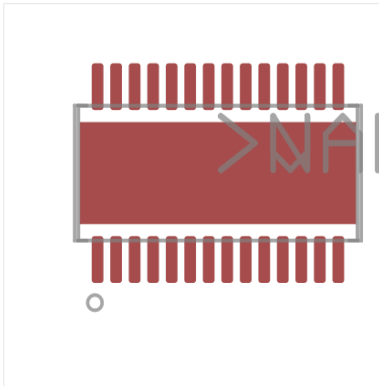
Total solder points:

29

Package Info

Category:

Length:	Column Pitch:	Column Pins:
9.70	0.65	
Width:	Row Pitch:	Row Pins:
6.40		
Height:		Pins:
1.20		29
Diameter:		

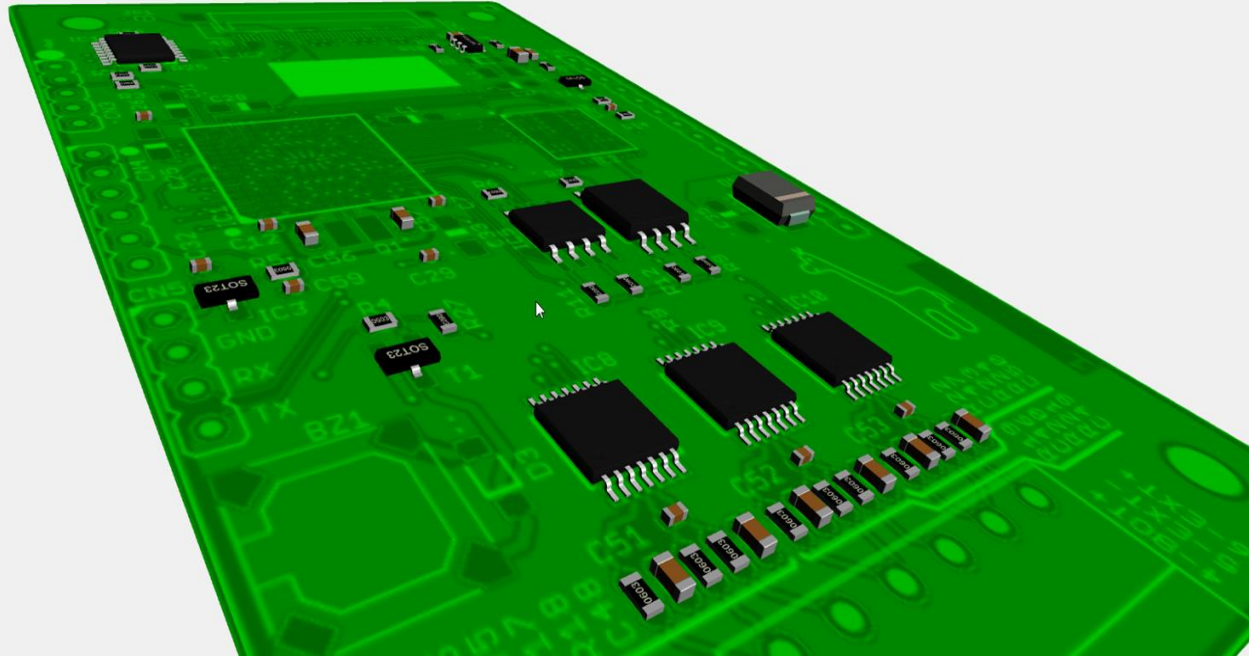


Close Save Save & New

Assembly Visualizer

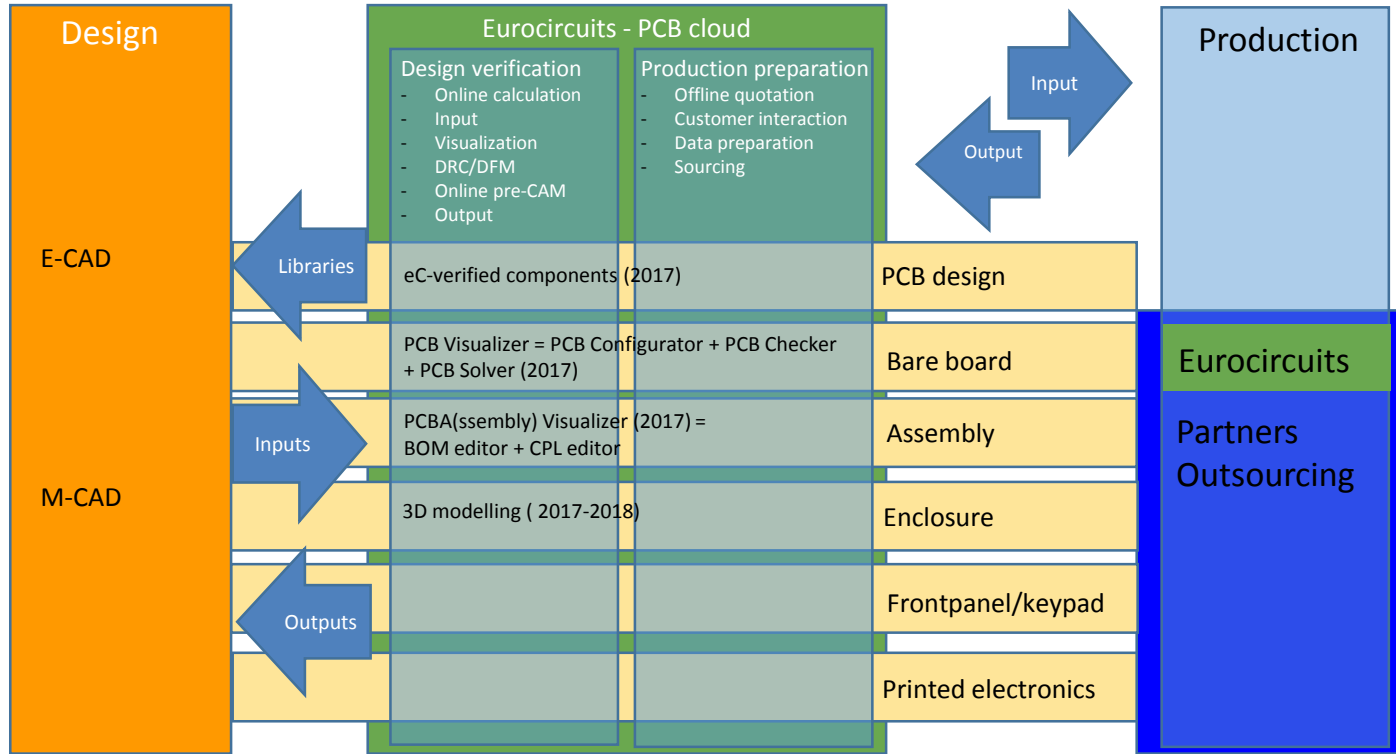
the way to proceed

- **eC-verified component database (DB)**
 - Verified footprints (IPC-rules + Own practical experience)
 - Output to various CAD-packages



Assembly Visualizer the way to proceed

- Eurocircuits CAM department
 - pool of electronics engineers for data preparation ... to get a virtual 3D assembled board



Making electronic applications

Virtual production in the eC-cloud - Your Populated Board produced “right first time”

EURO CIRCUITS

- Your board
“right first time”
 - on time
 - accurate to your intentions
 - at best total cost
- Thanks