



# Cost-cutting online prototype & small batch PCB services

## Eurocircuits – a new generation of online PCB services

### Low prices

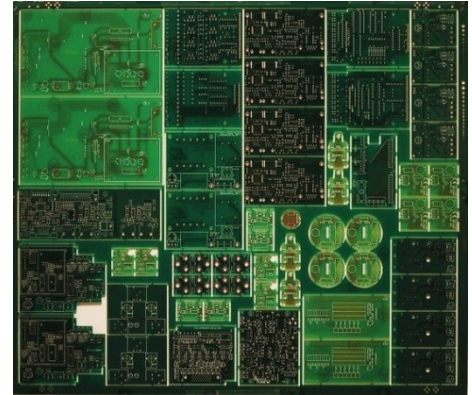
- **Order-pooling** technology (combining several customers' orders on standard manufacturing panels) cuts costs without compromising quality or delivery.
- **No tooling** charges or minimum order size.

### Wide choice

- **4 pooling services** and one non-pooling service.
- **Widest range** of online PCB options.

### Quality

- All boards are made in our own ISO9001:2008 approved factories in Hungary, Germany and India.
- **100% CAM verification check** prior to manufacture to ensure a high quality board delivered on time.



Typical order pooling panel

### Speed and Convenience

- **Immediate online prices** 24/7 against minimum data. No waiting for a sales office to call you back.
- **Order directly** online.
- **Deliveries from 2 working days.**
- **Access your complete PCB records** online (order status, data files, previous orders, invoices etc)

### NEW 2010 "TECH pool" 2010 NEW

- **100µm technology.**
- A one page menu for fast ordering of 100µm technology PCBs from 2 up to 8 layers. Details overleaf.
- Only high tech pooling service in the market.
- **Deliveries from 5 working days**

### NEW 2010 "IMS pool" 2010 NEW

- **Insulated Metal Substrate** PCBs.
- 1 layer, 1.5mm ALU, 75µm insulator, 35µm copper, white or black solder mask
- **Low pooling prices** – for example: **20 off boards 25 x 25 mm in 5WD, €12.20 each**

### "PCB proto" – dedicated prototype pooling service

- **2 boards in 2, 3 or 5 days:** 2 or 4 layers fully finished with 2 soldermasks and 1 legend.
- **Bonus board:** to make 2 PCBs we launch 3. If the third board is good we ship it free of charge.
- **Lowest prices:** for example: **2 off boards 100 x 80 mm in 5WD, 2L €38.12 each or 4L €77.23 each.**

### "STANDARD pool"

- A one page menu for fast ordering of standard **150µm technology** PCBs up to 8 layers. Details overleaf.
- **Widest choice** of technical options in pooling services.
- **Deliveries from 2 working days**

### "On demand" full choice

- **1 – 16 layers.**
- **Full choice** of materials, copper weights, mask and legend colours. Details overleaf.
- **Deliveries from 2 working days**

Eurocircuits are part of the Belgian-owned Europrint Group founded in 1991. We specialise in the online supply of prototype and small-series PCBs from our ISO9001:2008 approved plants in Hungary, Germany and India. Our 5000 m<sup>2</sup> factory at Eger in Hungary was built from new in 2004 but our staff there has over 30 years continuous PCB experience. We acquired our factory in Aachen, Germany in summer 2009 to provide more prototype capacity for European design and development. A dynamic re-investment program keeps our production continuously at the leading edge of PCB technology.

[www.eurocircuits.com](http://www.eurocircuits.com)

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# Technical Specifications “Pooling” & “On demand” Services

The first 4 columns show the specification of our “pooling” services. “On demand” represents our “non-pooling” options.

	“PCB proto”	“STANDARD pool”	“TECH pool”	“IMS pool”	“On demand”
Number of layers	2, 4	1, 2, 4, 6, 8	2, 4, 6, 8	1	1, 2, 4, 6, 8, 10, 12, 14, 16
Maximum PCB dimension	425mm x 425mm	425mm x 425mm	410mm x 410mm	425mm x 425mm	On request
Minimum PCB dimension	20mm x 20mm	5mm x 5mm	5mm x 5mm	5mm x 5mm	On request
Base material	FR-4, Td $\geq$ 325°C, T260 $\geq$ 60', T288 $\geq$ 5', CTEz $\leq$ 3.7%, Tg $\geq$ 135°C	FR-4, Td $\geq$ 325°C, T260 $\geq$ 60', T288 $\geq$ 5', CTEz $\leq$ 3.7%, Tg $\geq$ 135°C	FR-4, Td $\geq$ 325°C, T260 $\geq$ 60', T288 $\geq$ 5', CTEz $\leq$ 3.7%, Tg $\geq$ 150°C	T300 $\geq$ 60', Tg135°C, $\geq$ 1.3W/m-K, $\leq$ 0.65°C/W, $\geq$ 8.5kV, 0.58 °C-cm <sup>2</sup> /W	FR-4, Tg 135-150-170°C Rogers RO4000 series
Base material thickness	1.55mm	1.55mm for 1L/2L only: 1mm & 2.4mm	1.55mm	ALU 1.5mm, 75µm Insulation	FR-4: 0.3mm – 6.4mm Rogers: on request
Base copper foil – outer layers	18µm/½oz	1L: 35µm/1oz, 2L: 18-35-70µm, 4-6-8L: 18µm/½oz,	12µm/½oz	35µm/1oz	12µm, 18µm, 35µm, 70µm & 105µm ½oz, ½oz, 1oz, 2oz & 3 oz
Base copper foil – inner layers	35µm/1oz	35µm/1oz	18µm/½oz	-	18µm, 35µm, 70 µm & 105µm ½oz, 1oz, 2oz & 3 oz
Surface finish	Lead-free finish at our discretion for best price	Lead-free for best price, ENIG, IM Ag, LF HAL	ENIG	LF HAL	Lead-free, ENIG, IM Ag, LF HAL, HAL Sn/Pb, IM Sn
Soldermask type/colour	Liquid Photo Imageable - Green	LPI: Green, black, blue	LPI: Green	LPI: White, black	Green, black, blue, red, white, clear
Extra options	None	Gold fingers, carbon pads, peelable mask, via filling	Peelable mask, via filling	-	Gold fingers, carbon pads, peelable mask, via filling, heat sink paste
Legend colour	White (one side only)	White both sides	White both sides	Black, white	White, yellow, black
Min. track width/spacing	0.150mm	0.150mm	0.100mm	0.150mm	0.090mm
Min. finished hole size	0.25mm	0.25mm, press fit holes	0.15mm, press fit holes	1.00mm	0.10mm, press fit holes
Minimum outer layer pad diameter = finished hole size + listed value	Hole $\leq$ 0.45mm: 0.350mm Hole $\geq$ 0.50mm: 0.400mm	Hole $\leq$ 0.45: 0.350mm Hole $\geq$ 0.50: 0.400mm	Hole $\leq$ 0.45: 0.300mm Hole $\geq$ 0.50: 0.350mm	Hole $\geq$ 1.00: 0.350mm	Hole $\leq$ 0.45: 0.300mm Hole $\geq$ 0.50: 0.350mm
Minimum inner layer pad diameter = finished hole size + listed value	Hole $\leq$ 0.45mm: 0.450mm Hole $\geq$ 0.50mm: 0.500mm	Hole $\leq$ 0.45: 0.450mm Hole $\geq$ 0.50: 0.500mm	Hole $\leq$ 0.45: 0.400mm Hole $\geq$ 0.50: 0.450mm	-	Hole $\leq$ 0.45: 0.350mm Hole $\geq$ 0.50: 0.400mm
Minimum copper to board-edge clearance – outer layers	0.250mm (routed)	0.250mm (routed), 0.450mm (V-cut). Copper up to edge. Plated holes on edge	0.250mm (routed), 0.450mm (V-cut). Copper up to edge. Plated holes on edge	0.250mm (routed), 0.450mm (V-cut)	0.250mm (routed), 0.450mm (V-cut). Copper up to edge. Plated holes on edge. Round-edge plating
Minimum copper to board-edge – inner layers	0.400mm (routed)	0.400mm (routed), 0.450mm (V-cut). Copper up to edge. Plated holes on edge	0.400mm (routed), 0.450mm (V-cut). Copper up to edge. Plated holes on edge	-	0.400mm (routed), 0.450mm (V-cut). Copper up to edge. Plated holes on edge. Round-edge plating
Slots and cut-outs	2.0mm tool	0.5, 0.8, 1.0, 1.2, 1.6, $\geq$ 2.0mm tool	0.5, 0.8, 1.0, 1.2, 1.6, $\geq$ 2.0mm tool	2.0mm tool	0.5, 0.8, 1.0, 1.2, 1.6, $\geq$ 2.0mm tool. Depth routing
Delivery panels	2.0mm break-routed	2.0mm break-routed + V-cut	2.0mm break-routed + V-cut	2.0mm break-routed + V-cut	2.0mm break-routed + V-cut
Multilayer-build	Standard	Standard	Standard	-	Custom option
Electrical test	Standard for 4L	Standard for ML, option for 1-2L	Standard	option	Standard for ML, option for 1-2L
UL marking	Available	Available	Available	Not yet available	Available
Stencil material	130µm stainless steel	130µm stainless steel	130µm stainless steel	130µm stainless steel	130µm stainless steel
Maximum stencil size	465 x 465mm	600 x 600mm	600 x 600mm	600 x 600mm	600 x 600mm

For further information, please go to [www.eurocircuits.com](http://www.eurocircuits.com) and go to the “PCB proto”, “STANDARD pool”, “TECH pool”, “IMS pool” or “On demand” menus.

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