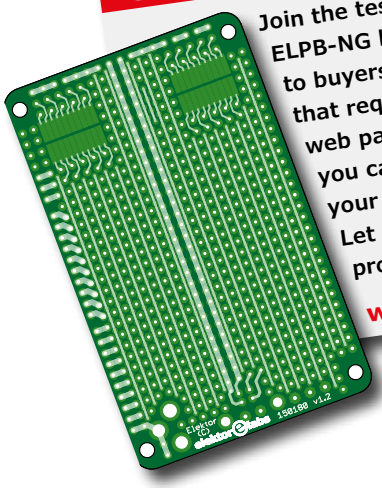
ELPB-NG: Prototyping Board Revisited

perfboard is dead — long live perfboard

Get an ELPB-NG for free!



Join the test team. A few hundred ELPB-NG boards will be given away to buyers of Elektor PCBs and kits that require soldering. A special web page has been created where you can leave feedback concerning your experience with the ELPB-NG. Let us know how we can make prototyping boards even better.

www.elektor.com/elpb-ng

Good power

When prototyping, good connections to the power supply are especially important. That's why the ELPB-NG comes with footprints for USB-B, DC adapter barrel jack and PCB screw terminal blocks. No more croc clips that drop off or create short circuits; just mount the connector that suits you best. The ELPB-NG features two power rails for easy supply voltage distribution.

Dimensions

As Goldilocks taught us, dimensions have to be just right. The ELPB-NG measures 87.6 x 54.6 mm (3.45 x 2.15"), which is about the size of a cigarette pack, i.e. perfect for a 40-pin DIP package. Too small? No problem, boards can be stacked. Pile up as many as you need.

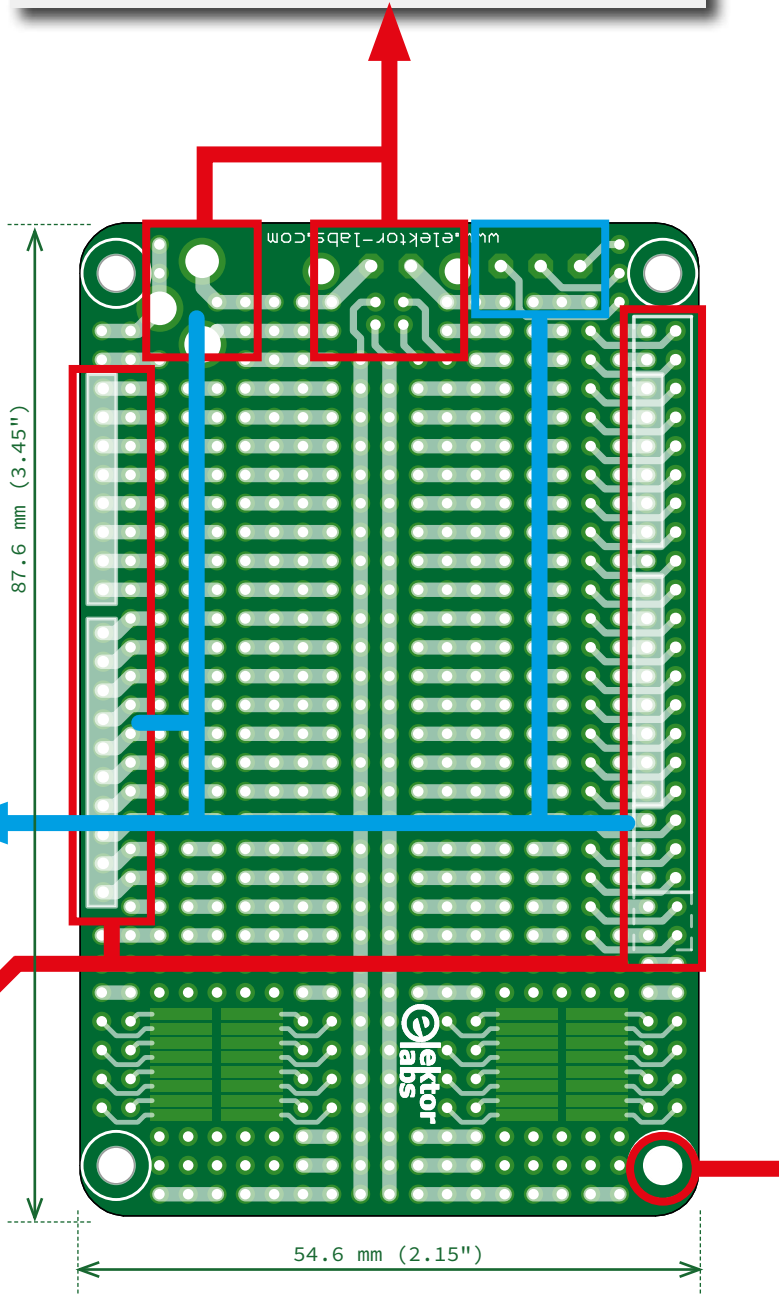
(Boards shown here at 150% of their true dimensions)

Connectivity

The ELPB-NG was designed with connectivity in mind. USB, Arduino, Raspberry Pi, microcontroller programmers — all are easily connected to the ELPB-NG thanks to special connector footprints with pins brought out.

Arduino & Raspberry-Pi compatible

There is no point in denying it; today's e-experimenting in many cases revolves around an Arduino or Raspberry Pi board. Therefore it is only logical that the ELPB-NG is Arduino and Raspberry Pi (2 model B) compatible.

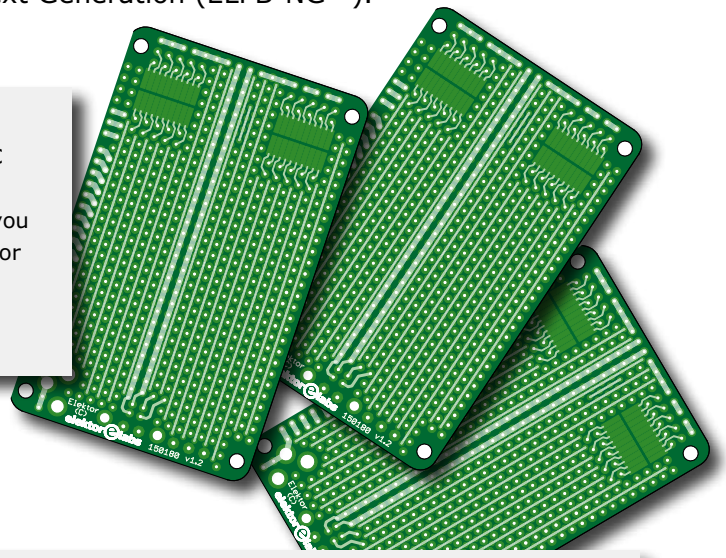


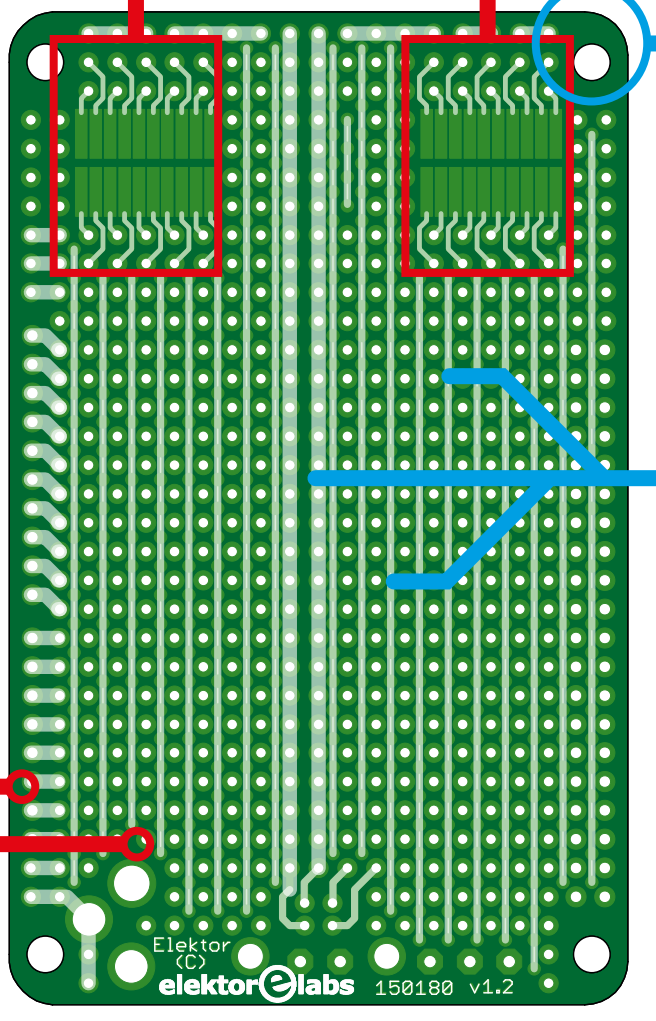
By **Clemens Valens,** Elektor.Labs

All of today's ubiquitous perforated prototyping boards (a.k.a. stripboards; veroboards) have one thing in common: they are outdated. TTL has been replaced by microcontrollers, and opamps no longer require symmetrical supply lines. While electronics keeps evolving, "perf" boards remained stuck in the previous century. At Elektor.Labs we felt it was time for a change and so, after many long months of research, we now proudly present the Elektor**.**Labs Prototyping Board Next Generation (ELPB-NG™).

SMT

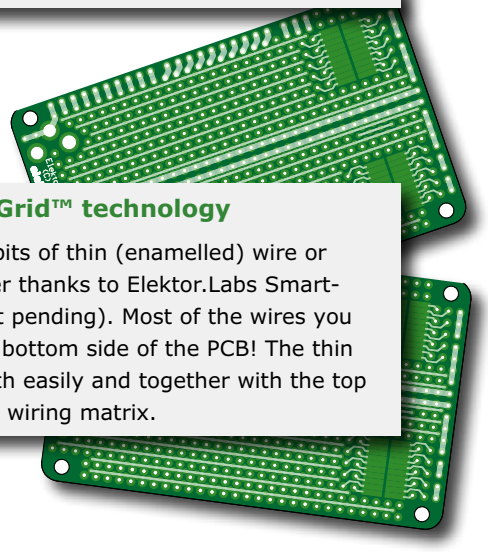
A problem with SMT footprints is their sheer variety. We combined SOIC and SOT-23 footprints into one and dropped four multi-package SMT prototyping areas on the board, two on each side. Together they allow you to mount up to 20 3-pin SOT-23 parts (or ten 6-pin), or eight SOIC-8s, or four SOIC-14s or -16s and even two SOIC-20s. Two-terminal packages like 0603, 0805 or 1206 fit here too. The SMT areas are on top of each other for creating very compact circuits.





Cutting corners

With safety and ergonomics in mind the ELPB-NG has rounded corners. Every 'corner' has a 3.2-mm (0.126") diameter hole allowing the board to be fixed easily to a supporting surface.



Elektor.Labs Smart-Grid™ technology

No more stripping small bits of thin (enamelled) wire or drawing traces with solder thanks to Elektor.Labs Smart-Grid™ technology (patent pending). Most of the wires you need are available at the bottom side of the PCB! The thin traces can be cut to length easily and together with the top side columns they form a wiring matrix.

Holy holes

A prototyping board without holes is not very practical. This is why each ELPB-NG is carefully perforated 620 times. With 548 0.9-mm (0.0354") holes plus 58 1-mm (0.0394") holes there's great freedom to mount components. The remaining holes of various diameters serve connectors.