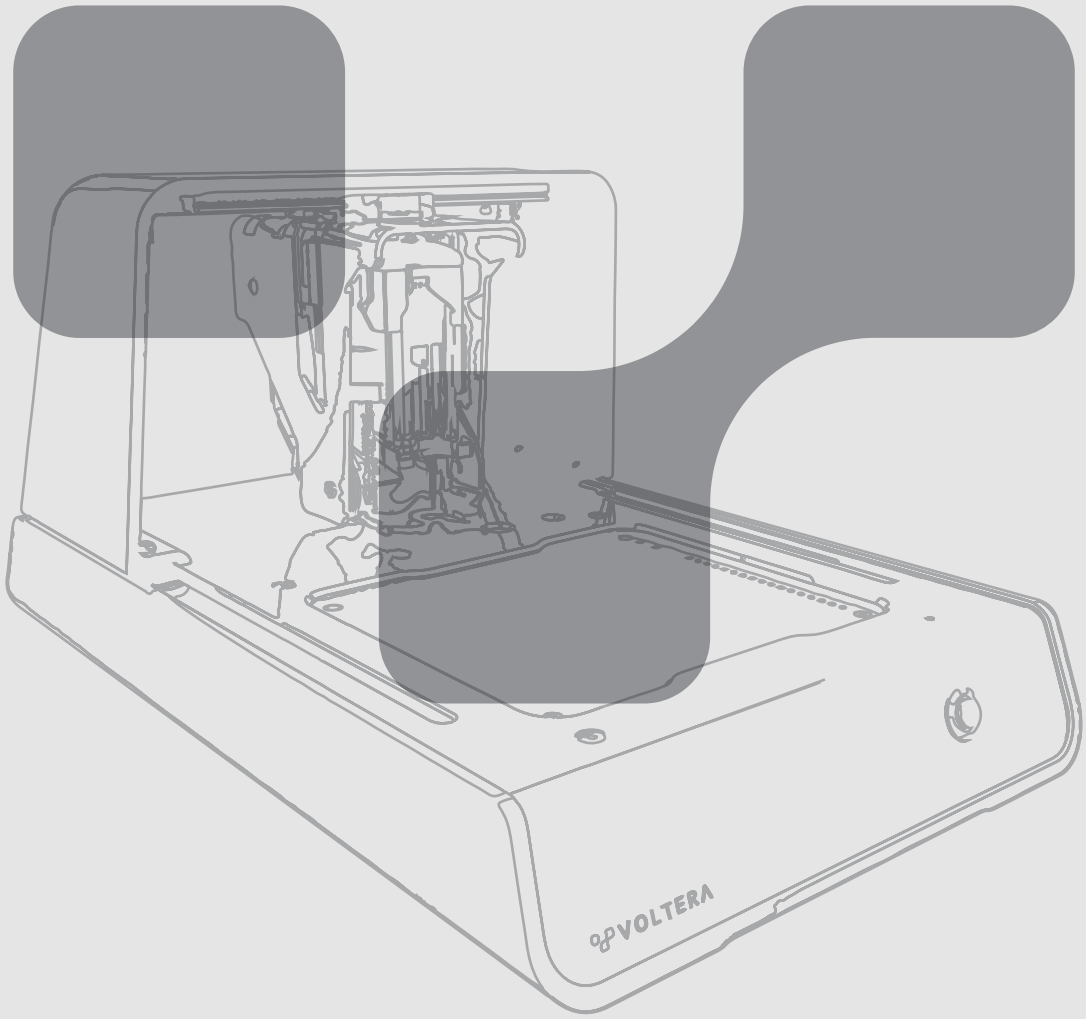
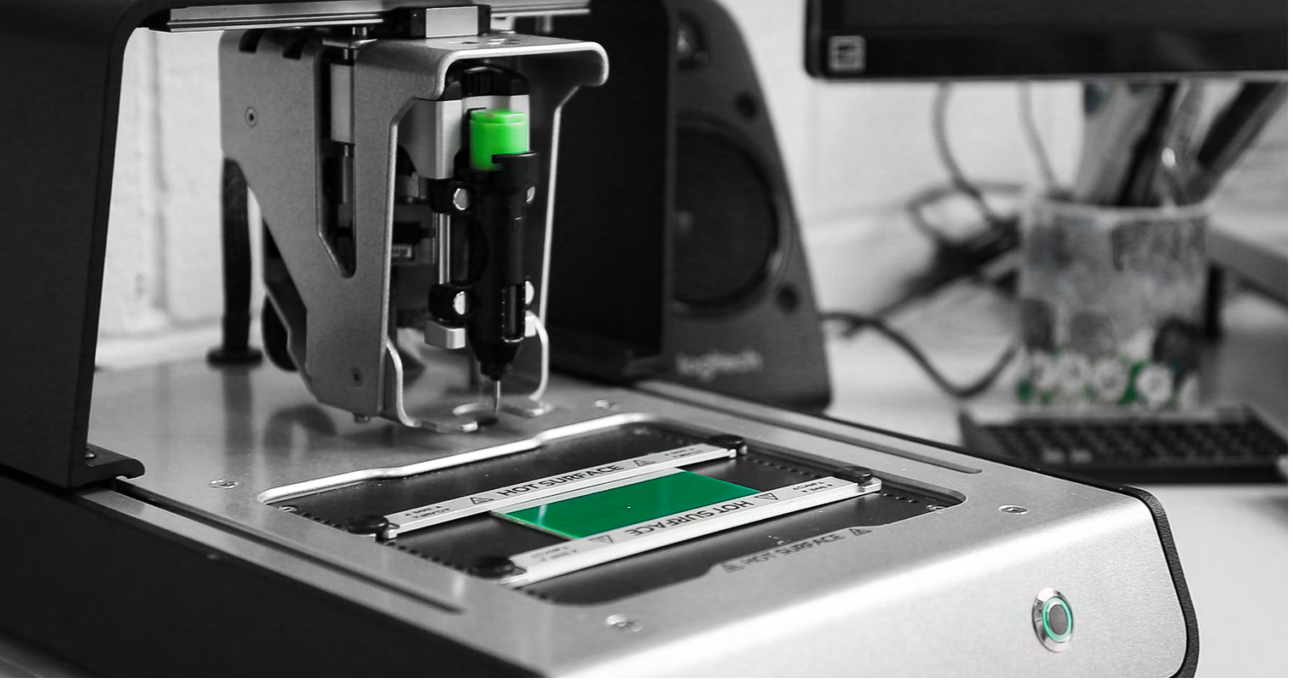



# VOLTERA FOR PRODUCT DEVELOPERS




# The V-One is a desktop, multi-functional circuit board printer.

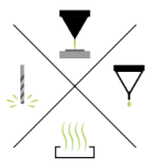
Save time and money with desktop PCB manufacturing.

If you had access to your own PCB factory — 24 hours a day, seven days a week — that sat on your desktop and printed custom circuits on a variety of substrates with a zero-day lead time, what could you make? How fast could you make it?

Those are the questions that inspired Voltera's founders to invent the V-One Desktop PCB Printer.

The V-One can print traces of conductive ink, drill through-holes and vias, precisely dispense solder paste and reflow components with a built-in heater. It's an all-in-one solution for board fabrication that keeps your development cycle tight and your IP completely in-house.

With the V-One, your imagination is the only limit on your electronics design.

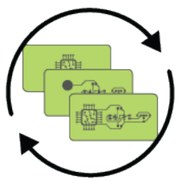


### All-in-one circuit design

Print conductive traces, drill through-holes, dispense solder paste and reflow components on your desktop; at home, the lab or the office.

### Easy experience

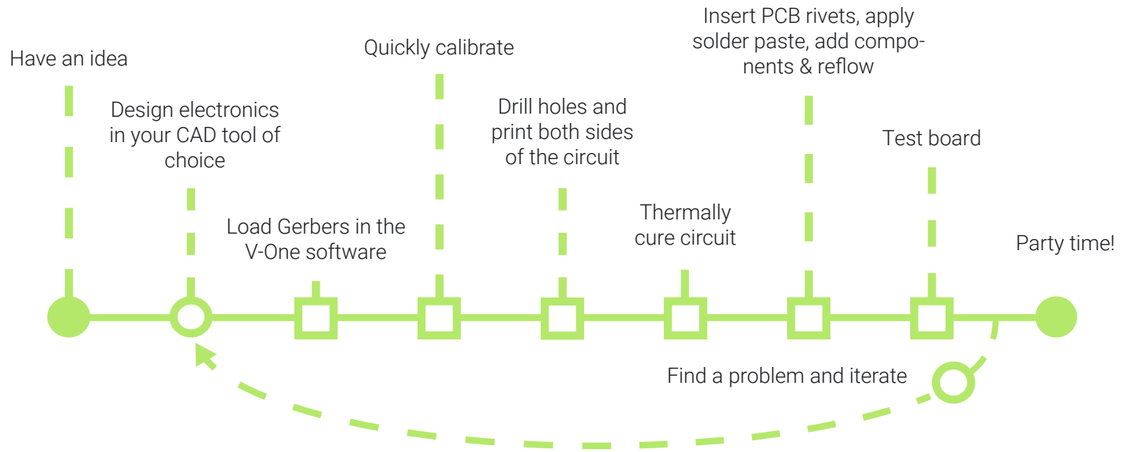
Using the V-One is a breeze. From simple software with in-app video instructions to magnetic attachments, it's as easy to use as an iPad app.



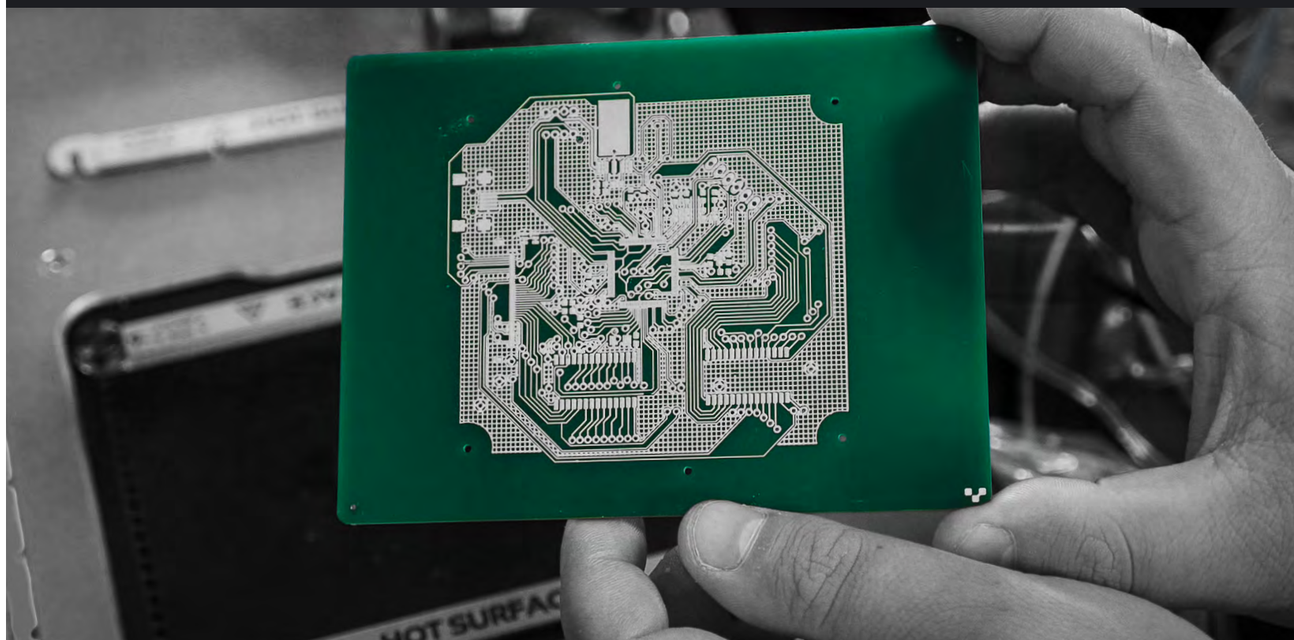
### Rapid Iteration

Save money and shave weeks off your product development. Test your prototype board the same day you finish the design and export the Gerber file.

# Electronics design with the Voltera V-One.

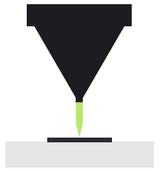



## Take control of your product development cycle by printing your own circuit boards.



# Design. Print. Test. Repeat.

The Voltera V-One is a “compile” button for hardware designers and engineers.



Align

Align quickly using Voltera’s smart height probe and existing board features as fiducials for XY alignment.

Drill

Designed to be compact, the V-One drills through-holes and vias at 13,000 RPM with a 3 mil runout.

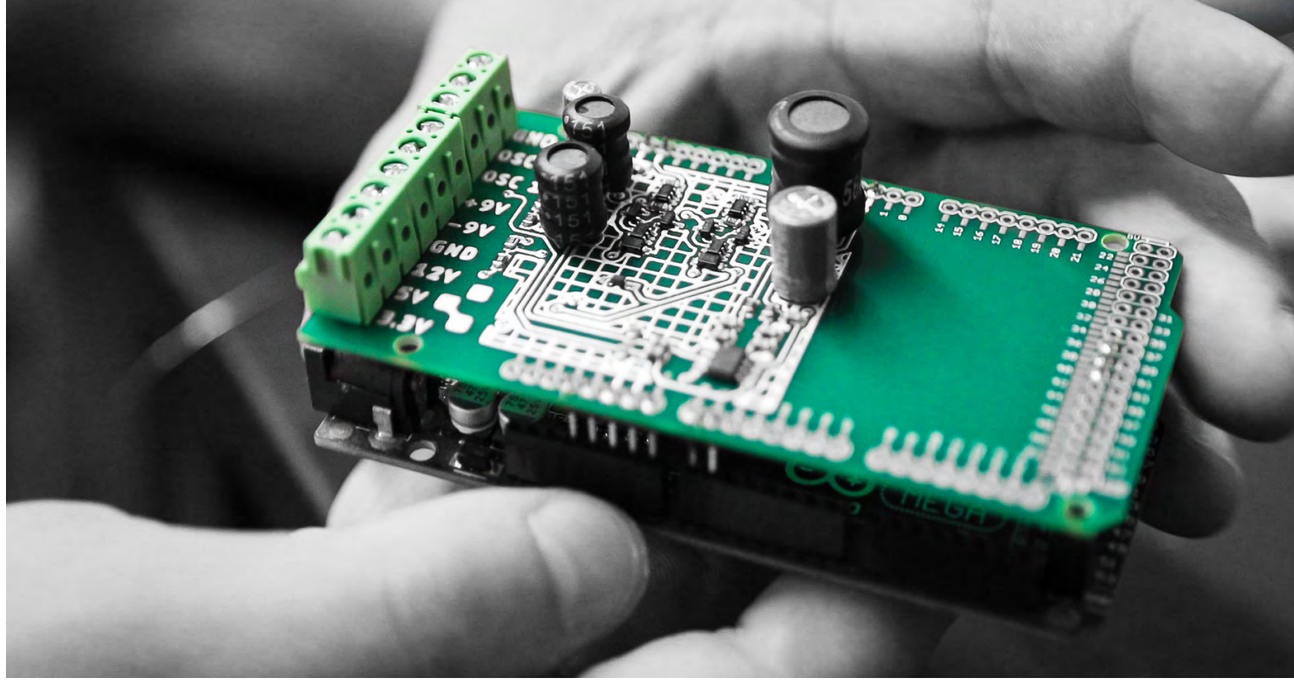
Dispense

Deposit ink and solder paste on printed or factory-fabbed boards with a 0.65mm pin-to-pin pitch.

Reflow

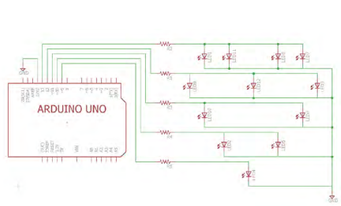
Cure ink and reflow with one click using pre-registered heating profiles on the 550W heater.

Teams at leading institutions like Princeton, Stanford, Harvard, Oxford, Apple, NASA and Intel use the V-One rapidly design hardware.



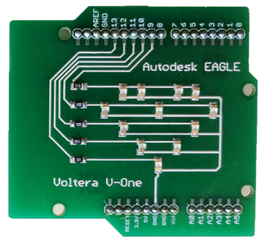

# Template shields for Arduino, Raspberry Pi and more.

Prototype quickly with templates for popular open source microcontrollers.



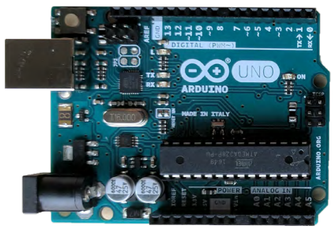

Design

Design your schematic and layout in Eagle, Altium, KiCad, or any other design software with Gerber output. Then, load your design to the V-One software and you’re ready to print.




Print & populate

Print and cure your circuit design on template boards specifically designed by Voltera to work with open source microcontrollers. Then dispense solder paste, populate & reflow.




Watch it work

Once the circuit is finished, mount it onto the Arduino and program your prototype. All in all, the above project took less than 2.5 hours from start to finished, functioning device.


# Software that teaches every step of the way

Lab software that's as easy and intuitive as a smartphone app.

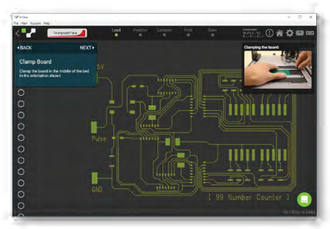
Sick of using software that was created in the days of dial-up internet and beepers? We are too.

Our software is simple and straightforward, with instructional videos to guide you every step of the way. Support chat is built right into the app, and a playlist of detailed support videos will make sure you never get stuck.

Our software is also completely free: no recurring licenses or big up-front payments required.

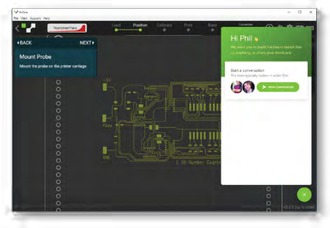
You can get started with electronics prototyping moments after your download the software from our website. Download it now for free and upload a few designs to see how easy it is to use.


Simple and elegant design.




Step-by-step video instructions.

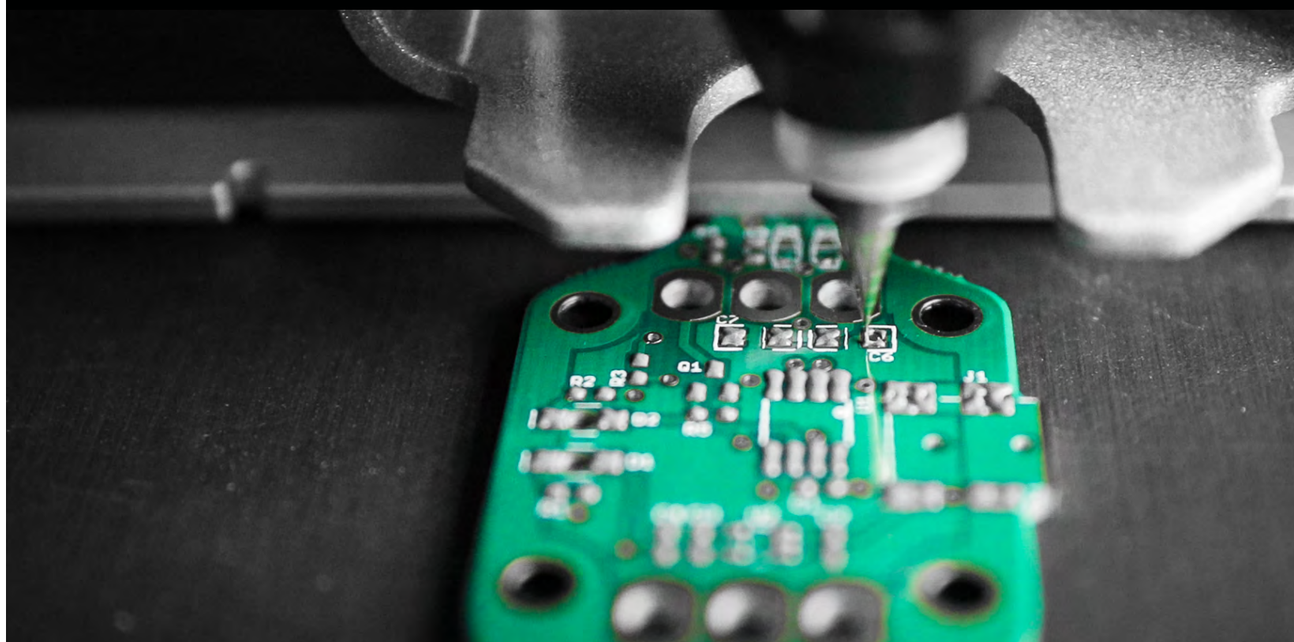

Smart alerts prevent printing issues.




In-app support chat.

"As an engineer, I know the frustrations of waiting for circuit boards, and the Voltera V-One elegantly solves this problem."

Sir James Dyson - Inventor & Founder at Dyson



### In-app chat

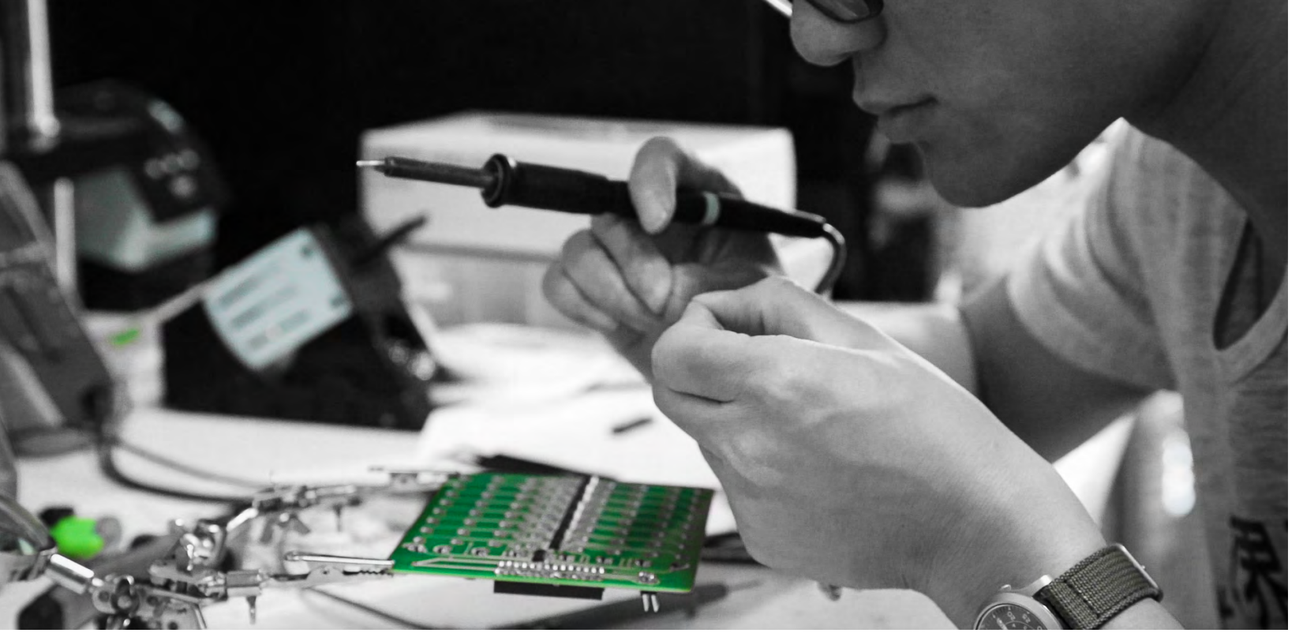
The V-One was designed to be used by everyone. Even with no experience, you can sit down and print your first circuit in minutes.

### Intuitive

Our software is part of what makes the V-One so intuitive. Follow our workflow and you'll go from a blank board to a finished circuit in an hour or two.

### Free

Our goal is to help the world build hardware faster, and completely free software is a part of that. No upfront costs or recurring license fees required.



# The V-One Spec

| DRILLING | METRIC | IMPERIAL |
|---|---|---|
| Spindle Speed (Max.) | 13,000 RPM | 13,000 RPM |
| Power | 12V, 25W | 12V, 25W |
| Runout (TIR) | 0.076mm | 0.003" |
| Shank Diameter | 3.175mm | 1/8" |
| Supplied Substrate Material | FR1 | FR1 |
| Bit Diameter (Max.) | 2mm | 0.078" |
| Bit Length (Max.) | 38.1mm | 1.5" |

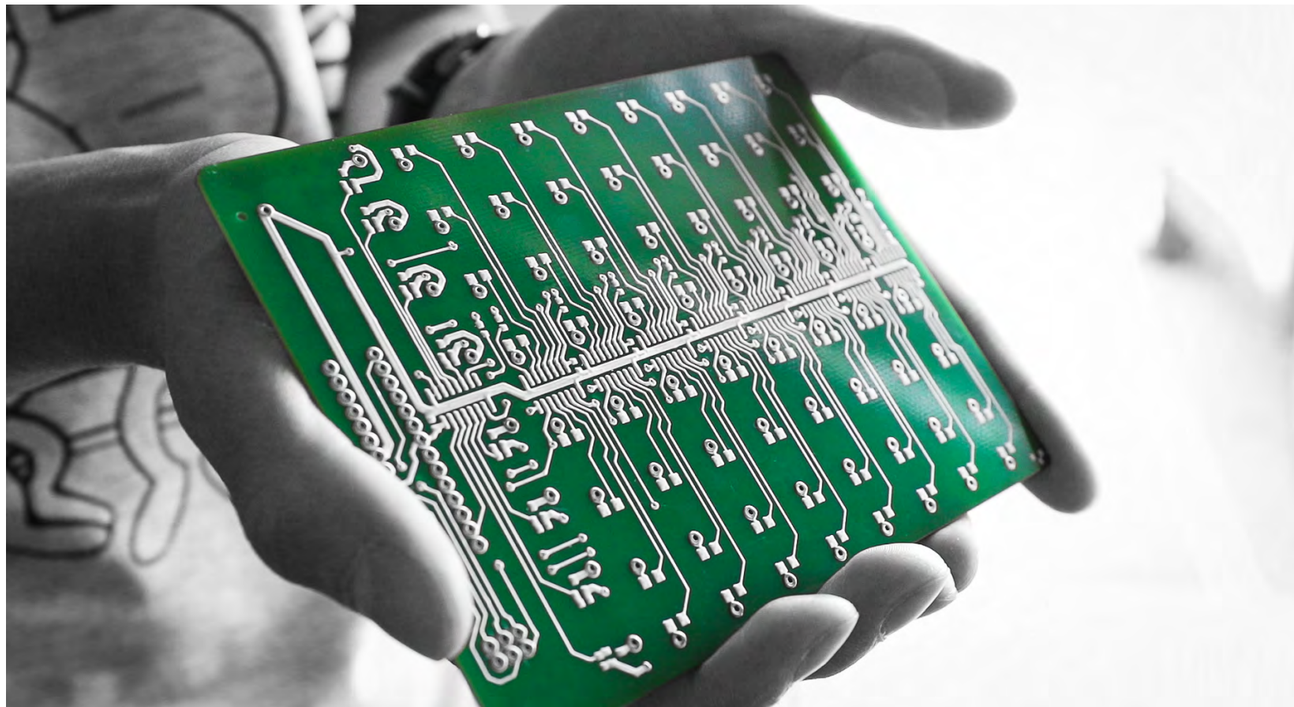
| SOLDER COMPATIBILITY | Sn42/Bi57.6/Ag0.4 Solder | Sn63/Pb37 Solder |
|---|---|---|
| Standard Ink | ✓ | X |
| Flexible Ink | ✓ | X |
| Copper PCBs | ✓ | ✓ |
| HASL PCBs | X | ✓ |

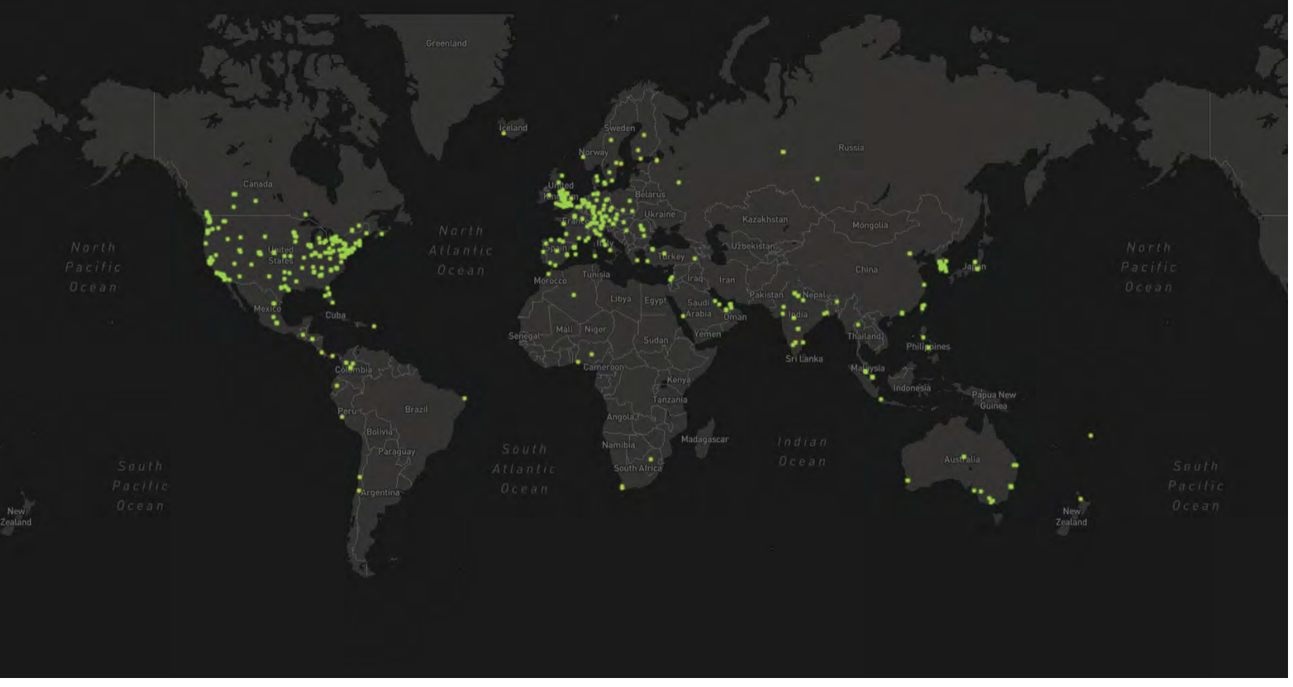
| SOFTWARE REQUIREMENTS | |
|---|---|
| Operating Systems | Windows 7, 8, 10 (64bit), OSX 10.11+ |
| Compatible File Format | Gerber |
| Connection Type | Wired USB 2.0 |

| PRINTING | METRIC | IMPERIAL |
|---|---|---|
| Minimum Trace Width | 0.2mm | 8mil |
| Minimum Passive Size | 1005 | 0402 |
| Minimum Pin-to-Pin Pitch | 0.65mm | 26mil |
| Resistivity | 12mΩ/Sq @ 70um Height | 12mΩ/Sq @ 3mil Height |
| Supplied Substrate Material | FR4 | FR4 |
| Maximum Board Thickness | 3mm | 0.125" |

| SOLDERING | | |
|---|---|---|
| Minimum Passive Size | 1005 | 0402 |
| Minimum Pin-to-Pin Pitch | 0.5mm | 20mil |
| Solder Paste Alloy | Sn42/Bi57.6/Ag0.4 | Sn42/Bi57.6/Ag0.4 |
| Solder Wire Alloy | SnBiAg1 | SnBiAg1 |
| Soldering Iron Temperature | 180-200°C | 355-390°F |

| FOOTPRINT AND PRINT BED | | |
|---|---|---|
| Dimensions (L × W × H) | 390mm × 257mm × 207mm | 15.4" × 10.1" × 8.2" |
| Weight | 7kg | 15.4lbs |
| Print Area | 128mm × 116mm | 5" × 4.5" |
| Max. Heated Bed Temperature | 240°C | 464°F |






# A global community of users.

Join the researchers, educators and engineers around the world innovating with the V-One.

We have shipped thousands V-One's to over 60 countries and counting. With over a dozen resellers on nearly every continent, it's easy to purchase, restock or find support for your V-One in your native language.

Academic reserachers creating exotic printed electronics, high school teachers helping students learn the fundamentals of electronics design and product developers at the world's top tech companies are using the V-One to push the boundaries of what's possible.

"We use the Voltera V-One to dispense various pastes for printed electronics onto a number of different substrates ranging from FR4 to 3D printed objects to carbon fiber composites. The V-One is one of the workhorses in our lab because of how easy it is to get started printing. A major advantage is the customer service, which has always been very responsive and helped us to quickly solve any problems."

—Dr. Gerd Grau, Assistant Professor, York University

Save money

The V-One lets you create working prototypes without the hassle or cost of outsourcing PCB fabrication overseas.

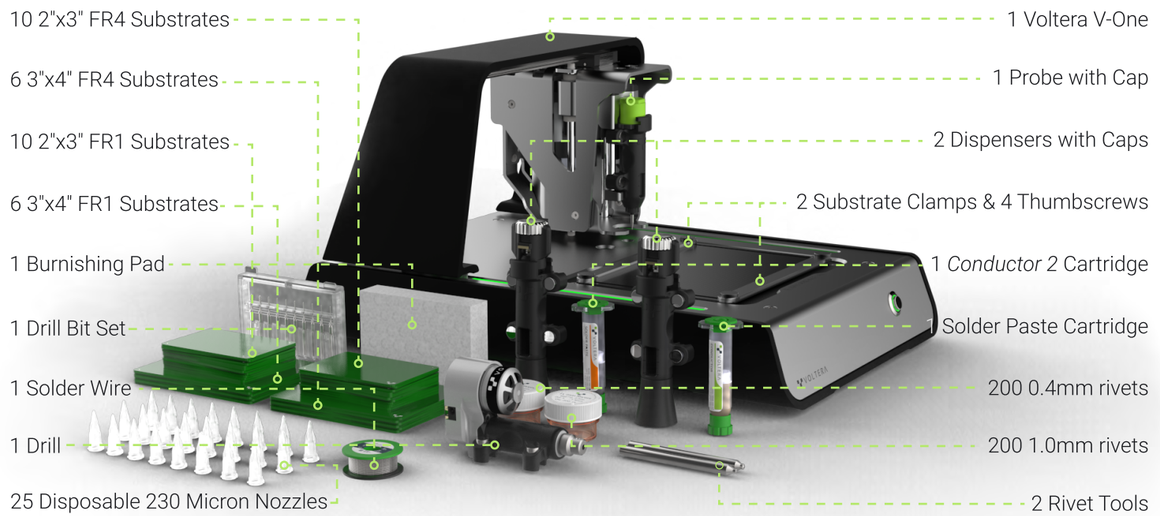

0-day lead time

Bring products to market faster, try out more ideas at the prototype phase and rapidly iterate on full boards or circuit modules.

Online help center

Searchable guides, safety data sheets, getting started projects, video tutorials & educational content. All with technical support staff a message away.

# What's in the box?




(Not pictured) 1 Sacrificial Layer 1 Hello World Starter Kit 1 Punk Console Starter Kit 1 Voltera Anti-Static Tweezers 1 Set of Safety Glasses

"The V-One has really been a game changer for us. We are experimenting with concepts we never thought were possible before. This little machine has opened up a portal of possibilities in our research."

— Anonymous In-App Feedback


# voltera.io

## CONTACT US

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VOLTERA

BUILD HARDWARE FASTER