



## Gerber Solara ion™ series

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# General

**Q: *What is the Gerber Solara ion?***

A: The Gerber Solara ion is a line of wide-format, cationic UV, outdoor-durable inkjet printers from Gerber Scientific Products, Inc. A true flatbed\* printer, the Gerber Solara ion series produces vivid, flexible, outdoor-durable graphics that are immediately usable. Its advanced GerberCAT™ inks and Cold Fire Cure™ technology are compatible with a wide range of flexible and rigid materials.

\*The Solara ion<sup>X</sup> model incorporates both a true flatbed AND true roll-to-roll system.

**Q: *What is the difference between the ion<sup>X</sup> and ion<sup>V</sup>?***

**A: *Number of Print Heads***

Whereas the Solara ion<sup>X</sup> uses 8 print heads to print, the Solara ion<sup>V</sup> only uses 4. This does not effect the quality between the two printers but does effect speed, making the ion<sup>X</sup> almost twice as fast as the ion<sup>V</sup>.

**Roll-to-Roll System**

Whereas the Solara ion<sup>X</sup> incorporates both a true flatbed and true roll-to-roll printing systems, the Solara ion<sup>V</sup> only incorporates the flatbed system. The ion<sup>V</sup> can still print on flexible materials on the flatbed portion of the system but is limited by length, whereas the ion<sup>X</sup> can print flexible rolled materials with a much longer length.

**Q: *Is the Solara ion like the Solara UV2?***

A: The Gerber Solara ion and the Gerber Solara UV2 are alike in that they share the Solara family name. Other than that, the new Solara ion is radically different in its flatbed design, the inks it uses, and the broader range of compatible materials and possible applications.

**Q: *What materials are compatible with the Solara ion?***

A: The Gerber Solara ion will print on almost any rigid substrate that you can think of! The rigid material just has to meet the size limitations of less than 1" (25.4mm) thick and 64" (162.6cm) wide. The following list of commonly used rigid materials is not all-encompassing; you may have success with other materials not listed here.

PVC	polystyrene	MDO/MDF
glass	polycarbonate	chipboard/cardboard
acrylic	corrugated plastic	cabinet-grade plywood
styrene	painted aluminum	sign foam (expanded and primed polyurethane)

(Continued on next page...)

Flexible materials must meet the size restriction of 64" (162.6 cm) wide and weight restriction of 100 lbs. (45.36 Kg) if rolled. Compatible materials include but are not limited to the list in the following table; you may have success with other materials not listed here.

non-grommated banner	calendared vinyl	cast vinyl
Instachange vinyl	mesh (lined)	backlit vinyl
reflective vinyl	window film	textiles (canvas, flag)
paper		

**Q: *Where is the Solara ion manufactured?***

A: The Gerber Solara ion is designed, manufactured, and tested at the Gerber facilities in South Windsor and Tolland, CT, USA.

**Q: *Where can I see the Solara ion?***

A: The Solara ion is available for demonstration at industry tradeshows and authorized Gerber distributor sites. Click the links below or visit [www.gspinc.com](http://www.gspinc.com) for a list of locations.

[List of GSP Tradeshows](#)

[Find a GSP Distributor](#)

**Q: *Where can I buy the Solara ion?***

A: The Gerber Solara ion is sold by GSP-authorized distributors which are located throughout the United States and around the world. Click the link below or visit [www.gspinc.com](http://www.gspinc.com) to locate a GSP distributor in your area.

[Find a GSP Distributor](#)

## Technology

**Q: *What is Cold Fire Cure?***

A: Gerber's patent-pending, Cold Fire Cure™ technology is a unique UV curing process which uses low energy and low temperatures to cure the proprietary GerberCAT™ inks. Cold Fire Cure employs specialized UV lamps that run the full length of the gantry (approximately 65"/165cm) to provide a very specific wavelength of UV light which cures the GerberCAT inks.

The Cold Fire Cure system is nothing less than revolutionary! The UV lamps do not require a burn-in period which means that there are no striking delays and its low operating temperature results in short warm-up cycles.

The low-temperature cure greatly expands the range of materials that can be printed by the Gerber Solara ion. Heat sensitive plastic, vinyl, fabric, and paper-based materials can be printed using Gerber's Cold Fire Cure and GerberCAT inks without concern over ink adhesion or material damage.

Gerber's Cold Fire Cure offers a vast array of benefits over any competitive curing process in the areas of material compatibility, cost of operation, and environmental health and safety.

**Q: What are GerberCat Vibrant CMYK inks?**

A: GerberCAT vibrant inks are an exclusive, four color (cyan, magenta, yellow, and black) cationic ink set that UV cures at approximately room temperature using Gerber's Cold Fire Cure technology. The GerberCAT inks are custom formulated for an expanded color gamut which produces vibrant, true-to-life colors. Printed graphics have up to three-year, outdoor-durable life span and laminating graphics significantly increases their durability.

**Q: How does Cold Fire Cure compare to solvent technologies?**

A: The pigment of solvent-based inks is suspended in a volatile solvent. When solvent-based inks are printed they erode the surface of the material to create a chemical bond between the ink and the substrate. During the curing process, the solvent evaporates, leaving the pigment behind. It is the solvent evaporating that produces the unpleasant and potentially harmful fumes during printing and post-curing. In addition, the waste solvent must be collected and disposed of properly.

The GerberCAT vibrant cationic inks are 100% solid-curing with no waste. Cold Fire Curing of these inks produces no unpleasant odors and creates a strong mechanical bond that is extremely flexible and immediately usable.

<b>Performance Properties</b>	<b>Traditional Mercury Vapor</b>	<b>New Cold Fire Cure™</b>
Generates environmental ozone	Yes	No
Electrical usage	Very High	Very Low
Lamp cost	High	Low
Lamp life	Very Low	Very High
Material compatibility	Moderate	Very High
Generates heat on material surface	Yes	No
Slower print modes require dwell time to dissipate heat	Yes	No

**Q: How does GerberCat Cationic Ink compare to Free-Radical UV Ink?**

A: Compared to traditional free-radical inks, GerberCAT inks have superior adhesion, flexibility, and abrasion resistance. Their amazing flexibility allows for difficult applications including vehicle wraps and installation over rivets.

**Q: *Why is GerberCAT ink adhesion so strong (vs. traditional UV ink)?***

A: There is actually a slight difference in the amount of time required to cure the inks. This miniscule difference in curing times is undistinguishable to the operator, but it affects the adhesion and flexibility of the printed output. Traditional UV inks take just milliseconds to cure, creating a more brittle bond. In contrast, GerberCAT inks cure in approximately one second. The result of this “slower” curing time produces printed output with greater adhesion, more durability, better abrasion resistance, and outstanding flexibility.

**Q: *How does the Solara ion compare in color output to other UV ink jet printers?***

A: The color gamut of the Solara ion is larger and deeper than competitive UV ink sets. The addition of light cyan and light magenta in other printers does not improve or increase the color gamut. These colors are designed to support shading and grey scaling of images. The custom-formulated vibrant GerberCAT cationic ink set produces a wider color gamut for true color reproduction.

**Q: *What applications does the Solara ion support?***

A: The Gerber Solara ion can support a wider range of applications due to its Cold Fire Cure and GerberCAT inks. Just one ink set can produce flexible or rigid outdoor-durable graphics on all kinds of materials such as vinyls, textiles, paper, Dibond®, Alupalite™, glass and many others. There is no need to have different types of inks for rigid or flexible substrates. The list of applications is only limited by the designer's imagination! Typical jobs include window graphics, banners and mesh signs, vehicle graphics, flexible plastic-based outdoor signage, outdoor rigid signage, site signage, traffic signage, cardboard and display board graphics, double-sided printing, full-bleed printing, and backlit signage, and much, much more!

**Q: *What is the outdoor durability of the Solara ion prints?***

A: Graphics created by the Gerber Solara ion are outdoor-durable for up to three years. However, environment and application will determine the ultimate outdoor life span and may result in outdoor durability of greater or less than three years.

# Machine Specifications

**Q: How fast does the Solara ion print?**

A: The Gerber Solara ion has a versatile range of printing modes offering choices in print speed and resolution to meet all your graphic requirements.

Solara ion <sup>x</sup>		
User Selectable Print Modes	Print Through-put 4 x 8 sheet print timing from first to last swipe only	
	360 x 360	720 x 720
2-pass, bi-dir	320 ft <sup>2</sup> /hr	---
4-pass, bi-dir	192 ft <sup>2</sup> /hr	---
8-pass, bi-dir	108 ft <sup>2</sup> /hr	---
2-pass, uni-dir	240 ft <sup>2</sup> /hr	65 ft <sup>2</sup> /hr
4-pass, uni-dir	137 ft <sup>2</sup> /hr	34 ft <sup>2</sup> /hr
8-pass, uni-dir	69 ft <sup>2</sup> /hr	18 ft <sup>2</sup> /hr

Solara ion <sup>v</sup>		
User Selectable Print Modes	Print Through-put 4 x 8 sheet print timing from first to last swipe only	
	360 x 360	720 x 720
2-pass, bi-dir	181 ft <sup>2</sup> /hr	---
4-pass, bi-dir	107 ft <sup>2</sup> /hr	---
8-pass, bi-dir	55 ft <sup>2</sup> /hr	---
2-pass, uni-dir	125 ft <sup>2</sup> /hr	36 ft <sup>2</sup> /hr
4-pass, uni-dir	70 ft <sup>2</sup> /hr	18 ft <sup>2</sup> /hr
8-pass, uni-dir	33 ft <sup>2</sup> /hr	9.5 ft <sup>2</sup> /hr

**Q: Does the Solara ion have a vacuum table?**

A: Yes! The flatbed vacuum table holds rigid substrates securely in place while the print head gantry moves over the substrate during printing. The table is designed for easy loading and unloading of rigid material. The gantry moves completely out of the way for unobstructed access to the table.

**Q: How do you gauge material height and adjust the print heads?**

A: The Gerber Solara ion is equipped with an automated material thickness sensor that makes setting up a job easy! The sensor measures the loaded substrate and locates the print heads and UV lamps at the correct height for precise printing and curing without operator intervention.

# Site Prep

**Q: *What site prep is required for the Solara ion?***

A: There is very limited site preparation required before the Solara ion arrives at your doorstep. Unlike competitive systems that require extensive alterations to the site just to get the printer through the door, the Solara ion arrives in several compact shipping crates that are easy to handle.

**Q: *What door opening size will accommodate the Solara ion?***

A: Before assembly, product crates fit through most standard 36" (99.44 cm) door openings.

**Q: *Does the Solara ion require a concrete floor?***

A: No! The Gerber Solara ion weighs approximately 1,000 pounds which is spread over a footprint of 104" x 148" (264 cm x 376 cm) and therefore does not require a concrete floor.

**Q: *Does the Solara ion require special ventilation?***

A: No! GerberCAT cationic inks do not produce unpleasant odors while printing or during the post-cure period. Special ventilation is NOT required.

**Q: *What electrical setup does the Solara ion require?***

A: The Gerber Solara ion electrical configuration is 230 VAC +/- 10% at 50-60 Hz, single phase, 15 Amps continuous. (Gerber recommends a 240 VAC circuit as the ion requires 230 VAC +/- 10% at the unit.)

**Q: *What are the work space requirements?***

A: Gerber suggests an operation work space of approximately 36" (1 meter) on all sides of the Solara ion. This equals a works space footprint of approximately 14' 8" x 18' 4" (447 cm x 559 cm).

Other dimensions and setup information are published in the product Site Requirements.

**Q: *Are there any environmental limitations for the Solara ion?***

A: Recommended ambient conditions for operation are as follows:

Temperature: 65°F to 75°F (18.5°C to 24°C)

Humidity: 40% - 60%, non-condensing

Ventilation: no special ventilation required

Avoid using printer near open windows, outside doors, or heating/cooling systems

Protect printer and ink pouches from moisture, dust, drafts, and direct sunlight

# Installation and Service

**Q: *Who installs and who trains for the Solara ion?***

A: Authorized GSP distributors will install the Solara ion and train you in its operation and care. In addition to this comprehensive training, the Solara ion comes with extensive user documentation to assist you when you are on your own.

The interface of the Solara ion is highly intuitive and operators can become proficient in the printer's operation in a matter of minutes. The Solara ion is ergonomically designed for user comfort and ultimate usability.

**Q: *What documentation comes with the Solara ion?***

A: Prior to installation you will receive the Gerber Solara ion Site Requirements guide which provides basic pre-installation information such as electrical requirements, recommended ambient conditions, and working area. The Gerber Solara ion comes with a comprehensive Gerber Solara ion Owner's Manual that can guide you through printer operation and maintenance in a straight-forward, step-by-step format.

**Q: *Who services the Solara ion?***

A: The Solara ion is supported by Gerber Service depending on the location globally. Gerber's outstanding customer support is well known in the graphics industry.

**Q: *What is involved in daily maintenance?***

A: The Gerber Solara ion requires very little daily maintenance. At the start and end of each day and after every four hours printing you must clean and wipe the print heads to prevent ink build up. A head cleaning timer automatically resets after each cleaning and will remind the operator when the next head cleaning is scheduled. Cleaning the print heads is a simple procedure that only takes three minutes.

# Applications

**Q: *What programs (RIP drivers) support the Solara ion?***

A: Currently the Gerber Solara ion is compatible with the following RIP providers: **Onyx®**, **ErgoSoft™**, **SAi™**, **Cadlink™** and **Wasatch™**. We anticipate that other RIP software products will be added to this list soon.

**Q: *What can the Solara ion print?***

A: The Gerber Solara ion can print on most rigid, semi-rigid, or flexible substrate that you can think of! This includes materials normally challenging for inkjet printers such as textiles, glass, and paper.

**Q: *Are there any materials the Solara ion can't print?***

A: The Solara ion cannot print on pre-finished mirrors due to their reflective nature and a very limited selection of materials that do not support cationic ink.

Due to the wide range of supported materials, you should always test print on a material to determine if abrasion and adhesion resistance meet your expectation.

**Q: *How long does it take to change from flat substrate to roll-to-roll?***

A: Since the Solara ion has two different dedicated platforms for printing rigid and rolled substrates there is no need to reconfigure the printer to accommodate a different material. Rolled material may remain loaded on the printer's winding unit while printing a rigid job.

**Q: *Does the Solara ion have a print-to-rout solution?***

A: GSP offers several print-to-rout solutions including the M3000 Series Digital Cutting and Finishing System and the GerberCUT Finishing System for the Gerber Sabre™ router.

The M3000 Series flatbed cutting systems can cut, rout, or crease a wide variety substrates including flexible and rigid materials. A Gerber Sabre equipped with GerberCUT can rout rigid materials up to 2.5" (6.35 cm) thick with great accuracy and speed. Both systems have state-of-the-art laser registration devices which automatically compensate for image or material distortion producing an accurate cut every time.

**Q: *What are the material size restrictions?***

A: The Solara ion is a versatile wide-format printer for rigid materials up to 1" (25.4 mm) thick and 64" (1.6 m) wide and rolled materials up to 64" (1.6 m) wide and up to 100 lbs. (45.36 Kg). Minimum sheet size is 12" x 12" (30.5 cm x 30.5 cm). In addition, rigid materials can be printed full-bleed and or double sided. (Maximum print length varies between models)