

Fujifilm SonoSite

Value-added assembly



The challenge

When SonoSite, a medical device manufacturer, was developing their X-Porte Ultrasound System, they wanted a distinctive industrial design to showcase their logo on the system's monitor. Additionally, they required a front panel integrator to bond together the printed cover glass with the display. Along with these program requirements, SonoSite was looking for a supplier to streamline production by offering multiple components of the device. As a product used within the medical industry, the system's requirements for tight bonding registration, durability, optical clarity, and color uniformity across the imaging field demanded an experienced display integration partner.

Project goals

- Custom glass decoration with chrome and black ink
- Color uniformity across the display panel
- Durable monitor with impact resistance

The solution

SonoSite was originally looking for a branded solution when GM Nameplate became involved in the X-Porte program. As project planning progressed, GMN was able to offer several supporting components including front panel integration, glass decoration, display testing, electroform branded badges, decorative nameplates, formed graphic overlays, die-cut foams, gaskets & shields, and regulatory labels.

100%
INSPECTION
TESTING

One requirement of the program was to create a branded logo on the monitor by printing on glass. A highly-reflective chrome ink was chosen to create the bold look that SonoSite required. To compliment the reflective chrome color and match company branding, a custom black ink was screen

One requirement of the program was to create a branded logo on the monitor by printing on glass. A highly-reflective chrome ink was chosen to create the bold look that SonoSite required. To compliment the reflective chrome color and match company branding, a custom black ink was screen

CASE STUDY

printed behind the logo onto the border of the monitor. Through print development iterations, GMN's corporate chemist and rapid prototyping team identified the proper inks and printing parameters needed to cure the liquid adhesive while also meeting the color requirements.

Another project challenge was the stringent color uniformity requirements for the display. Because this ultrasound device is used in a medical setting and presents images on a black background there couldn't be color disparities. To achieve optimal performance, extensive display testing equipment in GMN's Light Lab was utilized to measure optical characteristics. This testing was crucial during product development phases in order to approve image quality and color uniformity across the monitor. The program is currently in volume production and GMN continues to run a 100% inspection on every device.

**20 PARTS
PER SYSTEM**

After conducting a series of drop ball tests, it was proven that liquid optically clear adhesive (LOCA) bonding met impact resistance requirements. LOCA was specified for the integration of the cover glass to the LCD for its impact resistance, optical clarity, and good imaging quality.

One of the greatest benefits that GMN provides to its customers is a wide range of technologies and processes. In an effort to lower costs and boost efficiency, many companies are streamlining their programs by consolidating suppliers. GMN is able to provide many program solutions and reduce the burden of auditing and purchasing from multiple suppliers. The X-Porte Ultrasound System illustrates GMN's ability to broadly support customers with our wide range of capabilities.

