

# MEDICAL SOLUTIONS

OPTIMIZE. ENHANCE. IMPROVE

Offering high image clarity and exceptional precision, Touch International's specialized medical touch screens are often used in surgical displays, patient monitoring units and hand-held devices to improve patient care. Customized based on the medical application, Touch International's touch displays deliver unparalleled durability and quick response times. Applications can be designed to work with gloved fingers, scalpels and other pointing devices.

## APPLICATION REQUIREMENTS

By integrating display enhancements and other value-added solutions, Touch International is able to conquer environmental challenges and improve display functionality and performance.



### Device Control Panels



- Shatterproof
- NEMA Sealable
- Anti-Reflective
- Anti-Glare
- Anti-Microbial Coating
- Quick and Accurate



### Hand-held/Portable Devices

- Light Weight
- Glove or Pen Activated
- Anti-Reflective
- Easy to Use
- High Endurance
- Shatterproof



### Operating Room Displays



- High Optics
- Low Reflection
- Anti-Microbial Coating
- NEMA Sealable
- Glove & Scalpel Activated
- Works with Liquids



### Patient Care Monitors

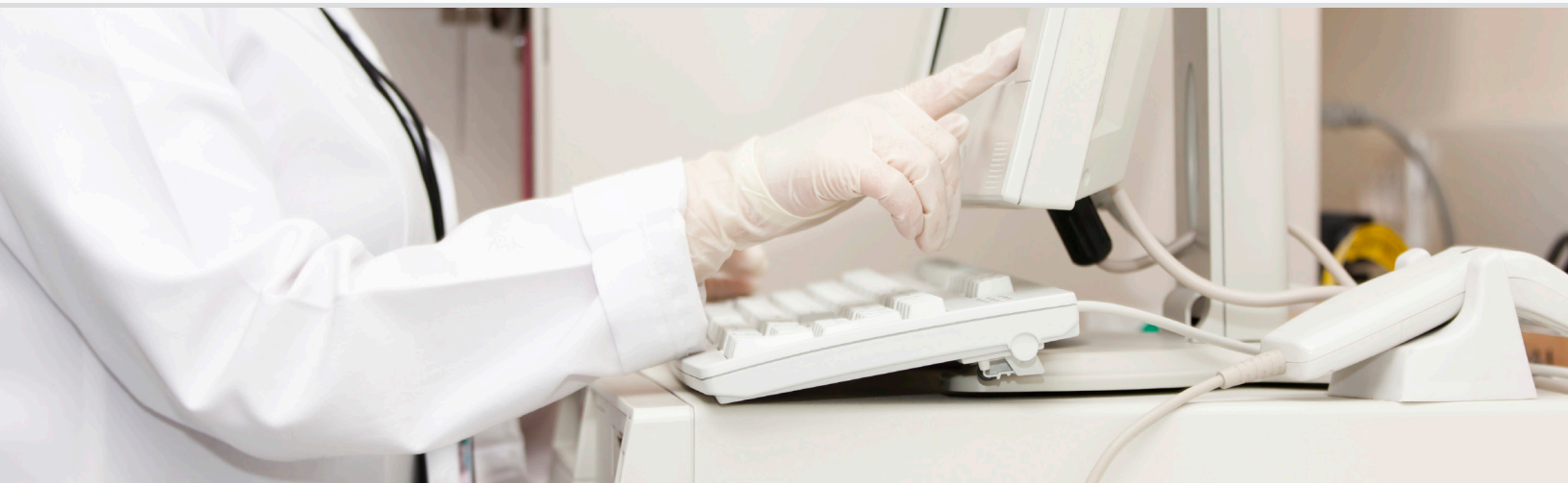
- Low Reflection
- Anti-Smudge
- Fast and Accurate
- Shatterproof
- Chemically Resistant
- Restricted Video Image



Contact a sales representative at Touch International today for additional information about our Medical Display Products and Solutions.

# Medical Device Manufacturer

MULTI-USE DISPLAY INTEGRATED INTO MEDICAL EQUIPMENT IN AND OUT OF OPERATING AND EMERGENCY ROOMS



## Background

Medical equipment manufacturer brought Touch International a complete display module. To simplify development and supply chain, the company used the same display component in four different finished products, two of which would be used in operating rooms. The products' display went EOL without much advanced notice.

## Challenges

All of the final products were in full production, so they needed a solution fast. Redesigning cabinets and components around a new display was not an option, requiring a display that fit mechanically. Since the products would be used in operating rooms, the displays had to retain the optical EMI filter to maintain EMI/RFI compliance.

## Summary of issues to consider

1. Display must fit mechanically and have at least 350nits of brightness.
2. Maintain EMI shielding.
3. Fit active area of optical filter.
4. Meet target cost range.
5. Me compatible with existing board layout.
6. Usable in super bright ambient lighting conditions.

## Solution

TI's display team was able to identify and source a 450 nit display that was compatible with the active area of the optical filter, matched the outer mechanical dimensions tail location, and fit the right price point. Unfortunately, the

display was slightly thicker than the existing cabinet would allow. To remedy the problem, TI's mechanical engineering team quickly redesigned the optical filter using thinner glass. After producing rapid prototypes at the Austin, TX Design and Development center, testing verified the transmissivity was increased 8% and the overall stack-up was identical to the original product design. The team then optically bonded the EMI filter to the display to increase picture quality and eliminate internal reflections in high ambient lighting conditions.

## TI solution key feature overview

1. Identify and source display with matching specs, price, and increased brightness.
2. Redesign EMI filter to meet target stack height while increasing optical clarity.
3. Optically bond EMI filter to display to eliminate internal reflections.

Through tactical sourcing, rapid prototyping, and thinking outside the box, TI was able to offer a fully customized, complete solution to an unavoidable and unexpected EOL that would have halted production. Instead, the new design provided improved performance and extended product life while maintaining the target price range.