

GE Transportation

Membrane switch



The challenge

GE Transportation, a leading technology supplier to the railroad and other heavy industries, needed to procure a working membrane switch graphic user interface for a fast approaching tradeshow. Their latest highway crossing phase motion detector (PMD4) is used to control railroad crossing gate and signal controls. The user interface technology prototyping would include developing the membrane switch design paired with a printed graphic overlay.

Project goals

- **Develop a production ready membrane switch and graphic overlay assembly**
- **Provide working prototypes within 2 weeks**

The solution

GMN was brought into a meeting with GE Transportation by another manufacturer where the GMN team learned about their needs for the project. GE Transportation expressed the need to have a quick turn prototype ready to use at their show, but they couldn't find a membrane switch producer able to meet their deadline. For GMN's rapid prototyping team, GE Transportation's timeframe was possible.

S I N G L E
PART
S I N G L E
S U P P L I E R

The GMN team worked quickly with GE Transportation to learn more about their needs for the project and the overall human interface design. Once GMN understood GE Transportation's needs for the user interface, they quickly went to work designing the front panel overlay and membrane switch. The front panel assembly incorporates a few different user interface technologies including membrane switch technology,

CASE STUDY

backlighting, and integration to an aluminum back panel with an OLED display and printed circuit board assembly.

Thanks to GMN’s in-house engineering services, GE Transportation was able to fully pass the design and development over to GMN – ultimately saving GE Transportation time and allowing them to focus on other factors of the product design.

TWO WEEK
PROTOTYPING
WITH DESIGN
& DEVELOPMENT

The GMN team was able to produce samples quickly to have a prototype ready for their show. The prototypes not only met GE Transportation’s stringent deadlines, but also led to a successful production-ready design! The value-added user interface assembly is now in production for products that will go to market.

Since GMN developed this part, within GE, the lead engineer of the new PMD-4 won an award for subsystem of the year. GMN is proud to have contributed to the design of a successful part within a stringent industry. Thanks to GMN’s user interface capabilities, paired with its prototyping and engineering services, GE Transportation effectively sourced one assembled part from one supplier, rather than having to work with multiple suppliers for components for the front panel interface – reducing their supply chain and saving their team time.

