

Industrial Panel PC Supplier Uses 3M™ MicroTouch™ Displays to Expand Product Offerings

The Application

Panel PC's with touchscreens are becoming more prevalent in Industrial Automation applications. These interactive systems can be integrated when upgrading existing manufacturing equipment, are used in rack mount applications, and can be installed in factory walls for automating production processes. Panel PC's equipped with touch input can increase the ease of interacting with production machines, shorten training time based on the intuitive user interface, and can be sealed to several levels of dust and water ingress protection making them ideal for the varying conditions found in industrial automation.

The Problem

Panel PC's are designed specifically for use in industrial applications. These products are purpose built and have outer cases that have been designed specifically for the industrial application. These devices cost significantly more based on their fully-integrated industrial design. This leading panel PC supplier was looking to expand their product line with a more cost-effective option while still providing a product that meets the existing depth measurement, ingress protection, and durability requirements.

The Solution

The 3M MicroTouch Display C1500SS provided the panel PC supplier with an alternative to their current, more costly 15" panel PC model. The C1500SS display has several features that were advantageous, such as a thin display depth and VESA mounting pattern. The C1500SS's small depth measurement enabled the display to accommodate compact designs with minimum space required and to be placed inside an existing wall without the display extending beyond the wall surface. The 75mm VESA pattern (See Figure 4) provided an easy mounting location for the panel PC supplier to attach a custom bracket and add a custom configured PC to the back of the touch LCD chassis display which met the customer's requirement for processor speed and memory. With the special attachment bracket, the PC totaled approximately 3 inches in depth and the touch display totaled 1.96 inches, keeping the overall device depth below the 5.12 inches of existing panel PC's.



The C1500SS display has several bezel options that provided the OEM's customers with the ability to customize ingress protection based on their needs. For those with a NEMA 1 rating (for dust contamination), the 3M MicroTouch Slimline and Contour bezels (see Figures 1 and 2) were the best solution. For customers needing a liquid ingress protection rating of NEMA 4, the 3M MicroTouch Industrial Flange bezel (see Figure 3) provided the necessary sealing level.



Figure 1: 3M MicroTouch Display C1500SS with Slimline bezel.

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The C1500SS display uses 3M's surface capacitive touch solution. This is an all-glass touchscreen that is very durable, especially when compared with a typical 5-wire resistive PET-on-Glass touchscreen solution. As a gauge of surface durability, a MoHS pick with a hardness rating of 7 or higher is required to induce a scratch that will cause a functional failure in a 3M surface capacitive touchscreen (for reference, a typical screwdriver is equivalent to a MoHS pick with a hardness rating of 5). And, the all-glass construction makes it easy to apply the correct torque on the Industrial bezel screws to achieve the NEMA 4 rating.

The Result

By using the VESA mount option, the Panel PC supplier was able to use a stand-alone 3M touch LCD display as an alternative to the higher-priced, industrial panel PC's. 3M's multiple bezel options allowed the supplier to customize the touch display for ingress protection and supply his customers with multiple products at varying price points to better meet their needs. This expansion of the supplier's product line has enabled them to meet more and varied customer needs at a cost competitive price without sacrificing ingress protection or durability.



Figure 2: 3M MicroTouch Display C1500SS with Contour bezel.



Figure 3: 3M MicroTouch Display C1500SS with Industrial bezel.



Figure 4: Available VESA and side/top mounting brackets

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