



All-In-One Panel PC & Monitor Helps Busy Airport Streamline Traffic Without Failure

As one of the busiest airports in the United States, San Francisco International saw about 430,000 departure and arrival flights in 2015. The Federal Aviation and SFO designed a new air traffic control tower. Designed to withstand high magnitude earthquakes, the new tower was located between terminals 1 and 2. Standing as a three story, 44,000 square-foot building, it housed all administrative offices, computer equipment, back-up generators, and secure corridors that allowed passengers to transition between terminals.

Challenge:

Compact and Rugged Computing Technology Required For Non-Stop Operation

SFO's new air traffic control tower required many specialized and compact equipment that could not fail in an mission-critical environment. Every flight coming in and out of SFO needed direct contact with the control tower 24 hours a day, 7 days a week. However, due to space limitations, SFO needed an ideal system that can be integrated without the use of a keyboard or mouse. They also required a system which will be able to control and monitor crucial programs such as the Instrument Landing Systems (ILS), Distance Measuring Equipment (DMEs) as well as various lighted nav aids such as RVR, ALS, PAPI, VASI, REIL and associated Engine Generators at particular airports.

When Premio connected with SFO, their solution was no ideal. Their previous control tower utilized desktop computers. With this approach, wires and space was being used up unnecessarily. In addition to this, the client would often run into many PC issues that would often compromise their mission critical environment.

Approach:

Best-in-Class Embedded Hardware with End-to-End Lifecycle Support

With heavy requirements and many limitations. Premio was entrusted by SFO to create the best easily deployable embedded solution that will provide the longevity and low cost of ownership.

An all-in-one design was called upon for a high performing, yet effective system that can be integrated with the comprehensive industrial design of the airport control tower. In order to prevent any debris, dust or noise we approached our design with an industrial grade, fanless, monitor and PC module that can be integrated with the latest touch screen technology and processor. With touch screen integration, this eliminated the need for any accessories such as a keyboard or mouse, further reducing the total cost of ownership.

Results:

Custom Solution Reduces Total Cost Of Ownership And Failure

Premio dived beyond the typical industrial application requirements and designed an innovative modular series of touchscreen panel by supporting more extensive features, such as wide voltage 9~48VDC power input, removable SSD/HDD Drive tray, wide range of processor selections, rich I/O, PoE support. The result became our VIO Rugged Series with touch screen integration.

“Some critical features that make this touch screen flat panel computer perfect for this application in SFO project are its fanless system design, solid state drive storage, no physical control buttons on the front panel, low glare glass, good quality sound, great brightness range for day/night operation and dual networks for extra reliability,” said Dave Henderson, Project Engineer at FAA National Airway Systems Engineering.

This solution provided the SFO a reduced total cost of ownership while maintaining a highly reliable system that would not fail during mission critical moments. The staff can quickly operate without the use and hassle of extra accessories, and did not have to worry about maintenance.

About Premio: Premio Inc. is a leading global ODM/OEM service provider in computing technology. Since 1989, the company has designed and built world class computing technologies – enterprise servers, embedded systems, and touch panel solutions – for businesses with highly specialized needs. The company achieves success by becoming more than another technology partner. Premio becomes a reliable "inside outsource"— an extension of its customers' businesses, work cultures, manufacturing processes and operations, modulating its solutions to answer any and all special requirements with speed, agility and precision. With state-of-the-art facilities in North America and Asia, Premio partners with some of the worlds leading technology companies, including Intel, Microsoft, Kingston and Dell.

Contact:

Premio Headquarters

918 Radecki Court

City of Industry, CA 91748

Tel: (626) 839-31000

Email: sales@premioinc.com

For more on Premio, visit, premioinc.com