

Driving Change with 4K2K Technology



Raptor[®] RP4325

We are witnessing an unprecedented, ever increasing volume of air traffic worldwide with no landing in sight. Existing ATM is being stretched beyond design loads, pushing control capacity to the limit. While industry programs drive needed change, maintaining standards in safety and efficiency in technological innovation is imperative.

Being integral to technical innovation, there is an increasing focus on display technology. The central visual component of any ATM solution is the primary control monitor which must deliver an absolute and uncompromising level of 24/7 operation, consistently high performance, and long-term reliability.

Monitor manufacturers have been bringing forward viable and captivating visual solutions for the primary control workstation – monitors are getting smarter and becoming a more active component in any modern ATM system. The 2K2K primary control monitor still remains the cornerstone of the ATM experience, displaying key surveillance radar feeds. It has been a part of ATM for years and will continue to so long as the industry uses current radar data formats.

That being said, the ATM industry itself is in the midst of a significant strategic change to increase control capacities to manage escalating loads. It is more open to new concepts to improve performance and efficiency and alternatives to how ATCOs view and manage information. With the adaption of ADS-B, we see rise and benefits in alternative sizes, resolutions, and concepts such as the 4K2K primary control monitor.

Unfortunately, the 4K2K LCD module market has been driven primarily by the consumer-grade TV market. Such panels cannot be used 24/7 without impacting on performance and reliability. Industrial-grade LCD modules, made using industrial-grade components – as they have a longer production life and EOL notification, slower natural deterioration, low image sticking, higher performance, and reliability – are essential for ATC.

EIZO is one manufacturer using its experience in developing monitors for ATC and other mission-critical environments to produce 4K2K primary control monitors that meet the stringent technical demands of



ATC, enhance the visual experience of the ATCO, and increase performance and efficiency.

In a multi-monitor setup, the users' eyes need to scan from one monitor to the next; a process which can be They also need to adjust to the varying pixel sizes and color characteristics between multiple monitors and this contributes to eye strain on the ATCO over long periods of operation. Advantages of the 4K2K resolution itself include having all pertinent information viewable on a single screen, no obtrusive bezel frames between feeds, consistent color characteristics and font size across the entire visual HMI, and reduction in eye fatigue.

EIZO has been spearheading the development of 4K2K technology for niche markets such as medical and ATC. All EIZO primary control monitors use high quality industrial-grade LCD modules designed for 24/7 usage in mission-critical environments. This applies to not only 2K2K primary control monitor development, but EIZO has now also developed the industry's first 4K2K primary control monitor specifically for the ATC environment: the Raptor RP4325 is a 42.5" monitor backed by more than 10 years of primary control monitor development and 45 years of expertise in visual display solutions. It uses an industrial LCD module that

meets the stringent requirements of ATC. The monitor can also display video from up to three sources simultaneously, each of which can be freely positioned on the screen.

The Raptor RP4325, announced in January 2017, has already been tested, approved, and selected for installation in EN ROUTE positions from 2017. EIZO plans to continue to evolve the Raptor RP4325 with customer-driven development to address growth and change in the ATC market.

EIZO

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