



Portland International Airport (PDX)

PRODUCT

Planar CarbonLight CLI Series,
Planar DirectLight Pro Series

LOCATION

Portland, Oregon

INDUSTRY

Transportation

APPLICATION

Digital Signage
Digital Art

PARTNERS

Cochran
dotdotdash
Half Sister Studio
ZGF Architects
PAE

Reimagined PDX Terminal Modernizes and Transforms Passenger Experiences With Planar Displays

Since the original main terminal opened in 1958, Portland International Airport (PDX) has undergone numerous updates and expansions, but none rival the \$2.15 billion expansion of the terminal core. The final project in the Port of Portland's transformative initiative to modernize the airport's facilities doubles capacity and elevates the travel experience for millions of passengers in the years to come.

The project introduces a reimagined main terminal inspired by the natural beauty of the region. ZGF Architects designed the new terminal with biophilic elements, evoking the feeling of walking through a Pacific Northwest forest. The expansive space features more than 5,000 plants — including 72 live trees — and a striking 9-acre mass timber roof made entirely from Douglas fir, sourced from forests in Oregon and Washington.

The updated terminal core also incorporates advanced designs for improving energy efficiency. Among these is an open-loop groundwater heating and cooling system. Designed by engineering firm PAE, the system is one of the largest heat pumps in Oregon, supplying 90% fossil fuel-free heating for the terminal. Combined, the project's sustainable elements have reduced the building's energy needs per square foot by half.

Display technology from Planar plays an integral role in the redesigned terminal. Travelers begin their experience at the upgraded PDX Main Terminal with an enhanced check-in experience featuring Planar LED displays installed at new airline check-in counters. Eight Planar® DirectLight® Pro Series LED video wall banners, each in an 83-foot-wide by 3-foot-high (42x3) array heighten the check-in experience by providing essential travel communications.

“The traveler journey was central to every design decision for the new PDX, and these dynamic displays behind at the airline ticket counters were another opportunity for us to streamline that experience,” said Michael Croston, Senior Manager of Aviation Program Delivery at the Port of Portland.

After exiting the check-in area, travelers are dazzled by twin 120-foot-long by 25-foot-high Planar LED video walls located above North and South security checkpoints. The Planar® CarbonLight™ CLI Series LED video walls with 5.2mm pixel pitches are seamlessly integrated with the terminal’s design and include doorway cutouts to allow entry into the upper space. Wooden slats are mounted in front of the Planar CarbonLight CLI Series displays in a style that complements the undulating timber roof.





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The video walls provide a vast digital canvas for generative art that brings Oregon landscapes to life. The artwork, “Extraordinary Windows,” was developed by Half Sisters Studios in collaboration with design agency dotdotdash, both based in Portland, and combine data-influenced imagery of Oregon-inspired scenes with creative content from digital storytellers.

Using Unreal Engine, the 24-hour cinematographic piece dynamically adjusts to reflect the time of day, changes in the weather and how many travelers are passing through the airport.

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In terms of how travelers experience Extraordinary Windows, dotdotdash Creative Director Fernanda Navilli hopes it will bring them a moment of pause, where they can stop the turbulence of traveling and feel really present for a few moments. “If I were to hope for a lasting impact, it would be for people to feel how big and how diverse nature is here,” Navilli said.

Ryan Lalum, PAE senior associate, said, “Planar’s outstanding collaboration and support throughout the design and construction process was key to the project’s success, resulting in one of the West Coast’s most iconic digital experiences.”



Beyond the technology itself, selecting a local partner brought additional advantages. Located in Hillsboro just 15 minutes away from PDX, Planar’s proximity enabled direct collaboration throughout both the design phase and the display integration, contributing to a seamless project execution. “Working with Planar provided us valuable local support, and we’ve also been able to consolidate our maintenance functions by using their displays in multiple areas of the terminal,” Croston said.

About the Planar CarbonLight CLI Series

Featuring patented carbon fiber frames and a modular design, Planar CarbonLight CLI Series LED video wall displays are uniquely lightweight, thin and strong. Refined mechanical construction gives the displays the versatility to fit a wide range of applications, including free-standing, hanging, wall-mounted and ceiling-mounted installations. Front-side installation and service shrink the overall video wall footprint and servicing space needed behind the wall, making it simpler to fit in more spaces than other LED solutions.

About the Planar DirectLight Pro Series

Planar DirectLight Pro Series fine pixel pitch LED video walls deliver beautiful imagery to suit every indoor, fixed installation application. Offering 5x the bandwidth of competitive solutions, the displays reduce total cost of ownership and feature fewer cabinets, cables and internal components like receivers and power supplies. The solution comes with the Planar® WallDirector™ Video Controller which drives the video wall at native resolution, captures multiple 4K inputs and includes a web-based management software for simplified set-up, configuration, operation and monitoring. Planar DirectLight Pro Series is protected by the Planar® EverCare™ Lifetime Limited Warranty, which covers the whole display—everything from the sub-pixels to the video controller, for as long as it is used in a fixed location.