

Complete LED display systems for simulation and VR



With vast experience and a continuously evolving product portfolio, we design and deliver bespoke LED display systems for simulation and VR environments. Our offering goes beyond LED walls, integrating complementary technologies like advanced image processors, high-performance projectors, and complete system services to create seamless, high-impact visualization solutions for all needs.

A treasure trove of visualization solutions



LED video walls

Barco offers a portfolio of LED video walls, straight or curved, allowing you to optimize the system exactly to your infrastructure.



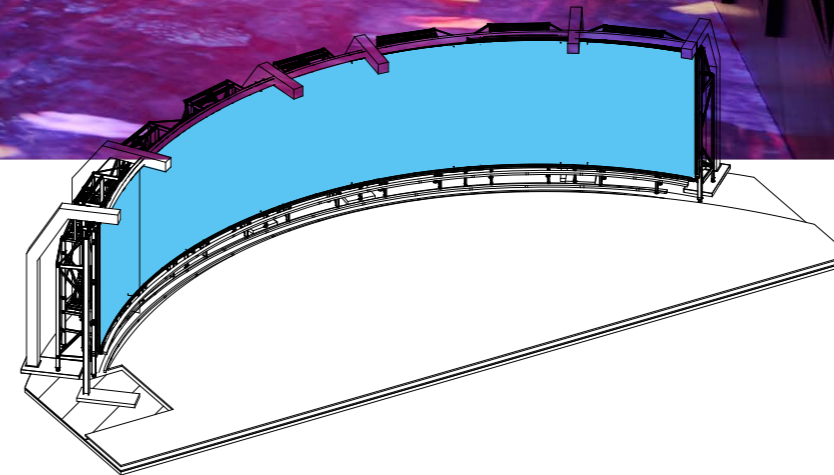
Screen management

Our display management hardware and software allows you to control even in the most sophisticated large-screen multi-channel systems in a user-friendly way.



Projection

Need to compliment your LED wall with a projector? Consult our wide range of projectors, available in various configurations, sizes & weight.



Custom system expertise for large immersive setups

Barco's offering is not restricted to standard configurations: when projects require out-of-the-box creativity, visionary innovation and specialized support, our dedicated team of visualization experts is available to think with you about custom solutions.

In collaboration with you, our all-round technology portfolio and dedicated visualization experts are ready to take on the journey towards exciting results.

Curved LED displays for simulation and training

Barco is the leading developer of **cylindrical training devices** for flight and driving simulation. We can **custom-build** a system that meets your requirements. Expect the most seamless, uniform image.

Our **Direct View LED systems** can be configured with pixel pitches starting from **0.9 mm**, **1.75m system radius**, and a field-of-view **up to 360°**, ensuring high immersion for simulation and training scenarios.

Why choose this solution?

- The intra-tile curvature on the Barco TruePix LED tiles allows for quasi-perfect cylindrical systems, creating an immersive environment in which the user can perform the required testing and simulation scenarios in the most optimum way.
- The Barco LED walls bring unmatched image uniformity and seamlessness, so trainees experience the most realistic and distortion-free visuals.
- The TruePix LED technology delivers high brightness and contrast levels to simulate both day and night scenes with the best image quality.
- Ultra-fast performance with refresh rates up to 240 frames per second, enable smooth rendering of dynamic scenarios without motion artifacts.
- The system delivers responsive interaction with latency under one frame (<4ms@240hz), synchronizing simulator input and visual output in real time for accurate training feedback.
- With TruePix LED technology, these systems enable 3D stereo visualization, including unique viewpoints for drivers/pilots and passengers, creating an authentic and collaborative simulation environment.



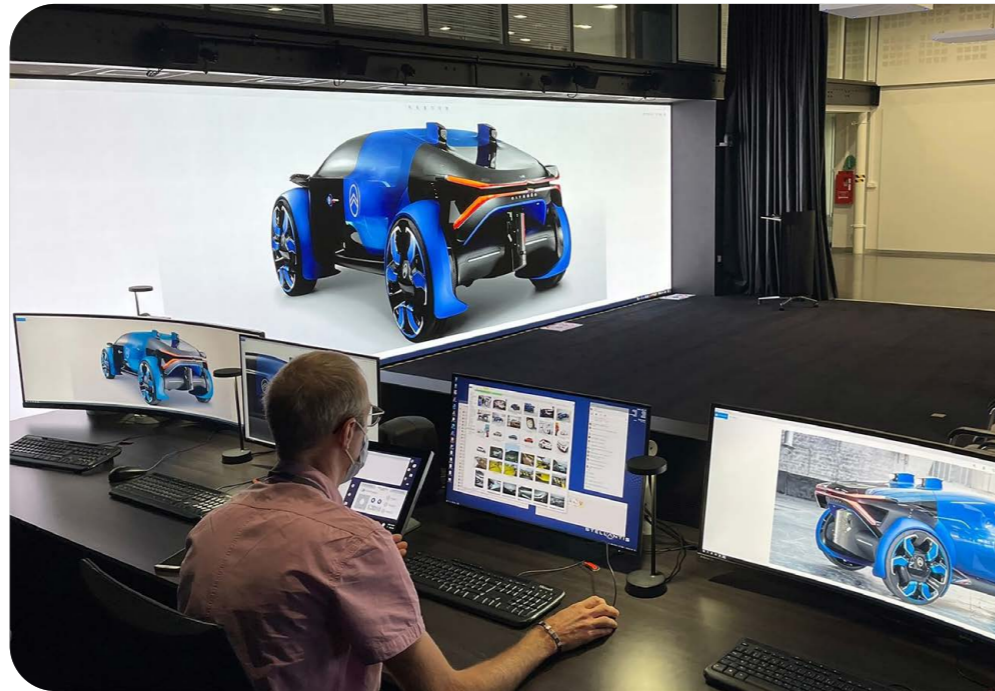
As the world leader in full 360° cylindrical setups, our solutions are engineered to perform at the apex of motorsport, offering unmatched realism and precision.

- The precisely engineered TruePix LED tiles, combined with the very fine mechanical adjustment during production and installation, ensures big seamless LED surfaces without visible edges.
- The flexible serviceability with front and rear access, minimizes downtime and simplifies maintenance in high-demand training centers.
- Cyber-secure and reliable design, featuring multi-level redundancy, TÜV certification, and compliance with stringent cybersecurity standards for mission-critical environments.



LED powerwalls for design centers

Direct View LED video wall in typical set-ups of **5-6m wide** and **2.5m high** and a pixel pitch between **0.9 to 1.9 mm**.



LED VR CAVEs



Barco is leading the way in VR with our LED caves for simulation, design and research. Our experienced engineers can custom-configure an LED cave to your exact specifications and application needs.

Why choose this solution?

- These LED powerwalls deliver high brightness and great black levels which allows them to preserve contrast and details even when used in rooms with lots of ambient (natural or artificial) light.
- LED technology requires limited space to be integrated. And having the possibility to do both front and back servicing adds to the advantages of this choice.
- A smooth viewing experience with extremely low latency and high refresh rates thanks to the Barco-state-of-the-art Infinipix image processing.
- Transformable display systems: Optimize your design space with motorized, rail-mounted solutions. Switch from two smaller displays to one large canvas at the touch of a button, perfect for flexible workflows.

Optional: Enable **Dual Eyepoint** for visualization of multiple sources simultaneously in any combination of mono and 3D images.

Why choose this solution?

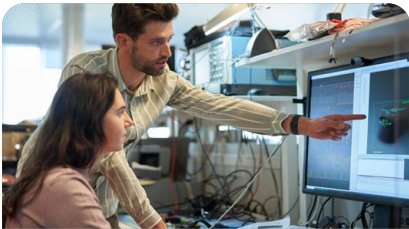
- We optimize every system for demanding VR applications, delivering high brightness, contrast, and color accuracy for lifelike visualization in design and simulation workflows. Our unique mechanical approach eliminates visible gaps and delivers seamless visuals through precision engineering for a flawless viewing experience.
- We integrate motion tracking and cooling systems into the design to maintain image integrity without disrupting immersion.
- Dual Eyepoint stereo technology enables true collaborative VR experiences with multiple viewpoints for enhanced realism.
- TruePix and NT LED display systems deliver peace of mind with multi-level redundancy and guarantees of up to 10 years for long-term reliability.

Tailored services

	Standard warranty	EssentialCare for TruePix & NT	SmartCare for TruePix & NT
General			
Duration	3 years product warranty	Up to 10 years warranty*	Up to 10 years warranty*
Support services			
E-portal access	Yes	Yes	Yes
Helpdesk access	Barco partner/ integrator	Barco partner/ integrator	Barco partner/ integrator
Helpdesk availability	Business hours	Business hours (priority handling)	Business hours (highest priority handling)
Parts coverage			
Service model	Return to factory for repair	Advance swap	Advance swap
Batch-compatible LED modules	No	Yes	Yes
Onsite spare LED modules	No	Yes	Yes
Shipment SLA	Next Business Day economy shipment	Next Business Day express shipment	Next Business Day express shipment
Spare LED modules during installation	No	Yes	Yes

**10 years for TruePix and TruePix-I,
5 years for TruePix-E and TruePix-Q*

From start to finish, you can rely on our global team brimming with expertise and customized system design capabilities



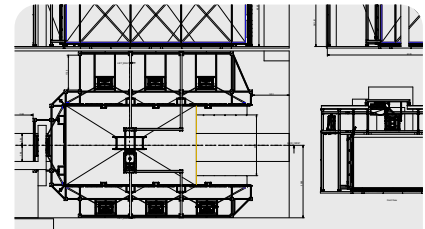
R&D

Our team goes the extra mile to guarantee the most innovative solutions using durable materials and long-lasting system components.



Solution design

You know the requirements of your project. We know our portfolio. Together, we can design the optimal solution that creates your desired impact.



Mechanical engineering

We push technology boundaries with tailored mechanical design optimized for your specific needs, whilst ensuring robustness, safety and service aspects in the design.



Technology & system validation

With 25 years of system design expertise, you can rely on our teams from testing phases to post-installation support.



Custom manufacturing

For you we push the boundaries of existing visualization technologies and tailor the system components to their best performance for your project.



Installation

We work together with you to find the best way of installing the final system, whether you want us to take a lead role or consult for support.

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