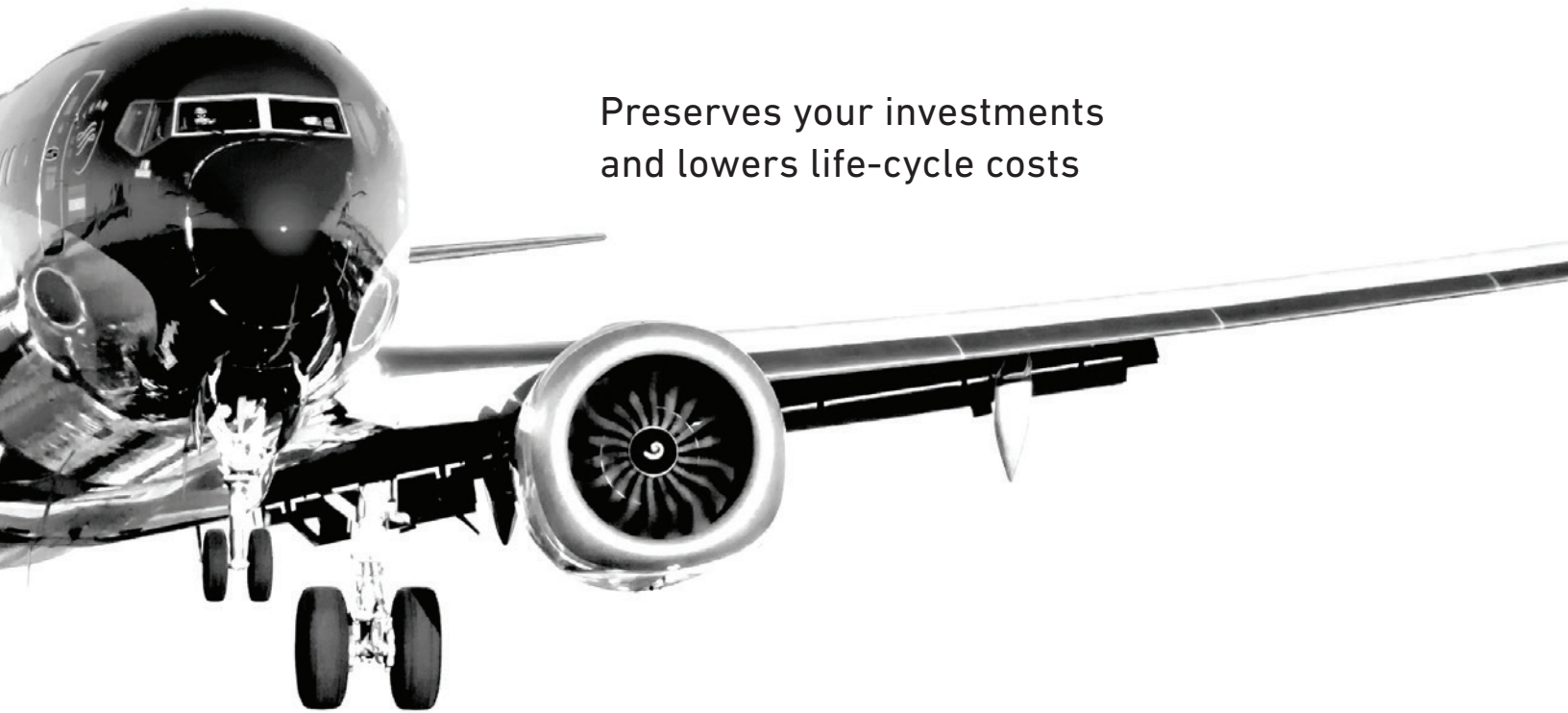


EP®-8100 integrated visual system

TRAIN WITH
UNPARALLELED
REALISM

Preserves your investments
and lowers life-cycle costs



TRAINING AND ITS COST EFFICIENCIES GET REAL



Ensure relevant pilot training for the maximum training credits while taking advantage of smart ways to save costs.

The Collins EP®-8100 integrated visual system raises the bar for realistic and affordable pilot training. It offers unmatched performance that exceeds all current worldwide regulatory commercial flight training requirements.

It also provides an integrated, turnkey visual system consisting of the Collins EP®-8100 image generation system, projectors and a worldwide synthetic environment.

Providing an integrated visual system solution is becoming increasingly important as the benefits of the components technology can be optimized at the system level to provide a better overall result for pilot training, as well as long-term support.

BUILT FOR BETTER TRAINING

Our EP-8100 integrated visual system includes:

- EP-8100 image generation system
- Projectors
- Synthetic environment
- Service and support

ELEMENTS OF A WORLD-CLASS VISUAL SYSTEM

EP-8100 image generation system

Building on our market-leading EP®-8000 image generation system, the EP-8100 image generator is fully backward compatible with the EP-8000. It can preserve your investment in hardware and synthetic environments as well as display and host interfaces while providing additional performance and features for future enhancements.

Its field programmable gate array (FPGA)-based rendering engine lets the EP-8100 provide higher simulation-specific performance graphics processing power. The EP-8100 enables the use of the latest commercial off-the-shelf (COTS) projection systems to achieve the highest approval standards specified by worldwide regulations, including the latest ICAO 9625 guidelines.

Leveraging COTS FPGA technology enables Collins Aerospace to provide low life-cycle costs over a long term while avoiding the short life-cycle of the PC-based video card market.

KEY FEATURES AND BENEFITS

- Provides a supportable life of 15 years, compared with five years for typical PC graphics cards
- Low cost of ownership based on reduced line replaceable unit count, higher system reliability
- Highest image quality – the industry’s best anti-aliasing algorithms and superior light point representations provide outstanding key training cues
- An increase in polygon and pixel capacity for greater scene realism
- The industry’s largest dedicated texture memory
- Built-in display support, including: distortion correction with no loss of resolution and no performance impact; channel edge blending; and display uniformity correction
- Fully integrates with Collins supplied projectors
 - Enhanced light-point compensation
 - Image generation system to projector system interface provides time of day information for edge blend control, video blanking and test pattern selection
 - Single maintenance user interface for EP-8100 image generator
- Full backward compatibility of the host interface to earlier Collins image generation systems minimizes upgrade cost

- Regional weather allows for up to seven simultaneous, unique regions with smooth and continuous transition from one to another
- Built-in support for optional taxi camera and enhanced vision systems
- Use of particle effects to provide realistic 3D clouds and storm clouds
- Over 70 unique 3D storm models provided with radar cross sections
- Advanced light scattering model provides more realistic sky and atmospheric effects

Projectors

The Collins VS2300/VS2500 hybrid laser-illuminated LCoS and the new VS3000 native 4K projectors are fully integrated with the EP-8100 image generation system to optimize system performance. This combination delivers the most realistic visuals in the market today.

We selected this projector technology for its superior image quality. With the combination of the LCoS projector and the hybrid laser illuminator, long illuminator life is achievable without sacrificing image quality. The LCoS technology produces the highest contrast and dynamic range, key factors for producing exceptional night-time and low-visibility representations needed to meet training requirements.

Collins Aerospace procures the COTS projectors from JVC and modifies them to meet commercial training requirements. We ensure the projectors are motion compatible, install a high-quality custom glass lens and improve the color and gamma tracking to obtain the best images through all conditions.

KEY FEATURES AND BENEFITS

- Long life illuminator – a minimum of 24,000 hours, an average life of 35,000 hours, meeting current regulatory requirements
- Higher native contrast (28,000:1) compared with DLP (2,000:1 typical) for superior black-level performance and improved light points performance
- Large dynamic range, allowing bright light points with simultaneous dark night scenes
- E-shift technology, offering improved resolution (VS2500)
- True native 4K resolution with the VS3000
- Improved smear reduction provides better signboard readability and less scene breakup during higher turn rates
- Standard three-year warranty on image generator and five-year warranty on projectors; extended warranty options available

- Refurbishment programs are available to extend projector life and reduce cost of ownership
- Reduced “screen-door” effects when compared with similar resolution DLP technology
- Optional motorized edge blending to improve night-time edge blending
- Auto Intensity internal to projectors
- Custom glass lens provides a sharper and brighter image compared with standard plastic lenses
- Lower operating cost due to less maintenance and lower power consumption
- Common projector interface for adjustments and maintenance
- Common mechanical form factor and lenses between VS2000, VS2100, VS2200, VS2300, VS2400 and VS2500
- Industry-leading WholeEarth™ synthetic environment with 0.5 meter high-resolution, geo-typical imagery and 3D region-specific content worldwide
- Every airport in the library contains user-editable airport clutter consisting of populated gates, parked aircraft, service vehicles and personnel
- Optional Model Update Service (MUS) available for continuous airport updates to meet regulatory requirements
- Optional Comprehensive Database Generation System (DBGS) toolset for customers to maintain airport models
- Large moving model library, providing high-fidelity moving models with particle-based effects and fully articulated debrief models

Synthetic environment

- Airport library of over 500 FAA and EASA certified models
- Enhanced airport models with improved textures, contaminants and advanced lighting, including SMGCS, RWSLs and enhanced taxiway lighting
- Unlimited secondary airfields using Enhanced Generic Airport with clutter and routes

Unsurpassed service and support

- Comprehensive operational and maintenance manuals for all products
- On-site or in-factory classes available for operation and maintenance and DBGS training
- Long-term product support offerings for up to 15 years
- Projector refurbishment and upgrade programs with advanced exchange to minimize downtime

Please contact a Collins Aerospace representative to customize an integrated visual system solution for you.

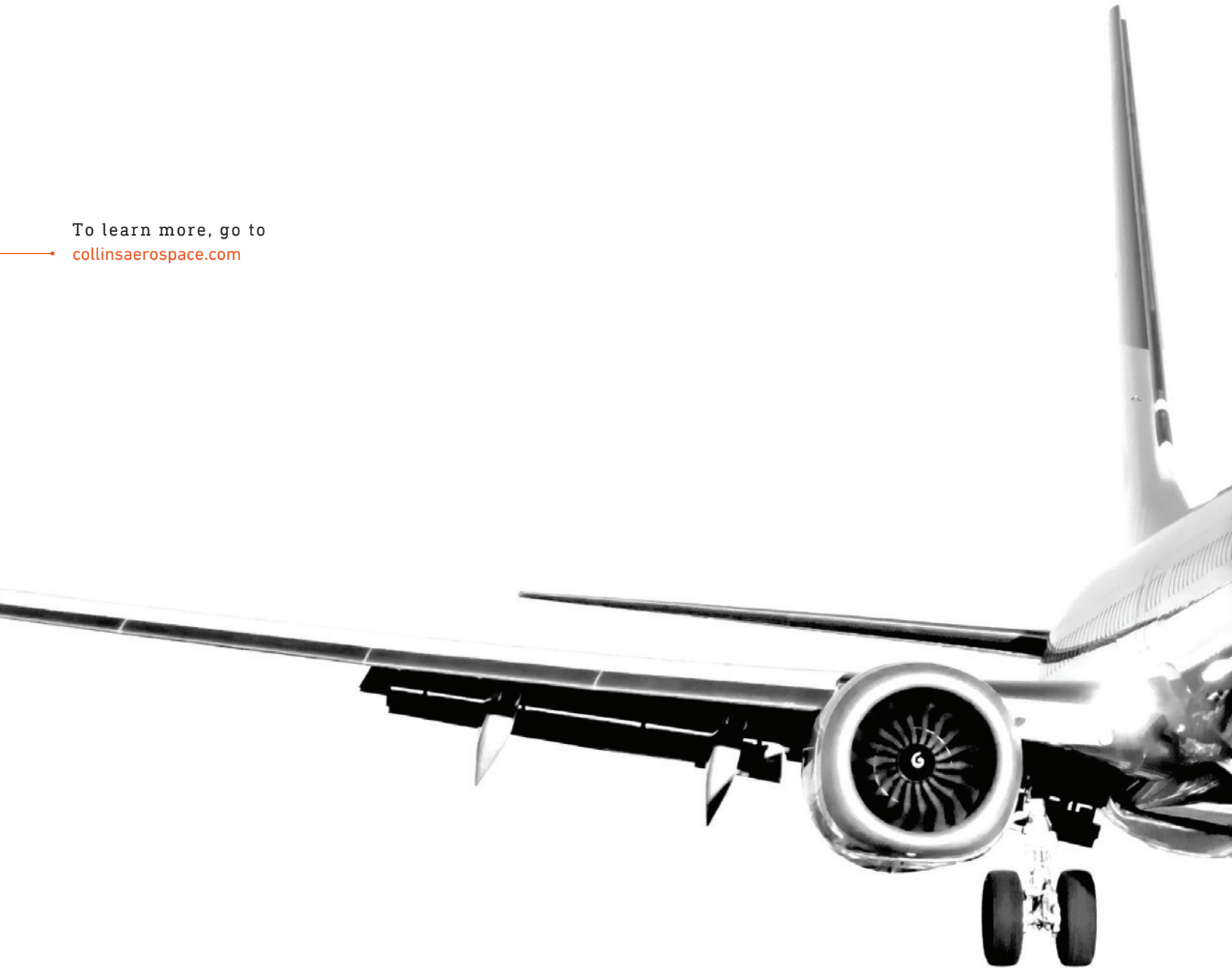


The Collins EP®-8100 integrated visual system

Backed by our 45+ years of visual-industry development, delivery and support, the EP-8100 integrated visual system is the highest quality and most cost-effective visual system available today. It can meet all your training requirements.



To learn more, go to
collinsaerospace.com



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