Panorama's collimated imagery is designed to support training with side-by-side crew seating used in airliners, helicopters, military transport aircraft and ground vehicle simulators. Panorama displays offer superior optical performance, consistently achieving Level D certification for both fixed- and rotary-wing applications.

As a pioneer and trusted provider of best value simulation and training display solutions for commercial and military applications, Rockwell Collins can offer customers the expertise that comes with being a leader in the marketplace for more than 25 years.

We understand your needs and will collaborate with you to achieve the right solution for your particular training requirements. With a broad range of established product offerings, both standard and customized, we are ready to help you succeed.

**KEY FEATURES**

- Fields of view up to 225°H x 60°V
- Film and glass mirror options
- Rear- or front-projected configurations
- Flexibility in system design and access to proprietary tooling
- Patented technology
- Supports training with night vision equipment
- Motion compatible, extended field of view and customized solutions available
- Mechanical structures interface to all simulator types

**KEY BENEFITS**

- Proven technology with more than 800 systems sold
- Displays achieve fixed- and rotary-wing Level D certification
- Superior optical performance using film or glass mirrors
- Different Panorama sizes/radiuses available based on the application or space available
- Projector options to suit your program requirements
- Proprietary auto alignment system reduces setup time
- Experienced installation and service teams maximize system uptime and provide high-quality, through-life support

Providing seamless views with world-class expertise for both commercial and military training applications.

rockwellcollins.com/simulation
STANDARD OFFERINGS
The Panorama display system is designed to provide collimated, out-the-window views through the forward and side windows of the simulator cockpit. The displayed image typically projects onto a back projection screen located above the cockpit. The image is displayed on a large-radius collimating mirror positioned around the cockpit.

The collimating mirror uses an aluminized thin film polyester material that provides a high degree of reflectivity. It is also lightweight and makes integration easier for the simulator provider.

With more than 800 displays sold worldwide, the Panorama product family offers an unmatched range of available configurations. It supports unobstructed fields of view up to and including 225 degrees horizontal by 60 degrees vertical.

Existing offerings are tailored and available for the business jet, air transport, military tanker/transport and helicopter training markets, as well as for single seat auto racing applications. Our standard displays are designed for motion compatibility and will also support night vision training requirements.

Rockwell Collins supports a broad range of projector technologies designed to meet the demanding requirements of the simulation market.

The Panorama film front projected configuration is a common variant of the standard Panorama. It takes advantage of the new generation of higher brightness, fixed-matrix projectors and qualifies to a Level D standard. In certain applications, this design can help you reduce the cost of a high-end display by incorporating tradeoffs in system performance while still meeting your requirements. We can help you determine if this is a good choice for your application.

CUSTOM OFFERINGS
With extensive system engineering capability, we can specify a number of custom solutions outside of the standard offerings. Rockwell Collins has delivered over a dozen variants of Panorama, with multiple sized radius systems developed and delivered. These include extended field-of-view options such as chin windows. Design options are available to accommodate simulators that are transportable or for custom applications such as driver training and other non-flight applications.

Our design portfolio includes multiple combinations of front and rear-projection models and accommodates a broad range of projector technologies. Several types of glass mirrors are available upon request. We will work with you to design the optimal solution for your particular requirements.

The Panorama glass front projected display is an excellent example of our ability to innovate. This small footprint visual solution uses a collimating glass mirror and front projection screen to provide a twin eye-point collimated display for two pilots. It is packaged for the constraints of portable trainer applications without compromising on quality or performance.

ADDITIONAL SERVICES/CAPABILITIES
Our broad range of products can include a number of options to complement the Panorama display system and facilitate system integration.

Proven system-level analysis capabilities, along with our portfolio of innovative display management and integration tools, will optimize your overall solution. These include automated alignment and other projector and display management options. We offer a finite element analysis (FEA) to ensure the overall structural integrity of the display. The display FEA will be suitable for sharing with the customer or end user to support simulator integration.

Rockwell Collins offers a total solution, which includes our own projector designs. This means we can support you throughout the life cycle of your display, providing service and support tailored to your specific needs, and upgrade options to maximize performance and extend the life of your system.