



CAE e-Series MR PRODIGY VISUAL SYSTEM

Overview

To ensure that critical training is as effective as possible, the visual immersion must be as realistic as it can be. The e-Series MR Prodigy Visual Display System creates unprecedented visual immersion which maximizes mission training value and permits the training of complex and risky procedures in a safe virtual environment.

The CAE eSeries MR Prodigy Visual Display System integrates CAE's Prodigy gaming-engine-based image generator combined with synthetic environment solutions deliver stunningly realistic graphics via extraordinarily true-to life visual images. Using Commercial-Off-The-Shelf (COTS) projection technology and an innovative rear-projection display system, CAE continues to lead the way in immersive training for fighter and fast-jet applications. Designed to be flexible and scalable in both field-of-view and resolution, this integrated solution is suited for intermediate to advanced levels of training, including distributed mission operations (DMO) and integrated Live-Virtual-Constructive (ILVC) environments.

Our most immersive visual training experience optimizes the balance of live and synthetic training to enable pilots to:

- Train in a bright, high-contrast, high-resolution simulation environment populated with realistic and challenging content
- Fly in formation; detect and engage ground and air targets in a detailed, compelling visual environment
- Perform complex maneuvers such as air-to-air refuelling (boom and hose and drogue) safely, without high logistic overhead
- Fly tandem cockpit configurations via two linked visual displays - each crew member benefits from the same high-fidelity, no-compromise visual experience

Training fidelity beyond traditional displays:

- Enhanced Detection, Orientation, Recognition and Identification (DORI) performance
- 120 Hz operation reduces image smearing and eyestrain
- E-collimation eliminates parallax error associated with typical small-radius displays, improves Heads-Up Display (HUD) and Helmet-Mounted Display (HMD) registration
- Innovative training with night-vision goggles (NVG) via dedicated infrared (IR) emitter in projector and dynamic reallocation of image generator (IG) resources
- Available 3D stereoscopic view for ultimate realism in tasks such as close formation flight and air-to-air refuelling



CAE e-Series MR Prodigy Visual System brings the following benefits to your mission training devices:

- Choice of resolutions to satisfy specific training objectives
 - cost-effective 4 arcmin/OLP or high-value 2.5 arcmin/OLP configurations using COTS projectors
- E-360 offers full 360° x 135° for full mission simulators (FMS); E-225 offers optimized 225° x 90° with a smaller footprint for part task trainer (PTT) or entry-level devices
- Optical blending for artifact-free visuals in any time-of-day conditions, including stimulated NVG
- Compatible with a wide range of fast-jet cockpits. Adjustable to align pilot and design eyepoints
- Easy pilot ingress and egress via linear actuated door
- Offered as a turnkey solution, pre-integrated with CAE's Prodigy image generator
- Optional dedicated HUD projector
- Optional light closeout to perform night-time and NVG training

	CAE e-Series MR Prodigy — E-360	CAE e-Series MR Prodigy — E-225	CAE e-Series MR Prodigy — E-360X	CAE e-Series MR Prodigy — E-225X
Display type	10 channel rear-projection dome	5 channel rear-projection	10 channel rear-projection dome	5 channel rear-projection
Field of View	360° x 135°	225° x 90°	360° x 135°	225° x 90°
Projectors	4K pixel shift projectors		8K-class e-shift projectors	
Average Resolution	4 arcmin/OLP		2.5 arcmin/OLP	
Brightness	15 ft-L		13 ft-L	
Contrast ratio	15:1 - Average			
Eyepoint Correction	Yes, via head-tracked e-collimation			
Smear Reduction	Yes, via 120 Hz, no brightness loss			
Stereoscopy	Yes, with optional 3D eye wear			
NVG	Unique Hybrid-mode Stimulated NVG driven by dedicated IG with available IR-specific features			
HUD	Optional dedicated HUD projector matched to OTW			
Footprint (L x W x H)	7 x 6.5 x 6 (m) 23 x 21.5 x 20 (feet)	6 x 6.5 x 4 (m) 20 x 21.5 x 13.5 (feet)	7 x 6.5 x 6 (m) 23 x 21.5 x 20 (feet)	6 x 6.5 x 4 (m) 20 x 21.5 x 13.5 (feet)

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