

CAE Medallion-6000XR



The CAE Medallion™-6000XR series is the latest member in CAE's powerful Medallion image generator family. CAE's Medallion-6000XR image generator builds on the proven features and performance of CAE's long-standing Medallion-6000 family of image generator solutions tailored for the military market. CAE's Medallion-6000XR will continue to leverage the latest commercial-off-the-shelf (COTS) graphics processors and includes enhanced features aimed at supporting a highly realistic and immersive synthetic environment for a variety of applications with industry-leading image quality.

The CAE Medallion-6000XR image generator provides the following training benefits:

- Exceptional image quality and scene density, with detailed environments and realistic night scenes for enhanced fidelity;
- Realistic 3D ocean, wakes and ocean to shore simulation with enhanced whitecap and water illumination effects for improved overall visual cueing;
- Updated scene densities for runways, taxiways, airport contaminants, aprons and terminal buildings delivering unmatched airport realism;
- Support for the recently approved OGC CDB standard enabling more accurate terrain profile and enhanced local terrain features such as rivers and roads;
- Ability to modify OGC CDB synthetic environments at run-time to change the terrain dynamically (CAE Dynamic Synthetic Environment);
- Ideally suited for collective and distributed mission operations training (DMO);
- High-end sensor simulation capabilities.

Key Features

CAE's Medallion-6000XR includes the rich feature set the Medallion family has pioneered for virtual air applications, including fast jet, tanker/ transport aircraft and rotary wing visual training, as well as features that make the CAE Medallion-6000XR ideal for creating realistic, immersive synthetic environments for maritime, land and public safety applications. Some of the CAE Medallion-6000XR features include:

- Animated 3D grass and 3D trees;
- Particle-based recirculation and downwash effects;
- Realistic run-time lighting and shadowing effects based on various light sources;
- Craters, weapons effects, and localized damage on any three-dimensional (3D) content or vegetation at runtime;
- Environment reflections on lakes and oceans;
- Dynamic environment full of moving models, special effects and characters;
- Support of OGC CDB standard for ease of content reuse (open specification);
- Reflective model for rainy conditions and fog, including multiple 3D clouds for accurate simulation of weather and the resulting impact on training;
- Sun, moon and stars ephemeris model, physics-based sky model;
- Shader-based light points;
- Smooth dynamic shadows correlated to sun/ moon positions (terrain, moving models, buildings, cloud layers, storm models, lamp posts, projected light lobes);
- Particle-based weather simulation including rain, hail, and snow;
- Accurate simulation of weather phenomena's (storm cells, lightning, blowing effects, contaminants, snow scene, wind layers);
- Full suite of special effects, including tracers, missile trails, explosions, smoke, rotor downwash, and recirculation, conforming craters and bullet impact;
- Lifeforms simulation with suite of animations for soldiers, marshalls, and landing signal enlisted (LSE);
- Up to sea state 6 dynamic 3D ocean model with ship wakes, swell and wind lanes and a 2D ocean model for high level flight;
- Comprehensive mission functions (height above terrain, collision detection, line of sight, laser ranging);
- Correlated sensor suite for FLIR, NVG, EVS, EO, Day TV and LLTV computed using sensor textures with 16-bit radiance values and advanced video post-processing;
- Highly scalable visual system entirely based on COTS workstation components;
- Based on industry standards: Windows 7 Embedded, OpenGL, OpenFlight, OGC CDB, CIG;
- Fully backward compatible with CAE Medallion interfaces and databases;
- Compatible with ultra-high resolution projectors (including 10 million pixel models);
- Low latency (< 52 ms).

Your worldwide training partner of choice



Common specifications

- Windows 7 Embedded operating system (64 bits);
- COTS graphic card;
- Sustainable iteration rate: 60 Hz;
- Simulation polygonal capacity: 450,000 at 60 Hz;
- Light point capacity: 275,000 at 60 Hz;
- Internally generated blend zones;
- 1024 addressable moving models;
- Up to 24 level-of-detail (LOD) geo-specific satellite imagery texturing;
- Up to 40GB equivalent through optimized adaptive texture memory paging;
- 256-level alpha transparency;
- Fully projected light lobes;
- HUD overlay support;
- Outstanding performance, leveraging latest graphics processor (GPU) technologies;
- Advanced shader-based 3D engine;
- 16-bit radiance computation with advanced sensor post-processor (SPP);
- Embedded non-linear dome mapping (NLIM) for curved surface projection;
- Multiple-inputs projectors synchronization capability;
- OGC CDB content level selected on-the-fly (one run-time database);
- Assured correlation across OGC CDB systems when operating in network;
- Centralized database repository for ease of database maintenance and deployment (automatic updates to multiple simulators and sites);
- Low operating costs.

Capabilities of CAE Medallion-6000XR

Application types	<ul style="list-style-type: none"> - Full-mission simulator - Mission rehearsal - High-end out the window (OTW) - Stealth view display 	<ul style="list-style-type: none"> - FTD/CPT - Role playing station - Low-end OTW - Sensor simulation - Maritime 	<ul style="list-style-type: none"> - Land - Public Safety
Number of channels	1 to 64		
Full-scene anti-aliasing (max.)	32x		
Anisotropic filtering (max.)	16x AF (angle invariant)		
Resolution/Anti-aliasing/Anisotropic filtering (typical application)	2560x1600 NI @ 60 Hz 16x AA, 8x AF		
Genlock & frame Lock	Y		



Canada

Tel: +1-613-247-0342
milsim@cae.com

Europe

Tel: +49-2402-106-0
info@cae-gmbh.de

India

Tel: +91-80-2625-6000
caeindiapvtltd@cae.com

United States

Tel: +1-813-885-7481
cae_usa@cae.com

Australia

Tel: +61-2-9748-4844
caeaus@cae.com.au

Middle East

Tel: +971-2-676-7676
milsim@cae.com

United Kingdom

Tel: +44 (0) 1444-247535
cae_plc@cae.co.uk

Asia

Tel: +65 6430 4390
milsim@cae.com

Corporate Headquarters

Tel: +1-514-341-6780
milsim@cae.com

Your worldwide training partner of choice

milsim@cae.com

@CAE_Defence

CAE

cae.com

