



CAE Medallion™ -6000 Series

The CAE Medallion™-6000 series is the latest member in CAE's powerful Medallion image generator family. The CAE Medallion-6000 series combines a proven, industry-leading feature set and image quality with the power and capabilities of the latest commercial-off-the-shelf workstation graphics. The CAE Medallion-6000 provides a highly modular, scalable and portable visual solution designed to satisfy your full range of military training needs.

The CAE Medallion-6000 image generator is a proven system, in operation on many programs, that provides training benefits such as:

- Extremely detailed environments and realistic night scenes;
- Smooth dynamic shadows correlated to sun/moon positions;
- High resolution imagery and textures for enhanced fidelity;
- Highest scene density on the market;
- High-end sensor simulation capabilities.

Features

CAE's Medallion-6000 includes the rich feature set the Medallion family has pioneered for fast jet, tanker/transport aircraft and rotary wing visual training, including:

- Environment reflections on lakes and oceans;
- Dynamic environment with many moving models, special effects and characters;
- Fully compatible with common database (CDB) specification for ease of content reuse (open database format);
- Reflective model for rainy conditions and fog simulation;
- Multiple cloud layers with true 3D cloud models;
- Sun, moon and stars ephemeris model, physics-based sky model;
- Shader-based light points, dynamic shadows;
- Particle-based weather simulation including rain, hail, and snow;
- Full suite of special effects, including tracers, missile trails, explosions, smoke, rotor downwash, 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, OpenGL, OpenFlight, CDB, CIGI 3.2
- Fully backward compatible with CAE Medallion interfaces and databases;
- Compatible with ultra-high resolution projectors (including the latest 10 million pixel models)
- Low latency (< 52 ms).

Common specifications

- Windows 7 operating system (64 bits);
- COTS graphic card;
- Sustainable iteration rate: 60 Hz;
- Simulation polygonal capacity: 275,000 at 60 Hz;
- Light point capacity: 200,000 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 5,000 MegaTexels 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;
- Analog and digital video output modes;
- CDB content level selected on-the-fly (one run-time database);
- Assured correlation across CDB systems when operating in network;
- Centralized database repository for ease of database maintenance and deployment;
- Low operating costs.



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Capabilities

Model 6120

Model 6220

Model 6x20

Application type	- Stealth view display - FTD/CPT - Role playing station - Low-end OTW - Sensor simulation	- Full-mission simulator - Mission rehearsal - High-end OTW	- Full-mission simulator - Mission rehearsal - High-end OTW
Number of channels	1 to 8	1 to 64	1 to 64
Support of multiple-inputs projectors	N	N	Y
Full-scene anti-aliasing (max.)	16x	32x	32x
Anisotropic filtering (max.)	16x AF (angle invariant)	16x AF (angle invariant)	16x AF (angle invariant)
Resolution/Anti-aliasing/ Anisotropic filtering (typical application)	2048x1536 NI @ 60 Hz 8x AA, 4x AF	2048x1536 NI @ 60 Hz 16x AA, 8x AF	as per application 16x AA, 8x AF
Genlock & frame Lock	Y	Y	Y
Centralized database server	Y	Y	Y
Common database (CDB) support	Y	Y	Y
HLA support	Optional	Optional	Optional

Note : The 6220 can be configured in a multiple IG configuration per channel to support very high resolution projector (10 million pixels)



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one step ahead