



CAE Tropos™-6000XR

Visual Solution





CAE Tropos™-6000XR Visual Solution

More than 20 years of leadership in visual technology

The CAE Tropos™-6000XR is the latest evolution of visual solutions for civil aviation training. It combines the rich and proven feature set developed from more than 20 years of experience in high-end visual solutions, CAE Tropos™ software and commercial off-the-shelf (COTS) hardware technologies.

The CAE Tropos™-6000XR enhances the realism of pilot training visual cues through extensive use of satellite imagery, dynamic airport environments, advanced weather effects and a continuous world database.

The CAE Tropos™-6000XR solution includes special rendering features optimized to take full advantage of the latest 4 million pixels LED (light-emitting diode) projectors to deliver unprecedented visual realism exceeding the regulatory requirements of Level D qualification. The CAE Tropos™-6000XR offers a seamless upgrade path for any currently fielded CAE-built full-flight simulator and can also be retrofitted to simulators manufactured by other vendors.

The new platform is fully compatible with previous CAE Tropos™ IGs, protecting existing database investments. The CAE Tropos™-6000XR is fully compatible with the CAE True™ Airport service.

CAE True™ Airport is an innovative subscription-based service offering, ensuring that visual databases around the world are continuously maintained current with the rapidly changing airport environment. This service is made possible by leveraging our large customer base and innovative technologies to allow CAE to offer rich, correlated and up-to-date content with cycle times that are much lower than the traditional business model.



Features

The CAE Tropos™-6000XR solution delivers an unprecedented visual realism exceeding the regulatory requirements of Level D qualification with features focus around:

Image generator

- 3,000,000 visible polygons / system at 60Hz
- 700,000 lights points / system at 60Hz
- High precision light point rendering
- Up to 64x anti-aliasing for stable airport markings and scene
- Unique dynamic scene load management mechanism
- Dynamic color equalizer for optimal colors

Environment simulation

- Layered fog and patchy fog simulations
- Light scattering simulation around lit areas depending of fog density
- High-fidelity glare effect from the aircraft lights in low visibility
- Realistic 3D particle-based cloud layers – 1/8 to 8/8 coverage
- Multiple levels of falling snow, rain or hail
- Library of 22 selectable storm fronts including rain shafts and lighting effects
- Dynamic 3D moving traffic on city roads
- Physically accurate sun and moon light reflection effects on water
- Dynamic & shadows correlated with sun position
- Reflection of wet surfaces, including visible effect of the rain drops in the puddles
- Atmospheric scattering (Rayleigh and Mie light scattering)
- 15 metre imagery-based 3D world database with high precision terrain
- Seamless integration of 10,000+ enhanced generic airfields

CAE Airport Clutter Editor (ACE) Utility

- Provides user with customizable 3D model clutter (dynamic & static)
- Enables the positioning of marshallers, aircrafts, ground vehicles and docking systems
- Allows the user to create/modify default scenarios (runway intrusion, rejected takeoff, landing) associated with the moving aircraft
- Embedded pushback & emergency scenarios with simulation of relevant ground personnel

CAE True™ Airport Service

- Annual site subscription
- No limits, quotas, or restrictions on amount of updates a customer can receive for their selection of databases
- Airport databases proactively updated to latest Jeppesen and Aeronautical Information Publication (AIP) data
- Access to 250 up-to-date airport databases at all-time via a web portal
- Content correlated with enhanced ground proximity warning system (EGPWS) and enhanced visual system (EVS)
- Customer notification as soon as a new version of their database is available
- Automatic database alignment feature



Customer benefits

The CAE Tropos™-6000XR visual solution provides customers a number of compelling benefits for their flight training organization. These include:

- One-stop shop when combined with a new CAE full-flight simulator
- Long-term commitment of CAE towards visual simulation evolution and support
- Excellent MTBFs and low life cycle cost
- Minimal maintenance required and excellent reliability
- Leveraging COTS technology for highest performance
- Worldwide customer support and service

CAE is unique in its ability to offer customers the products, services and support required for a visual turnkey solution that can enhance operational efficiency and safety.







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