Low Profile Digital SparrowHawk™ Head-Up Display

A completely digital, raster video capable Head-Up Display (HUD), the Esterline CMC Electronics’ CMA-7150 Low Profile Digital SparrowHawk™ provides a 26° total field of view and is designed to fit in a cockpit with a Large Area Display. It also offers up to twice the accuracy of competing systems, making it the most accurate HUD available on the market.

The CMA-7150 Low Profile Digital SparrowHawk HUD features a reliable, solid state display and includes extensive built-in testing for simplified maintainability, internal data logging and continuous in-flight testing to track system conditions during flight.

The CMA-7150 can also be fitted with an optional HUD camera, video recording system and an Up Front Control Panel, which allow the pilot to select the system mode and manually enter numerical data into the mission system. The Low Profile Digital SparrowHawk offers numerous maintenance saving features such as electronic boresighting support (for original equipment installation); automatic boresighting removal and replacements do not require re-boresighting of the HUD; O-Level interchangeable combines (without requiring re-boresighting or re-calibration of the HUD); and O-Level interchangeable HUD Camera (no camera re-boresighting required upon removal and replacement).

When combined with CMC’s Operational Flight Programs, the CMA-7150 can provide a complete weapons delivery system providing a powerful, cost-effective solution for aircraft that perform a broad range of missions. Configurable symbology offers fleet commonality in “look and feel” and ensures minimal impact on pilot transition across aircraft types.

The Low Profile Digital SparrowHawk’s high performance and low cost make it the best value solution for new military aircraft or for upgrades to existing aircraft. Every CMA-7150 Low Profile Digital SparrowHawk HUD is backed by Esterline CMC Electronics’ worldwide support network.

Compact and Reliable, with Proven Performance and Technology

- Stroke Only or Stroke on full-frame raster images
- Symbology can be overlaid on any image, e.g. SVS, FLIR or radar.
- Total Field of View: 26° with 5" Aperture
- Provides large, instantaneous field of view in a clear, sharp display with high brightness and clarity, increases the pilot’s aiming envelope allowing for pinpoint accuracy.
- Luminance capability allows a contrast ratio of 1.2 to 1 against 10,000 fL ambient background.
- symbology readable under all ambient light conditions.
- Automatic Brightness Control
- Automatically adjusts symbol brightness for varying light ambience.
- Type I and Type II Class B & Class C Night Vision Goggles (NVG) Compatible
- Clear, sharp HUD image during night operations.
- Dual Combiner Optical System
- Provides large instantaneous field of view with excellent transmissivity.
- Electronic Boresighting Capability and Automatic Boresighting Capability
- Simplifies HUD installation process, increased accuracy.
- 30-Minute Operational Level Test/Remove and Replace
- Enhances maintenance efficiency and extends in-service lives.
- Continuous BIT
- Automatically validates HUD operators.
- Optional Up-Front Control Panel (UFCP)
- Allows the pilot to select the system mode and manually enter numeric data into the mission system.
- Optional Integrated Color HUD Camera and Video Recorder
- Training or mission debriefing.
- Camera Placement Forward of Combiners
- Camera does not obstruct pilot’s view. Camera video and HUD symbology overlaid on video recorder and rear cockpit monitor produce high-quality display regardless of ambient light.
- Dual Symbol Generator Capability
- Hot-standby operation.
- Compact, Flexible Design
- Ideal for retrofit applications.
- Reliable Solid State Display Technology
- MTBF of 20,000 hours resulting in lower life cycle costs.

Specifications

- Weight: 30 lb/13.6 kg
- Display Color: Green
- Combiner: Single or Dual
- Dual Combiner: 70% photopic transmission
- Aperture: 5"
- Image Distortion: <1%
- Accuracy: 0.0 to 2.0 mr
- Power Consumption: 95 Watts
- Reliability: 20,000 hrs MTBF
- Environmental: DO-160F
- EMI: DO-160F

For information purposes only. To accommodate product improvements, specifications are subject to change without notice.

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HUD-CMA-7150 LOW PROFILE DIGITAL SPARROWHAWK_18-002
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HUD-CMA-7150 LOW PROFILE DIGITAL SPARROWHAWK_10-022