

## Aviator Night Vision Imaging System Improved Head-Up Display for:

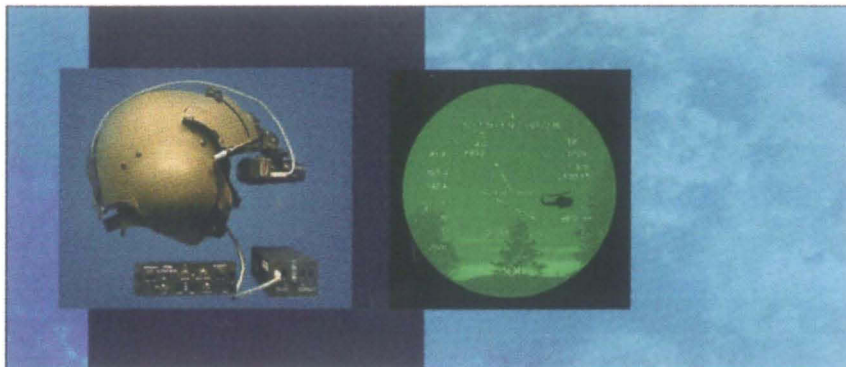
- Enhanced Flight Safety
- Increased Situational Awareness
- Monitor Dynamic Flight Data Via NVGs
- User-Defined Display Symbology
- Independent Pilot/Copilot Symbology Control
- Multi-Bus Architecture
- Low Helmet-borne Weight/CG
- Small, Lightweight Flex-Cable to Display
- Extensive Growth Capability

### Initial Platform Applications:

UH-60 A/L, UH-60 S, UH-1Y,  
CH-47D, CH-47D (Improved Engine),  
Other Platforms In Process

**BAE SYSTEMS**

## Next Generation Improved HUD (I-HUD)



The ANVIS/I-HUD enables the pilot, copilot, and other flight crew to visually observe aircraft flight data while maintaining exterior situation awareness. Fully compliant with U.S. Military Night Airborne Operational Requirements, the primary mission of I-HUD is to mitigate risk associated with night-aided flight and ultimately contribute to operational success and to the survivability of aircrew and aircraft. I-HUD improvements have been implemented based on operational user feedback on deficiencies of existing systems.

The I-HUD mitigates risk of night-aided flight by electro-optically inserting flight data graphics within the aviator's night vision imaging system field-of-view. Superimposing flight data onto the night scene improves the aircrew's overall situational awareness and enhances coordination – the aircrew is free to concentrate on the situation outside the aircraft.

Fully Form, Fit, Function Interchangeable (F3I) with the current BAE SYSTEMS AN/AVS-7 NVG/HUD, the I-HUD System is modularly adaptable to both backward fit and forward fit applications. Compared to the legacy NVG/HUD, the I-HUD is smaller, lighter weight, lower power, less expensive and more reliable – with much higher system performance.

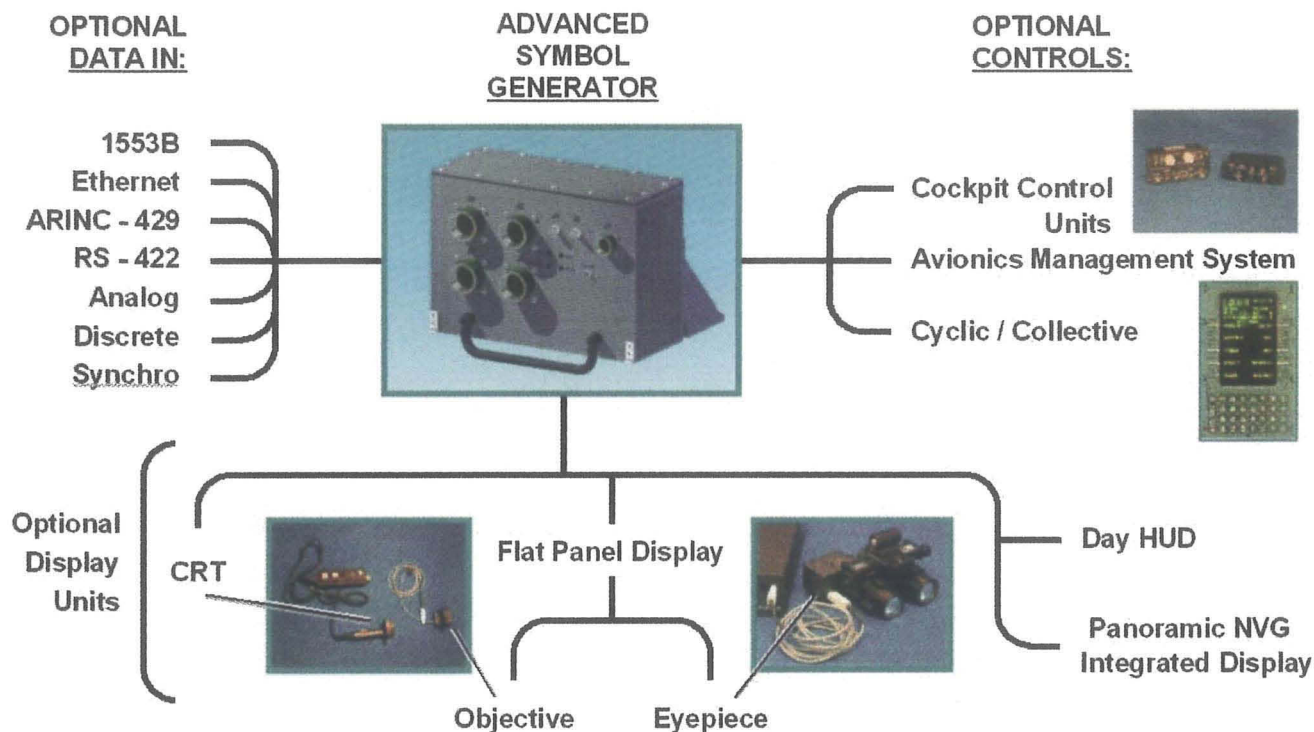
The Advanced Symbol Generator (ASG) converts aircraft avionics data into real time display graphics with an advanced PowerPC-based processor that includes embedded dual fast Ethernet 100BaseT architecture for negligible latency flight symbology and video, e.g. FLIR imagery. Future growth options, with minimal impact to existing hardware, include color symbology, DayHUD/Visor, Helmet Tracking System, MonoHUD and Flight Data Recorder.

The I-HUD System accommodates a variety of display units (DU) to insert flight data into the optical channel: Legacy CRT, Flat Panel DU-Objective, Flat Panel DU-Eyepiece, DayHUD and Panoramic NVGs. The DU is equipped with a quick disconnect connector, where appropriate, providing safe egress for aircrew members. The direct drive all-digital flat panel displays feature a small diameter, flexible electrical cable, which 1) enhances situational awareness, through much improved peripheral vision, and 2) reduces the pilot distraction caused by the large diameter, stiff high-voltage cables needed by CRT displays.

The I-HUD System control function can be either via the aircraft Avionics Management System (AMS) or a dedicated Cockpit Control Unit (CCU). Controls consist of all the features necessary to independently select displays prior to and during flight, to control symbology position and intensity, to provide symbology selection by operator, and to initiate the Built-In-Test function. Certain functions can also be remoted to the cyclic or collective grips.

**Aviator's Night Vision Imaging System/Improved Head-Up Display (I-HUD):  
A Critical Safety Enhancement For All Modes Of Night Aided Flight**

# Next Generation Technology for Today's Nightfighter



## System Features

- Real-Time, High Resolution Digital or Analog Displays
- Easily Adaptable to All Night Vision Goggles
- Lightweight Display Unit: ~75-100 grams
- Installed on Multiple US Army, US Marine Corps and US Navy Aircraft Platforms
- Adaptable to Any Aircraft Platform:
  - Backward or Forward Fit Installations
  - Single Card Fit to Aircraft Mission Computer
- Advanced PowerPC Processor & ASIC Architecture
- Four Independent Display Modes, Each With Declutter
- Video Display, e.g. FLIR Imagery
- Pilot And Copilot Independently Select Symbols And Display Modes
- Pilot And Copilot Controls On Center Console, AMS And Collectives or Cyclics
- ANVIS Compatible Control Panel And Displays
- BIT with 95% Failure Detection and Fault Isolation
- Enhanced Provisions for Future Growth Capabilities

## Specifications

- Field of View: 34°
- Display Type: Raster or Stroke
- Resolution: 480 x 480 pixels
- Power: 28 VDC, <1 Amp, MIL-STD-704A
- Interfaces: Dual Ethernet 100BaseT, Dual MIL-STD-1553B, ARINC-429, RS-232/422/485, Analog, Discrete And Synchro
- Operating Temperature: -32° to +52° Celsius
- Environment: MIL-STD-810C
- EMI/EMC/EMV: MIL-STD-461C/MIL-STD-462A Notice 1, ADS-37, 200 V/M RMS
- NVG Compatibility: MIL-L-85762A
- MTBF: >6000 Hours

## Physical Characteristics

- Avionics -"B" Kit
  - Converter Control (CC): 2.5 x 5.5 x 3 Inches
  - Display Unit (DU): 2.7 x 1.6 x 1.0 Inches
  - Advanced Symbol Generator (ASG): 10.5 x 8.0 x 4.5 Inches
- Aircraft Installation -"A" Kit
  - Aircraft Harness and Mounting Hardware
  - Sensors (If Required)

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