

TULGAR

HELMET MOUNTED DISPLAY

VISOR PROJECTED, SEE-THROUGH COLOR DISPLAY
INTEGRATED DIGITAL NIGHT VISION PROJECTED ON VISOR
HYBRID (INERTIAL & OPTICAL) HEAD TRACKING





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HELMET MOUNTED DISPLAY

TULGAR Helmet Mounted Display (HMD) is a head mounted visor projected display system for fixed wing platforms. This system is designed by ASELSAN to enhance situational awareness and increase the capabilities of the pilot and the aircraft with its digital night vision, color display, and accurate head tracking.

The system is composed of three core units:

- Headgear Assembly
- Electronic Unit
- Head Tracking Modules

HMD supports the pilot during missions with high resolution color imagery projected onto the visor. Equipped with cutting edge optical design, it possesses high field of view and see-through capability.

TULGAR helmet is a lightweight solution to maximize the comfort of the user. Additionally, the system offers passive and active noise reduction, customized inner helmet, and compliance with the anthropometric specifications.

HMD system features an integrated digital night vision module. This enables the system to be operable during both day and night missions without any modification on the headgear assembly.

TULGAR HMD can operate in harsh environmental conditions of fixed wing platforms with its reliable, durable design.

General Specifications

- Lightweight helmet
- Color display
- Personalized inner liner for accurate fit and comfort
- Digital night vision
- Hybrid head tracking system
- Active noise reduction (ANR)
- Compatibility with eyeglasses
- 3D audio compatibility
- 40°(H)-by-32°(V) field of view

Interfaces

- ARINC-818-2 Video Interface
- Display Port Digital Video I/O Interface
- Serial Interface (RS-232/RS-485/RS-422)
- Discrete I/O Interface
- MIL-STD-1553 Interface

Physical Specifications

- Headgear Assembly Weight: < 2.1 kg (including oxygen mask)
- Electronic Unit (EU) Weight: < 5 kg

Technical Specifications

- Power Input: 28 VDC (Nominal)
- Power Consumption: 140 W (Nominal) / 190W (Maximum)

Environmental Conditions

- Operating Temperature (EU)
 - : -40°C / +70°C (Forced Air Conduction Cooling)
 - : -55°C / +95°C (Climated Air Conduction Cooling)
- Storage Temperature (EU)
 - : -55°C / +95°C

Qualifications

- MIL-STD-810G W/Change 1
- MIL-STD-461G
- MIL-STD-1472G
- DO-254
- DO-178C

