



# IESI

Integrated Electronic  
Standby Instrument  
fully featured for  
helicopters

**THALES**  
Building a future we can all trust



# IESI

## Fully featured for helicopters



### MARKET WORLDWIDE LEADER

- Three essential back-up functions (artificial horizon, altimeter and airspeed indicator) - all in one place
- Wide range of additional features
- Accurate low airspeed measurement
- Accurate even in the high-vibration helicopter's environment
- Enhanced HIRF immunity
- Extended graphic generation capabilities

As a world market leader in conventional instrumentation, Thales has combined its expertise in both active-matrix LCD technology and solid-state sensors, including inertial and pressure components, to propose a self-contained family of Integrated Electronic Standby Instrument (IESI) products.

Already successfully installed on a full range of civil and military aircraft, a Thales IESI has been selected (with the full TopDeck® avionics suite) by Sikorsky to equip its new S-76D™ medium helicopter. The new Thales IESI has also been selected by Airbus Helicopters for its range of light and medium helicopters. This includes the Ecureuil family, the EC135, EC145 and EC155 and their military versions, as well as the latest in the Airbus Helicopters civil range, the EC175.

Optimised for helicopters, the new Thales IESI provides the pilot with attitude, altitude and airspeed backup indications in a single LRU. With embedded sensors and a high-definition, fully sunlight-readable and NVG-compatible colour display, Thales IESI offers unparalleled usability and fits seamlessly into any glass cockpit configuration.

With its compact 3-ATI packaging, the new Thales IESI is compatible with the cockpits of all new-generation helicopters, and is an ideal choice for helicopter upgrade operations.

### PHYSICAL CHARACTERISTICS

- Housing: 3-ATI case according to ARINC 408A
- Depth: 9.6" (244 mm)
- Weight: 4.2 lbs (1.9 Kg)
  - 5 standard ARINC 429 busses, 15 discrete, 2 segregated power supplies
  - or 6 standard ARINC 429 busses, 15 discrete, 1 power supply
- Power consumption: 28Vdc/ 18W
- Pressure ports: per MS33649 standard
- Electrical connector: EN4165 / 2x20 pin I/O

### MAIN FEATURES

- Attitude: pitch & roll - Altitude: Feet or metric
- Airspeed including low speed area + VNE
- ILS (Instrument Landing System)
- Backcourse
- Heading (digital interface) - True & Magnetic
- Digital magnetometer (optional LRU)
- Slip / Skid
- Dual barometric scales (Hpa or InHg)
- Static Source Error Correction (SSEC)
- Adjustable dashboard tilt angle

### OPTIONS

- Vzbi (Accurate and swift hybrid barometric /inertial vertical speed measurement)
- VOR display
- Dual NAV display capability
- Integrated back-up radio control

### TECHNICAL DATA

- Attitude according to TSO C4c:
  - Range: Pitch +/- 90° - Roll: +/- 180°
  - Accuracy: +/- 0,5° (stabilized flight)
- Accelerometers range up to 4G
- Flight envelope up to 200°/sec
- Altitude: according to TSO C10b (AS8009A)
- Airspeed: according to TSO C2d
- MTBF > 4,000 hours (helicopter flight profile)
- HIRF: compatible with IFR flight standards
- Applicable standards: RTCA DO-160E, DO-178B level B, DO-254 DAL B

### DISPLAY PERFORMANCE

- Active Display area: 2.44" x 2.44"
- High resolution: 480 x 480 dots
- Number of colours: 1.8 million colours
- Viewing Angle: +/- 45° in lateral
- High brightness > 116 fL
- NVG compatible
- Dimming range > 2000/1
- Anti-aliasing