AN/AES-1
Airborne Laser Mine Detection System (ALMDS)
The AN/AES-1 Airborne Laser Mine Detection System (ALMDS) designed by Northrop Grumman addresses the U.S. Navy’s immediate need to protect its sea-based assets from the ever-increasing threat of mines.

Inexpensive and easy to deploy, mines have proven to be effective in disrupting port and maritime operations and preventing naval forces from achieving sea control and power projection ashore.

The ALMDS detects, classifies, and localizes surface and near-surface moored sea mines. This capability provides rapid wide-area reconnaissance and assessment of mine threats in littoral zones, confined straits, choke points, and amphibious objective areas for naval forces—a mine countermeasures capability that did not previously exist. ALMDS is part of the Littoral Combat Ship (LCS) mine countermeasures mission package.

Integrated into the MH-60S helicopter, the ALMDS uses pulsed laser light and streak tube receivers housed in an external equipment pod to provide 3D images of the near-surface volume area. The pod is nearly nine feet long with a diameter of 21 inches and weighs 805 pounds.

The untethered sensor is capable of day or night operations and can attain high area search rates with accurate localization to support follow-on mine neutralization. The ALMDS uses the forward motion of the aircraft to generate image data, which simplifies the scanning process and helps ensure high system reliability.

Pod Physical Characteristics
- Diameter: 21” (53 cm)
- Length: 107” (2.7 m)
- Weight: 805 lbs (365 kg)

Rapid, Wide-Area Reconnaissance and Mine Detection Capabilities

For more information, please contact:
Northrop Grumman Aerospace Systems
Military Aircraft Systems
Tom Rodabaugh
Office: 703.949.2324 • Thomas.rodabaugh@ngc.com
Mobile: 831.207.6592