

GOES-R SERIES

Early and accurate detection of dangerous weather is essential to protecting our nation's economy, security and quality of life. The National Oceanic and Atmospheric Administration's (NOAA's) newest generation of geostationary weather satellites — the Geostationary Operational Environmental Satellite-R (GOES-R) Series — provides a significant increase in the quality, quantity and timeliness of weather imagery and data available to forecasters. L3Harris provides critical imaging and ground system capabilities for the GOES-R Series.



ADVANCED BASELINE IMAGER (ABI)

The ABI is the primary instrument on board the GOES-R Series for imaging Earth's weather, climate, oceans and the environment. Its advanced capabilities reflect more than 40 years of L3Harris experience producing geostationary imaging radiometers. ABI views the Earth with 16 spectral bands (compared to five on the previous GOES system) providing three times more spectral information, four times the spatial resolution and more than five times faster coverage than the previous system.

GROUND SEGMENT

The GOES-R Ground Segment–designed, developed and deployed by L3Harris – receives and processes GOES-R Series data and generates and distributes the data to more than 10,000 direct users. The service-based, open-architecture ground segment ingests, processes and distributes 10 times more data than before, at six times the speed.



Geostationary Weather Imager

> Enables weather forecasts that save lives, protect property and enhance the economy

Next-generation

- Reduces damage to property and agriculture
- > Improves air traffic and maritime ship routing
- Provides more accurate air quality monitoring and forecasting
- > Spots new fires faster than before and identifies smaller fires than could be previously detected

GOES-R Ground Segment



A WEATHER-READY WORLD

Advanced GOES-R Series capabilities are vital to U.S. national security, economic strength and public services through enhanced severe weather detection and forecasting.

L3HARRIS ENABLES GOES-R SERIES IN SPACE

The ABI, a next-generation remote sensor from L3Harris, represents a significant advancement in performance over the former generation of imagers. It provides scientists and meteorologists with improved image resolution and faster refresh:

- > Visible and infrared images of the entire hemisphere provided as fast as five minutes at resolutions starting at half a kilometer
- Coverage of severe weather events as fast as 30 seconds with simultaneous full-hemisphere imagery and data
- > Detection of water vapor at three levels of the atmosphere compared with a single level previously

These improvements allow meteorologists to increase the accuracy of their products, both in forecasting and nowcasting.

ABI Status: ABIs are currently on orbit onboard two operational GOES-R Series spacecraft — GOES-East and GOES-West. ABIs will also provide advanced capabilities on GOES-T and GOES-U.

L3HARRIS ENABLES GOES-R SERIES ON THE GROUND

Ground Segment Status: The ground segment system is installed across three sites and includes 2,100 servers, 214 racks of network equipment, 317 workstations and storage services totaling three petabytes.

For more information, contact: weathersolutions@L3Harris.com



ABI on GOES-16 captures imagery in 16 visible and infrared bands (NOAA/NASA)

GOES-R Series | Transformational Change in Weather Intelligence

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L3Harris Technologies is an agile global aerospace and defense technology innovator, delivering end-to-end solutions that meet customers' mission-critical needs. The company provides advanced defense and commercial technologies across air, land, sea, space and cyber domains.



First full-disk ABI image from GOES-17 (NOAA/NASA

GOES-R SERIES PROVIDES:

- > The essential enabling technology to support severe weather forecasting in the U.S. and the Western Hemisphere
- > Early position and intensity detection of tropical storms and hurricanes in the Atlantic and Eastern Pacific
- > Tracking data for storms, fires, fog, frontal systems and other weather patterns across the continental U.S.
- More detailed and more frequent data, which improves the accuracy of forecasting models

