



## GROUND-BASED MIDCOURSE DEFENSE WEAPON SYSTEM (GWS)

The Ground-based Midcourse Defense Weapon System provides the United States' with defense against long-range missile threats. Northrop Grumman protects the U.S. homeland by providing the ground system component to the complex, network-centric defensive system. This system enables early detection and

tracking through the boost phase, mid-course target discrimination, and precision intercept and destruction of inbound ballistic missiles using hit-to-kill technology.

### Leading Provider in Missile Defense

As the lead for GWS, Northrop Grumman is responsible for executing systems engineering, design, development, integration, testing, and fielding of software and hardware. We're transforming the current ground system component of the GMD system by utilizing a DevSecOps approach, leveraging proven digital transformation processes to update

and modernize legacy code, enhance warfighter capabilities, and incorporate the Next Generation Interceptor (NGI) into the overall GMD system.

The GWS program builds on the company's decades of mission-proven missile defense innovation, experience, and end-to-end capabilities. Today, we're bringing revolutionary technologies to the GMD weapon system, ensuring our warfighters are equipped with the most innovative architecture to protect the U.S. and its allies.



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## Next Generation Systems

The GWS is an integrated system that delivers integrated battle plans based on sensor data. Starting with the processing of the space-based and radar track data in conjunction with Ballistic Missile Defense (BMD) System Tracks (BST) to reliably achieve the Missile Defense Agency's missile defense system architecture, the next generation GMD Fire Control (GFC) computes and selects comprehensive engagement plans to optimize defense of critical assets and defends the U.S. homeland. Delivering communications between GMD resources and the GMD Fire Control Center, the GMD Communication Network (GCN) links to external sensors and systems. The Ground Support System (GSS) monitors the health and status of each interceptor to ensure weapon system readiness and rapidly performs the detailed flight calculations to program the interceptor to ensure a successful mission.

Utilizing a Phased-Array Technology, the GMD in-flight interceptor communication system connects the GMD Fire Control and the interceptor to update the missile during flight. Integrated throughout the entire system, the cyber tools continually monitor, detect, and defend against cyber threats.

## Lasting Importance

The GWS contract provides the GMD system with the advanced operational capabilities for U.S. NORTHCOM homeland defenders to defeat advancing projected threats. As the GWS prime, Northrop Grumman will be a key defense industry partner in engineering, producing, and testing of the missile defense shield protecting the United States and the warfighter and position Northrop Grumman as the lead expert in missile defense solutions worldwide. The Northrop Grumman-led GWS program team is primarily located in Huntsville, Alabama, including our large and small business partners.

To learn more about Northrop Grumman's missile defense portfolio, visit:

[Missile Defense - Northrop Grumman](#)