

GBU-53/B SDB II Small Diameter Bomb Increment II



GBU-53/B SDB II will provide the warfighter with a game-changing capability to engage moving targets in adverse weather conditions.

Benefits

- Reliable and affordable
- Network-enabled
- Increased fighter load-out
- Long-range standoff
- Multiple attack modes
- Multi-effects warhead
- Selectable fuzing
- Low collateral damage
- Insensitive munitions
- Protective dome cover
- Simple, flexible employment

Background

GBU-53/B Small Diameter Bomb Increment II (SDB II) is an air launched, precision strike weapon that will give the warfighter the ability to defeat moving and stationary targets in adverse weather conditions. A joint United States Air Force and Navy program designed with reliability and affordability in mind, SDB II provides increased weapons load-out for 4th and 5th generation fighter aircraft, bombers and RPAs. It allows multiple target attacks from beyond 40 nautical miles standoff, to close-in, immediate attack ranges. Net-enabled and incorporating the latest smart weapon logic, GBU-53/B accepts in-flight re-targeting, target updates and provides weapon status feedback to authorized parties on the network. The GBU-53/B is equipped with a tri-mode seeker that features a millimeter wave (MMW) radar to detect and track targets through weather, imaging

infrared (IIR) for enhanced target discrimination and classification, and semi-active laser (SAL) for the maximum in operational flexibility. Built with growth in mind, GBU-53/B's electronics have powerful signal processing capable of dealing with a wide variety of engagement scenarios and countermeasures.

Operation

Mission Planning is fast, flexible and simple to execute using the Joint Mission Planning System pre-sortie, as part of ground operations, or in flight. Once in the target area, a variety of on-aircraft or authorized third parties such as JTACs can be used to cue the weapon.

GBU-53/B multi-attack modes: **Normal Attack** for moving and stationary targets in adverse or clear weather.

Coordinate Attack for fixed targets in heavily defended environments.

Immediate Attack for close in or pop-up opportunity targets;

rapid employment, flies predictable flight path.

Laser Illuminated Attack for hit-the-spot precision.

Smart weapon logic results in minimum cockpit workload, ensuring focus on the fight.

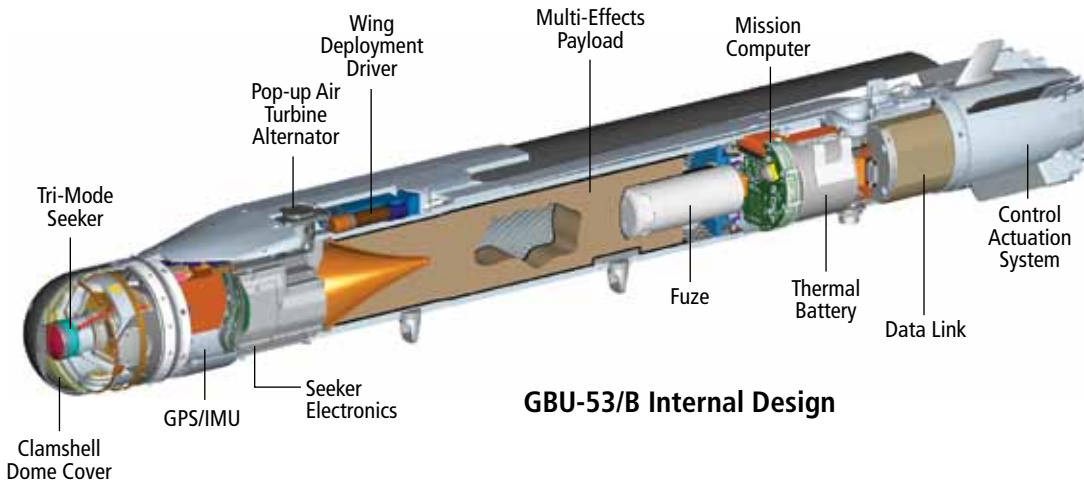
Features

GBU-53/B tri-mode seeker utilizes MMW and IIR sensors to find and identify targets, refine aim points and guide the weapon to impact. The uncooled IIR achieves excellent seeker sensitivity while dramatically reducing life cycle costs and logistics burdens.

GBU-53/B dual wave form, two-way data link allows targeting updates for positive weapon control, and provides weapon status messages to the shooter en route to the target after launch.

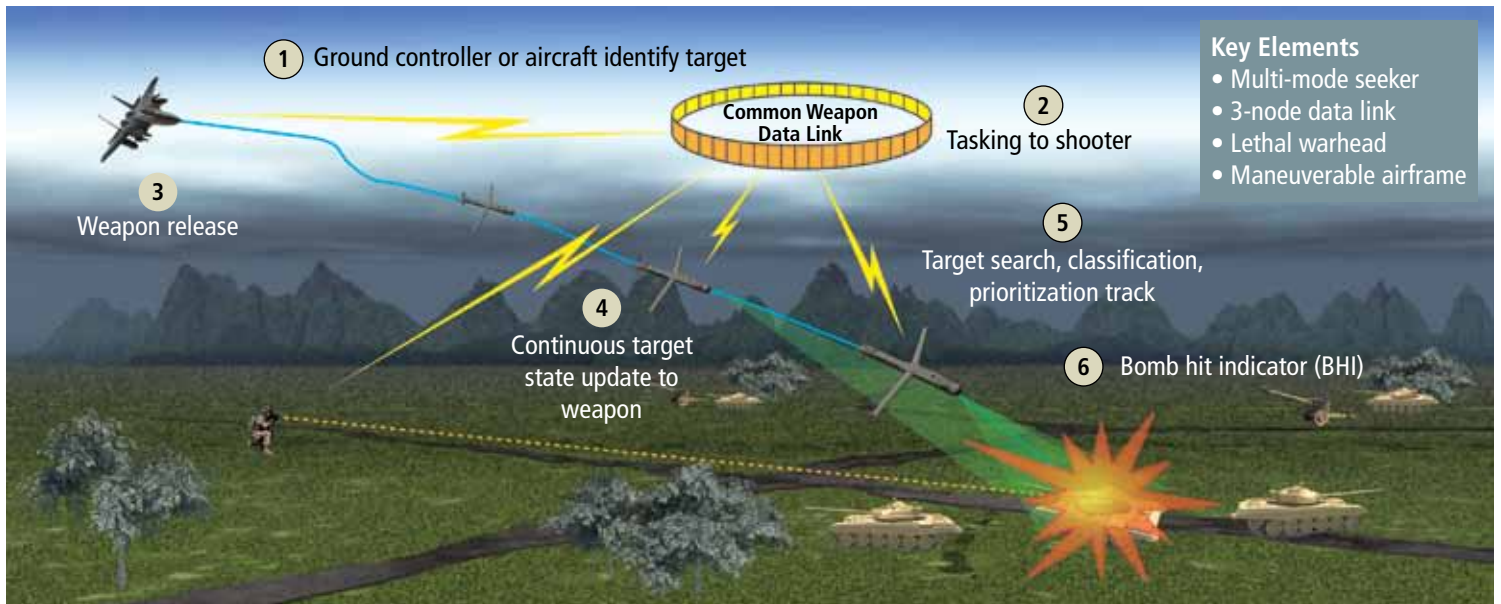
GBU-53/B multi-effects warhead ensures lethality against a wide spectrum of battlefield targets, from soft-skinned vehicles to armor, while significantly





GBU-53/Specifications

Length:	69 in.	176 cm
Wingspan:	68 in.	168 cm
Diameter:	6-7 in.	15-18 cm
Weight:	204 lb	93 kg



SDB II Mission

minimizing the risk of collateral damage.

GBU-53/B inertial navigator uses the latest in anti-jam, global positioning system (AJ-GPS) for pinpoint precision against high value fixed targets from long standoff ranges in GPS-denied environments.

Time Line

- Risk Reduction Program: 2006–2009
- Engineering and Manufacturing Development: 2010–2016
- Production: Low Rate 2013; Full Rate 2017

Tri-Mode Seeker

- **Millimeter wave radar** — provides all-weather capability and the ability to quickly detect and track moving or stationary targets.
- **IIR sensor** — uncooled IIR sensor provides three categories of classification capability and aim point refinement.
- **Semi-active laser sensor** — tracks a laser spot from the launch platform or third-party designers.

Aircraft Integration

- Threshold Aircraft: F-15E, F-35B and F-35C
- Objective Aircraft: F-35A, F-16, F/A-18E/F, A-10, F-22, B-2, B-1B, B-52 and MQ-9
- Quadruples load-out compared to 1,000 lb/2,000 lb weapons
- Eight GBU-53/Bs and two AIM-120s will fit in the F-35's internal weapons bays

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