



Golden Dome Missile Defense System

Source: DD

The US has finalized the design of the [Golden Dome missile defense system](#).

Golden Dome Missile Defense System

- **About:** It is an **advanced multilayered missile defense system** with **space-based sensors and interceptors** to **protect the US from foreign missile attacks**.
 - It is designed to counter **hypersonic, ballistic, cruise missiles**, and **drones** globally through satellite-based sensors.
 - It is inspired by Israel's [Iron Dome](#) and former US President Reagan’s **1983 Strategic Defense Initiative (Star Wars Programme)**.
 - It will integrate components from existing US missile defense systems, including **Patriot batteries, THAAD, Aegis BMD**, and **Ground-based Midcourse Defense (GMD)**.
- **Functioning:** Using a **network of hundreds of satellites**, it targets missiles in the **boost phase, immediately after launch**, intercepting them **before or shortly after they enter space**.

Global Missile Defence Systems

System	Range (km)	Features
Iron Dome (Israel)	70	Intercepts rockets and drones targeting populated areas; radar-based detection
S-400 Triumph (Russia)	400	Multi-missile system ; engages stealth aircraft, cruise missiles, and multiple targets
Barak-8 (Israel/India)	70-100	Land and naval system; 360° protection against aircraft, missiles, and UAVs
HQ-9 (China)	125	Inspired by S-300; intercepts UAVs , aircraft, ballistic and cruise missiles



S-500 Prometheus (Russia)

The S-500 Prometheus is Russia's advanced air defense system with a 600 km range, capable of intercepting ICBMs, hypersonic missiles, and aircraft, even at 180 km altitude. It tracks 10 targets at once and offers anti-satellite capability.



S-400 Triumph (Russia)

The S-400 Triumph is a Russian air defense system with a 400 km range, capable of targeting aircraft, missiles, and drones. It tracks multiple threats and is among the world's most advanced. India is buying it to strengthen its defense.



THAAD (Terminal High Altitude Area Defense) – USA

THAAD is a U.S. missile defense system with a 200 km range, intercepts missiles at 150 km altitude, and uses hit-to-kill technology to destroy threats in their final flight phase.



Iron Dome (Israel)

The Iron Dome is Israel's air defense system that detects and shoots down short-range rockets and missiles within 4 to 70 km. It uses radar and interceptor missiles to protect cities with about 90% success.



Barak-8 (India/Israel)

Barak-8 is a long-range missile developed by India and Israel with a range of about 70-100 km. It protects against aircraft, missiles, and drones using advanced radar and guidance.



HQ-9 (China)

The HQ-9 is a Chinese long-range surface-to-air missile system with a range of about 200 km. It can target aircraft, cruise missiles, and ballistic missiles using advanced radar guidance.



Aster 30 SAMP/T (France/Italy)

The Aster 30 SAMP/T is a French-Italian long-range air defense missile system with a range of about 100 km. It protects against aircraft, drones, and ballistic missiles using advanced radar and quick-response missiles.



S-300VM / Antey-2500 (Russia)

The S-300VM (Antey-2500) is a Russian long-range air defense system with a range of up to 200 km. It can target aircraft, cruise missiles, and ballistic missiles simultaneously.



David's Sling (Israel/USA)

David's Sling is a missile defense system developed by Israel and the USA to intercept medium- to long-range missiles and cruise missiles. It has a range of 40 to 300 km and uses the Stunner interceptor with advanced radar and sensors.



Patriot PAC-3 (USA)

The Patriot PAC-3 is a US missile defense system with a range of about 20-35 km. It uses precise hit-to-kill technology to destroy incoming missiles and aircraft.

TOP 10 AIR DEFENCE SYSTEMS IN THE WORLD

Read More: [Strategic Defence Technologies in India](https://www.drishtiias.com/printpdf/golden-dome-missile-defense-system)