

Sentinel A4

The Army's Premier Battlefield Radar for the Next 40 Years

Sentinel A4 is the U.S. Army Program of Record solution designed to meet Air and Missile Defense performance requirements for the next 40 years

Why Sentinel A4

- Provides Simultaneous Multi-Mission capability supporting Air Defense and Counter Fire missions
- Hemispherically surveils, acquires, and tracks short and medium range air defense threats (FW, RW, UASs, CMs) and Rockets, Artillery, Mortars (RAM)
- Addresses Sentinel A3 obsolescence issues by replacing obsolete traveling wave tube technology with state-of-the-art digital AESA radar technology
- Extends range by 175% and increases Sensitivity by 225% over Sentinel A3
- Design to allow the radar to respond to future evolving threats

Program Timeline

- ✓ **2019:** USG awards Lockheed Martin Engineering and Manufacturing Development (EMD)/ Low-Rate Initial Production (LRIP) contract
- ✓ **2022:** Five Sentinel A4 EMD radars delivered ahead of schedule
- ✓ **2022:** USG awards Lockheed Martin a contract for five Sentinel A4 User Operational Evaluation Systems (UOES), with deliveries planned for 2024
- ✓ **2023:** Developmental Test complete and Milestone C achieved
- ✓ **2023:** USG awards Lockheed Martin a contract for quantity 19 LRIP systems, with all system deliveries schedule to complete by 2026
- **2025:** Initial fielding of the Sentinel A4 radar
- **2026:** Full Rate Production of 200+ Sentinel A4 radars begins for the U.S. Army

Sentinel A4 is Approved for Export



Sentinel A4

Mission Functions

- Simultaneous, Multi-mission against entire AMD threat set.
- Search/Acquisition/Track / Classification/ Fire Control
- Elevation Coverage: -15 to Zenith
- Azimuth Coverage: 360 degrees
- FW / RW / CM / RAM & UAS
- Stressing Environments (Complex Terrain, Clutter and EME/RF)

Data Link Interfaces

- IBCS Connectivity
- FAAD C2 Interface for SHORAD Forces
- NASAMS integration in NCR

Track/Classification/ID

- 100s of simultaneous track
- 100s of simultaneous fire control tracks
- 10s of simultaneous engagements
- IFF Mode 3, 5, and S

Key Radar Features

- Advanced X-Band Digital AESA
- Digital Transmit / Receive LRUs (DTRL) Architecture with COTS GaN High Power Amplifiers
- Sub-array Digital Beamforming
- 60 kW Generator Power
- Flexible Architecture to Address Future Threats; Built-In 60% Growth Potential Increase in Element Count

Highly Mobile

- Single Truck / Trailer Deployment
- FMTV-based
- Emplacement < 30 minutes
- March Order < 10 minutes
- Air (C-5 / C-17), Rail, Sea Transportable

Reliability/Maintainability

- Two Soldier Operation / Maintenance
- MTTR: 30 minutes
- Operational Availability (Ao) > 96%
- MTBF: 208 Hrs (Spec); 800+ Hrs (Demo)

