AH-64 Apache Flexibility for the Future

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Apache Program Overview

Aircraft Deliveries

- **AH-64A Production** (1984)
- **AH-64D BLOCK I** (1997)
- **AH-64D BLK II** (2003)
- **AH-64D BLK II EXT** (2007)
- **AH-64E** (2011-2013, Lot 1-6; 2017-2027, Lot 7-16)
- **AH-64E** (2040)

Modernization Planning

- Technology Development & Transition to Production

Effective Modernization Planning Continues to Ensure Apache Relevancy
Apache AH-64E Production Configuration

Improvements from AH-64D Block II

- **Open Systems Architecture**
  - Improved Drive System (IDS)
  - Multi-core Mission Processor (MMP)
  - Level IV Unmanned Aircraft System (UAS)

- Cognitive Decision Aiding System (CDAS)
  - w/ Data Fusion II, Voice Recognition

- WNW & SRW
  - Link 16 R/T

- System Level Embedded Diagnostics (SLED)

- Aircraft Survivability Product Improvement (ASPI)

- Composite Main Rotor Blades (CMRB)

- Integrated Aircraft Survivability Equipment (ASE)

- 701D Engines w/ Enhanced Digital Electronic Control Unit (EDECU)
MIST Charter
Develop, promote and maintain an Apache Modernization Plan that assures Apache remains relevant and ready to support Joint Combat Operations any time, anywhere via technology insertion.
Joint Army/Industry Apache Logistics Integrated Strategy Team (LIST)

Develops and Implements Strategy for Effective Life Cycle Support

LIST Charter

Refine the Apache Integrated Logistics Strategy to achieve improvements above Army standards for material availability, material reliability and soldier support while minimizing total ownership cost.
Apache Modernization Process

Ensures relevant, low-risk technology for future production insertion
Apache Modernization Technology Roadmap for Lot 7 and Beyond

Technologies and Programs

Avionics/Software
- Multi-core Processors
- FACE Apps & Compliance
- Data & Display Gateways

Advanced Platform
- ITEP Engines
- Composite Center Fuselage
- Upgraded Drive System

Advanced Platform
- Full Authority Digital Flight Control System (eAAAVMS)

Advanced Sensors and ASE
- New Radar (DVE)
- UAS Detection
- Multi Band Manned/Un Level 4
- Adv ASE

Advanced Weapons
- Modernized Gun System
- Airburst 30mm
- Air to Air and Advanced Munitions
- Laser Dazzler
- Advanced weapon stores configuration

Advanced Platform
- Imp T/R blade (ITRB)
- Comp Aft Fuselage
- Imp T/R Drive System
- Upgrade T/R Actuators/Accumulator
- Upgrade T/R Strap Pack
- Imp M/R Hub

Advanced Crew Station
- Adv CDAS
- Data Fusion
- MUM Multi-UAS
- Adv Synthetic Vision
- Advanced HMD
- Voice Command (Lot 4/6 SDD)
- 3-D Audio

Advanced Crew Station
- Advanced Displays
- Adv GUI Multi-touch
- Adv Flt Controls/Grips
- Ergonomic Seat
- Minimize Reflections
- Transparent Armor

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AH-64D/E Apache

2010
2020
2030
2040
Summary

- Apache modernization process will ensure platform relevancy to year 2040
  - Army/Industry Modernization Integrated Strategy Team (MIST)
    - Establishes Needs and Charts the Course
    - Maintains Battle Rhythm and Working Relationships
    - Army manages the program for future success
  - Industry Team Invests-in and Matures Relevant Technologies
  - Effective Systems Integration, Systems Engineering, and Open Architecture are key to maintaining platform flexibility
  - Deliver low risk affordable/reliable logistics solutions
  - Leverage our global team
    - Cumulative customer investment
    - Utilize the best of Boeing solutions (BCA, BDS, EO&T, BR&T)