

Common Avionics Architecture System
for the H-47 Chinook

UNSURPASSED SITUATIONAL AWARENESS, UNMATCHED TACTICAL SUPERIORITY

A proven, cost-effective, mission-enhancing integrated
flight and mission management system



Collins Aerospace



A DECISIVE AIRBORNE MANEUVER ADVANTAGE

No matter the location or environmental conditions, the CAAS avionics suite is optimized for the unique requirements of the H-47's wide array of mission profiles.

The system effectively integrates multiple communications, navigation and mission sensor subsystems through its flexible hardware and software architectures. The result: Crews can fly their missions with lower workload, greater operational effectiveness and enhanced safety.

CAAS capabilities include:

- Flexible cockpit displays, optimized to provide enhanced situational awareness
- Embedded cognitive decision aids to reduce pilot workload
- Tactical displays optimized for cargo lift, heavy assault and multi-mission roles
- Advanced hover symbology for brownout/reduced-visibility situations
- Digital mapping, with integrated tactical situational awareness symbology displays
- Redundant, highly fault-tolerant hardware and software designs

DIGITIZING THE CHINOOK COCKPIT.

The CAAS cockpit upgrade replaces legacy mechanical analog instruments with highly reliable and flexible digital displays and systems. A complete, fully integrated H-47 cockpit avionics management system provides a host of upgrades, including:

- Large-format primary displays and controls
- Embedded mission computing resources and system interfaces
- Cockpit avionics and mission integration software

MULTIPLE PLATFORMS. ONE TRUSTED PROVIDER.

Designed to enable cost-effective system upgrade and enhancement, our H-47 CAAS is implemented using our widely fielded Flight2™ Open Systems Architecture (OSA). This approach features robust principles and open standard technologies, such as fully partitioned software, ARINC 653 RTOS, high-integrity Ethernet and 3U cPCI form factor hardware in the CAAS design. It has repeatedly proven effective in reducing total sustainment costs over a platform's life cycle.

Today, more than 700 Chinook and Black Hawk aircraft utilize our combat-proven CAAS upgrade, with another 300 aircraft in position for upgrade. This broad range of experience, developed over 15 years, uniquely positions Collins Aerospace to provide H-47 flight crews with a modernized cockpit, optimized for battle-proven situational awareness.

AN EVER-CHANGING BATTLESPACE REQUIRES FLEXIBLE AVIONICS.

Whether the mission involves providing humanitarian support or operating within today's irregular battlespace, situational awareness is often the difference between success and failure. That's why U.S. and allied forces are choosing to upgrade their airborne assets with CAAS. And because CAAS leverages non-development components, along with established support and training, its procurement and ongoing support costs are in line with today's military budgets.

The CAAS upgrade provides a number of operational enhancements, including:

- Advanced flight management system, providing both certified Required Navigation Performance – Area Navigation and tactical navigation capabilities
- Data management for engines, transmissions, fuel and integrated advisory displays
- Aircraft performance planning
- Radio, communications and crypto equipment management
- Centralized management of mission sensors
- Overall system status management

Growth enabled by the system's flexible architecture easily accommodates future enhancements, such as tactical synthetic vision and DVE sensors, cognitive decision aids and weather avoidance systems.



CAAS upgrade for the Chinook – ready, willing and able.

Component highlights of the H-47 CAAS integrated avionics upgrade package include:

MFD-268C3A MULTIFUNCTION DISPLAY



- Fully interchangeable, 6-by-8-inch AMLCD displays
- 3D graphics-generation capabilities
- Multi-video-channel display capabilities
- Full NVIS compatibility
- Lighter weight and higher reliability than mechanical displays

CDU-7000D CONTROL DISPLAY UNIT



- Provides easy, centralized management of displays, radios, navigation and communications
- Fully ruggedized for military rotary-wing applications
- Dual MIL-STD-1553B processors
- ARINC 739 compatibility

PSM/VPM-8600 GENERAL-PURPOSE PROCESSING UNIT



- System features a video processing module and a power and switch module
- 23-port Ethernet switch
- Internal graphics generation
- Capability to display two separate video sources simultaneously

DTU-7100 DATA TRANSFER UNIT



- Compact, digital mass-memory storage unit
- Provides access to worldwide navigation databases as well as mission-specific data
- Access and transfer map data files from industry standard compact flash cards

To learn more, go to
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