The CMA-9000 is an industry leading Flight and Radio Management System (FMS/RMS) designed for demanding commercial, paramilitary and military helicopter applications. Compact, single box and civil-certified, the CMA-9000 FMS/RMS provides a flexible, reliable and responsive flight and radio management solution that is fully compliant with the requirements of civil airspace navigation, while offering unique mission capabilities.
CMA-9000 FMS/RMS

Flight and Radio Management System
For Commercial, Paramilitary and Military Helicopters

CMC’s FMS and GPS systems are standard equipment on several platforms, including Airbus Helicopters’ H225/ H225M, H175, the new H160 as well as AVIC’s AC312 and AC312C/E helicopters. The CMA-9000 is also in service on other platforms, including the H145M, EC135, EC145, EC235, AS332, AS532, AS565 and Mi-17.

The CMA-9000 has the unique advantage of combining the latest in Required Navigation Performance Area Navigation (RNP RNAV) airspace advancements, Satellite-Based Augmentation System/Wide Area Augmentation System (SBAS/WAAS) navigation, radio control and innovative tactical features, making it the product of choice for various applications such as Police, Border Patrol, Emergency Medical Services (EMS), Search and Rescue (SAR), Off-shore applications and Corporate transport.

The CMA-9000 complies with the latest industry requirements of TSO-C115c, DO-236B/DO-283A, and TSO-C146c (gamma-3) while meeting and frequently exceeding the requirements of the ICAO Performance Based Navigation (PBNav) manual. As a result, the CMA-9000 provides superior PBN and RNP navigation features, enabling operators to fly more precise and predictable routes while minimizing required separation, resulting in lower operational costs, landing clearances and preferential departures and arrivals.

In addition to its non-precision approach capabilities (supports operations down to RNP 0.3), Baro-VNAV approaches and Point-in-Space (PiS) approaches, the CMA-9000, combined with the CMA-5024 GPS Landing System Sensor Unit (GLSSU), supports SBAS-based approaches such as Localizer Performance with Vertical Guidance (LPV), Localizer Performance (LP) and SBAS Lateral Navigation/Vetical Navigation (LNAV/VNAV). This capability allows operators to fly more precise approaches to lower minima (down to 200 ft), while reducing the visibility requirements. Approaches may be autopilot coupled, both laterally and vertically, thus minimizing pilot workload during instrument approaches.

The CMA-9000 FMS/RMS and CMA-5024 GLSSU support Automatic Dependent Surveillance-Broadcast (ADS-B out) next generation surveillance technology in addition to the more of the other NextGen and Single European Sky Air Traffic Management Research (SESAR) requirements. This brings significant safety and efficiency benefits by offering properly equipped aircraft and rotorcraft more flexible fuel-saving routes through airspace previously managed using only procedural air traffic control.

FLEXIBLE, RELIABLE AND RESPONSIVE!

MULTI-SENSOR NAVIGATION
The CMA-9000 FMS offers much more than basic GPS navigation. Using its multi-sensor navigation capabilities, the CMA-9000 FMS provides seamless navigation through all phases of flight. Its ability to interface with a wide variety of navigation sensors and radios enables the CMA-9000 FMS to provide navigational information in different navigation modes, including GPS (civil and/or Military), INS/GPS, INS, DME/DME, VOR/DME, DVS and Kalman filter navigation for short GNSS outages.

RADIO MANAGEMENT
The CMA-9000 FMS/RMS provides centralized management and control of navigation and communication radios, including DME, VOR/ILS, DF, ADF, VHF (Nav and Comm), V/UHF, HF, civil and military transponders (TPDR, IFF). Voice and text communication is also supported by interfaces to satellite phones utilizing the Iridium satellite communication network. The CMA-9000 FMS/RMS has a radio library feature that can hold 99 data-loadable presets for each communication and navigation radio.

MISSION FEATURES
The CMA-9000 includes a comprehensive set of features to enhance the operational efficiency of pilots for many types of specialized missions. These features include:

- Approaches to Offshore Oil Rigs designed exclusively for Airbus Helicopters platforms.
- Search and Rescue patterns that were specifically engineered to improve the accuracy of the algorithms which aid to speed up search and rescue operations.
- The Transition to Hover feature of the CMA-9000 FMS/RMS takes into account tide, wind speed and direction, enabling a pilot to quickly find and converge towards a person in distress, in both adverse weather and sea conditions.
- Supports simulation of the effects of One Engine Inoperative (OEI) and Out Of Ground Effect (OGE) scenarios.
- Miss on Top and Moving Waypoint definition and rendezvous guidance.

FLIGHT MANAGEMENT
- Extensive flight planning, route creation and modification second route, inverse route, SIDs, STARs, Direct to, Direct to with moving desired track and leg/course interception, holding patterns, DME arcs, procedure turns and offset tracks.
- Multi-Sensor navigation modes with installed navigation sensors and radios.
- Search and Rescue pattern definition and navigation.
- Required and actual navigation performance (RNP/EPU).
- Approved for RNP/RNAV (RNP4, RNP2, RNP1, RNP0.3, RNP APCH), RNAV5, RNAV2, RNAV1, P-RNAV A-RNP ...
- Time and Fuel Management, including Required Time of Arrival (RTA).
- Digital Map display interface to support route and waypoint exchange and positioning.
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