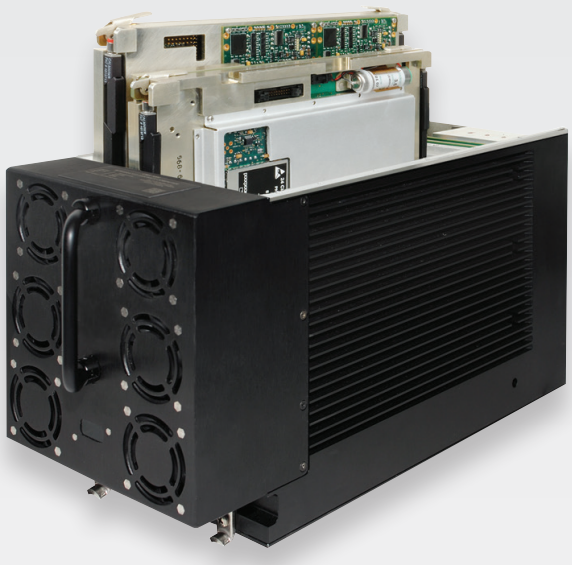
Esterline
Avionics Systems

CMA-5000

Integrated Avionics Computer



Leading edge design:

- Open architecture – flexible and scalable with third party cards
- Partitioned system supports civil certification
- Software compliant to RTCA/DO-178B
- Hardware compliant to RTCA/DO-254
- Flexible, powerful display capability
- Video handling supports any page on any MFD
- Flexibility to add/remove capability without affecting existing capability
- Six Sigma design techniques for quality and cost control
- Ruggedized design for EMI and environmental considerations
- Non-volatile memory storage

Modular platform offers wide choice of functions

- Head-Up Display processing
- Multi-Function Display video processing and routing
- Display integrity monitoring
- Weapons delivery processing and aiming
- Primary Flight Display symbol generation
- Primary Navigational Display symbol generation
- Engine Indication and Crew Alerting System
- Flight Management System
- Global Positioning System
- Customer designed software applications
- Digital Moving Map
- Virtual Training Systems

The CMA-5000 supports Multi-Function Displays (MFD), Head-Up Display (HUD) systems and mission functions on modern aircraft. A rugged platform with powerful processing capabilities, the system is designed to satisfy civil certification requirements for avionics systems.

CMA-5000 integrated avionics computer (IAC) — Specifications

Compact, low weight Avionics Computer, FMS/GPS and Display Management System

FEATURES	BENEFITS
Compact PCI/PMC open architecture	Enhanced obsolescence management Exceptional growth and upgrade capabilities including third party customer modules
Multiple processor dupport	Separate operational flight programs/applications possible as a result of both hardware and software partitioning
Solid state Mass memory card	Map, navigation database, terrain database storage and management (optional)

SPECIFICATIONS FOR STANDARD CONFIGURATION

(Two Universal carrier cards, one power supply/HUD graphic driver card, one FMS with integral GPS and one spare slot)

GENERAL

Size	ARINC-600 5MCU, 6.19”W x 7.62”H x 15.04”D (not including mounting tray)
Weight	24 lb (nominal) configuration dependant
Power input	+28 VDC, max 300 W (operation including HUD driver)
Chassis cooling	Convection and self-contained fans
Connectors	ARINC-600, shell size 3
Mounting	ARINC-600 5MCU tray

MODULAR CHASSIS CARD SPECIFICATIONS

Card assembly	6U, cPCI, with dual PMC sites
Card cooling	Conduction cooled to chassis
Universal carrier card	MPC7447 Power PC, 1.1GHz, 512M RAM, 256M Flash, 8M Boot Flash, 512K NVRAM cPCI environment, dual PCI busses (32bits/66MHz)
UCC PMC Sites	COTS graphics cards (dual channel input/output with capture) RGB, DVI, LVDS formats
FMS/GPS	CMC CMA-4124 GNSSA GPS module daughter card integrated onto custom 6U FMS carrier card

SOFTWARE

Operating system	Green Hills Integrity and RTCA/DO-178I
HUD graphics driver	HUD stroke symbol generation and (optional) raster
Displays graphics driver	OpenGL (standard or certified subset OpenGL)

ENVIRONMENT	RTCA/DO-160E, MIL-STD-704E
EMI/EMC	RTCA/DO-160E
GROWTH CAPABILITY	Single 6U cPCI card slots together with PMC available for growth
HARDWARE DESIGN ASSURANCE	RTCA/DO-254

INTERFACE CAPABILITY (IAC external and per hardware partition)

Note: Many ARINC-429 and Discrete inputs are shared between assemblies across the backplane

Interface	Qty
ARINC-429 In	42
ARIN-429 Out	22
Discrete In Open/Ground	77
Discrete In Open/28V	17
Discrete In 28V/Ground	1
Discrete Out Open/Ground	61
Discrete Out Open/28V	3
Discrete In RS-422 time mark	2
Analog In	2
Analog Out	11
Ethernet external links	4
Ethernet Internal links	4
MIL-STD-1553B	3
Composite Video In	4
Composite Video Out	3
RGB Video In	1
RGB Video Out	4
RS-232	5
RS-422 in	11
RS-422-Out	8
RS-485	1
HUD Interface	1
CAN BUS (I2C protocol)	1

(1) Please contact Esterline for other possible options

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