CMA-9000CT

Advanced Flight Management and Control Display Unit

Ideal replacement for previous-generation FMS

- Multi-Sensor FMS (INS, GPS, DME, VOR)

- RNP-0.3 compliant as per DO-236/283. Fully ICAO RNP and U.S. RNAV compliant

- Triple FMS synchronization

- ARINC-424-16 compliant Navigation Database with continuous upgrades as new features are added

- 16 Mb database size with optional expansion to 300 Mb

- 200 waypoints per flight plan. Alternate route. All ARINC-424 leg types are supported

- Airline standard page formats providing minimal training impact

- Performance VNAV for Climb, Cruise and Descent (option)

- VNAV coupled with autopilot and autothrottle (option)

- Full datalink – AOC, FANS-1/A CPDLC, ADS and AFN in service with Asian airlines, giving 30/30 separation (option)

- 1,000,000 flight hours of FMS operation experience on B747 Classics and other airliners with major airline and cargo operators

- Compatible with Enhanced Surveillance requirements

- Sunlight readable colour Active Matrix Liquid Crystal Display

- Single FMCDU incorporating both FMS and ARINC 739 MCDU

- ARINC 739 MCDU capable to interface with up to 7 subsystems

- Upgrade path for continuous addition of new features (Flight Path intent bus, cost indexed performance optimization, ATN, Link 2000, etc)

Esterline CMC Electronics

CMA-9000CT ADVANCED FLIGHT MANAGEMENT AND CONTROL DISPLAY UNIT - SPECIFICATIONS

PHYSICAL

Size	6.75″ H x 5.75″ W x 6.5″ L
	(171.5 x 146 x 165 mm)
Weight	8.3 lb (3.7 kg)
Power Consumption	45 W @ 28 VDC typical load
	75 W @ 28 VDC heater on typical load
Lighting	Integral keyboard lighting: external control
	Display dimming lighting: external/internal control
Passive Cooling	No forced-air required
External Connector	MIL-STD-D38999/20FJ35AN mating with MIL-STD-D38999/26FJ35SN (128 pins ea.)
Reliability *Rotary-wing:*	6,500 hours MTBF, airborne (predicted)
Fixed-wing:	9,500 hours MTBF, airborne (predicted)
Mounting	5.75" (146 mm) wide (MS-25212) DZUS rails

DISPLAY

|	
Type	Active-matrix LCD, 8 colors
Screen Size	4" x 3" (101 mm x 76 mm)
Resolution	320 horizontal x 234 vertical/RGB
Alphanumeric Data	14 lines of 24 characters (including scratchpad)
Viewing Angle	± 45ºH; + 10ºV/-30ºV
Contrast Ratio	2:1 daylight; 20:1 night
Luminance	0.25 to 120 fl (standard display) 0.25 to 3.0 fl (NVG display)
NVG Compatible	MIL-L-85762A NVIS green B

OPERATOR INTERFACE

Line Select Keys	12
Function Keys	15
Alphanumeric Keys	41
Annunciators	9
Integral Keyboard Lighting or Display Dimming	5 VAC/DC, 0-28 VDC sense or supply

SIGNAL INTERFACE/SOFTWARE

ARINC	24 ARINC 429 input
	8 ARINC 429 outputs
RS-422/232	4 RS-422 transceive port
	1 RS-232 transceive port
Discrete Inputs	16 open/ground or 28V/0V or 28V/open
Discrete Outputs	8 open/ground (max 500 mA sink)
Processor	Pentium class, 220 MHz
Software	DO 178B Level C

APPROVAL/ENVIRONMENTAL
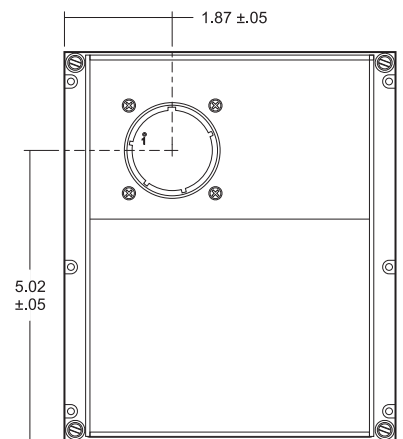
Approvals	TSO-C113, TSO-C115b
	TSO-C129a Class A1
	TSO-C129a Class B1/C1 with approved external GPS receiver
Environment	RTCA DO-160E, DO-254
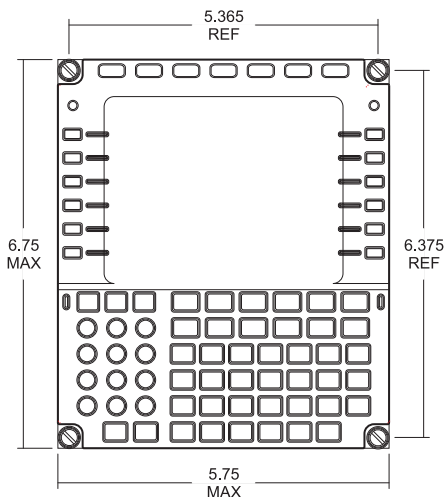
Front View
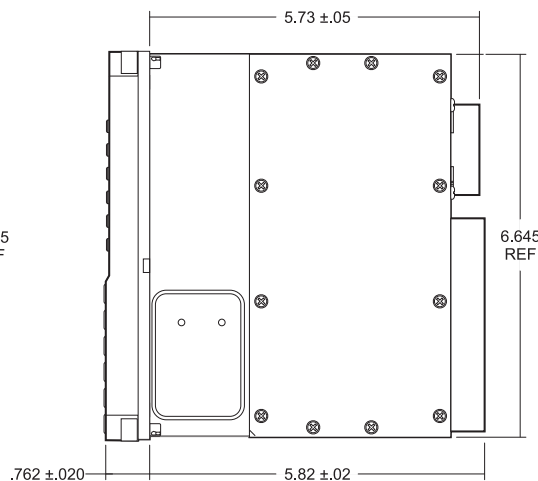
Side View

Rear View

Dimensions are in inches