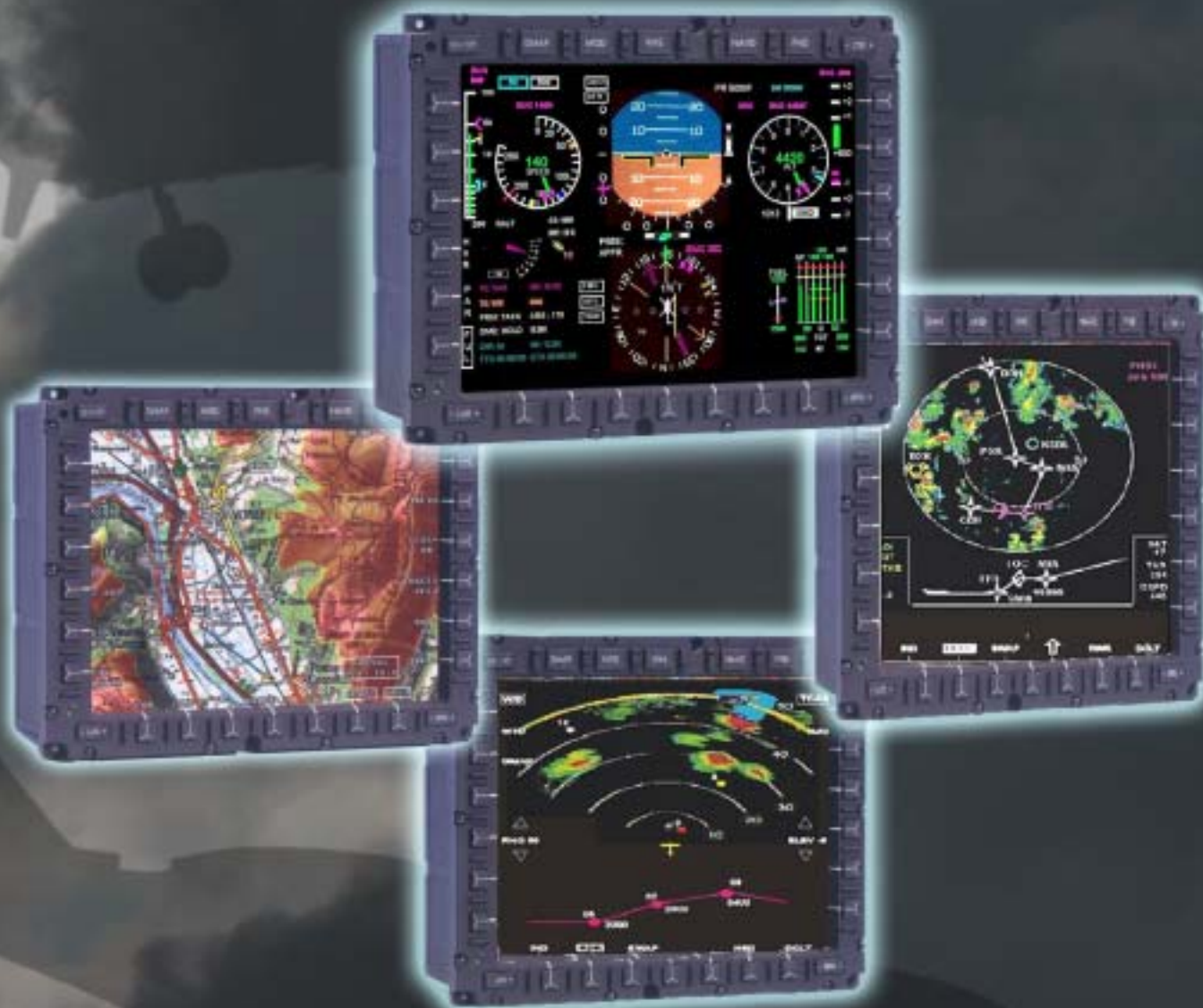


Kollsman Avionics

Advanced Flight Display System

(AFDS)



Super Puma Glass Cockpit



Kollsman Avionics AFDS: Selected by Eurocopter for EC 225/725 Super Puma Upgrade

AFDS - A Proven System

Eurocopter has selected the AFDS for the fully integrated glass cockpit designed for the EC225 (Civil) and the EC725 (Military) Super Puma Helicopter. The “landscape” format was selected for the four 6” x 8” active matrix liquid crystal displays (AMLCD) for optimum display of flight and mission data and to reduce the height of the instrument panel for improved aircrew external visibility.

- EC225 AFDS will be JAA certified
- EC725 AFDS will be qualified for military combat search and rescue (CSAR) operations

AFDS Features

- High brightness (220 foot Lambert) and contrast (10:1) active matrix crystal display
- Excellent sun light readability
- Wide viewing angles: +/- 60 Degrees Horizontal
+/- 47 Degrees Vertical
- SVGA with 100 dots-per-inch (DPI) resolution; display area 800x600 pixels
- Night vision goggle (NVG) compatible
- Display of caution and advisory messages
- Can be certified for dual or single pilot IFR operations

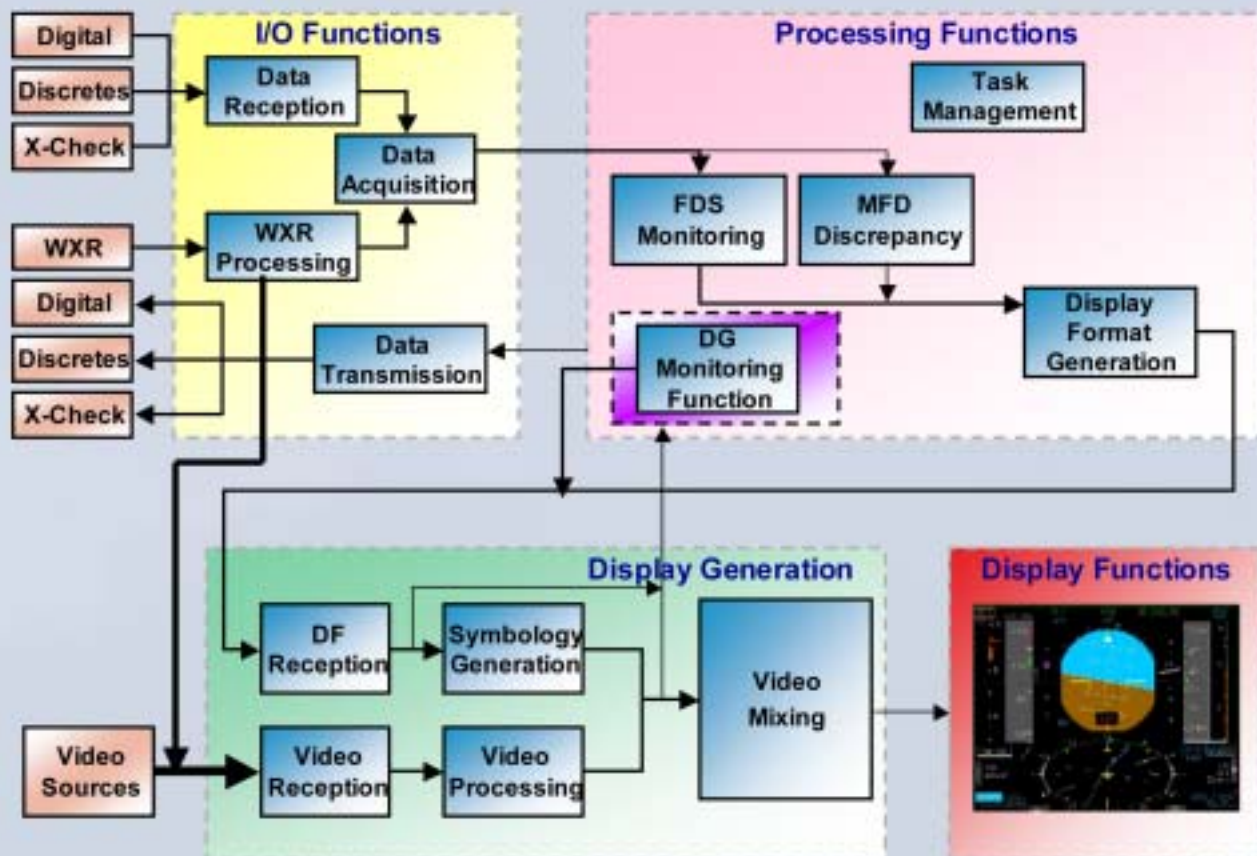
Super Puma



Designed For Flexibility

- Extensive I/O capabilities for digital and analog interfaces
- Each display is driven by an independent processing unit, providing redundancy for enhanced safety
- Separate modules for processing and display functions
 - Reduces weight on instrument panel
 - Allows display unit to be thinner which reduces instrument panel depth
 - Eliminates massive wiring and other routing to instrument panel
 - Reduces heat dissipation behind instrument panel
- Open hardware and software architecture allows for future upgrades as new display technology becomes available

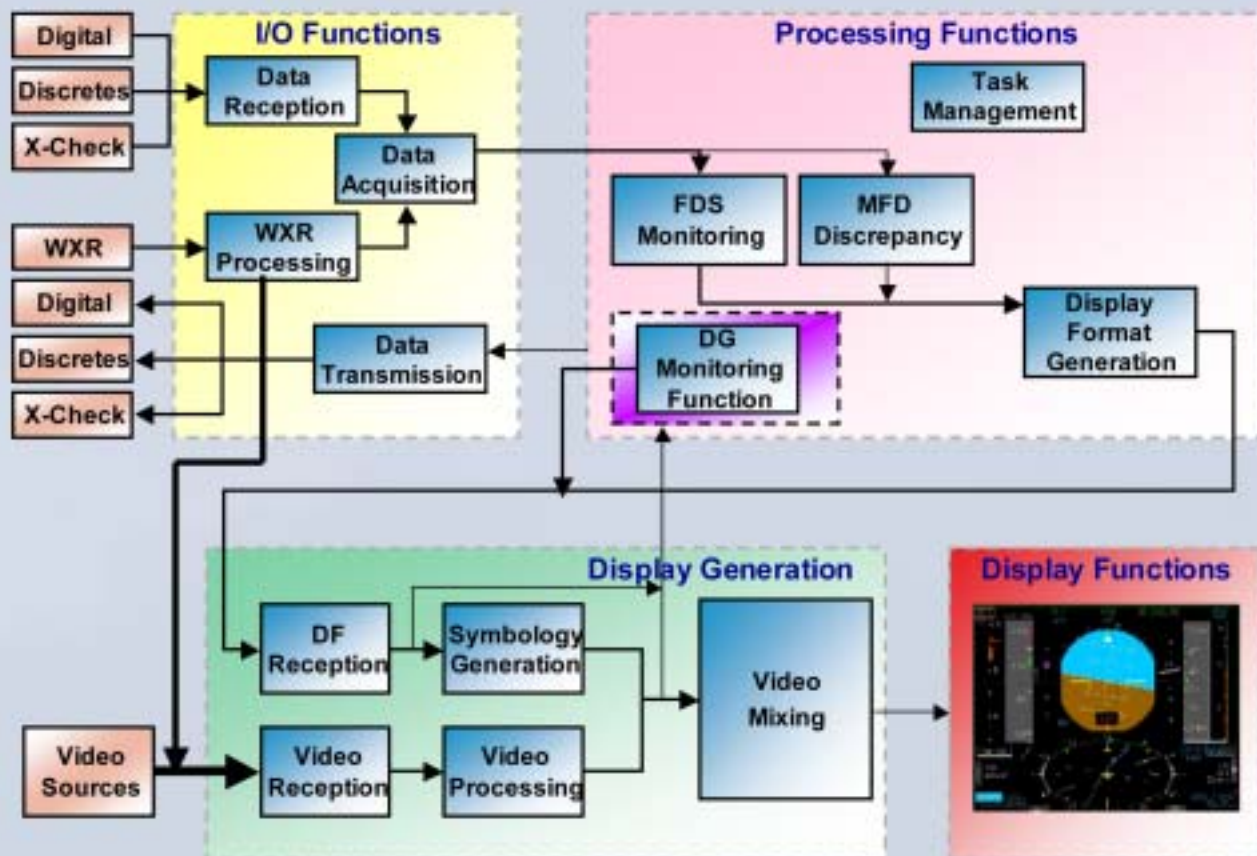
AFDS - Functional Schematic



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AFDS - Functional Schematic



AFDS modular design permits flexibility in cockpit layout and can be tailored to meet specific customer requirements.

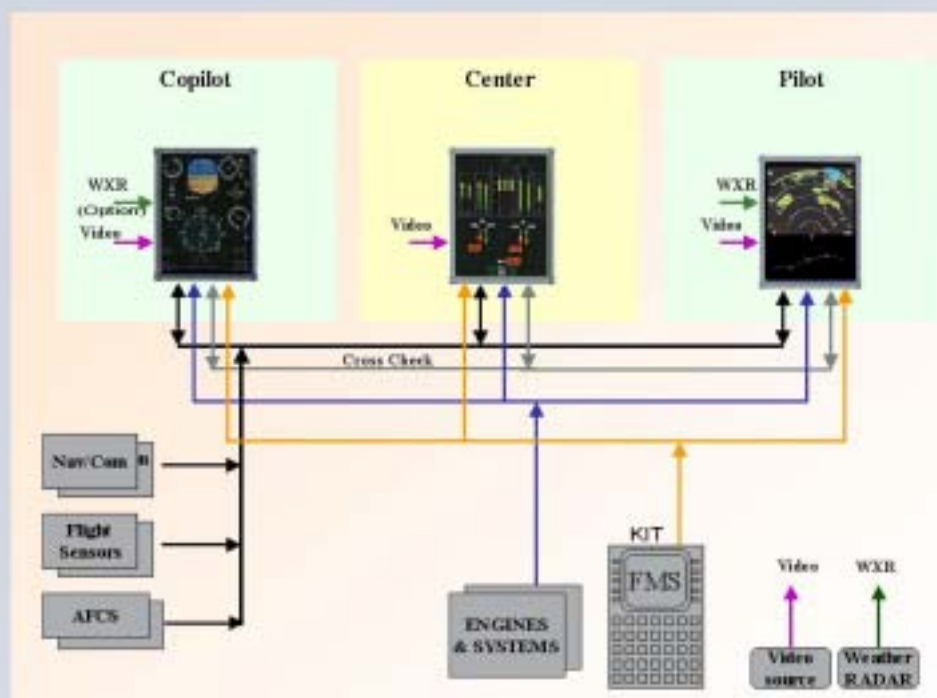
AFDS - Three Display Cockpit Configuration



AFDS Design Supports:

- Primary flight display for all required flight instrumentation
- Navigation display for navigation data, weather radar, or digital map
- Engine indication and crew alerting system (EICAS) display for status/performance of engine(s) and other aircraft systems, caution and advisory alerts, or external IR or TV sensor video

AFDS - Three Display Architecture



Technical Specifications

Keyboard Display Unit (KDU)

Length: 10.35 in
Width: 8.26 in
Depth: 3.15 in
Weight: 7.28 lbs
Power consumption: 40 – 160 watts
MTBF: 5000 hrs.

Operating temperatures: -45-70° C
Meets MIL STD 810 D, RTCA DO 160D
Cooling via natural convection

Standard VME 64 Power PC processor
Commercial interfaces and form factors
Vx Works real time operating system

Processing Unit (PU)

Length: 10.12 in
Width: 7.87 in
Height: 6.01 in
Weight: 14.5 lbs
Power consumption: 50.4 watts
MTBF: 5000 hrs.

External Interfaces:
28 VDC from separate inputs (each LRU)
LVDS Digital video output
41 x ARINC 429

ARINC 708
5 x RS 422
64 x Discrete
2 x RGB or Composite Video
RS 170 or NTSC/STANAG 3350B

Excellence Based on Experience

From the world's first blind flight with the Kollsman Barometric Altimeter in 1929 to the world's first certification of an Enhanced Vision System in 2001, Kollsman continues to shape the future of Avionics Systems



1929

**Over 70 Years
Of Experience**

Present



