FLCON | FCC

FLIGHT CONTROL COMPUTER

#Avionics

RTCA DO-254 CERTIFIABLE HARDWARE
RTCA DO-178B CERTIFIABLE BSP AND DRIVER SOFTWARE
DUAL REDUNDANT IO & PROCESSING INTERFACE

aselsan

FLCON | FCC

FLIGHT CONTROL COMPUTER

Main Responsibility of FLCON FCC which is designed for use on GÖKBEY and ATAK-II helicopters, is to provide autopilot functionality to the air vehicle it is mounted. FLCON FCC has all the interfaces which are required to control a rotary wing air vehicle and two powerful CPUs to control these interfaces.

FLCON FCC consists of RTCA-DO-254 Level A certifiable hardware and RTCA DO-178B Level A certifiable BSP and driver software for Green Hills Integrity 178TUMP and Wind River WxWorks 653 real-time operating systems

FLCON FCC has two lanes which has identical IO functionality and dissimilar CPU and Operating Systems. Both lanes are functional during flight. Lanes either manage the autopilot functionality or monitor the other lane. Dissimilar CPU and RTOS architecture reduces to possibility of common mode failure based on CPU or RTOS.

Power isolated interfaces groups, Built-in-Test capabilities, dual redundant architecture, dissimilar CPUs and rugged designed hardware provides reliable and safe operation for FLCON FCC during the flight.

General Specifications

- RTCA DO-254 Certifiable Hardware
- RTCA DO-178B Certifiable Software
- BSP and Driver Software for Real-Time Operating Systems
- Built-In Test Capability
- To be used in GÖKBEY Turkish Light Utility Helicopter, ATAK-II Turkish Attack Helicopter and Other Possible Rotary Wing Airborne Platforms
- Cooling Method: 28VDC Fan

Interfaces

- 84 x Discrete Input, 38 x Discrete Output
- 8 x Software Configurable Asynchronous /Synchronous,
- Half/Full Duplex, RS-422/RS-485 Interface (2400 - 10 Mbit)
- 4 x CAN 2.0 A&B Compatible CAN Interface
- 24 x Rx and 14 x Tx ARINC 429 Interface (12.5 Kbps - 100 Kbps)
- 2 x 10/100 Ethernet Interface
- 2x 10/100/1000 Ethernet Interface
- 8 x LVDT, 8 x Resolver, 4 x RPM, 12 x PWM etc Other Analog Interfaces Related to Possible Avionic Sensors
- AC and DC Sensor Excitation Signals

Physical Specifications

- Dimensions : 430 mm (W) x 197 mm (L) x 219 mm (H)
- Weight : < 12 kg

Technical Specifications

- PowerPC Computing Processors
- RTC/ETC/WDT
- Power Specifications
- Input : MIL-STD-704A Compatible 28VDC
- Power Hold-Up for Short Power Interrupts
- Nominal Power Consumption : < 70W
- Software Specifications
- Operating System 1: Integrity-178TUMP RTOS
- Operating System 2: WxWorks 653 RTOS

Environmental Conditions

- Operational Temperature and Altitude: -40°C / +71°C, 20.000 ft
- Storage Temperature: -55°C / +85°C

Qualifications

- MIL-STD-704
- MIL-STD-810 / DO-160

AGS - FLCON FCC - 12.2024

CALL CENTER +90 850 360 10 30 | P: +90 (312) 592 10 00 F: +90 (312) 354 13 02 | agsmarketing@aselsan.com

aselsan