ESEN

EVeGA

FLIGHT CONTROL COMPUTER

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Reliable Solution for Advanced Flight Management

FCC SW has state of the art sensor fusion and vehicle management algorithms with various levels of autonomy, redundancies and jam-resistance navigation techniques improving flight safety and mission capability.

SMU (Sensor Management Unit)

- Processing Sensor Data
- Voting Structures, Complex Kalman Filter Structures
- Fault Detection and Isolation Logics

VMM (Vehicle Mode Management)

- Fundamental Modes: TO, CRUISE, EMG, RTH, LAND, LOITER, CamNav
- Automous determination of flight modes execution

Navigation Module

- Route Management
- Selection of routes based on flight mode
- Flight to Next Point Calculations, Waypoint Reach Logics, Loiter Logics

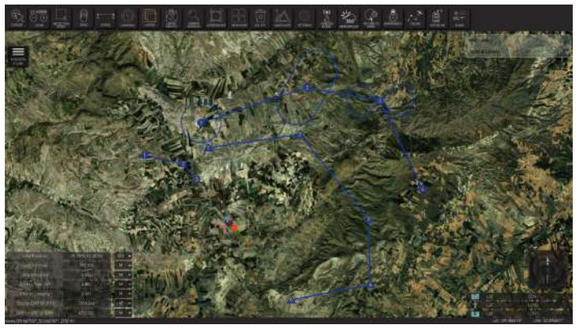
Autopilot Module

- Execution of pilot's speed and altitude commands by considering fight profile and envelope
- VTOL and Fixed Wing Autopilots
- Transition Management
- Safety Precautions for speed and altitude

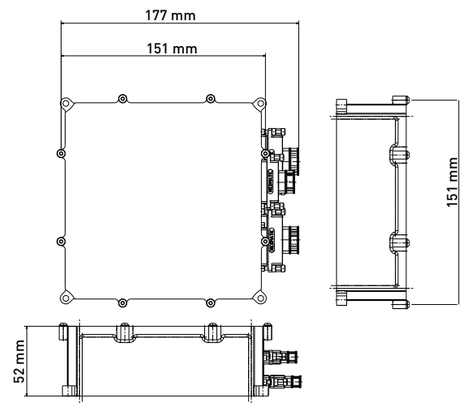
STANAG 4586 compliant Ground Segment(GS) SW is bundled with FCC SW. It has distributed service architecture providing a high level of extensibility and fast integration.

- Mission Planning on Map, Terrain Clash Analyses, LOS Analyses, Mission Upload to UAV
- Displaying UAV System Data and Navigation Data on the Layers of the Map
- Tactical Drawings
- Visualization of Flight and Mission Data
- Built-in Test
- Flight Control Mode Management

- Datalink Health Status Monitoring and Control
- GCS and GDT Handover
- Air and Ground Systems Status Monitoring and Control
- Warning, Caution and Alarm System
- Pilot Camera Streaming
- Mission anf Flight Log Recording
- Pilot Cam and Payload Recording



Technical Specifications



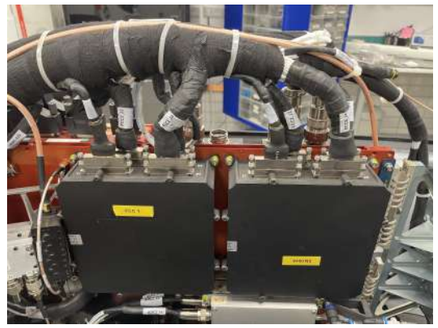
- Artron Cygnus US+04EV SOM
  - Arm Cortex-A53, Quad Core, 1333 MHz
  - 4GB RAM
  - 32GB eMMC
  - H.264/H.265 Video codec
- On-board RTC
- Input power: 24-32 VDC with following protections
  - Reverse connection
  - High voltage
  - High current
  - Low voltage
  - 20ms hold-up
- Power Consumption: <10W nominal

- I/O Interfaces
  - 1x USB 2.0
  - 1x USB 3.0
  - 2x 1Gbps Ethernet
  - 2x CAN 2.0
  - 4x Differential Analog Input (0-5V)
  - 8x PWM
  - 16x GPIO
  - 10x RS422/RS485
  - 2x RS232/RS422/RS485
  - 4x UART
  - 5VDC output, <500mA
- Weight: 585 gr

Environmental:

MIL-STD-810G Method 500.5, 501.5, 502.5, 506.5, 507.5, 508.6, 510.5, 513.6, 514.6, 516.6

MIL-STD-461E/F Method CE102, CS101, CS114, CS115, CS116, RE102, RS103



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