



This project is co-financed by the
European Union and the Republic of Turkey

Bu proje Avrupa Birliđi ve Türkiye Cumhuriyeti tarafından
finanse edilmektedir

Technology serving People & Planet

Dr. Namık Şengezer
İ. Yiğit Coşar

**R&D and Technology Business
Development**

"I am the drop that contains the ocean" *

* Yunus Emre is a great humanist and the most powerful poet of the Turkish folk literature

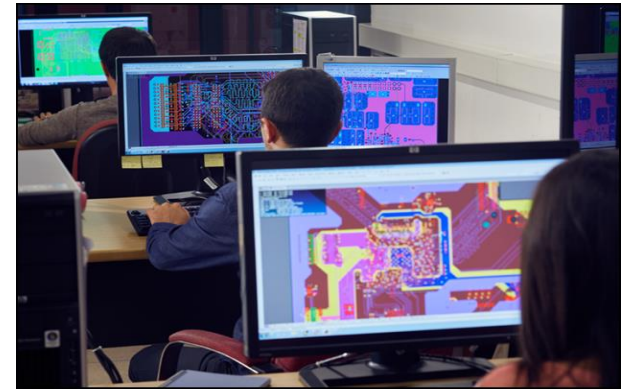
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- ASELSAN, established in 1975, is one of the largest electronics companies in Türkiye, with a capability/product portfolio that comprises;
 - Avionics and Unmanned Systems,
 - Electro-optics,
 - Communication and Information Technologies,
 - Security, Smart Systems And Automation,
 - Intelligent Transportation Systems,
 - Medical Systems.
- ASELSAN leads a large ecosystem and contributes to the national technology move via its subcontractors and over 4000 suppliers.

Company Profile 2/2

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- ASELSAN is the Turkey's largest R&D base and the top R&D spender in the country.
- Highly qualified engineering staff within more than 9000 employees, being the main driving factor of the company's success.
- ASELSAN allocates 7% of its annual income for self-financed R&D activities.

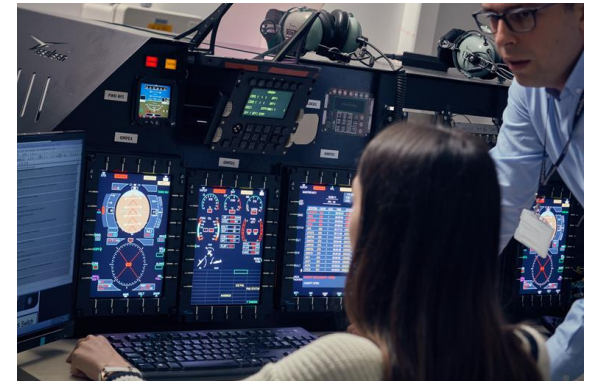


ASELSAN Avionic Capabilities 1/4



ASELSAN is experienced on development, production and integration of the most critical avionics systems used in helicopters, fixed wing aircraft and unmanned aerial vehicles.

- One of the well-known avionics equipment manufacturers in the World
- 1200 experienced personnel in the field of aviation
- Developing civil certified avionics for domestic and international civil aviation market
- More than 700 air platforms over 50 different types was modernized



ASELSAN Avionic Capabilities 2/4



Design, production, test, integration, installation of high-tech avionic systems for fixed/rotary wing aircrafts and unmanned air vehicles.

Avionics Systems Management components FMS-Flight Management Software and OFF-Operational Flight Program are developed, analyzed and integrated with the guidance of **SAE-ARP-4754A** and **SAE-ARP-4761**.



ASELSAN Avionic Capabilities 3/4



- Experience of working with Turkish Directorate General of Civil Aviation (SHGM) and Sikorsky Internal Authority throughout the approval processes of **DO-178 B/C** compliance and **DO-254** compliance for several avionics projects
- All civilian based LRUs are verified for their DO-160G related requirements in **ASELSAN's accredited test labs.**
- **Certified Quality Management System** according to international standards.

Solution partner of platform suppliers such as **SIKORSKY, LEONARDO, THALES, Turkish Aerospace** in Avionics and Mission Systems Development and Integration.



An active member of the **EAQG** (European Aerospace Quality Group)

ASELSAN Avionic Capabilities 4/4



Avionics solutions

- Compliant with **DO-178B/C**, **DO-254 DAL-A/DAL-B** and **DO-160G**
- For manned/unmanned fixed wing and rotary wing platforms
- More than 20 different LRUs are developed and verified

- Mission and Flight Control Computers
- Flight Management Systems
- Cockpit Display Systems
- Mission Management Systems
- Intercommunication Systems
- Inertial Navigation Systems



Touch IMD-820



Mission Computer



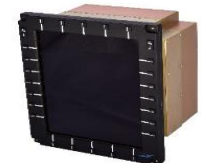
Touch TCCU-810



Flight Control Computer



KDU-45



GMFD-68



Data Concentration Unit



Intercomm. System



Airborne Navigation System



Multifunctional System Controller

Proposed Contribution

Call Topics of Interest:

HORIZON-JU-CLEAN-AVIATION-2022-01-TRA-01

Transversal Activity - Aircraft architectures & technology integration for aircraft concepts ranging from regional to short-medium range applications

HORIZON-JU-CLEAN-AVIATION-2022-01-TRA-02

Transversal Activity - Novel Certification Methods and Means of Compliance for Disruptive Technologies

Open to other related calls



AELSAN Avionics Suite

ASELSAN Avionics Suite 1/3

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High Performance

High Speed

Compatible to all platforms

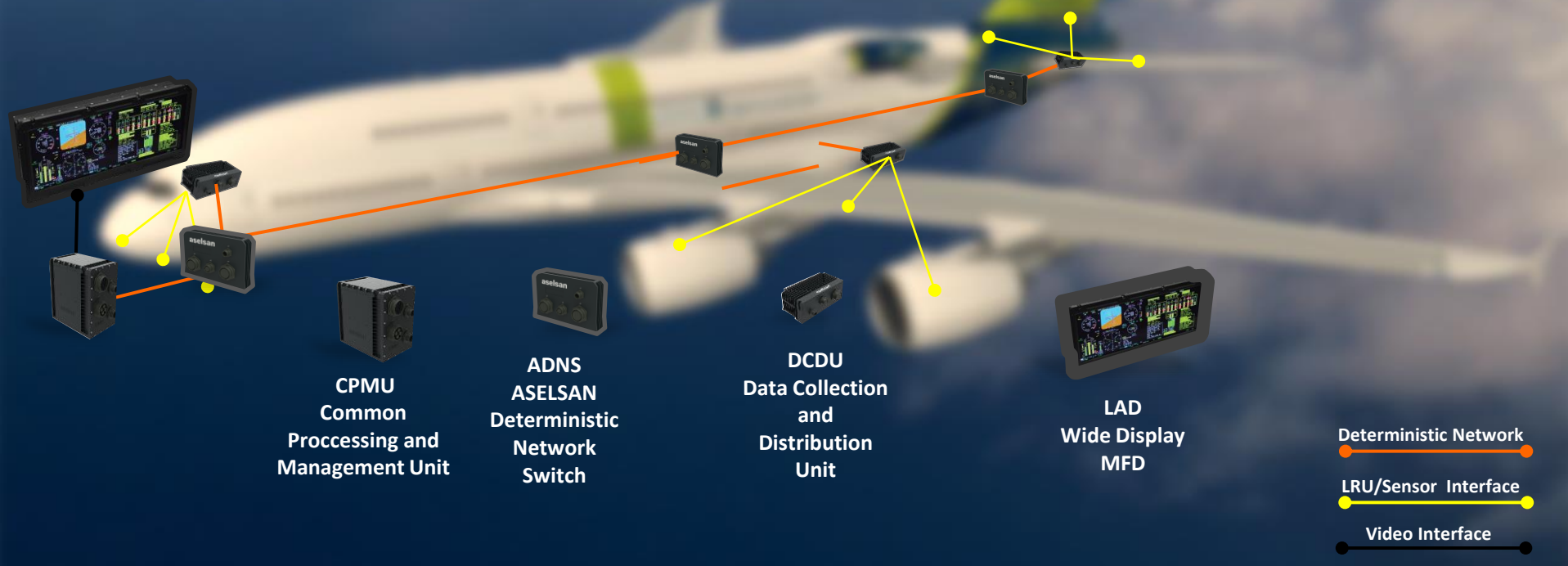
Increased Safety,
Active Redundancy

Increased Capacity

Decreased cabling

Less Power Consumption

Less Weight



ASELSAN Avionics Suite 2/3

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Development of Time Sensitive Network (TSN) based Distributed Integrated Modular Avionics (**DIMA**) Suite (targeted TRL: 4) with the aim of weight and power reduction

Objectives:

- Develop a DIMA Avionics Suite with the core units:
 - Aselsan Deterministic Network Switch (ADNS),
 - Common Processing and Management Unit (CPMU),
 - Data Collection and Distribution Unit (DCDU)
- Develop test and verification infrastructure for this DIMA Suite.
- **EASA ETSO C153a Certification Application** for TSN based ADNS Equipment.
- **EASA ETSO C153a DoA and PoA Applications.**



AAS
aselsan avionics suite

Expected results:

- Improved scalability for integration,
- Remarkable weight reduction in;
 - the aircraft avionics
 - harnessto lead reduction of fuel consumption.
- Reduction in power consumption via decrease in equipment quantity in the aircraft avionics and harness.





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