eInfochips
An Arrow Company

The Solutions People

ARROW

Aerospace Engineering Services

The aerospace and defense industry around the globe has been experiencing various challenges over the last few years, and manufacturers are embracing innovation to match the rising demands. Aerospace companies are seeking new ways to improve efficiency and enhance customer experience.

eInfochips engineering services are compliant with DO-254, DO-178B/C, DO-160, and ARP4754. We have worked with 5 of the world's top 10 commercial aerospace corporations. We provide a distinct value proposition that extends from concept and architecture through release/prototyping and certification, as well as SOI audits. eInfochips aerospace facilities are also ITAR compliant.

eInfochips Service Offerings

- **DO-254 ASIC/FPGA/board design and DO-178B/C firmware/software development & verification**
- **Model-based design and development compliant with EUROCAE and RTCA**
- **PCB/board design, mechanical enclosure design, prototyping and testing, compliant with DO-160 guidelines**
- **System-level design, verification, and validation, compliant with ARP4754 guidelines**
- **Tools qualification compliant with EUROCAE ED-215/RTCA DO-330 guidelines**
- **Obsolescence management, product re-design, and re-engineering services**

Cabin Systems

- In-flight information system
- Cabin control unit

Communication Systems

- AFDX switch
- Air to ground data delivery system
- SATCOM system

Navigation Systems

- GNSS
- Global landing system
- GPS receiver unit

Flight Control Systems

- Flight control computer module
- Horizontal stabilizer
- Actuator controller

Display Systems

- Head-up/down display
- Integrated flight deck
- Electronic Flight Instrument System (EFIS)
- Engine Indicating and Crew Alerting System (EICAS)

Areas of Engagement

In-flight Entertainment

- Seat display unit
- Digital media server
- Passenger media unit

Others

- Fire control system
- UAV/Drone
- Soldier weapon system
- Aerial refueling monitoring system
- Cargo door actuation system
- Landing gear unit

Awards

Supplier of the Year for Engineering Services

and

Chairman's Team Award from Tier-1 Aerospace company

Certifications/Regulations

AS9100D CERTIFIED ISO 9001

ITAR

Transport Canada

EASA European Aviation Safety Agency

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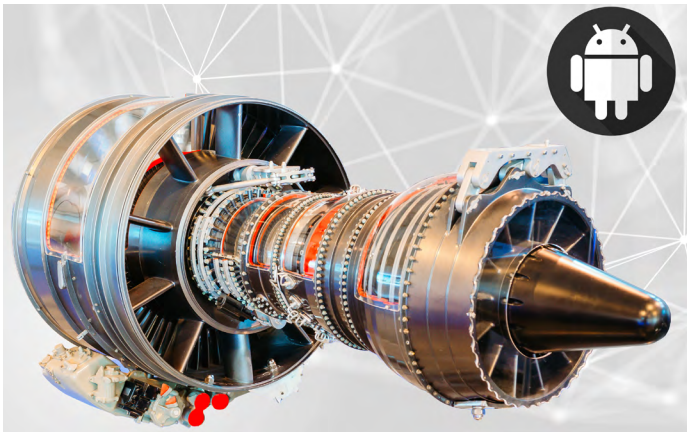
Success Stories

Aircraft Horizontal Stabilizer System

- Industry's first Mach-trim mode stabilizer
- DO-254 DAL A hardware and DO-178B DAL A software development for stabilizer controller unit LRU
- LRU integration and system validation
- DO-254 DAL A and DO-178B DAL A certification support
- Saved over $300K through accelerated testing

Flight Deck Display Processing Computer

- DO-178C DAL A platform software verification for next generation Multi-core Common Processing Resources (MCPR)
- Driver design and development for NXP-Freescale T2080 quad-core CPU with dual OS (VxWorks and Lynx OS)
- Development of the Mongoose verification framework
- Achieved 80% structural code analysis coverage for critical modules in the first run



Aircraft Engine Health Monitoring System

- World's first Android porting on PowerPC architecture
- Android version 4.4.4
- NXP-Freescale T1042 processor
- Quad-core architecture
- 2 ethernet interfaces
- BSP patch for Linux kernel 3.12.19
- Big-Endian related support to Android Open Source Project (AOSP)

Cockpit Head-Down Display System

- ARINC-429 & ARINC-818 compliant FPGA design
- DO-254 compliant FPGA design verification and validation
- SOI I - SOI IV FAA audit support
- Up to 30% cost reduction by leveraging reusable verification components

Video Streaming Solution for Unmanned Aerial Vehicle

- Low latency system design with ultra efficient compression (<50ms)
- Leveraging eInfochips IP - H.264 Codec, RTP/RTSP Stack, MPEG2 TS De-multiplexer
- Shortened the time-to-market by 20%
- Saved over $1 Million
- Deployed on NASA's Global Hawk UAV

Avionics Communication Switch Reengineering

- PowerPC platform porting
- Improved operational efficiency
- Reduced test cycle time
- $130K savings through automation
- Structural coverage analysis
- SOI I - SOI IV FAA audit support

NextGen In-Flight Entertainment System

- i.MX8M-based seatback and overhead display
- 4K HDR capable
- Android 9-based firmware for seat back display
- UI design & development
- Firmware development for STM32
- Build and test automation

Why eInfochips for Aerospace Engineering Services?

- Strong understanding of aerospace systems, process requirements, software and hardware regulations, and certification requirements along with AS9100D compliant project execution
- Highly experienced team that has worked on critical systems; 85% resources having experience of DAL A safety critical systems
- Extensive expertise with system criticality levels ranging from DAL A to DAL E
- Strategic partnerships with chip manufacturers such as NVIDIA, Qualcomm, NXP, Infineon, Analog Devices, Microchip and others to provide early access to technology and roadmaps
- Strong partnerships with Microsoft and AWS for customized IoT and cloud solutions
- A one-stop-shop for all your engineering services (eInfochips) and supply chain (Arrow) needs

About eInfochips

eInfochips, an Arrow Electronics company, is a leading provider of digital transformation and product engineering services. eInfochips accelerates time to market for its customers with its expertise in the areas of IoT, AI/ML, security, sensors, wireless, cloud, and power. eInfochips has been recognized as a leader in Engineering R&D services by many top analysts and industry bodies, including Gartner, Zinnov, ISG, IDC, NASSCOM, and others.