



Developed and presented in association with the CAA.

RTCA DO-254/EUROCAE ED-80 Design Assurance Guidance for Airborne Electronic Hardware provides a standard for the development and certification of Programmable Logic Devices (PLDs) for civil aerospace applications.

The use of PLDs is becoming increasingly prevalent in military and commercial systems. RTCA DO-254 has been given recognition for civil aerospace applications by the FAA (Federal Aviation Administration) as a result of Advisory Circular 20-152. This provides the certification requirements (and hence development), of PLDs such as FPGAs (Field Programmable Gate Arrays), CPLDs (Complex Programmable Logic Devices) and ASICs (Application Specific Integrated Circuits).

This introductory course will provide an overview of the processes required to integrate design assurance into the development of systems which include complex electronic hardware. The emphasis of the course will be on the processes by which the design assurance is gained and will also detail certification strategies and guidance.

Your programme

08.45 Registration and refreshments

09.00 **General introduction**

09.15 **Overview of 'Airborne Electronic Hardware' in DO-254/ED-80**

- Introduction to programmable logic
- Distinguishing features and capabilities of CPLDs, FPGAs and ASICs
- Issues of PLDs e.g. signal integrity, SEUs (Single Event Upsets).

09.45 **System safety**

- Introduction to civil aviation approach to system safety
- Failure conditions, random and systematic failures
- Design assurance levels
- Certification considerations.

10.30 **Overview of DO-254/ED-80**

- Document overview
- Use of complex hardware CRI (Certification Review Item).

10.45 Refreshments

11.00 **Using DO-254/ED-80**

- Hardware design lifecycle and planning
- Hardware requirements
- Hardware development
- Configuration management
- Quality assurance
- Lifecycle data
- Certification considerations.

12.30 Lunch

13.30 **Verification and validation**

- Review, analysis and testing
- Derived requirements.

14.45 **Achieving certification**

- The certification process
- Type of development including STC (Supplemental Type Certificate) and TC (Type Certificate) considerations.

15.30 Refreshments

15.45 **Achieving certification continued**

- Product service experience
- Previously developed hardware & COTS (Commercial-Off-The-Shelf)
- Tool qualification
- Microcontrollers.

16.30 **Discussion**

17.00 Close.

Related course

Software Development for Aircraft Systems using RTCA DO-178B/EUROCAE ED-12B
7-8 December 2011

For more information or to book a place on this course, please visit: <http://shop.era.co.uk>

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This course can be delivered at your site. To discuss your training requirements, please call the Events Team on +44 (0)1372 367439.



Your speakers



Clive Lee - Senior Safety Consultant, ERA Technology Ltd

Clive has over 30 years experience in software development and software assessment of both real time, embedded systems and IT applications. Since 1991, Clive has been involved in software and safety assessment and consultancy in a variety of industry sectors such as military (all forces), railways, process chemical, nuclear, and ship classification. He currently focuses on safety and software consultancy and assessment projects, concentrating on military and civil avionics.



Pippa Moore - Secretary of the Certification Authorities Software Team (CAST), Civil Aviation Authority (CAA)

Pippa has been an Avionic Systems Design Surveyor with the CAA for 15 years. In that time Pippa has worked as a CAA, JAA & EASA systems specialist on civil aircraft certification projects such as the Boeing 737 and 767, A330/340 and A380. She has also worked on numerous engine certification and validation projects. Pippa is a member of EUROCAE WG71, assisting in the development of ED-12C and DO-178C for airborne software approval considerations.

Booking form

Please photocopy this form if you wish to register more than one delegate. Send a second person at a discounted price!

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Organisation
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VAT number (EU customers only)
<input type="checkbox"/> Please tick if you are happy to receive further information about ERA Technology Ltd via e-mail. It is our policy NOT to supply your details to third parties.

Bookings

I wish to make a firm booking for:

Complex Hardware Development for Aircraft Systems using RTCA DO-254/EUROCAE ED-80

2 November 2011 Ref: 31140 26 April 2012 Ref: 31211

Fees*

Fee rate	Fee	VAT@20%	Total	Please tick
Early Booking Rate	£432.00	£86.40	£518.40	
Standard Rate	£480.00	£96.00	£576.00	

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- +44 (0)1372 367321*
- The Events Team, ERA Technology Ltd, Cleeve Road, Leatherhead, Surrey KT22 7SA.

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Enquiries:

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