

Plan for Hardware Aspects of Certification Review Checklist

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Document identification (name and revision): _____

Signature	Printed Name	Date	Pass/Fail

Assurance level (check one): A B C D E

Overall (circle one): PASS FAIL N/A at this level

This checklist is based on FAA Advisory Circular AC 20-152 dated June 30, 2005, which recognizes RTCA/DO-254 as a means, but not the only means, to secure FAA approval of complex custom micro-coded components. This checklist is intended to provide objective evidence of the review of a Plan for Hardware Aspects of Certification. The section numbers and the most of the text in the Objective and Criteria columns are taken directly out of RTCA/DO-254. Section numbers in the Notes column are from the Plan for Hardware Aspects of Certification identified above unless specified otherwise. Additional notes may be included after the end of the checklist.

Plan for Hardware Aspects of Certification Review Checklist

7/10/2006 05:59:46 PM

Objective	Criteria	Yes	No	Notes
10.1.1. The PHAC defines the processes, procedures, methods and standards to be used to achieve the objectives of this document and obtain certification authority approval for certification of the system containing hardware items. The PHAC, once approved, represents an agreement between the certification applicant and the certification authority on the processes and activities to be conducted and the resultant evidence to be produced to satisfy the hardware aspects of certification. The PHAC may be part of another plan, such as the airborne system certification plan.	Not evaluated.			
10.1.1 #1. System overview. This section provides an overview of the airborne system in which the hardware items are to be used	Are the system functions described?			
	Are the system failure conditions described?			
	Is the system architecture described?			
	Is there a description of the allocation of the system functions to hardware and software?			
	Is existing system documentation called out?			
10.1.1 #2. Hardware overview.	Are the hardware functions described?			
	Are the hardware items described?			
	Is the architecture described?			
	Have any new technologies been described?			
	Are fail-safe techniques described?			
	Are fault-tolerance techniques described?			
	Are redundancy techniques described?			
	Are partitioning techniques described?			
10.1.1 #3. Certification considerations.	Is the certification basis given?			
	Is the proposed means of compliance given?			
	Is the hardware design assurance level of each function of each hardware item given?			
	Is the hardware design assurance level justified?			
	Are the potential hardware failure conditions covered (in terms of the justifying the assurance level)?			
	Where applicable, is a summary of the FFPA or an FFPA plan given?			

Plan for Hardware Aspects of Certification Review Checklist

7/10/2006 05:59:46 PM

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10.1.1 #4. Hardware Design Life Cycle. This section describes the procedures, methods and standards to be applied and processes and activities to be performed to meet the hardware design assurance objectives.	Are applicable plans, policies, standards, procedures—such as the Hardware Design Plan—called out and appropriate summaries given, along with descriptions of deviations? <i>Or else</i> , are the following items covered directly in the PHAC:			
	Are the activities described?			
	Are the combinations and sequencing of activities described?			
	Are the relationships between processes and activities described?			
	Are transition criteria described?			
	Are responsibilities described?			
	Is tool usage described?			
	Are means for providing feedback and interaction among hardware processes described?			
	Are means for providing feedback and interaction between hardware processes and system processes described?			
	Are means for providing feedback and interaction between hardware processes and software processes described?			
	10.1.1 #5. Hardware Design Life Cycle Data.	This section describes or references the data to be developed and submitted or available as evidence of compliance to the objectives of this document and the plan.		

Plan for Hardware Aspects of Certification Review Checklist

7/10/2006 05:59:46 PM

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10.1.1 #6. Additional Considerations	Is the usage of previously-developed hardware described.			
	Is applicable reusable data (for the previously-developed hardware) referenced and justified?			
	Is the usage of commercial off-the-shelf (COTS) hardware described and justified?			
	Is relevant product-service experience (for the previously-developed or COTS hardware) described (in a way that justifies usage)?			
	Are tool assessment and qualification described?			
	Is design assurance for level A or B functions discussed?			
10.1.1 #7. Alternative Methods. This section describes any alternative methods proposed for the program which are either not described in this document or are to be applied in a manner other than as described in this document.	Is justification for the alternative method provided?			
10.1.1 #8. Certification Schedule.	This section identifies the major program milestones and the dates when hardware design life cycle data will be submitted to the certification authority.			

Plan for Hardware Aspects of Certification Review Checklist

7/10/2006 05:59:46 PM

DER Notes:

Engineering Notes:

END