AUDIT CHECKLIST

What follows is a recommended list of items to include in the audit. You may add items you feel relevant and use items from a higher classification if desired. An item with high assurance should include all questions. Do not forget to explore safety issues if the CE includes safety critical functions.

Question	**Assurance**
Does a Complex Electronics Project Plan exist and is it being followed?	**Low**
Does a Requirements Document exist and is it complete (no TBD's)?	
What activities have been performed to identify, assess, track, and verify safety-related (critical) functions?	
What is the requirements change process? Who reviews and who approves requirement changes? Show the documentation for the last change to the CE requirements.	
Is a Configuration Management System being used?	**Moderate**
Is a Problem Reporting and Corrective Action system being used?	
Were all design documents reviewed by CEA? If so, show the review records for two of them. If not, what is the plan for document review?	
Do all the CE requirements trace to a higher-level document or are they derived? Do the CE requirements trace into the software design? Do the CE requirements trace to the verification tests being performed?	
Select a Code module and show that it meets the coding standards/best practices. Also verify that the module has sufficient comments and that the comments provide useful information, and not just rephrase the code.	
Were any previous audits conducted? Has all findings in those audits been addressed? What observations have been addressed?	
How are real-time deviations from the process plan approved and documented?	
Obtain the current CE schedule from project management. When was the last time the CE schedule was updated? How reasonable is the schedule?	
Where all safety/mission critical functions fully tested? Were they retested when the CE device was integrated into the circuit board?	
Does a CE Test Plan exist and has it been reviewed?	**High**
What IP modules does the CE use? How are they controlled?	
Does the CE implement the states required by requirements document? Does it communicate that it has entered an off-nominal state?	
How were verification methods for CE requirements evaluated and approved?	
Has the interface between the CE and the next higher assembly been defined? Is it complete and been checked for errors/omissions?	
The Interface Control document lists the signals that CE may need to handle. What is the status of the CE signal identification, valid range determination, and actions?	
What are the logical subsystems that the CE was divided into? How did the CE software design and development address interfaces between these subsystems?	
Where are the errors or failures the CE deals with documented?	
What is the current status of the documents listed in Table A2 of the Complex Electronics Assurance Plan? Are they complete and under configuration management control?	

Question	**Assurance**
Were design reviews held and documented? Were the results documented in a database? Was the CE device baselined or under configuration management control when the review was held?	
Show the unit testing documentation/testbench for the CE or IP module.	
What is the process when a problem is identified during a unit test? What about problems noted during informal activities and simulation runs?	
Are there any deviations or waivers for CE? If so, what was the approval process?	
Describe the CE test environment. What aspects of the CE cannot be adequately tested in the development/test environment?	
What is the plan for CE verification reports? Will verification reports include best and worst case timing analysis, as well as test results?	
For the CE device, what is the process followed to acquire the software code, generate the netlist, and program the device?	
When the CE software baseline is changed, 1. How are the impacts of those changes identified and analyzed? 2. Who reviews and/or approves the changes? Is the CE code differences checked to verify that the documented changes were implemented, and that no other changes were made in the software?	
What length of time has the device been operating to verify it performs correctly?	
Has the device been tested as part of the system to verify it performs correctly?	
Does the Design Engineer participate in the risk management process? Are there any current CE related risks? How are these being mitigated?	
What is the status of the CE metrics collection? Show the metric for units that completed code review, completed Unit testing, and completed integration testing.	
To what extent was the CE development progress tracked against the planned progress? If tracking has not occurred for at least a three months, what are the factors that lead to ceasing to track CE development progress?	

Findings

1. List your findings here
2. Example. No worst case timing simulation done.
3.

Observations

1. List concerns here
2.
3.

Recommendations

1. List recommendations here
2.
3.