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| **Project:** | | | | | Project Name | | | | | | | | | | | | | |
| **Customer:** | | | | | Customer Name | | | | | | **Review date:** | | | | yyyy-mm-dd | | | |
|  | | | | | | | | | | | | | | | | | | |
| **Object to be reviewed:** | | | | | | | | | | | | | | | | | | |
| Document name: | | | Project\_Software\_Architecture\_Specification | | | | | | | | | | | | | | | |
| Version: | | | 1.0 | | | | | | | | | | | | | | | |
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| **Participants:** | | | | | | | **Name** | | | **Org. unit** | | | | | | | **Review manager**  **(x)** | |
| Person responsible (author): | | | | | | | Gil-Dong, Hong | | | R&D | | | | | | | x | |
| Reviewer: | | | | | | |  | | |  | | | | | | |  | |
| Reviewer: | | | | | | |  | | |  | | | | | | |  | |
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| Other reviewer(s): | | | | | | |  | | |  | | | | | | |  | |
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| **Review type:** | | | | | | | | | | | | | | **Project status:** | | | | |
|  | | | |  | |  | |  |  | | |  | | Phase: | | | |  |
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| **Last review of the object to be reviewed:** | | | | | | | | | | | | | | | | | | |
| Performed on: | |  | | | | | | | | | | | | | | | | |
| Doc. name: | |  | | | | | | | | | | | | | | | | |
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| **Follow Up:** | | | | | | | | | | | | | | | | | | |
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| **Checklist '** **Review Meeting'** | **OK?** | | **Action/comments** |
| --- | --- | --- | --- |
| **yes** | **no** |
| Are cross-references implemented to the best knowledge? |  |  | If this checklist is not applicable, you should leave comment and 'NA'.  If you have comment then you should leave comment at this. |
| Are the output products of the SW requirements analysis (SW specification, software release planning) completely available? Have these documents been subjected to a review? |  |  |  |
| Has the architecture design been discussed with all those involved in the project and has it been documented? |  |  |  |
| Have all defined standards been complied with in design creation? |  |  |  |
| Have processing speed and timings been defined and documented? |  |  |  |
| Are global variables used only in exceptional cases (from an architectural point of view)? |  |  |  |
| Are all global constants and variables documented? |  |  |  |
| Are modules/functions which are critical with regard to safety identified as such? |  |  |  |
| Have risks been recognised and assessed? |  |  |  |
| Have strategies been drawn up to prevent or handle risks? |  |  |  |
| Have verification criteria been developed? |  |  |  |
| Has a module classification been performed for all modules? |  |  |  |
| Is the architectural design comprehensible and complete? |  |  |  |
| Have resource reserves (e.g. RAM, ROM, CPU Time, Interrupts, etc.)  been taken into account? (Necessary to have reserves for changes.) |  |  |  |
| Are input and output values (type/value ranges) completely taken over from the software requirements specification? |  |  |  |
| Is the system structured as a layer model? (Independence of HW and operating system, breaking-down of the program structure into input processing, function, output processing (no ports set or read in the function)) |  |  |  |
| Has the application purpose been checked? (Re-Use of modules or (C-)functions) |  |  |  |
| Are necessary changes to reusable modules implemented and documented? |  |  |  |
| Are number, complexity and size of the modules reasonable? |  |  |  |
| Is overlapping of functionalities avoided? |  |  |  |
| Have all requirements of the software requirements specification been completely allocated? |  |  |  |
| Is the description of all modules consistent with the software requirements specification? |  |  |  |
| Are interfaces between modules unambiguously defined? (This includes timing (call cycle time), data types, logical resolution, physical resolution, scaling, quality expectations, etc.) |  |  |  |
| Are the interrelationships between the modules unambiguously described? |  |  |  |
| Is the independence of modules ensured if and as demanded by the software requirements specification (e.g. safety)? |  |  |  |
| Are a minimal number of interfaces used? |  |  |  |
| Do the interfaces guarantee the independency of the applications (this is important in the case of changes)? |  |  |  |
| Have all hardware-specific modules/functions been marked as such and are they of a modular design? |  |  |  |
| Are changes traceable to implementation (e.g. is there a history)? |  |  |  |
| Do modules, interfaces, global constants and variables have suitable (e.g. required standards) and unambiguous names? |  |  |  |
| Have the values ranges and default values of variables used in interfaces been described? |  |  |  |
| Is the data consistency (data belonging together) always guaranteed in all closed function blocks (e.g. tasks)? |  |  |  |
| Has the possible endangering of data consistency due to interruption (HW/SW interrupts, task interruption) been taken into account? |  |  |  |
| Did you consider adding a reset counter? This may especially be useful if there are different sources of resets. |  |  |  |
| Have mechanisms for error detection and handling been defined? |  |  |  |
| Has the behaviour after a reset been described? |  |  |  |
| Has a real time analysis been performed and successfully passed? |  |  |  |

|  | **Complaint / fault** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **No** | **Page / Line** | **Issue** | **Safety**  **relevant** | | **Action** | | | |
| **yes** | **no** | **Solution** | **Responsible person** | **Completion deadline** | **Done**  **(🗸)** |
| 1 | 15/20 | There is no diagram for explian of module. |  | x | Add diagram for module. | Gil-Dong, Hong | yyyy-mm-dd | **🗸** |
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