# Purpose and Scope

* 1. Define a standardized project directory structure allowing ease of navigation and familiarity with respect to the locations of expected documents and outputs. This generic project directory structure should satisfy a variety of project types among the electronic engineering department.

# Setup the Project Directory Template

* 1. Upon starting a new project, create and setup the project directory. The location of the directory will vary based on the project.
  2. Projects requiring electronics and automation are usually multi-faceted. To make the directory template generic, there may be categories or sub-folders which are unused.
  3. When working on a project, it can become burdensome to constantly search for the specifications document, therefore the EE-SD-001 and EE-SD-002 will reside within top level directory.
  4. The categories within the directory are:
* Archive
* Project Docs
* Hardware
* Firmware
* Software
* Cables
* Other
* Testing
* Design Review
* References
* Purchasing
* Communication
* ***EE-SD-001*** & ***EE-SD-002*** reside here

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# Project Docs

* 1. The “1\_Project\_Docs” folder will contain items such as customer supplied documents, vendor supplied documents, and internal documents. All of the documents in this folder will pertain to electronics design in some way and should be considered while doing the conceptual and detailed design.
  2. The ***EE-TD-001*** Technical Lessons Learned document will reside in this folder.
  3. Customer supplied documents could be items such as customer specifications, spec agreement docs, design documents, source files, test scripts, etc.
  4. Vendor supplied documents are documents related to system level components within the design. A common item would be a camera and the associated documents: software, installers, SDK, datasheets, user manuals, etc.
  5. Internal documents will include documents covering the broader strokes of the projects. It can be things such as calculated energy at a sensor, camera noise simulations, volume constraints, connector locations, etc. A system level electronics block diagram can also be included in here.

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# Hardware

* 1. The “2\_Hardware” folder will hold PCB designs.
  2. Within each PCB design folder there shall be:
     + Design Folder “D-XXXXX-RevYY”
       - Datasheet folder
       - Documentation folder
         * ***EE-TD-004*** design description document
         * ***EE-TL-001*** derating worksheet
       - Reference folder
       - Schematic Print folder
       - Simulation folder
       - E-CAD source files
       - ***EE-CL-001***
     + Assembly Folder “A-XXXXX-RevYY” will include E-CAD
       - BOM folder
       - Gerber folder
       - NC Drill folder
       - ODB folder
       - Pick Place folder
       - Fabrication Drawing
       - Assembly Drawing

# Firmware & Software

* 1. The “3\_Firmware” folder contains the source code, executable, and code documentation.
  2. The “4\_Software” folder contains the source code, executable, and code documentation.
  3. The ***EE-TD-004*** will reside in the “documentation” subfolder. Doxygen and other documentation may be saved in this folder as well.

# Cables

* 1. Each cable design/part number will have its own sub-folder.
  2. Each sub-folder will also contain its own ***EE-CL-002*** checklist document.

# Other

* 1. The “6\_Other” folder will contain items pertaining to the electronic design, but not electronics related. An example is a mechanical enclosure.

# Testing

* 1. The “7\_Testing” folder will include test plans, qualifications, and testing results.
  2. The testing scheme is at the discretion of the engineer.
  3. Hardware testing will follow the **EE-TD-003** & ***EE-TD-002*** template documents.
  4. Any system level testing will be agreed upon within the larger engineering team.

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# Design Reviews

* 1. The “8\_Design\_Reviews” folder will include notes, ppt presentations, schematics, and data related to the design review.
  2. There will be a separate folder created for each design review. The folder naming convention shall conform to the following:
     + - Sequential design review number, design review name, design review number w.r.t the subject matter, and the date.
       - Example “1\_Requirement\_DR\_1\_103124”
       - The above example would indicate the first design review of the project, it was a requirements review, it was the first requirements review, and it was held on Oct.31.2024

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# References

* 1. The “9\_References” folder will contain references relevant to the electronic system. Examples include documentation such as: mounting hardware info, bulkhead fitting info, drivers, software dependencies & SDKs, installers, interface PCB info, DAQ testing system info, instrumentation info, etc.

# Purchasing and Communication

* 1. The “10\_Purchasing” folder shall include a folder for each PR placed. Each PR folder shall be consistently named to display relevant information like the vendor name and date of purchase. The folder should include a BOM of the items purchased or the online cart. Any quotes should also be included.
  2. The “11\_Communication” folder shall include references to internal, vendor, and customer correspondence. Useful info to save would be agreement to spec changes, approvals of data, explanations of specifications, or calculations. Technical information which pertains to the electronic design.

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# Revision History

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| --- | --- | --- | --- |
| **Revision** | **Description** | **Author** | **Date** |
| 01 | Initial Release | J. Petrilli | 03/02/2024 |
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