

# Open Source Hardware — Disclosure Requisites

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This is a draft. The term “Open Source Hardware” and the title “Disclosure Requisites” are both open for discussion, along with the rest of the document. This box will be removed in the final version.

This short document aims to familiarize component vendors with the concepts of Open Source Hardware and to explain the specific needs of OSH. The objectives:

- accurately present our needs
- be understandable (to a corporate readership)
- convince them to provide documentation in a way we can use

Open Source Software and firmware requirements have been deliberately excluded to keep this short and because they should/might be covered in a separate document.

Open Source Software has proven that an open design process and liberal licensing contribute towards enhancing the quality, utility, and overall success of software products, and encourage convergence and cooperation among projects.

Open Source Hardware is an approach that aims to enhance quality and value of hardware products by applying an open design process, in keeping with best practices of Open Source Software development.

This document outlines the characteristics and benefits of Open Source Hardware and explains the requisites resulting from this on technical documentation provided by component vendors.

# 1 Characteristics

Open Source Hardware design is guided by the following principles:

- Expose the entire design process to public review.
- Invite contributions from anyone willing and able, irrespective of affiliation.
- Distribute the resulting design under an Open license, permitting use and further modification free from royalties.

Examples of Open licenses include the *General Public License* (GPL)<sup>1</sup> and the *Creative Commons Attribution – Share Alike* license (CC-BY-SA)<sup>2</sup>.

## 2 Benefits

Fully disclosing the design and the decision process leading to it brings the following benefits to development and use of the product:

- Enables prospective buyers and developers to participate in ensuring high quality of the product, e.g., through reviews. This also helps to accelerate the product development process.
- Permits prospective buyers and VARs to conduct a thorough and honest evaluation of the product design, improving their ability to correctly project the product's use and increasing their confidence in choosing the product.
- Lowers the barrier for developers and integrators to add value, either already during the design phase or on top of the finished product.
- Protects the investment of buyers, developers, and integrators by enabling them to make corrections, enhancements, and even derivative products without depending on the availability of the original designers and manufacturer.
- Creates the opportunity for other projects to reuse part or all of the design with a minimum of overhead, and to grow synergies by reciprocating.

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<sup>1</sup><http://www.gnu.org/copyleft/gpl.html>

<sup>2</sup><http://creativecommons.org/licenses/by-sa/3.0/>

### **3 Documentation requisites**

The open hardware development process requires the use of components for which the vendor makes technical product documentation available under terms that allow public use of the information gathered from it. The most common forms of such terms are:

#### **Permissive NDA**

Material is provided by the vendor under an NDA tailored to this purpose. The NDA allows open discussion of the design and distribution of the resulting work (schematics, layout, system software) under an Open license.

#### **Public access**

The vendor publishes data sheets and related material to the public, e.g., on its Web site. Access to this information for Open Source Hardware is then no different from any other use.

#### **Redistribution rights**

The vendor also grants redistribution rights, allowing projects to ensure that documents remain available even when the vendor no longer supports the product.

Public access is preferable over a permissive NDA since it limits the effort that has to be made on both sides before evaluation can begin, reduces the risk of misunderstandings, and avoids overhead in the design phase.