# 1. Introduction

## 1.1 Purpose

WireWorks is an offline software application designed for educators, students, and professionals to create, verify, and document circuit designs. It supports components such as Arduino, ESP, Adafruit, and more, catering to a diverse audience with varying levels of expertise.

## 1.2 Document Conventions

**Terminology:**

**"WireWorks"**: Refers to the software application being specified in this document.

**"SRS"**: Refers to this Software Requirements Specification document.

**"Component"**: Refers to the individual electronic parts (e.g., resistors, capacitors, microcontrollers) that users can incorporate into their circuit designs within WireWorks.

**"Diagram"**: Refers to the visual representation of the circuit design within WireWorks, including block diagrams, circuit schematics, and PCB layouts.

## 1.3 Intended Audience and Reading Suggestions

**Developers**: This document is the primary resource for the development team. Developers will use this SRS to understand the precise functionality, interfaces, and constraints of the WireWorks software.

**Users**: This document will be utilized by the users to understand the software's intended use-cases and understand its limitations.

## 1.4 Product Scope

WireWorks will encompass an intuitive graphical interface for circuit design, a comprehensive library of electronic components (including support for Arduino, ESP, and Adafruit), and automated verification tools to ensure design accuracy. The software will support the creation of block diagrams, circuit schematics, and PCB layouts, with seamless conversion between these formats. It will function entirely offline and allow users to add notes and comments to enhance readability. The initial scope will not include real-time collaboration features or integration with external databases.

## 1.5 References

1. IEEE 830-1998 Standard for Software Requirements Specifications