Network PDU-S High Level Design Document

# Introduction and Features

The Network PDU-S is a product that combines several features into a single package

* Power Distribution through two front and six rear outlets
* Surge protection and line filtering
* Network control of each outlet via a web page.
* Programmable sequencer so outlets can be turned on/off in a specific order after a configurable delay.

The Network PDU-S will come in a 19” rack mount case that is standard for the Audio/Visual and Information Technology industries.

# Top Level Architecture



# Software Tools

This project will take advantage of multiple CAD tools:

* Kicad
	+ PCB EDA Suite
	+ Free, Open Source Software
* Solidworks
	+ Mechanical Part and Assembly Design
	+ Proprietary Software
* Arduino Code Libraries
	+ Free, Open Source Software
* AVR-GCC
	+ Compiler provided by Atmel
* C++ Language
* Gantt Project
	+ Project Management
	+ Free, Open Source Software
* DIA
	+ Diagraming tool
	+ Free, Open Source Software

# Hardware Tools

* Rigol Oscilloscope
* Fluke 87V Multimeter
* Kitchen Hot Plate
* Hakko Soldering Iron
* Brainbox RS232 to Ethernet adapter
* Current Limiting Bench Power Supply

# Vendors

This project will use several vendors to manufacture the parts and final assembly:

* Protocase for the rackmount enclosure
* Digikey for the electronics BOM
* OSHPark for the PCB
* OSHStencils for the solder paste stencil
* Hand Assembly for the top level.