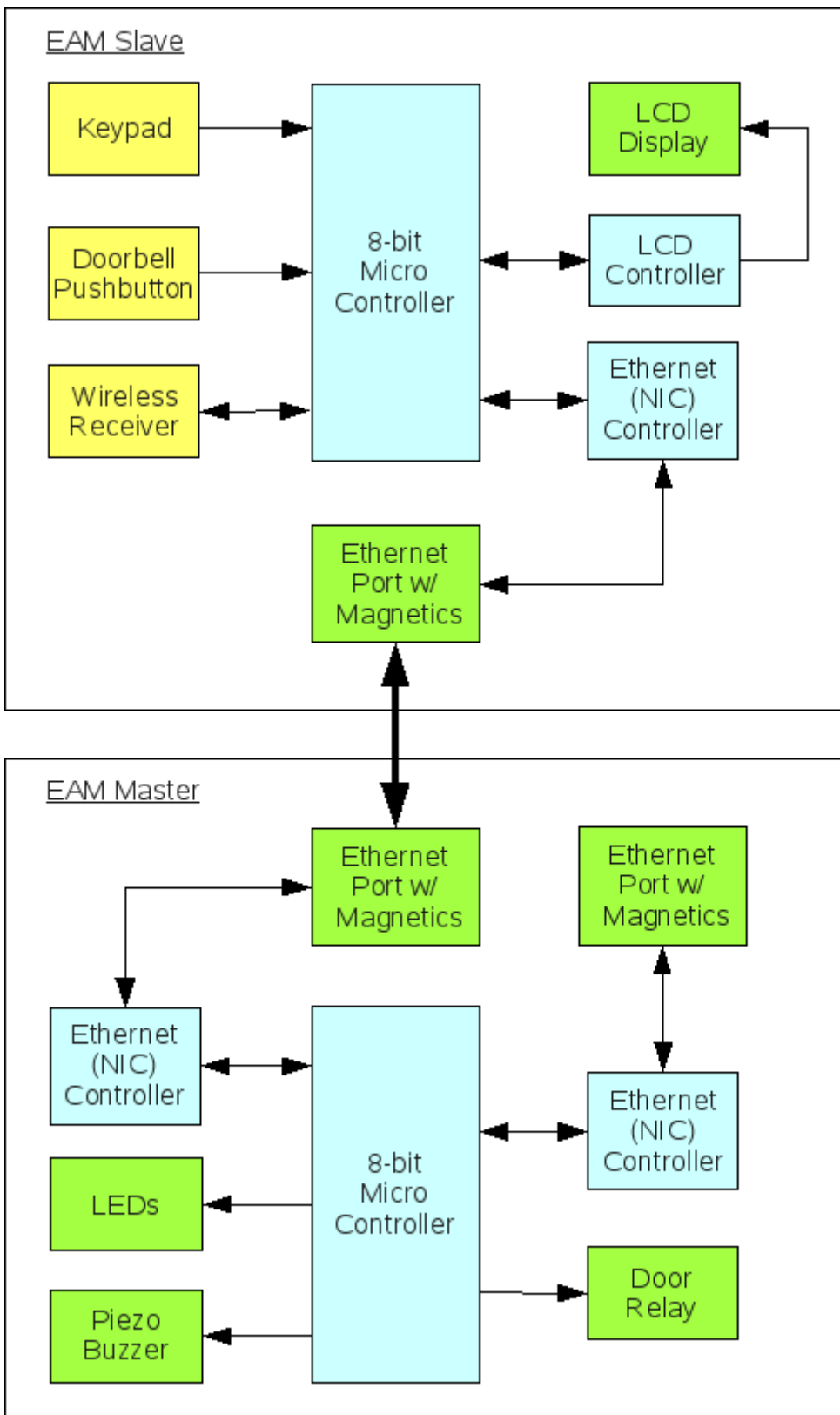


Functional Description

2009-11-05 16:11:53 by Chris

Hardware Description

The EAM hardware will consist of two paired master and slave sub-modules. Each submodule will be based on an 8-bit microcontroller running in the speed range of 10-20 MHz. Most of the hardware will fall into the category of general digital I/O. Additionally, 3-wire serial (SPI) will be used for communication between the microcontroller and the Ethernet ICs. Inter-module, as well as THAT, communication will be made possible using a hardware Ethernet controller designed for 10/100Base-TX data rates. See Figure 1 below for the hardware block diagram.



Software Description

The EAM firmware will consist of mainly C code. It will have both the functionality for the entry as well as Ethernet / networking stack necessary for communication with the client PC. Additionally, the master and slave devices will communicate over an encrypted channel.

