

## AVR Server Breadboarding

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Part of our project with THAT System is to design an embedded systems for both the COPTA and EAM modules. These embedded systems must be capable of running a small web server on an Ethernet-based home network. We have chosen to base the web server portion of our design on the [Tuxgraphics AVR Web Server](#), a project to create an embedded web server running a [TCP/IP stack](#). The full schematic and firmware for it are available for free from [tuxgraphics.org](http://tuxgraphics.org) under the GPL (v2) license.

Today Nick and I breadboarded a web server. It uses an Atmel AVR Atmega88 microcontroller and a Microchip enc28j60 Ethernet IC. The [schematic](#) we used is copyrighted material but is freely available as a PDF from the Tuxgraphics website.

We connected the device to the network and were able to successfully ping it from a PC. Visiting the device's minimal web interface in a browser, we were also able to view the status of a connected LED and toggle it on and off.

### Sources

- TCP/IP stack (2008-08-03)  
<http://tuxgraphics.org/electronics/200905/embedded-tcp-ip-stack.shtml>
  - Embedded Web Server (2009-03-27)  
<http://tuxgraphics.org/electronics/200611/embedded-webserver.shtml>
  - AVR Ethernet Device (2009-06-16)  
<http://tuxgraphics.org/electronics/200606/article06061.shtml>
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