

[Home](#)[Beginners](#)[Projects](#)[Tutorials](#)[Articles](#)[Reviews](#)[Software](#)

STARTING ELECTRONICS

Electronics for Beginners and Beyond

[Blog](#)[YouTube](#)[Donate](#)[Home](#) ▶ [Tutorials](#) ▶ [Arduino](#) ▶ Ethernet Shield Web Server Tutorial

Arduino Ethernet Shield Web Server Tutorial

Created on: 14 January 2013

Part 1 of the Arduino Ethernet Shield Web Server Tutorial

This multi-part tutorial shows how to set up an Arduino with Ethernet shield as a web server. The web servers in this tutorial are used to serve up web pages that can be accessed from a web browser running on any computer connected to the same network as the Arduino.

Some of the Arduino web server pages allow access to the Arduino hardware – this allows hardware to be controlled (e.g. switching on and off an LED from the web page) and monitored (e.g. reading the state of a switch and displaying it on a web page).

The tutorial teaches what is required to build a web server including all the technology such as HTTP, HTML, CSS, JavaScript, AJAX, etc. It starts with the very basics of hosting a simple web page on the Arduino and advances step-by-step from there.

Donate to Starting Electronics

Donate



Arduino Ethernet Shield Tutorial

Tutorials

Arduino

Part 1:
Ethernet
Shield Tutorial
Introduction
and Hardware

Part 2: Basic
Arduino Web
Server

Part 3: HTML
Web Page
Structure

Hardware Required

Hardware Components

The hardware required for following this series of tutorials is:

- An Arduino board such as the Arduino Uno
- An Arduino Ethernet shield
- An Ethernet cable, wired straight for connecting to your network router
- A USB cable for powering and programming the Arduino
- A micro SD card, e.g. a 2Gb card that is SPI compatible – only required for some of the servers
- A computer with a micro SD card slot or a card reader with a micro SD card slot – only required for SD card servers

There will be additional components required as listed in each tutorial, such as LEDs, resistors, switches, etc. and a [breadboard and wire kit](#) for building the circuits.

Hardware Setup

Before starting:

1. [Plug the Ethernet shield into the Arduino](#), connect it to the network and test it.
2. [Test the SD card](#) in the Ethernet shield.

[← Go back to Arduino Tutorials](#)

[Go to Part 2 →](#)

Comments

Login

There are no comments posted yet. [Be the first one!](#)

Part 4:
Arduino SD Card Web Server

Part 5:
Arduino Web Server LED Control

Part 6:
Reading a Switch

Part 7:
Reading a Switch using AJAX

Part 8:
Reading a Switch Automatically using AJAX

Part 9:
Reading an Analog Input and Switches using AJAX

Part 10:
Linking Web Pages

Part 11: Web Page Images

Part 12: CSS Introduction

Post a new comment

Enter text right here!

Comment as a Guest, or login:

Name

Displayed next to your comments.

Email

Not displayed publicly.

Website (optional)

If you have a website, link to it here.

Subscribe to

Submit Comment

Part 13:
Reading a
Switch with
SD Card Web
Server and
Ajax

Part 14:
Reading
Inputs with
Ajax and XML

Part 15:
Analog Value
Displayed on
Gauge

Part 16: Inputs
and Outputs
(I/O)

Part 17:
Accessing
HTML Tags
with CSS and
JavaScript

Part 18: CSS
for
Positioning,
Sizing and
Spacing

Summary and
Conclusion

[Arduino](#)

[Pinout](#)

[About](#)

[Contact](#)

[Donate](#)

[Privacy Policy](#)

[Amazon Adverts](#)

© 2012 – 2021, Starting Electronics