

# XC-2 Ethernet Kit Quick Start Guide

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*Version 1.1*



Publication Date: 2010/05/10

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## 1 Introduction

The XC-2 Ethernet Kit is a rapid and cost effective route for developing Ethernet-based products in XMOS Silicon. Based around the four-core XS1-G4 programmable device, the XC-2 Kit provides the hardware needed to connect to a 10/100 Ethernet system using an RJ45 socket.

The XC-2 Ethernet Kit includes:

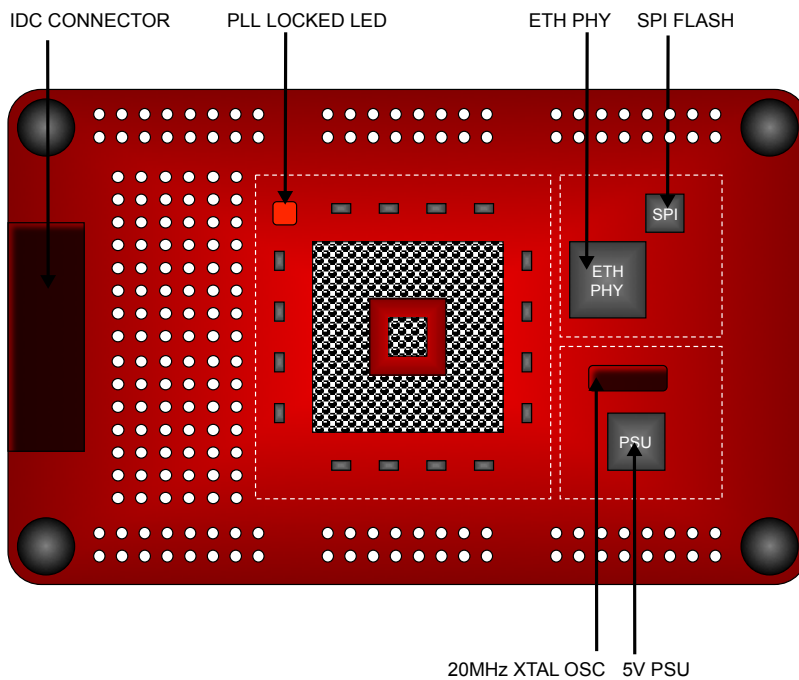
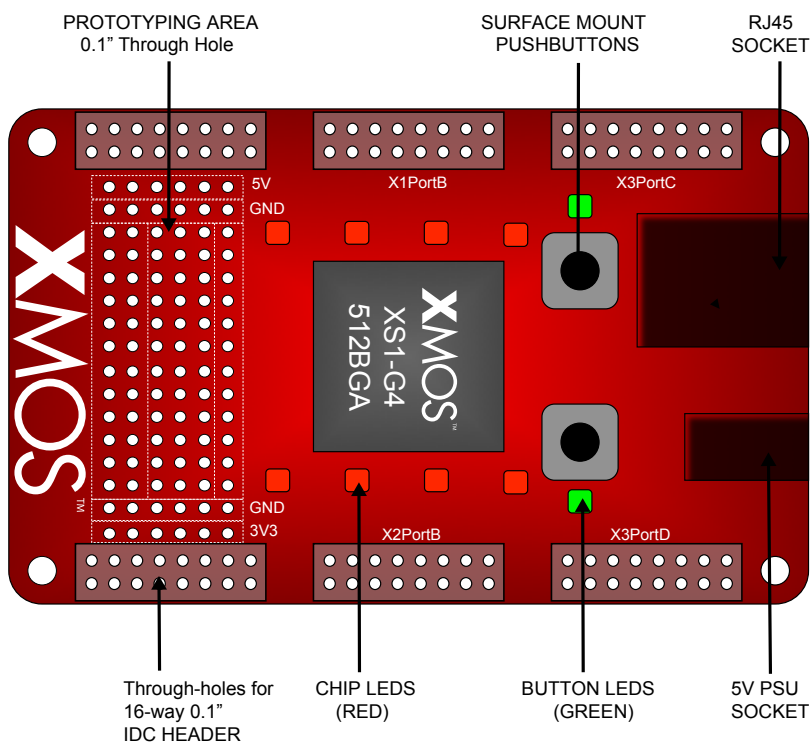
- XC-2 Development Board
- XTAG Connector which provides a JTAG interface between the board and XMOS Tools
- USB Cable to connect the XTAG to your development system
- External 5V power supply

## 2 Getting Started

The XC-2 Kit includes a webserver application written in C and XC. The XS1-G4 serves the website, and drives the protocol stack and ethernet hardware.

To use the webserver you need to plug the XC-2 board into a local network or your PC. Make sure that you disable any firewall you may have running before trying to connect to the website. If you do not want to run the webserver please go to the *Tools Support* section [3](#).

Further information on the XC-2 is available from the XMOS web site. Download the XC-2 tutorial, hardware manual, schematics and design files from: [www.xmos.com/xc2](http://www.xmos.com/xc2).



## 2.1 Connect the XC-2 to a network using DHCP

Plug-in the XC-2 using the 5V power supply. The PLL LED on the bottom of the board lights up to indicate that the board has been powered up.

Connect the XC-2 to your network using an ethernet cable (not supplied). An LED pattern flashes to show live connectivity.

The X1LEDA LED lights up to show that the application is running. The X2LEDB LED lights up to show the board is successfully connected to the network.

Open your browser and go to:

**`http://xc2.local`**

Use the menu options to explore the device capabilities. You can flash the LEDs on the XC-2, read real-time information about board features, and change the board to use a static or automatic IP configuration.

## 2.2 Connect the XC-2 directly to a PC

Make sure that the XC-2 power supply is disconnected.

Configure your PC to connect to a valid static IP address on the 192.168.0 subnet, for example 192.168.0.101.

Connect the XC-2 to your PC using an Ethernet cable.

Hold down firmly Button A on the XC-2 and plug-in the 5V power supply to the XC-2 board. Keep Button A held down until the LEDs stop flashing to force the board into static IP mode.

Open your browser and go to `http://192.168.0.100`, the default static IP address of the XC-2 board.

## 2.3 Webserver application - XC-2 buttons

The type of IP address used to connect to the webserver is set in the Configuration page of the `xc2.local` website. Use the XC-2 buttons to override this setting when you start the device:

- Button A - uses a static IP address (default 192.168.0.100)
- Button B - uses an automatic IP address

## 2.4 Troubleshooting the webserver application

LEDs do not light up

- Check that the power supply is connected correctly.

X2LEDB LED does not light up

- Check the ethernet cable is connected correctly to the XC-2.
- May take up to a minute to obtain an IP address if no DHCP server on network.

X2LEDB LED lights up but browser cannot load <http://xc2.local>

- Try installing Bonjour for Windows, available from: <http://apple.com/downloads>.
- Disable any firewall you may have running.
- Configure your PC and XC-2 to use a static IP address. See section [2.2](#).

## 2.5 Firmware Updates

You can check the webserver firmware version using the Board Information page on the [xc2.local](http://xc2.local) website. Check [www.xmos.com/xc2](http://www.xmos.com/xc2) for any firmware updates and instructions on how to update the device.

## 3 XMOS Tools Support

The XMOS tools are provide in a single platform-specific downloadable file from

<http://www.xmos.com/tools>

Instructions on installing and using the XMOS Tools can be found in the XMOS Tools User Guide [http://www.xmos.com/published/xtools\\_en](http://www.xmos.com/published/xtools_en). The following table provides a summary tools support for the XC-2 development board.

Minimum tools version required	9.9
Board support file	XC-2.xn
USB-to-JTAG adaptor	XTAG
USB-to-JTAG driver	FTDI
Board Tutorial	Integrated into XDE and available as PDF
Hardware Guide	<a href="http://www.xmos.com/published/xc2hw">http://www.xmos.com/published/xc2hw</a>

## 4 Document History

Date	Release	Comment
2009-07-08	1.0	First release
2010-05-10	1.1	Added tools support section

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