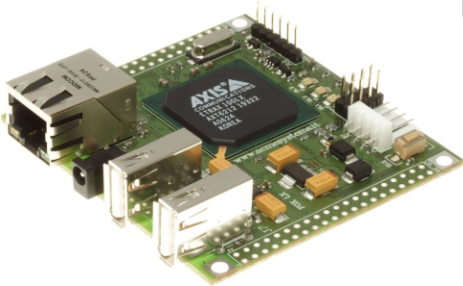


# FOX Board

## EMBEDDED LINUX SYSTEM

FOX Board is a "ready-to-run" Embedded Linux System, perfect to create mini WEB servers, network devices, TCP/IP gateways or CPU units for OEM embedded devices.

A fully Open Source environment is freely available to customize and build your own kernel image or to develop user applications using standard GNU tools.



**ACME  
SYSTEMS**

[www.acmesystems.it](http://www.acmesystems.it)

Visit the Acme Systems web site  
<http://www.acmesystems.it>  
to read more about FOX Board, application notes,  
extension boards, SDK, forum, enthusiast sites,  
wikies, blogs, etc. etc.

### MAIN FEATURES

Preinstalled Linux 2.6 with Web, FTP, SSH and Telnet server. Fully Open Source SDK.

#### CPU

Axis ETRAX 100LX, 32 bit, 100MIPS, RISC architecture.

#### MEMORY

8MB FLASH 32MB RAM

#### I/O PORTS

1 Ethernet, 2 USB 1.1 ports, 1 console. 2x40 pin strip headers step 2.54 mm (100mils) with: general I/O ports, I2C bus, SPI, 2 serial for carrier and add-on boards..

#### SIZE

66 x 72mm ( 2.6 x 2.8 inch).

#### POWER REQUIREMENTS

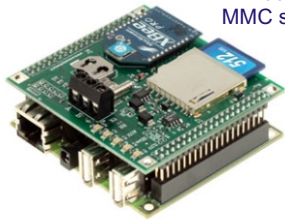
5 Volt, 1 Watt.

Flash image fully upgradable through local LAN, console port, WEB and FTP.

## FOX BOARD ACCESSORIES

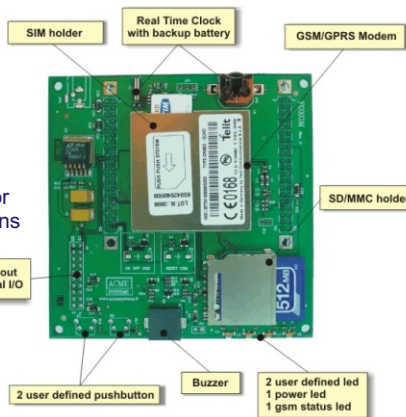
### FOXZB

Add-on board with MMC socket, Real time clock,

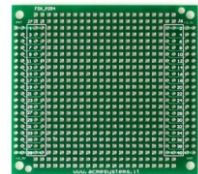


### FOXGM

Carrier board for GPRS applications



### FOXP254



### TUXCASE

TUX shaped case for the FOX Board



### PS5V1A

Switching power supply Available with EU, US, UK and Australian AC

### FOXCONS

RS232 adapter for FOX console interface



### FOXCASE

Plastic enclosure



More and more ideas on: <http://www.acmesystems.it>

# GETTING STARTED

*The FOX Board is shipped with a ready to run image of Linux. In this quick guide we show the first steps to get started with your new jewel.*

The FOX Board requires a regulated +5 Volt DC power supply through the J14 connector using a commercial power supply or **alternatively** on J2 connector using a floppy like power connector. Dedicated power supplies are available on <http://www.acmesystems.it>.

**Warning:** do not use a cheap unregulated wall power supply equipment. It could damage the FOX board and all the USB peripherals connected into it. Only a well regulated +5Volt power supply must be used.

The FOX Board alone needs typically a peak current of 280mA so a 5 Volt DC 500mA power supply should be more than sufficient for many cases. Otherwise if you connect one or two peripherals to the available USB ports you have to know the current that this peripherals need to choose the right power supply. The green LED DL3 indicates the power on state.

Plug your LAN cable to the RJ45 connector J11. This is a 10/100Mbit Ethernet port. The yellow LED DL2 will blink to indicate LAN activity.

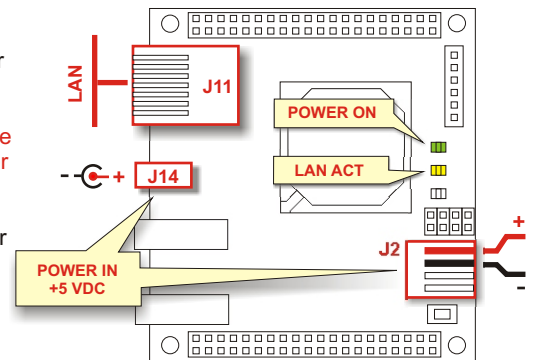
Now you can try to get access to the FOX board with your Web Browser, Telnet, FTP or SSH client. The default IP address of the FOX Board could be change due to the factory image mountet on it:

If you are using a default image the IP address is : **192.68.0.90**  
If you are using a **foXServe** image the IP address is: **192.168.0.96**

The factory default login is: User=**root** Password=**pass**

Further information about the FOX Board and the default image can be found on:  
<http://www.acmesystems.it/?id=14>

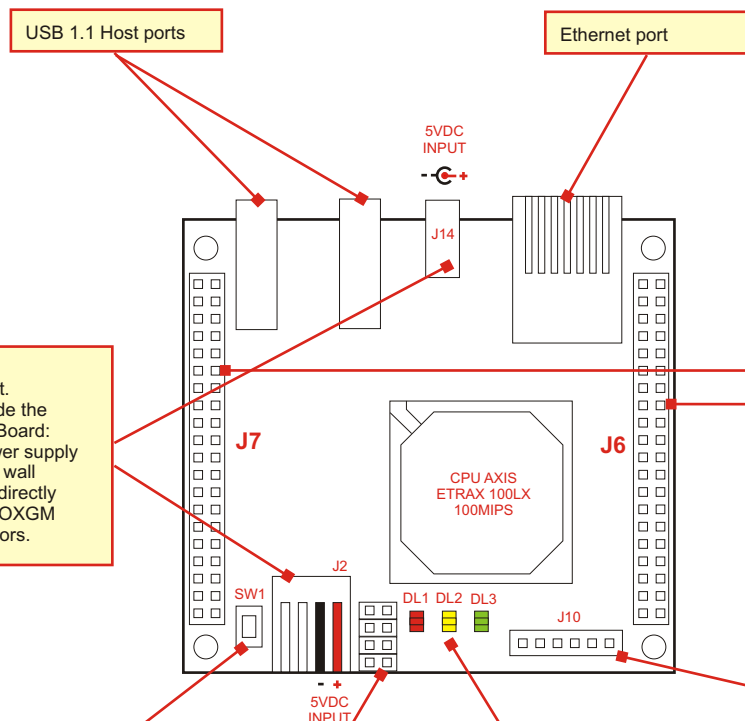
Further information about the foXServe image can be found on:  
<http://www.foxserve.it>



## What is foXServe ?

foXServe is special Linux image for the FOX Board LX832 made by **KDev** ([www.kdev.it](http://www.kdev.it)) that includes Apache, PHP and SQLite.

foXServe is an Open Source project freely available for all the FOX Board LX users (only the model LX832) on the web site: [www.foxserve.it](http://www.foxserve.it).



**J6, J7:** Extension sockets for carrier and add-on boards. Signals for I/O, I2C, SPI, serial and parallel ports. Not all the interfaces can be used at the same time. All the logic levels are at 3.3 Volt (5 Volt tolerant).

**Carrier boards** are extension like FOXGM that are placed below the FOX Board. In that case you have to weld two 20x2 pin stream headers (male) in the bottom side of the board.

**Add-on boards** are extension like FOXZB that are placed over the FOX Board. In that case you have to weld two 20x2 pin stream sockets (female) on the topside of the board.

See the pinout on:  
<http://www.acmesystems.it/?id=18>

**J10:** ttyS0 serial port used as system console port. 115200 baud N81. 3.3Volt. Designed for FOXCONS accessory.

**J2:** 5 volt DC power input.  
**J14:** 5 volt DC power input.  
There are 3 ways to provide the power supply to the FOX Board: using J2 with a floppy power supply like FPS; using J14 with a wall adapter like PS5V1A and directly from a carrier board like FOXGM trough J6 and J7 connectors.

**SW1:** Hold this button down during the power-on to restore the factory default /etc contents.

- Shutdown:** If closed the FOX turns off
- Reset:** if closed resets the CPU
- Serial boot:** if closed at start-up enables the serial flashing
- Ethernet boot:** if closed at start-up enables the LAN flashing

**DL1 RED LED** is a user defined led that could be controlled by your application software. Its normal state is off. At startup it is used by the Kernel to indicate an initial error state of the board. Typically it blinks when the MAC address of the ethernet adapter is not configured.

**DL2 YELLOW LED** shows the LAN traffic on the Ethernet connector.

**DL3 GREEN LED** is connected directly to the power supply so it shows the power on state.