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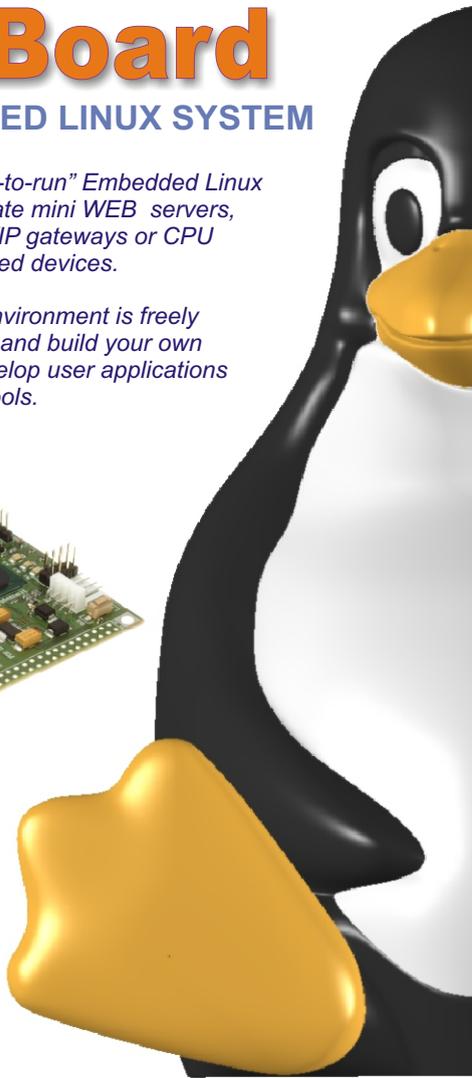
A fully Open Source environment is freely available to customize and build your own kernel image or to develop user applications using standard GNU tools.

This document is subject to change without prior notice.

The term "Linux" is a registered trademark of Linus Torvalds, the original author of the Linux kernel.

Linux Penguin, "Tux", was created by Larry Ewing.

FOX Board

EMBEDDED LINUX BOARD - 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.

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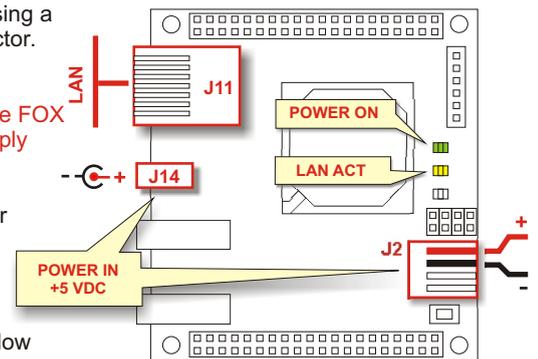
Now you can try to get access to the FOX board with your Web Browser, Telnet, FTP or SSH client. The default IP address of the FOX Board could be change due to the factory image mountet on it:

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

Visit: http://www.acmesystems.it

LAN
J11
POWER ON
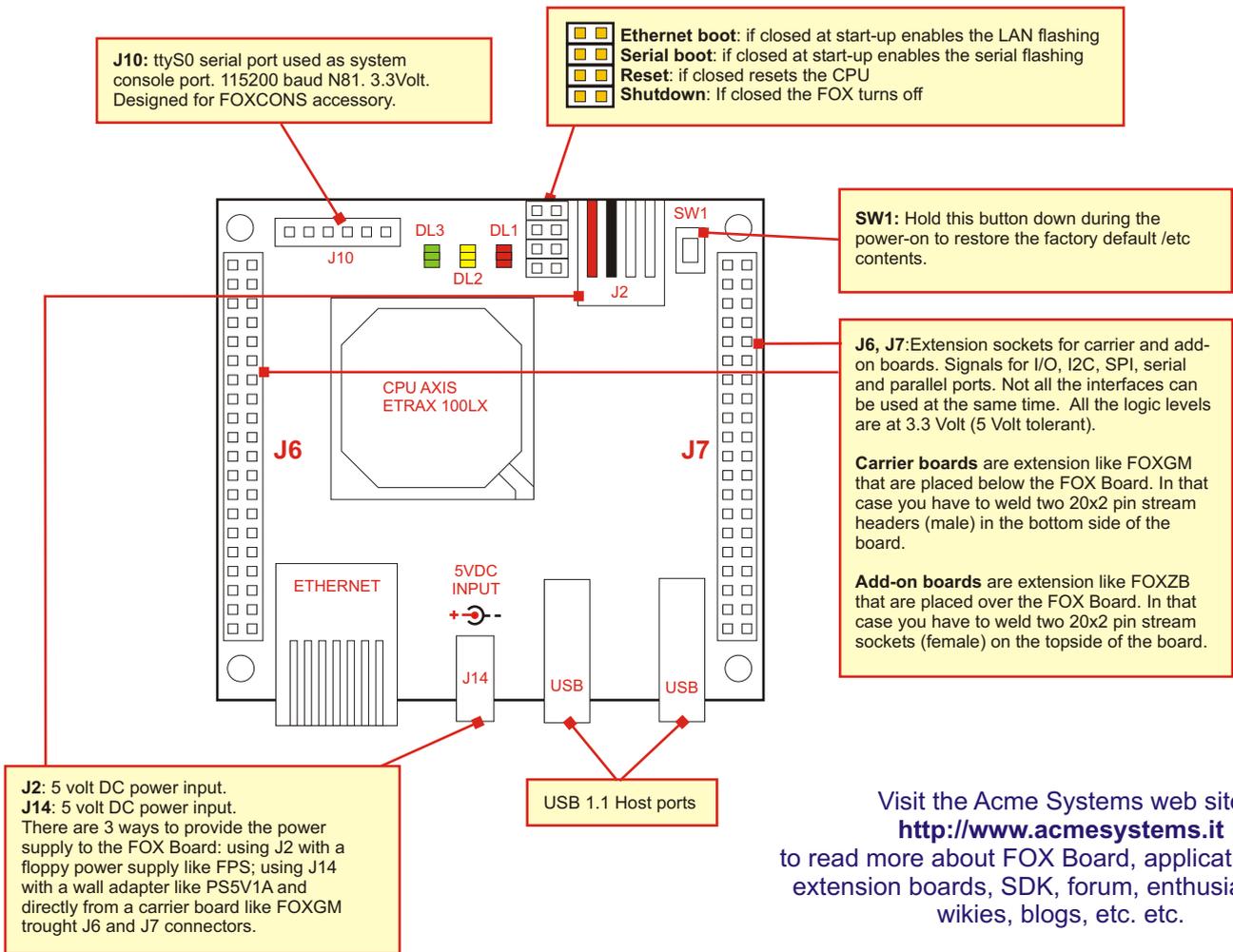**LAN ACT**
J14
POWER IN +5 VDC
J2
+

foXServe

SMOOTH · SECURE · SOLID-STATE · SILENT · EXTRASMALL

What is foXSserve ?

foXServe is special Linux image for the FOX Board LX832 made by **KDev** (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**.

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

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

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

DL3   DL1
J10   DL2
SW1
J2

CPU AXIS
ETRAX 100LX

J6   J7

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.

ETHERNET
5VDC INPUT
+ –
J14   USB   USB

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 trought J6 and J7 connectors.

USB 1.1 Host ports

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.

FOX BOARD ACCESSORIES

FOXZB
Add-on board with MMC socket, Realt time clock, RS485, XBee socket

FOXGM
Carrier board for GPRS applications

SIM holder
Real Time Clock with backup battery
GSM/GPRS Modem
SD/MMC holder
Audio in, out and general I/O
2 user defined pushbutton
Buzzer
2 user defined led
1 power led
1 gsm status led

FOXP254
Protoboard

TUXCASE
TUX shaped case for the FOX Board

PS5V1A
Switching power supply Available with EU, US, UK and Australian AC plug

FOXCONS
RS232 adapter for FOX console interface

FOXCASE
Plastic enclosure

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