



AXIS Device Server Platform

Network Device System-on-Chip

For Product Deployment of Embedded Linux Applications

Customers developing their own embedded Linux applications for the AXIS ETRAX 100LX platform have two options for taking a product to market: either design and manufacture their own hardware, or use the AXIS Device Server Platform. The best option depends on volume and application.

A Complete Product Ready for Use

The Device Server Platform, which is based on the AXIS Developer Board LX, is equipped with connectors for Ethernet, COM1, COM2, and RS-485. An Ethernet address is pre-programmed in each unit. Wrapped in a black aluminum casing and side plates, and complying with immunity, emission and safety standards, the product is ready for immediate deployment. Except a product label sticker on the underside, neither the casing nor the side plates have any Axis text or logos printed on them.

Simplify Production and Get Quicker to Market

The Device Server Platform ships product-ready; therefore the customer doesn't need to spend any time on hardware development, tests for authority approvals, or buying and programming Ethernet addresses. When the application is ready, the software can simply be flash-loaded to the Device Server Platform using FTP (File Transfer Protocol), a serial port, or Axis flash load method.

About the AXIS ETRAX 100LX Chip

This Network Device System-on-Chip is designed specifically for embedded Linux developers and features an on-chip 100 MHz 32-bit RISC CPU, cache and MMU, 10/100 full duplex Ethernet controller, SDRAM, Flash and other memory controllers, DMA driven ports: 2 synchronous and 4 asynchronous serial ports, 2 parallel ports, 2 USB ports, SCSI and EIDE/ATA-2 ports. It is a price competitive hardware option for designers of embedded Linux appliances.



About the AXIS Developer Board LX

With the ETRAX 100LX at the core, the Developer Board is made to simplify application development on Axis' technology. Besides the ETRAX 100LX chip, the Developer Board features an RJ-45 Ethernet connector, 2 serial ports + serial debug port, 1 RS-485 port, pin-header with parallel and general purpose I/O, 2 MB of Flash, and 8 MB of RAM. After downloading the Linux kernel source code, applications, and the GNU CC development environment from <http://developer.axis.com>, programmers can immediately start the development of their own applications.

Partnership Development

Axis is committed to open-source development and fully supporting its customers. Reference designs and advanced technical support help are available, as well as open discussion forums to facilitate communication between the wide range of ETRAX system developers.

Technical Specification – AXIS Device Server Platform

Technical Overview

- Product-ready device server platform based on the AXIS Developer Board LX. The product ships with an Ethernet address pre-programmed and the same Linux software as the Developer Board LX for simple application flash loading.

Physical Network Connection

- Physical network connection on 10BaseT Ethernet or 100BaseTX Fast Ethernet networks using RJ45 twisted pair cable (Category 5 shielded or unshielded twisted pair cable). Note: Shielded cable is recommended for industrial environments.

Serial Connection

- Two RS232 serial ports: terminated with 9 pin MALE D-SUB connectors, both ports support RXD, TXD, RTS, CTS, DSR, DTR, RI and CD at baud rates up to 115200 bps.
- One RS485/422 serial port: supported on a single screw terminal block. Supports baud rates up to 1843200 bps.

Pinout:			
1	CD	Carrier detect	(Input)
2	RxD	Receive Data	(Input)
3	TxD	Transmit Data	(Output)
4	DTR	Data Terminal Ready	(Output)
5	GND	Ground	
6	DSR	Data Set Ready	(Input)
7	RTS	Request To Send	(Output)
8	CTS	Clear To Send	(Input)
9	RI	Ring Indicator	(Input)

Terminal Block

Pinout:	
1	AC Power
2	AC Power
3	GND
4	RS422 GND Connected to GND through 100 ohm resistor
5	RX/TX-A Use pin 5 and 6 for 2-wire RS-485
6	RX/TX-B Use pin 5 and 6 for 2-wire RS-485
7	TX-
8	TX+

Hardware

- CPU: 32 bit RISC processor (ETRAX 100)
- Flash memory: 2 Mbytes
- RAM: 8 Mbytes
- Ethernet: 10/100Mbit on RJ-45
- Power supply (PS-B)

Mechanical Design

- A stable aluminum casing that can be conveniently mounted on a wall.

Product Identification

- Sticker label on the underside, which identifies the unit as an AXIS Device Server Platform and also identifies the Ethernet address of the unit.

Metrics

- Height: 27 mm
- Width: 112 mm
- Length: 110 mm
- Weight: 320g.

Application Flash-loading

- The customer's Linux application can be flash loaded to the Device Server Platform over the network using FTP (File Transfer Protocol) or a boot loader program for Linux, which loads and boots the application. Alternatively applications can be flash loaded over a serial port.

Power Supply

- Power: 9-24VAC (or DC), 6 VA, via external power supply (included) or on screw terminal block.
- Power consumption typically between 2.5 VA and 3.5 VA.

Product Warranty

- A one-year warranty is included.

Approvals

- AXIS Device Server Platform fulfills both industrial and light industrial/commercial EMC standards for both emission and immunity.
- Immunity Standards:
EN 55024:1998,
EN 50082-1:1997,
EN 6100-6-2:1999
- Emission Standards:
EN 55022:1994 (CISPR 22:1993 + A1: 1995 + A2: 1996), Class B + A1: 1995 + A2: 1997,
FCC Part 15, Subpart B, Class A
FCC Part 15, Subpart B, Class B, demonstrated by compliance with EN55022: 1994, Class B, AS/NZS3548 (C-Tick). Demonstrated by compliance with CISPR 22: 1993.
- Safety:
EN 60950, UL, CSA.



For more information, visit: developer.axis.com

www.axis.com