



## EDS4100

- ▶ Put just about any piece of equipment with a serial port on the enterprise network with robust “data center grade” security, including SSH and SSL
- ▶ A fully programmable device computing platform based on corporate IT standards – Cisco®-like CLI, XML, RSS
- ▶ True IEEE 802.3af compliant Power over Ethernet (PoE)
- ▶ RoHS-compliant
- ▶ Powerful web manager for easy device configuration

## Remotely Monitor, Manage and Share Devices Over a Network or the Internet

The EDS4100 is the first external Device Server™ to deliver an enterprise-grade, programmable device computing and networking platform for integrating ‘edge’ equipment into the enterprise network.

Featuring Lantronix Evolution OS™, our powerful real-time Networking Operating System, the EDS4100 delivers an unprecedented level of intelligence and security to networked equipment. With this powerful product, just about any piece of equipment with a serial port can become a fully secure member of the corporate network so it can be accessed and managed remotely from virtually anywhere.

### Easy to Setup

Without requiring any special software, the EDS4100 can put up to four RS-232 and/or 254 RS-485 serial devices on the network in a matter of minutes. Serial data from the device is encapsulated into packets and transported over Ethernet using a method called “serial tunneling.” Set up is a breeze with the included Windows-based web manager software. The EDS4100 can also be set up locally through its serial port, or remotely over a network using Telnet, a web browser or SNMP.

### Bullet-proof Security

Evolution OS provides ‘data center grade’ level of protection so that each device on the M2M (machine-to-machine) network carries the same level of security as IT equipment in the corporate data center.

The EDS4100 has robust defenses to hostile Internet attacks such as denial of service (DoS) and port mapping that can be used to take down the network. The hardened OS and mature protocol stack prevents it from being used to bring down other devices on the network. And with built-in SSH and SSL, it includes robust key management algorithms that:

- Verify the data received came from the proper source
- Validate that the data transferred from the source over the network is unchanged when it arrives at its destination
- Provide ability to run popular M2M protocols over a secure SSH connection

With SSH and SSL, the EDS4100 supports a variety of popular cipher technologies including 128/256/512/1024-bit AES (Rijndael), 3DES and

RC4 Encryption Public/Private-keys and hashing algorithms such as SHA-1 and MD5. HTTP authentication uses Base-64, Digest Authentication and SSL.

### Standards-Based Communications

**Cisco-like CLI** – The EDS4100 uses a Cisco-like command line interface (CLI) with syntax that is very similar to that used by data center equipment such as routers and hubs. This industry-standard tool simplifies configuration and control, making it easier to integrate edge devices into the enterprise network.

**XML-based Architecture** – XML is a standard tool for web services, data transfer and rich content management that encapsulates data into a text-based format. XML-based configuration and setup records in EDS4100 make the device configuration transparent and easily modified with a standard text or XML editor.

### PoE (Power over Ethernet)

EDS4100 features true IEEE 802.3af-compliant Power over Ethernet (PoE) using both Ethernet pairs. Eliminating the need for an external power supply and associated labor costs, EDS4100 is ideally suited to add immediate networking functionality for remote equipment located virtually anywhere.

### Powerful and Customizable

Eight MB of Flash memory provides maintenance-free nonvolatile storage of web pages, and enables future system software upgrades. Featuring a 32-bit XScale processor and 32MB of RAM, the EDS4100 is highly customizable with the Evolution OS Software Developers’ Kit (SDK). A free compiler is available.

The EDS4100 also features a mini PCI for future expansion, including additional possibilities such as modems, 802.11 wireless and FIPS 140-2 level 2 encryption.

### Com Port Redirector

Lantronix Com Port Redirector™ software is included. It redirects application data destined for a local serial (COM) port on a PC to a serial port on the EDS4100. Data sent from the device to the EDS4100 is transmitted back to the application over the network. Com Port Redirector then presents the data to the application as if it were from a local serial COM port.





## Features and Specifications

### Serial Interface

**Interface:** Software selectable RS-232/422/485 customizable baud rate support for non-standard serial speeds  
**Connectors:** Four DB9M serial ports; two RS-232, two RS-232/422/485  
**Data Rates:** Software selectable standard baud rates from 300 to 230 KBaud  
**Characters:** 7 or 8 data bits  
**Parity:** Odd, even, none  
**Stop Bits:** 1 or 2  
**Control Signals:** CTS, RTS, DTR, DCD  
**Flow Control:** XON/XOFF (software), CTS/RTS (hardware), None

### Network Interface

Software selectable Ethernet speed 10/100/Auto  
 Software selectable Half/Full/Auto duplex  
**Connector:** RJ45  
**Standards:** ARP, UDP/IP, TCP/IP, Telnet, ICMP, SNMP, DHCP, BOOTP, TFTP, Auto IP, SMTP, FTP, DNS, Traceroute and HTTP

### Indicators (LED)

10Base-T and 100Base-TX Link  
 Ethernet Activity  
 Serial Transmit Data  
 Serial Receive Data  
 Power  
 Diagnostics

### Processor

**CPU:** Intel XScale IXP420 Network Processor running at 266MHz  
 32k Instruction Cache  
 32k Data Cache  
**Memory:** 32 MB SDRAM  
 8 MB Flash  
 2 KB EEPROM

### Management

Internal web server, SNMP v2 (MIBII, RS232MIB), Serial login, Telnet login, XML  
**Firmware:** Upgradable via the Web Manager, TFTP or FTP  
**Internal Web Server:** Static and dynamic CGI-based pages and applets  
**Storage capacity:** 6 MB using industry-standard file system

### Power

9-30VDC - Barrel connector  
 42-56VDC - Screw Terminal  
 PoE-compliant power source - 802.3af (when populated)

### Environmental

**Operating:** 0° to 55° C (32° to 131° F)  
**Storage:** -40° to 70° C (-40 to 158° F)  
**Relative Humidity:** 10 to 90%, non-condensing

### Packaging

**Material:** Metal enclosure with removable wall mounts  
**Dimensions (LxWxH):** 3.81 x 17.65\* x 12.7 cm (1.5 x 6.95\* x 5 in.)\* with mounting brackets = 20.14 cm (7.93 in)  
**Weight:** .86 Kg (1.9 lb)

### Compliance

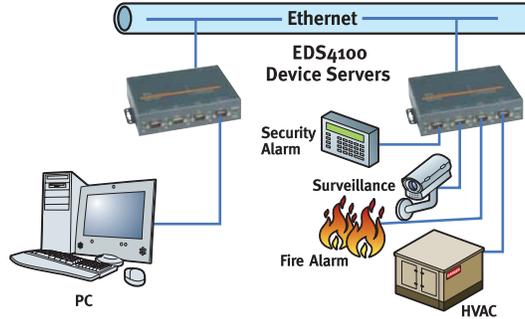
**Ethernet:** Version 2.0/IEEE 802.3 (electrical)  
 Ethernet II frame type  
 IEEE 802.3af (when PoE is populated)

### Safety Standards

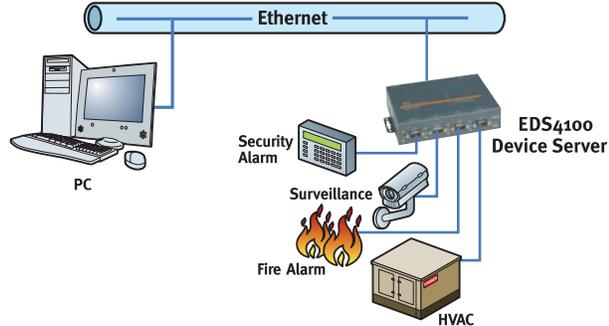
UL 60950-1, CSA-22.2 No. 60950-1-03, EN60950-1, CB Report - IEC 60950-1

## EDS4100 Example Configurations

### SERIAL TUNNELING CONFIGURATION



### DIRECT TCP/IP OR REDIRECTOR CONFIGURATION



### Security

SSL v3, SSH v2  
 MD5, SHA-1  
 Rijndael/AES 128-bit encryption  
 3DES encryption  
 ARC4 128-bit encryption  
 Password protection  
 IP address filtering  
 Hardened OS and stack

### Agency Approvals

UL/CUL, FCC, CE, TUV, C-Tick, GS, CB scheme, VCCI

### Warranty

2-year limited warranty

### Emissions

FCC Part 15 Subpart B Class A  
 ICES-003 Issue 4 February 2004 Class A  
 AS/NZS CISPR 22: 2004 Class A  
 EN55022: 1998 + A1: 2000 + A2: 2003 Class A  
 VCCI V-3/2005.04 Class A  
 EN61000-3-2: 2000 Class A  
 EN61000-3-3: 1995 + A1: 2001

### Immunity

EN55024: 1998 +A1: 2001 +A2: 2003  
 IEC\_61000-4-2: 1995 ESD 8KV Air Discharge (Direct), 4KV Contact Discharge (Direct/Indirect)  
 IEC\_61000-4-3: 1995 Radiated Immunity 3.0V/m, 1KHz AM Sine Wave at 80%  
 IEC\_61000-4-4: 1995 EFT/Burst 1.0KV Power Lines, 0.5KV I/O Lines  
 IEC\_61000-4-5: 1995 Surge Immunity 1.0KV Common Mode, 1.0 KV Differential Mode  
 IEC\_61000-4-6: 1996 Conducted Immunity 3.0 Vrms, 80% AM Modulated (1KHz)  
 IEC\_61000-4-8: 1993 Magnetic Field Immunity 50Hz 1.0 Arms/m  
 IEC\_61000-4-11: 1994 Voltage Dips and Interrupts (>95%, 0.5 periods), (30%, 25 periods), (>95%, 250 periods)

### Isolation

Designed with protection against transients and ESD for use under harsh environments.  
**Serial Port:** 15 KV ESD protection on RS232 and RS422/485 transceivers  
**Power Input:** 2kV common mode and 1kV differential mode power surge protection  
**Ethernet Port:** 1500 VAC isolation shielded

### Shipping Dimensions

**Dimensions (LxWxH):** 242 x 191 x 115 mm (9.5 x 7.5 x 4.5 in)  
**Weight:** 1.44 kg (3.19 lbs)

### Included Software

Windows™ 98/ME/NT/2000/XP-based DeviceInstaller™ configuration software, Com Port Redirector™ software and related utilities

### Product Label Markings

FCC Part 15 Statement Class A Device, C-Tick, VCCI, CE Marking, UL-CUL Mark, TUV-GS Mark, RoHS

## Ordering Information

Part Number	Description
ED4100P0-01	Four Port Device Server, PoE, no power supply, RoHS
ED4100P2-01	Four Port Device Server, PoE, with universal power supply and regional adapters, RoHS

