SV TEHS SIA

Scenix Development Tools

SX-Ethernet

User's Guide

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SX-Ethernet User's Guide

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Chapter 1

Introduction

SX-Ethernet evaluation board provides a platform for evaluating embedded Ethernet SX Stack, include web server and email appliances, on the 10BASE-T Ethernet network.

The SX-Ethernet evaluation board is a simple board, based on Scenix SX52BD communications controller and implementing Ethernet SX Stack - combination of standard Internet protocol layers optimized for the SX communications controller. Supported Internet protocols include TCP, UDP, IP, ICMP, DHCP, ARP, HTTP, and SMTP. Board come with preprogrammed web server and email client appliances, the SX communications controller's in-systems programming feature enables the device to be reconfigured easily for one of several implementations.

Features

- 10BASE-T and RS232 interfaces on board
- Powered from the AC or DC external power supply, 7…12 V, 200 mA (not included).
- Dimensions 71x68x16 mm, two-layer board, two 20-pin extension connectors
- 256Kbit on board EEPROM for embedded web content storage
- Compatible with Scenix iSX Ethernet, full source code included

Package

SX-Ethernet package include the following:

- SX-Ethernet evaluation board
- CAT5 cross-over Ethernet interface cable
- RS232 9-pin interface cable
- CD-ROM containing the iSX Ethernet source code files, support files and documentation

Requirements

It is recommended to install SX-Ethernet Evaluation board on the system with the following minimum requirements:

- IBM compatible 486/Pentium.computer
- One free serial port with 9-pin connector
- One free 10BASE-T Ethernet port
- 4 MB Ram, 16 MB recommended for the operational system
- 4 MB of free hard disk space
- Microsoft or compatible mouse

About the User's Guide

This User's Guide organized as following:

- **Chapter 1: Introduction** – Summarizes the SX-Ethernet features and requirements.
- **Chapter 2: SX-Ethernet Hardware** – Describes the SX-Ethernet hardware.
- **Chapter 3: Software Installation** – Provides information on installing the SX-Ethernet hardware.
- **Appendix A: SX-Ethernet board schematic** – Separate file for the on-line version
- **Appendix B: Component side** – Separate file for the on-line version
- **Appendix C: Solder side** – Separate file for the on-line version

Software Updates

New versions of the SX-Ethernet firmware can be obtained from the Scenix web site at:

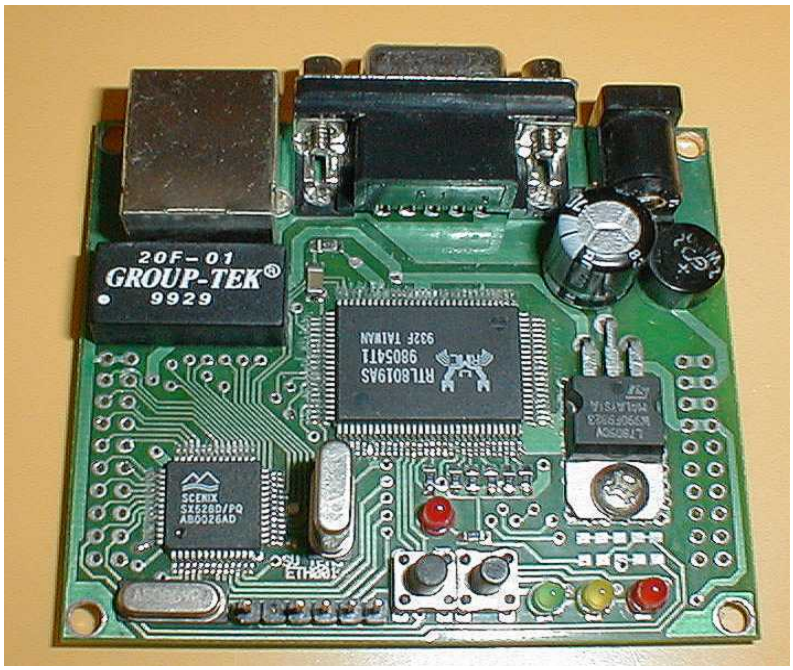
http://www.scenix.com

Chapter 2

The SX-Ethernet hardware

SX-Ethernet evaluation board offer small and low-cost solution for embedded Ethernet applications.

The SX-Ethernet board powered from the external AC or DC power supply 7.5…12 V. Board consume less than 200 mA.



SX-Ethernet board have 10BASE-T Ethernet connector X3, RS232 connector X4, power supply connector X1, ISP connector X6 and two 20-pins extension connectors – X2 and X5 (see Appendix B). You can use external in-circuit programmer, for example SX-TIPS, to reprogram target SX52 chip.

Left key SW1 is Reset key, right key SW2 connected to RA7 pin of the SX52 and can be used in customer application with the LED HL9. This components designated as "Test".

Three another LEDs HL12…HL10 connected to the Ethernet chip and mean "Collision", "Rx", "Tx" (from left to right).

16 free I/O pins of the SX52 (port D and port E) wired to extension connector X5 (on the left). This connector also have +5V and GND pins for some external circuit.

Extension connector X2 (on the right) have all power lines wired and 5V-level UART signals. Desolder RS232 tranceiver D12, if you plan to use 5V-level UART signals in your application.

Chapter 3

SX-Ethernet Installation

SX-Ethernet board installation is very simple.

SX-Ethernet board can be connected with supplied cross-over Ethernet cable directly to the free 10BASE-T Ethernet port on the PC. It it also possible to connect SX-Ethernet board to any hub in the local network with normal straight-through cable. SX-Ethernet default IP address is 10.1.1.20. Under Windows NT/Windows 2000 you can issue the following command:

```
route add 10.1.1.0 mask 255.255.255.0 157.55.80.1
```

Yould should use IP address of the Ethernet card in your computer instead of 157.55.80.1 in this example. Than you can ping SX-Ethernet board:

```
Ping 10.1.1.20
```

You can use Web browser to check Web site in the SX-Ethernet board:

```
http://10.1.1.20
```

Configuration

Please use "**iSX Ethernet Evaluation Board User's Guide**" for detailed description of the SX Ethernet evaluation board software setup.

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