sLAN/all

White Paper

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IoT Experts

SystemBase

Since 1987

Overview

Computer becomes more efficient tool when combined with features provided by the external equipment connected to it.

In order to connect external devices, communication protocol determined as standard is necessary, and the most widely used method is the serial communication. Serial communication is based on Telex communication, and nearly every computer has a serial port. However, communication speed is slow and it is not suitable for long distance communication.

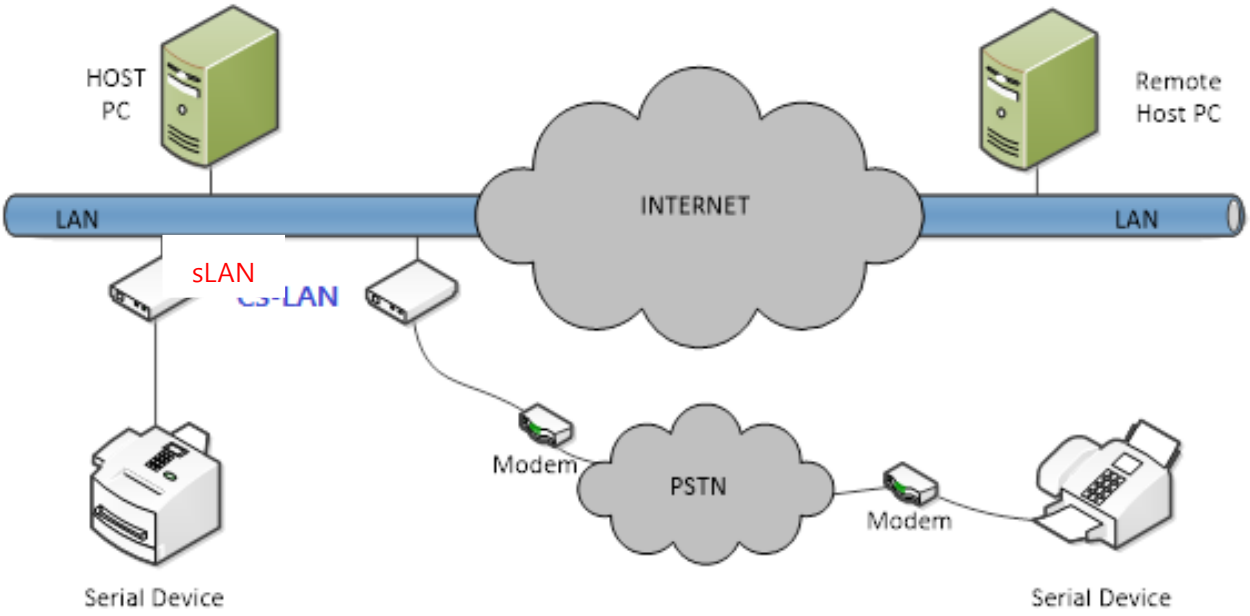
On the other hand, Ethernet enabling N:N communication in high speed is widely used for communication method. Even though Ethernet provides convenient wiring schemes, it is more complex and expensive than serial communication which makes it not ideal for connecting individual device.

As two methods with different purposes and characteristics coexist, Ethernet has developed to IP network (Internet). IP network overcomes the spatial limitation that was in LAN and now supports environment where computers all over the world can be connected on network. Computers and devices do not need to be physically connected, and with IP address they can be logically connected over the network. In this background, the need to connect devices with serial port to Ethernet has increased and the device that connects them over Ethernet, Ethernet to serial convertor, has emerged.

sLAN/all

sLAN is network access equipment which transforms socket communication as well as RS232/422/485 serial communication to an Ethernet based communication.

sLAN does not only work as a standard device server but also provides additional features such as SGConfig and COM Redirector.



(Image) sLAN Application

sLAN Features

sLAN Connectivity and Management

sLAN reads RS232/422/485 signals from a serial device and transmits to network. In contrast, network data could be sent to serial data. Serial communication speed is up to 921.6Kbps while ensuring reliability. It supports various network protocols such as TCP, UDP, Telnet, DHCP, HTTP.

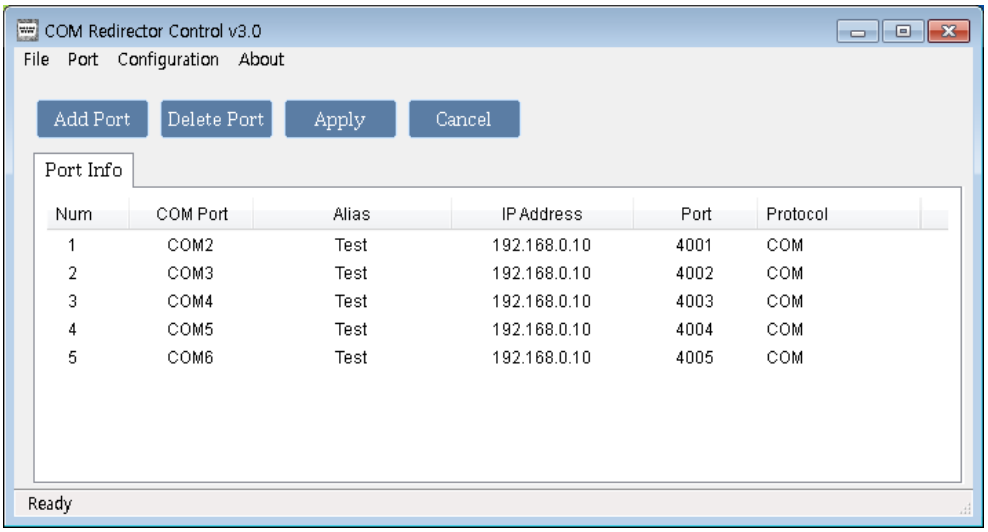
Configuration

sLAN helps the user to easily set up the environment for a high level of communication. Via web browser or Utility, it is available to configure serial communication, network and other advanced settings. sLAN provides easy and simple interface for setting via web browser.

COM Redirector

COM Redirector is a Serial-to- Ethernet and Ethernet-to-Serial conversion driver.

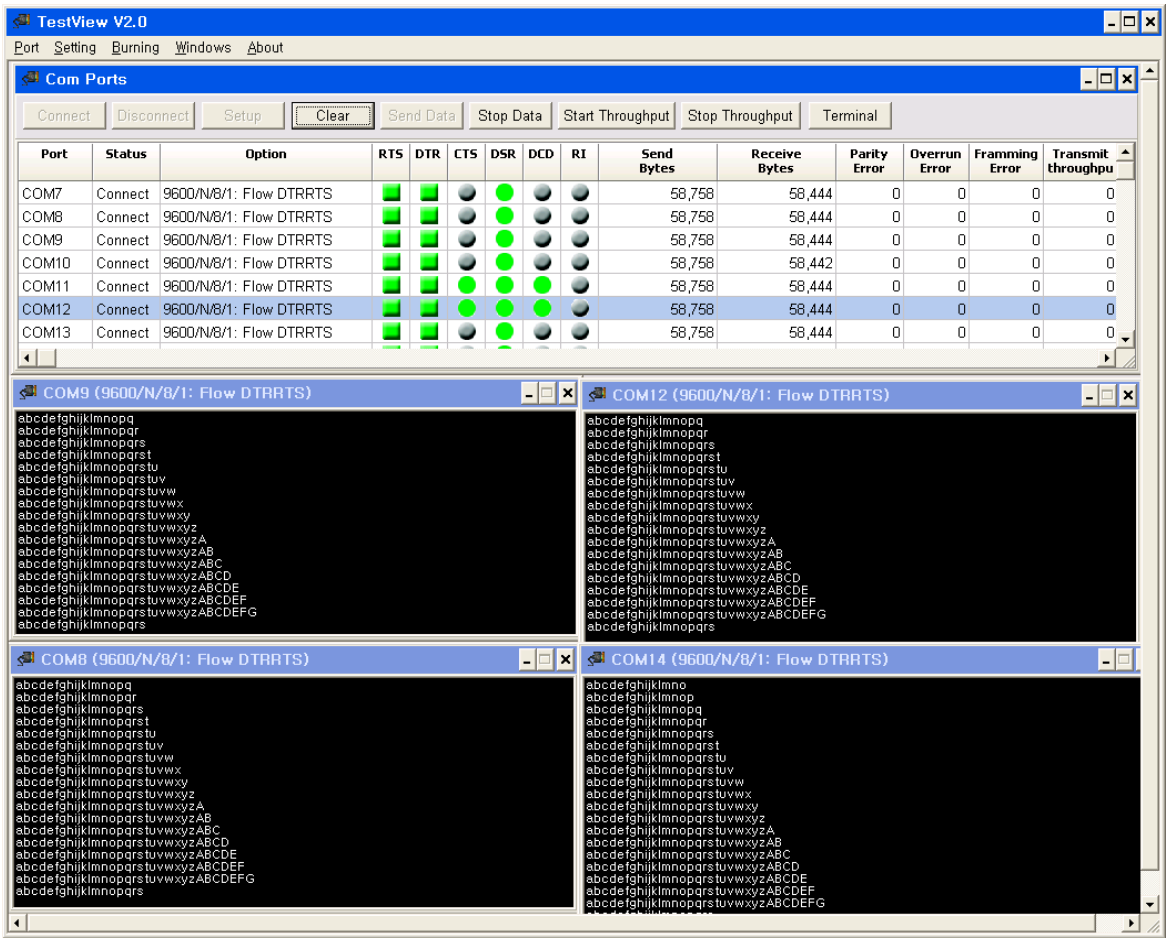
It allows a user to utilize serial ports of sLAN as they are serial ports on PC. User does not need to write a new socket program to use the existing serial communication program.



TestView

TestView is an application running in Windows. It tests performance and reliability of the products supplied by SystemBase.

It provides TCP, UDP server/client features, and performance, reliability, and stability can be evaluated using the burning test.

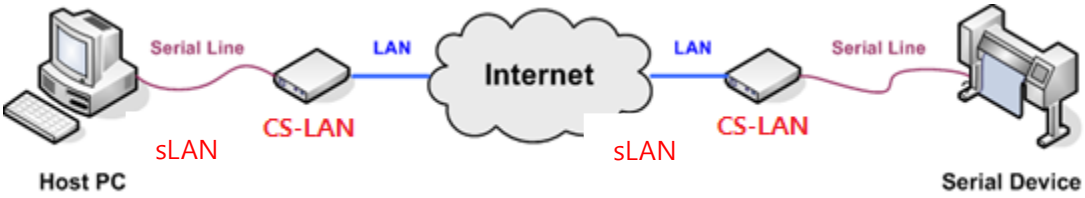

TestView V2.0
Port Setting Burning Windows About
Com Ports
Connect Disconnect Setup Clear Send Data Stop Data Start Throughput Stop Throughput Terminal
Port Status Option RTS DTR CTS DSR DCD RI Send Bytes Receive Bytes Parity Error Overrun Error Framming Error Transmit throughpu
COM7 Connect 9600/N/8/1: Flow DTRRTS 58,758 58,444 0 0 0 0
COM8 Connect 9600/N/8/1: Flow DTRRTS 58,758 58,444 0 0 0 0
COM9 Connect 9600/N/8/1: Flow DTRRTS 58,758 58,444 0 0 0 0
COM10 Connect 9600/N/8/1: Flow DTRRTS 58,758 58,442 0 0 0 0
COM11 Connect 9600/N/8/1: Flow DTRRTS 58,758 58,444 0 0 0 0
COM12 Connect 9600/N/8/1: Flow DTRRTS 58,758 58,444 0 0 0 0
COM13 Connect 9600/N/8/1: Flow DTRRTS 58,758 58,444 0 0 0 0
COM9 (9600/N/8/1: Flow DTRRTS)
COM12 (9600/N/8/1: Flow DTRRTS)
COM8 (9600/N/8/1: Flow DTRRTS)
COM14 (9600/N/8/1: Flow DTRRTS)

sLAN Application

sLAN can be used in many practical applications in various fields. Here we present some of them.

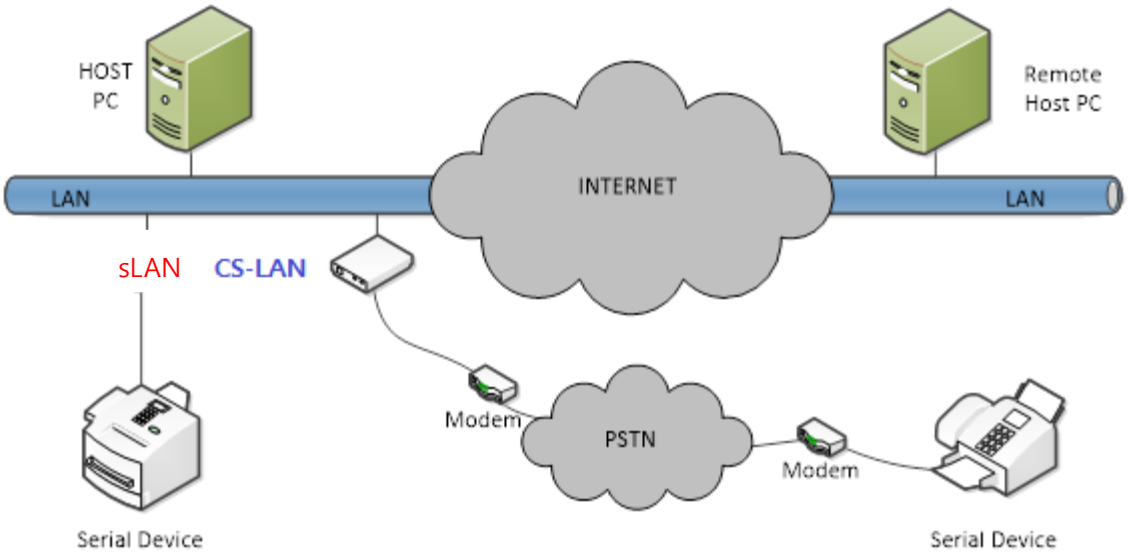
- **Serial Communication Tunneling**

Tunneling extends cable in between PC and serial devices to network so it makes serial cable with no distance limitation.



- **Serial to Ethernet Convertor**

As the most common example, PC and sLAN are connected to network, and serial devices connected to sLAN can be controlled in PC. Using 'COM Redirector' feature, it is available to use the program developed for serial port.



- **Remote Serial Port**

  To provide remote serial port, sLAN provides COM Redirector.