

# **sLAN/all-PoE**

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## **White Paper**

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Computers become more efficient tools not only by their own functions but also by utilizing functions provided by various types of equipment that connects to the outside.

In order for computers to connect equipment to the outside, they usually follow the standard communication methods, and the most widely used method is **serial communication**.

Serial communication is a method of communication based on telex communication that came out long before computers appeared, and almost every computer has serial communication port. Serial communication is easy, while slow and has difficulty for long-distance communication.

The method currently used for communication between computers is the **Ethernet** method.

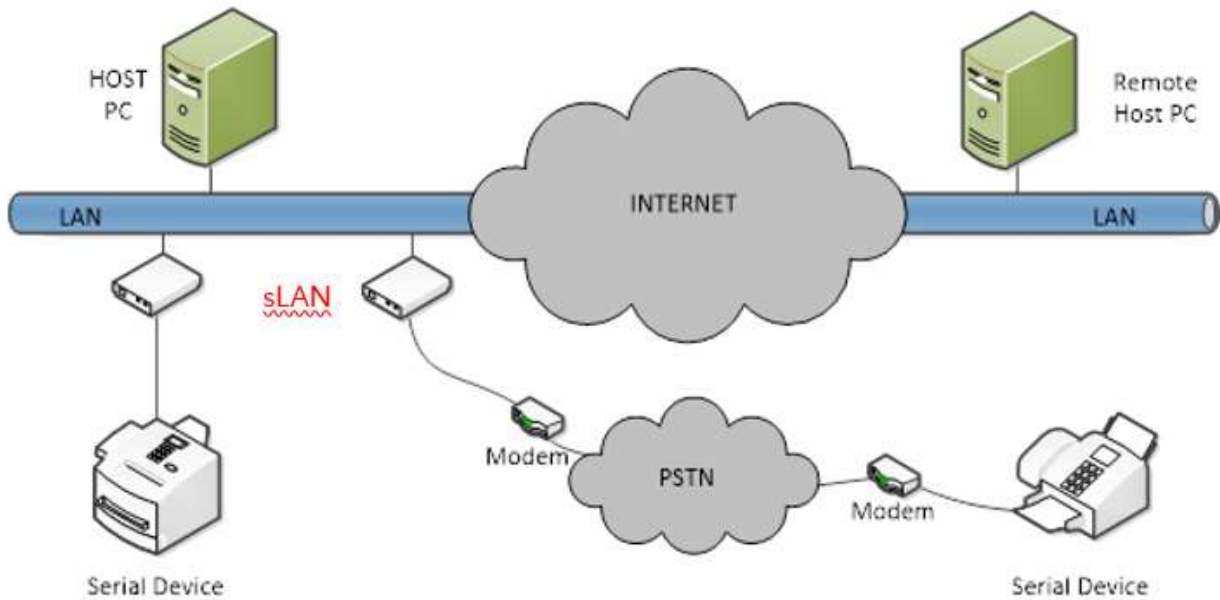
This method allows the parties to be connected to one coaxial cable as N:N, enables simultaneous communication at high speed. Although Ethernet methods have a convenient wiring structure, they are not suitable for connecting individual equipment as they are more complex and expensive than serial communication methods.

While these two methods with different purposes and features, Ethernet has evolved into an IP network(Internet). The IP network allows local networks to be interconnected, enables overcoming the spatial limits of Ethernet, which was several kilometers. Now an environment has been made to communicate with computers anywhere in the world just by connecting to the network.

Computers and equipment can be connected over the network with only an IP address without physical direct connection. Therefore, many equipment with serial ports needed to be connected to Ethernet, resulting in converter connecting them to Ethernet without any changes to the existing equipment.

## sLAN/all-PoE

The sLAN/All-POE is a network access device that converts RS232/422/485 serial signals to Ethernet-based communication. Basically, it is a communication converter which also provides additional functions through Com Redirector, SGConfig.



(Figure) sLAN utilization configuration

# sLAN/all-PoE Features

- **sLAN Connection and Management**

sLAN/all PoE reads RS232/422/485 signals from the serial equipment and sends it to the network. It also sends network data to serial data. It supports serial communication speed up to 960Kbps, ensuring fast and stable communication. Supporting various network protocols such as TCP, UDP, DHCP and HTTP, it can be used in various environments.

- **PoE Functionality**

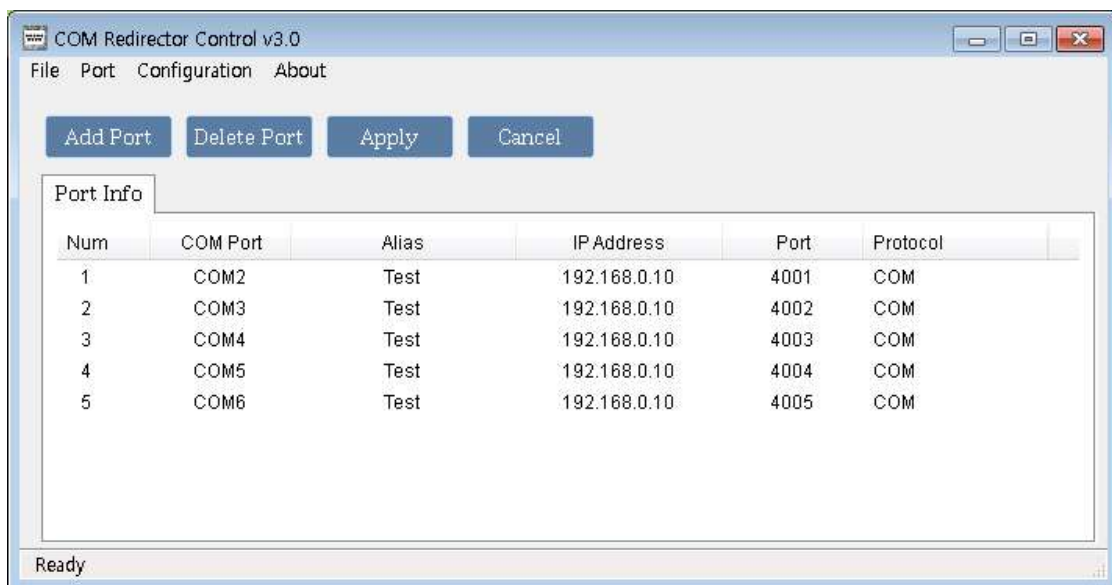
PoE stands for Power of Ethernet. Through the Ethernet Cable(UTP Cable), it can send data and power simultaneously. The PoE system consists of a Power Sourcing Equipment(PSE) and Power Device(PD). sLAN/all PoE is a PD device that receives supplied power.

- **Configuration**

sLAN/all PoE helps users to easily set up high level communication environments. Serial communication and advanced network environments can be set up via the web or utility. When setting up via the web, it can be accessed from the web browser and set up using the easy interface provided by sLAN/all PoE. And when setting up via the utility, the settings can be easily changed.

- **Com Port Redirector**

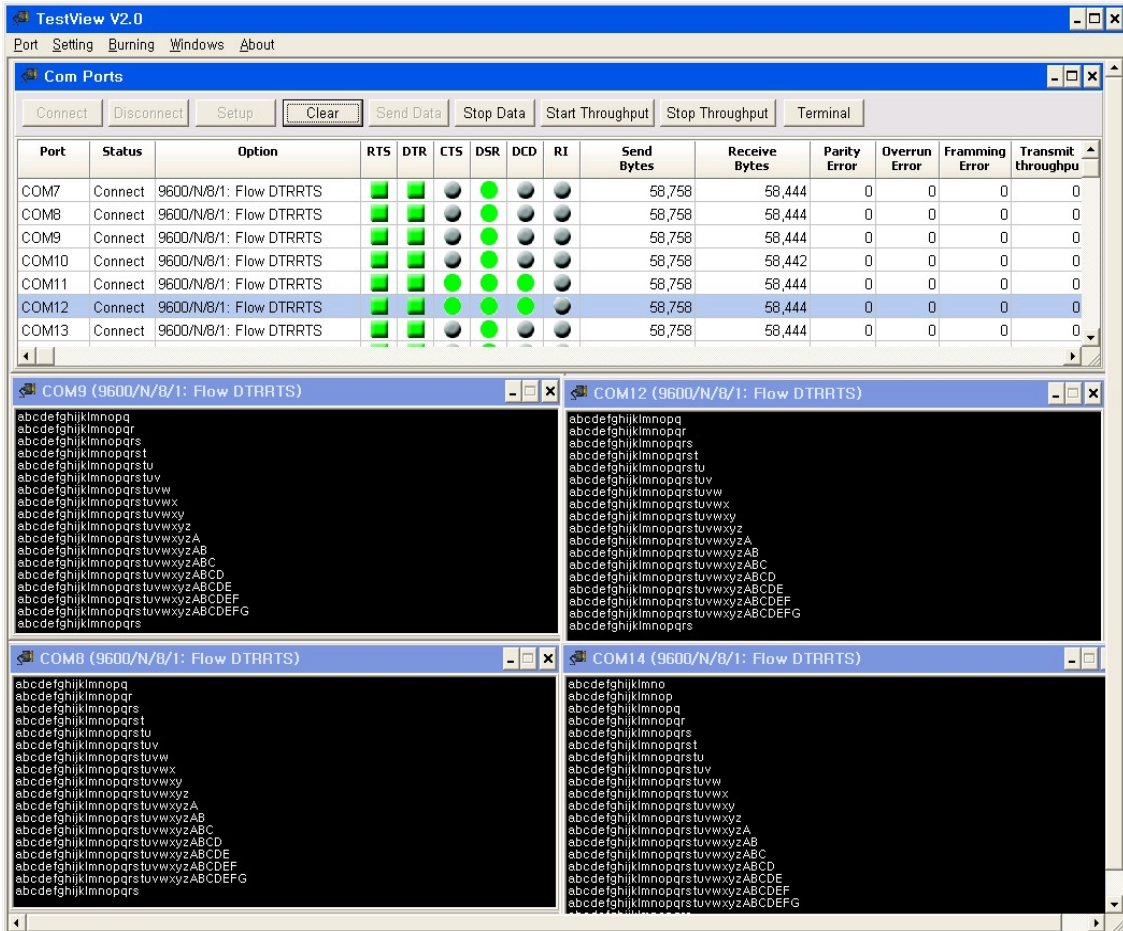
Com Port Redirector is an Application Software installed on an PC. It is a driver automatically converts Serial-to-Ethernet. Users can use network-connected sLAN/all PoE serial port as if it was mounted on their PC. Therefore, users can use the existing serial communication program without creating new socket programs.



● **TestView**

TestView program is a communication testing program that runs in a Windows environment to test the performance and reliability of multi-port, device server, converter and embedded module that SystemBase supply and sell.

It provides TCP, UDP server/client functions which is serial port and socket port, and can objectively evaluate the performance, stability, reliability of the equipment through the Burning test.



## sLAN/all-PoE Applications

sLAN/all PoE can be applied in various fields. There are many applicable areas as follows:

connection of POS related devices, monitoring/control of various production facilities, building automation, operation status monitoring/control/data collection of general equipment, remote control of equipment over the Internet, management of roads/railways/airports and harbors.

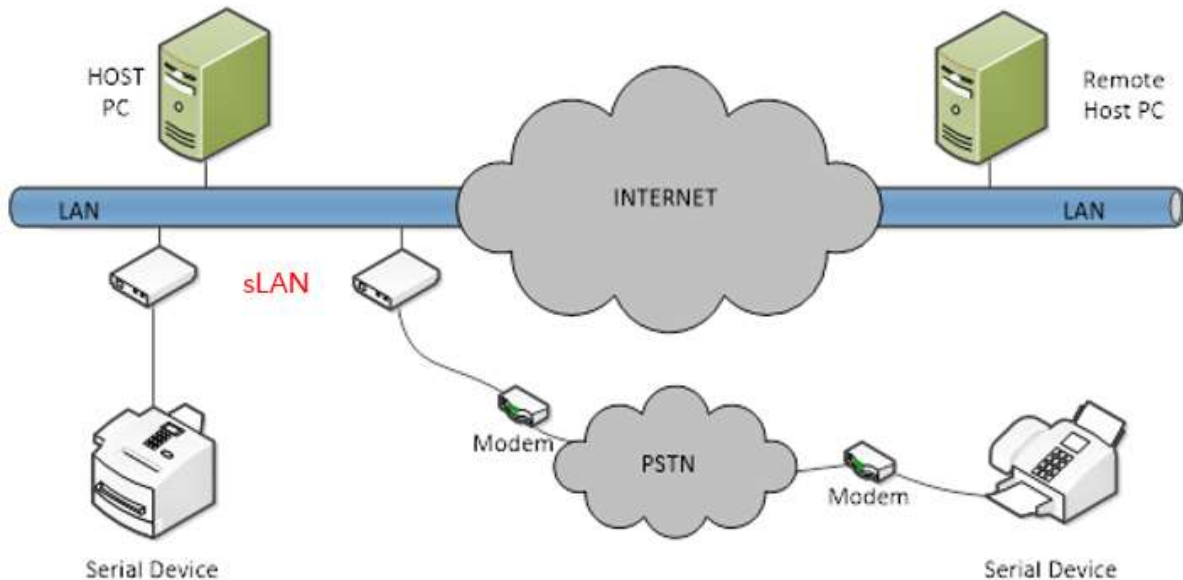
- **Serial Communication Tunneling**

Configure sLAN/all PoE 2pcs are a Server-Client Pair to solve the serial communication distance limits and high cost maintenances. Also, the Internet section can use various media such as wired, wireless sections and PPP communication.



- **Serial to Ethernet Convertor**

Serial devices connected to sLAN/all are able to be used on PCs as PC and sLAN/all are connected over the network. At this time, with COM Redirector provided, users can use the program developed for COM ports.



- **Remote COM Port**

sLAN/all PoE provides remote COM port through COM Redirector, which provides the advantage of being able to use the program developed for COM ports.

