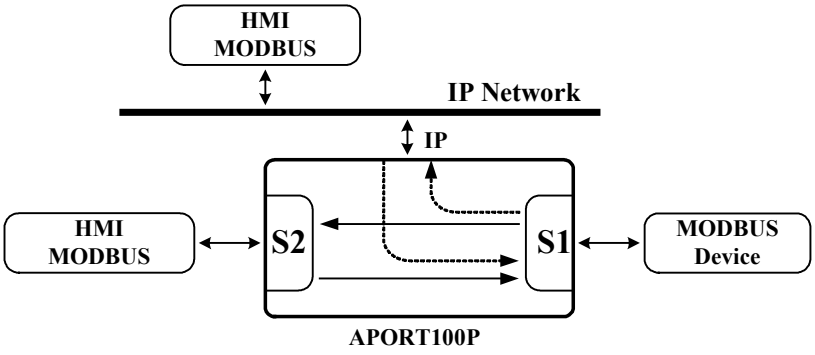
How to use APORT100P in your control environment

Traditionally we may use RS232 cable to connect between HMI control panel(may be one PC or one PLC or Touch panel...) and machine (one slave device).Now IP network is more popular and cost acceptable. So we may use Ethernet serial device server to connect with machine. Our HMI control panel will access target machine in any Ethernet reachable location. Now we may connect our machine with Ethernet serial device server and HMI control panel will access target machine via network. But local HMI control panel do not connect with machine and can't access machine. Or you may connect local HMI control panel with machine. Then we can't access machine via network in remote site. To solve this condition we can use APORT100P box to let local HMI control panel and remote HMI control panel to control machine.

APORT100P box can support two RS232 serial ports. One RS232 serial port is major serial port to connect with target machine. The other RS232 serial port is pass-through serial port to connect with local HMI control panel. So we can access target machine by remote HMI control panel via Ethernet. And local HMI control panel can access target machine also. When we send data in remote HMI control panel to target machine, the response data will send back to remote HMI control panel and local HMI control panel. When we send data in local HMI control panel to target machine, the response data will send back to local HMI control panel and remote HMI control panel.



When we use APORT100P in control environment. People can control target machine in comfortable area (may be one location with air conditioner) in normal working day. People can also control target machine in working area (may be very hot and uncomfortable environment). Why you need to work in uncomfortable area. Because you may have some problem to control target machine in comfortable area. For example, we may have problem to control our target machine in remote site (comfortable area for mankind). We need to find the possible problem. We may have problem in LAN cable connection. Or we may have problem in Ethernet serial device server function. Maybe we have problem in RS232 cable. In traditional Ethernet serial device server it is

not easy to find possible reason. To use APORT100P we can find the possible reason easily. When we can't control target machine in remote site and we can control target machine in local HMI control panel. Then it may be LAN connection problem. When we can't control target machine in local and remote HMI control panel. Then it may be problem in RS232 cable or machine itself. So it is very easy to maintain our control system with APORT100P. People can work in comfortable area upon normal working day and stay in working area upon special condition.

Generally we will use serial port 1 of APORT100P in virtual COM mode. Then serial port 1 of APORT100P will work as standard COM port in one PC. If we had one PC as local HMI control panel, then we may use standard COM port to connect with target machine. The software for local PC (HMI control panel) will handle data communication task based on serial port. Because serial port 1 of APORT100P is one virtual COM port in remote PC (HMI control panel). So you can use same software in remote site. To use APORT100P box you can have same HMI control panel in local site and remote site. The only difference is local site will use RS232 cable to connect and remote site will use Ethernet connection.

But we still have one difference between standard COM port and virtual COM port. When we send data in standard COM port, we can confirm the data transmission timing. When we send data completely in PC, target machine receive data completely in the similar time. For virtual COM port we may send data from PC via IP packet and received by Ethernet serial device server. Then Ethernet serial device server will convert such IP packet to serial data and send to target machine. The data transmission finished time point in PC may have some time delay for machine data received time point. When we run same software in local PC and remote PC, we need to take care this difference. If we did not take care this difference in software, we may have problem in remote site. That is why we may have problem to run our current software for local PC in remote PC. When you need to create new application software for your target machine. In traditional Ethernet serial device server environment you may try your software in local PC connection and swap to remote PC connection. So you need to change RS232 cable to connect with local PC or Ethernet serial device server. You may have bad connection for RS232 cable and you always have problem. You don't know this condition and try to find problem in software. It is very stupid condition. To use APORT100P we have fixed RS232 cable for local PC and target machine. We can run same software in local PC and remote PC. You just need to focus your effort in software.

Now you can know APORT100P is your optimum solution in Ethernet serial device server application environment.