# How to use APORT210 box as serial port sharer application

Due to RS232 connection is **common ground** and **point-to-point** communication. So we can't use RS232 cable to connect multiple RS232 devices together directly. For example, we may have one thermometer to send temperature data periodically or required. Generally we may use **RS485 half-duplex** method to let multiple controllers to connect with this equipment. If we just had RS232 interface in all equipments, then we may need RS232 to RS485 converter in this application environment. Now, RAYON Technology's **S232 serial port sharer** box can let 3 RS232 controllers to connect with one RS232 equipment simultaneously. But we may have one condition to ask **LAN** connection. Some PC may need to have such data via network. Then we may need one **network serial port device server** box to have one RS232 connection in LAN and connect to S232 serial port sharer. Now, we have one new **APORT210** box to solve this problem.
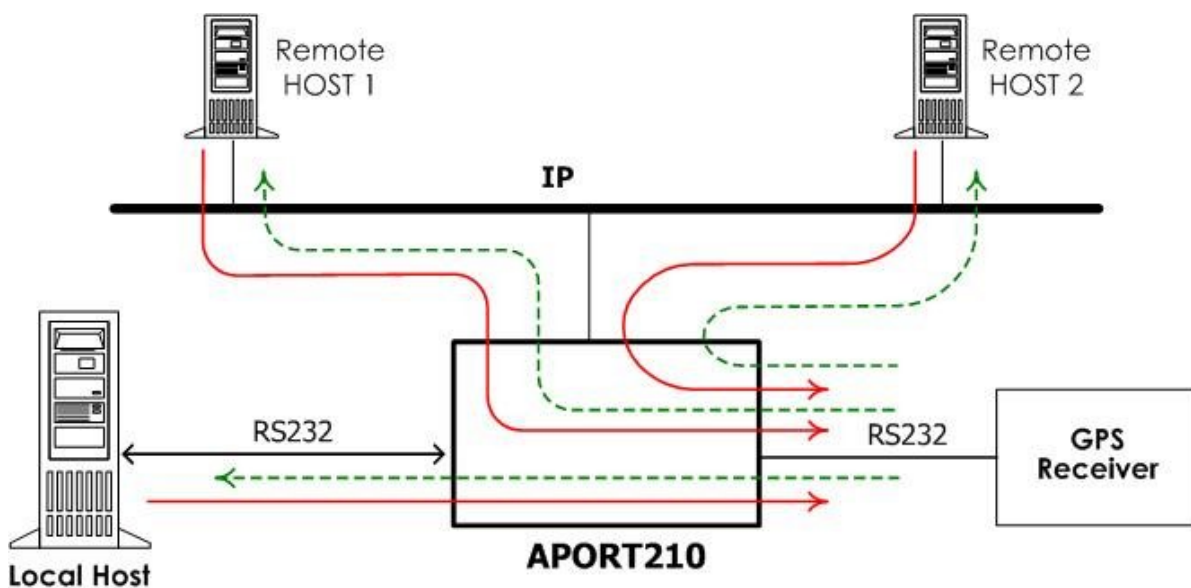
APORT210 box can have two **local** RS232 serial port connectors and two virtual COM ports in LAN connection. In serial port 1 we have **same signal GROUND** with local power input. In serial port 2 we have **ISOLATED GROUND** with local power input. In normal operation we will receive data from serial port 1 and re-transmit in serial port 2. When we receive data in serial port 2, we will re-transmit in serial port 1 and virtual COM port 1/2. When we receive data in virtual COM port 1 and 2 (or we can say to send data in virtual COM port), we will re-transmit in serial port 2. So you can consider serial port 2 as **master serial port** and the other serial port as **slave serial port**. Any data received in slave serial port will re-transmit to master port only. Any data

received in master port will re-transmit in all slave ports.

   For example, we may have one **GPS receiver** and we need to use such GPS data in multiple locations. We will connect GPS receiver to serial port 2 of **APORT210** box. We have one PC to connect in serial port 1 and the other two PC to use virtual COM port via LAN connection. In normal condition GPS receiver will send GPS data to all PCs. We can also set GPS receiver in any PC.

   So we can use one APORT210 box to replace one **S232 serial port sharer** and two network **serial port device servers**. Because serial port 2 is **GROUND Isolated**, so we can have better connection between APORT210 box and RS232 equipment. It is very easy for us to share the data in master equipment and control such equipment from any PC.