

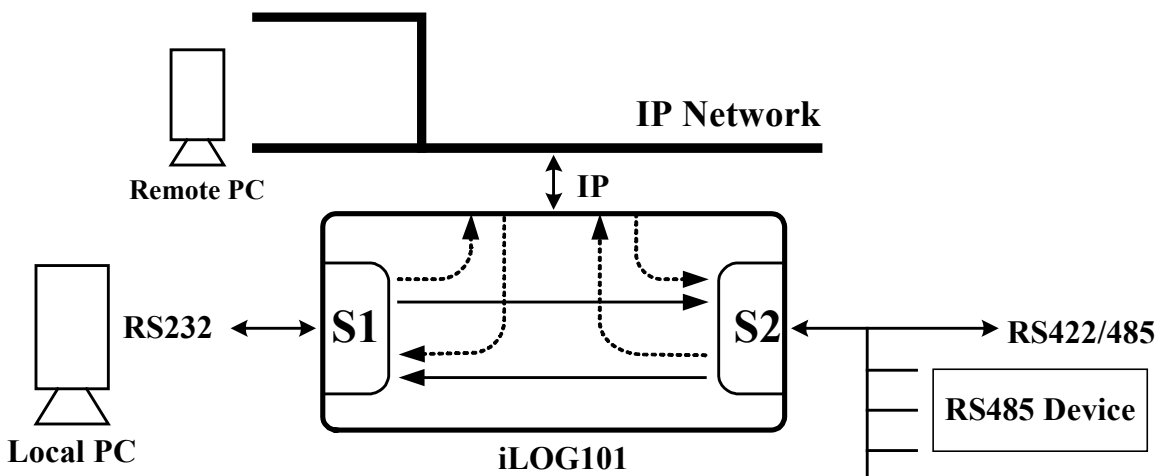
## How to use iLOG101 box in your application environment

Traditionally we need to let one RS232 device to be used in RS485 environment, we may need one RS232 to RS485 converter. Due to RS232 signal is common ground type and RS485 signal is differential type. And RS485 signal is used in long distance connection environment. So we may need GROUND isolated feature between RS232 and RS485 interface. Due to RS232 signal is used in full duplex transmission protocol and RS485 signal is used in half duplex protocol. When there are some problems in RS485 network, we may need to find the possible reason. It may be RS232 connection problem. It may be RS232 to RS485 converter function problem. Traditionally we will use dedicated equipment to monitor RS232 signal and RS485 signal. But such equipment and connection will change the original application environment (we may use extra RS232 receiver to monitor RS232 signal. And this structure will increase loading in transmitter site. we may use extra RS485 receiver to monitor RS485 signal. And this structure will increase loading in RS485 network). So we may not have same result as original environment. Now, iLOG101 converter can help you to solve such problem.

iLOG101 box is RS232 to GROUND isolated RS485 converter with network monitored capability. In serial port 1 it is RS232 interface. In serial port 2 it is RS485 interface. When iLOG101 is connected to Ethernet network, we can install virtual COM driver in remote PC (this PC will connect to Ethernet network also). Then serial port 1 of iLOG101 box will be virtual COM port 1 of remote PC and serial port 2 of iLOG101 box will be virtual COM port 2 of remote PC. Now the data received from external RS232 device in serial port 1 will be converted to RS485 signal to send in serial port 2. And such data will be also sent to remote PC's virtual COM port 1. In the other side the data received from RS485 network in serial port 2 will be converted to RS232 signal to send in serial port 1. And such data will be also sent to remote PC's virtual COM port 2. So iLOG101 box will be worked as normal RS232 to RS485 converter. But we can monitor in remote PC to record all data received in RS232 port and RS485 port. When we find problem in RS485 network. Then we can analyze data recorded in remote PC (by virtual COM port 1 and 2) to find possible reason.

Because serial port 1 and 2 of iLOG101 box are virtual COM port 1 and 2 of remote PC. So we can send data in virtual COM port 1 of remote PC and such data will be sent in serial port 1 (RS232) of iLOG101 box to external RS232 device. We can send data in virtual COM port 2 of remote PC and such data will be sent in serial port 2 (RS485) of iLOG101 box to external RS485 network. So we can exchange data between

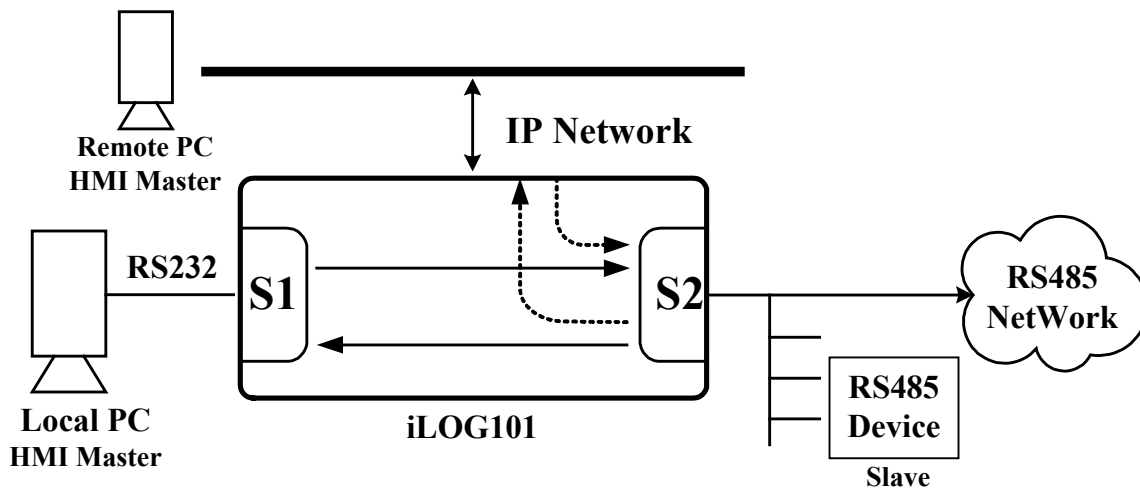
serial port 1 and 2 of iLOG101 box, we can also send data from remote PC.



There are many serial modes available in iLOG101 box. When we set each serial port in iLOG101 box to be "virtual COM" mode. The serial port 1 and 2 in iLOG101 box will be worked as standard COM port in PC. In normal condition iLOG101 box will be used as standard RS232 to GROUND isolated RS485 converter. But we can use remote PC to monitor data received in serial port 1 and 2 via network connection. This data monitor and log process will not change the normal application environment for RS232 connection and RS485 connection. When we find some problem in working environment. We can analyze data logged in remote PC to find possible reason. For example, we may receive the data from external RS232 device in serial port 1, but we do not receive response data from RS485 network in serial port 2. We may need to confirm the data from external RS232 device is correct. So we will send response data from remote PC's virtual COM port 1 to simulate RS485 network response. Then we can know the "Poll & Ack" procedure and protocols are correct or not. In the other side we may receive data from RS485 network in serial port 2, but we do not receive response data from external RS232 device in serial port 1. So we can send response data in remote PC's virtual COM port 2 to simulate RS232 device response data. So you can find the problem in hardware or software issue easily.

iLOG101 box can also be used in two PCs as master HMI control panels for RS485 network application environment. Generally one PC's COM port is RS232 interface. So we will connect this PC's COM port to serial port 1 of iLOG101 box. The serial port 2 of iLOG101 box is connected to RS485 network. We can have the other PC in remote site to use virtual COM port 2 to access RS485 network via Ethernet network.

In this application structure we can have local PC to control RS485 network via serial port 1 in iLOG101 box and remote PC to control RS485 network via Ethernet connection in iLOG101 box. So we can have iLOG101 box and local PC (HMI control panel) to stay in uncomfortable working area and people stay in comfortable area. In normal condition we can work in comfortable area. In special condition we can also work in uncomfortable working area.



Now we can find the merit for iLOG101 box. To use iLOG101 box we can have RS232 to GROUND isolated RS485 converter function. We can monitor such data transmission action in real time based. We can also simulate data transmission procedure to trigger abnormal procedure. We can use iLOG101 box in two master HMI control panel application environment. We can use local master HMI control panel to control RS485 network in uncomfortable area. We can also use remote master HMI control panel to control RS485 network in comfortable area. In RS232 application environment we can have APORT100P box to support two master HMI control panel structure.

