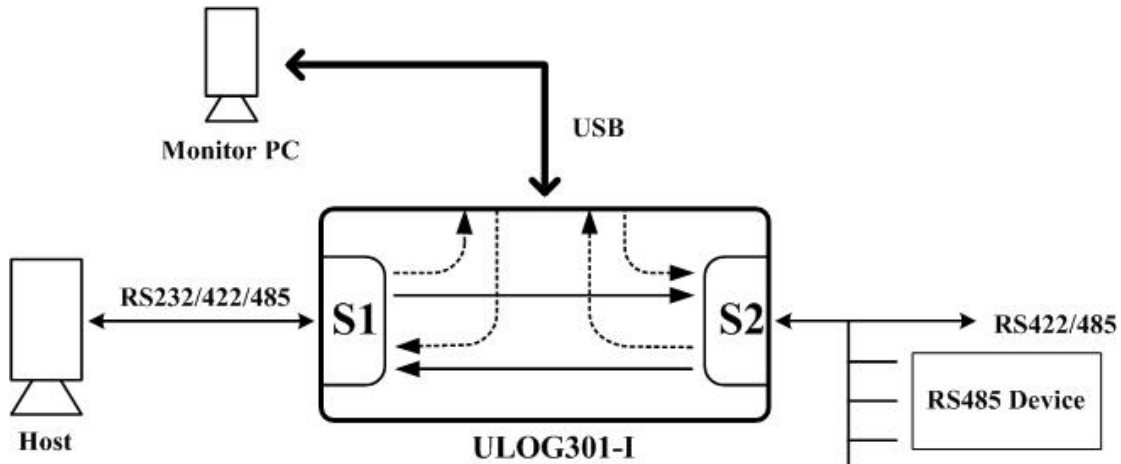# ULOG301-I box is intelligent converter

ULOG301-I box is powerful intelligent monitored interface converter to support **GROUND isolated** feature and **interface type conversion** function. We can create two COM ports in PC via USB connection to monitor data communication in both direction.

There are two DB9 connectors in ULOG301-I box. Serial port 1 is **RS232/RS422/RS485 settable**, so you can connect with any host equipment. Serial port 2 is **GROUND isolated RS422/RS485** settable. We can us USB bus power mode or use external 5V power adapter to offer power supply for ULOG301-I box. The signal ground pin in serial port 1 is same as signal ground pin of 5V power adapter and USB bus. The signal pin in serial port 2 is different and isolated with serial port 1 and USB bus. So we can remove the ground loop between the device to connect with serial port 1 and device to connect with serial port 2.

When ULOG301-I box is connected with PC via USB cable. There are two COM ports created in PC. The first COM port will transmit and receive data in serial port 1. The second COM port will transmit and receive data in serial port 2. In normal condition we will not transmit data in COM port and we just receive data in COM port. Then ULOG301-I box is just worked as normal interface converter box. But all data transmission in this interface converter will be monitored in PC without any interruption. If there were any problem in application environment, then we can analyze such received data in COM port to find possible reason. Maybe we can disconnect one device connected to serial port 1 or serial port2. Then we can use COM port as simulated device to communicate with the other device. So we can know the problem in equipment or connection cable. RAYON Technology just offer one utility software "RAYREAL" to show two COM ports' data in one display window. The data received from both serial ports will be shown and analyze. So it is

very easy for us to find possible problem. All the source files for RAYREAL software are included in CD. User can use these source files and modify to meet target application environment.

We can use ULOG301-I box as **full-duplex RS232** to GROUND isolated **half-duplex RS485** interface **converter**. So we will set serial port 1 in RS232 interface type (DIP Switch bit 1 and bit 2 set in OFF location) and serial port 2 in RS485 interface type (DIP Switch bit 3 in OFF location and bit 4 in ON location). Now we can let one RS232 device to be used in RS485 network safety. The **ADDC** (Auto-Data-Direction-Control) feature will handle data transmit/receive function automatically.

We can use ULOG301-I box as **full-duplex RS422** to GROUND isolated **half-duplex RS485** interface **converter**. So we will set serial port 1 in RS422 interface type (DIP Switch bit 1 and bit 2 set in ON location) and serial port 2 in RS485 interface type (DIP Switch bit 3 in OFF location and bit 4 in ON location). Now we can let one full-duplex RS422 device to be used in half-duplex RS485 network safety.

We can use ULOG301-I box as RS485 to GROUND isolated **RS485 Bridge**. So we will set serial port 1 in RS485 interface type (DIP Switch bit 1 in OFF location and bit 2 set in ON location) and serial port 2 in RS485 interface type (DIP Switch bit 3 in OFF location and bit 4 in ON location). Now we can let one RS485 device to be used in different RS485 segment safety. We can increase the area for RS485 network and total number of RS485 equipment.

We can use ULOG301-I box as **full-duplex RS232** to GROUND isolated **full-duplex RS422** interface **converter**. So we will set serial port 1 in RS232 interface type (DIP Switch bit 1 and bit 2 set in OFF location) and serial port 2 in RS422 interface type (DIP Switch bit 3 and bit 4 in ON location). Now we can let one RS232 device to be connected with RS422 device in remote site.

We can use ULOG301-I box as **full-duplex RS422** to GROUND isolated full-duplex **RS422 repeater**. So we will set serial port 1 in RS422 interface type (DIP Switch bit 1 and bit 2 set in ON location) and serial port 2 in RS422 interface type (DIP Switch bit 3 and bit 4 in ON location). Now we can extend the range for one RS422 device to be connected with another RS422 device safety.

We can use ULOG301-I box as **half-duplex RS485** to GROUND isolated **full-duplex RS422** interface **converter**. So we will set serial port 1 in RS485 interface type (DIP Switch bit 1 in OFF location and bit 2 set in ON location) and serial port 2 in RS422 interface type (DIP Switch bit 3 and bit 4 in ON location). Now

we can let one RS485 device to be connected with RS422 device safety.

In **RS485 application environment** we can use one **ULOG301-I** box to let any equipment worked in. You can let one RS232 device to be worked in RS485 network. You can extend your RS485 segment to support more equipments and wide range. What you need is to prepare one ULOG301-I box in stock. Don't need to prepare RS232 to RS485 **interface converter**. Don't need to prepare RS422 to RS485 **interface converter**. Don't need to prepare RS485 to RS485 **Bridge** box. **Save your cost in stock. Support your function in emergency requirement.**

In normal condition nobody will consider to monitor the data communication in application environment. When there are some problems in your RS485 application environment. It is not easy to find the reason upon something happened. Because the hardware environment is changed and time schedule is different. So it is very important for us to monitor data communication in application environment anytime. If there were something wrong, then we can analyze the monitored data to find possible reason. It is just like video recorder. You can play later to find something wrong. Or you can send warning message upon wrong condition. In normal condition we can record the data communication in **ULOG301-I** box and analyze later. We can also send warning message upon found data communication out of rule. If you did not need to monitor your data communication, then you can use less expensive **UCON301-I** box. UCON301-I box is converter only model. **ULOG301-I** box is converter with monitored capability feature model.

RAYON Technology can also offer **UCON310-I** and **ULOG310-I** box. They are major in GROUND isolated RS232 application environment. If you need to monitor data communication via IP network connection, then **iLOG101** box and **iLOG333** box can meet your target. **ILOG333** box can support RS232/RS422/RS485 settable input to RS232/RS422/RS485 settable output and monitor via two COM ports created in IP network. **ILOG101** box can support RS232 to GROUND isolated RS422/RS485 converter and monitor via two COM ports created in IP network.

In serial port application environment you can send mail to info@rayontech.com.tw or rayon@ms1.hinet.net to talk with over 35 years experience engineer.