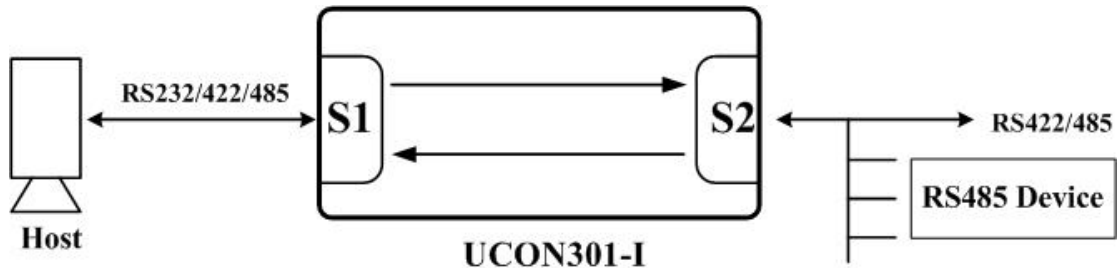# UCON301-I box is intelligent converter

UCON301-I box is powerful intelligent interface converter to support **GROUND isolated** feature and **interface type conversion** function.


There are two DB9 connectors in UCON301-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 will use external 5V power adapter to offer power supply for UCON301-I box. The signal ground pin in serial port 1 is same as signal ground pin of 5V power adapter. The signal pin in serial port 2 is different and isolated with serial port 1. So we can remove the ground loop between the device to connect with serial port 1 and device to connect with serial port 2.

We can use UCON301-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.
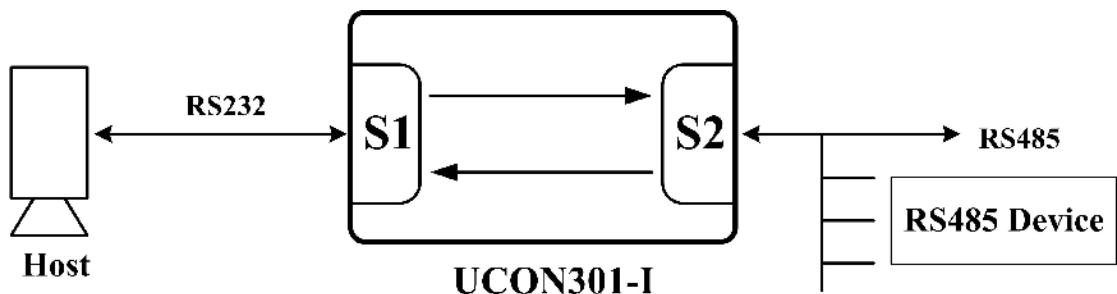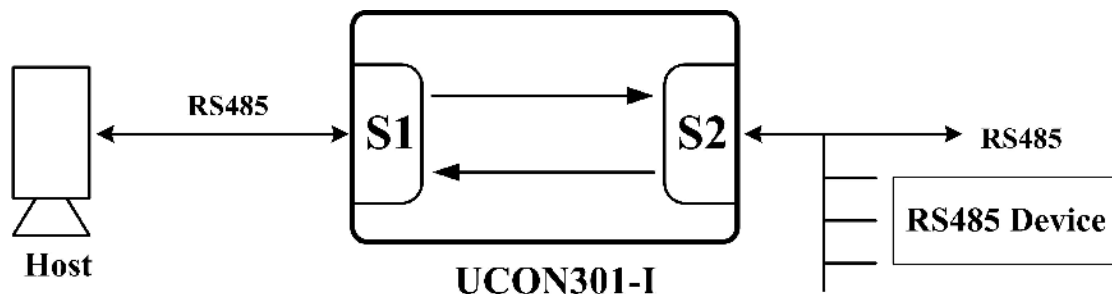

We can use UCON301-I box as **full-duplex RS422** to GROUND isolated **half-duplex RS485** interface **converter**. So we will set serial port 1 in RS422
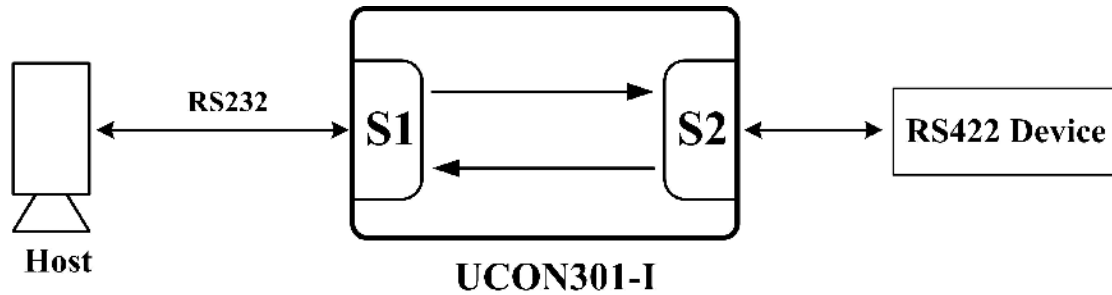
interface type (DIP Switch bit 1 and bit 2 set in ON location) and serial port 2 in RS485 interface type (DIP Switch bit 3 in OFF location and bit 4 in ON location). Now we can let one full-duplex RS422 device to be used in half-duplex RS485 network safety.
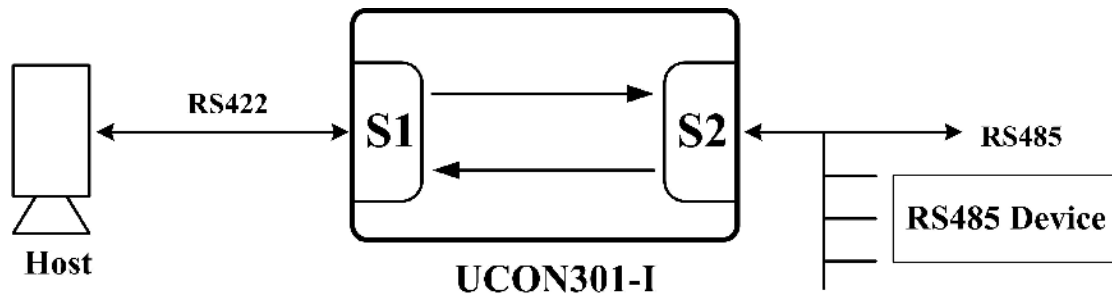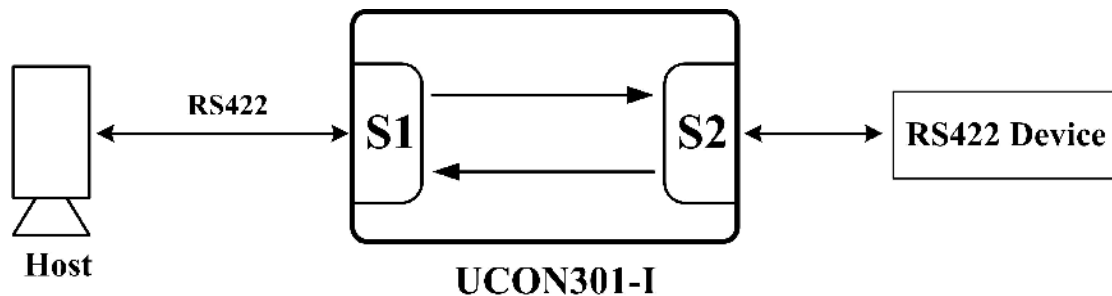

We can use UCON301-I box as RS485 to GROUND isolated **RS485 Bridge**. So we will set serial port 1 in RS485 interface type (DIP Switch bit 1 in OFF location and bit 2 set in ON location) and serial port 2 in RS485 interface type (DIP Switch bit 3 in OFF location and bit 4 in ON location). Now we can 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 UCON301-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.

RS232 → **S1** → **S2** ↔ **RS422 Device**

Host

UCON301-I

We can use UCON301-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.

RS422 → **S1** → **S2** ↔ **RS422 Device**

Host

UCON301-I

We can use UCON301-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.

RS485 → **S1** → **S2** ↔ **RS422 Device**

Host
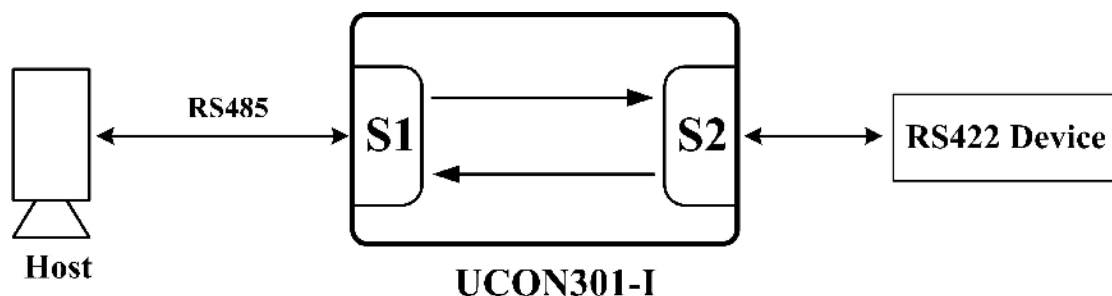
UCON301-I

In **RS485 application environment** we can use one **UCON301-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 UCON301-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.**

When there are some problems in your RS485 application environment. Another product ULOG301-I box from **RAYON Technology** can help you. **ULOG301-I** box can support same function as UCON301-I box. But you can **monitor** data transmission **real time** via USB connection. When you have one ULOG301-I box to be connected with PC via USB cable. You can create two COM ports in PC. Each COM port will receive data in serial port 1 and serial port 2. When there are any problems in application environment, we can analyze such data transmission in network to find possible problem.
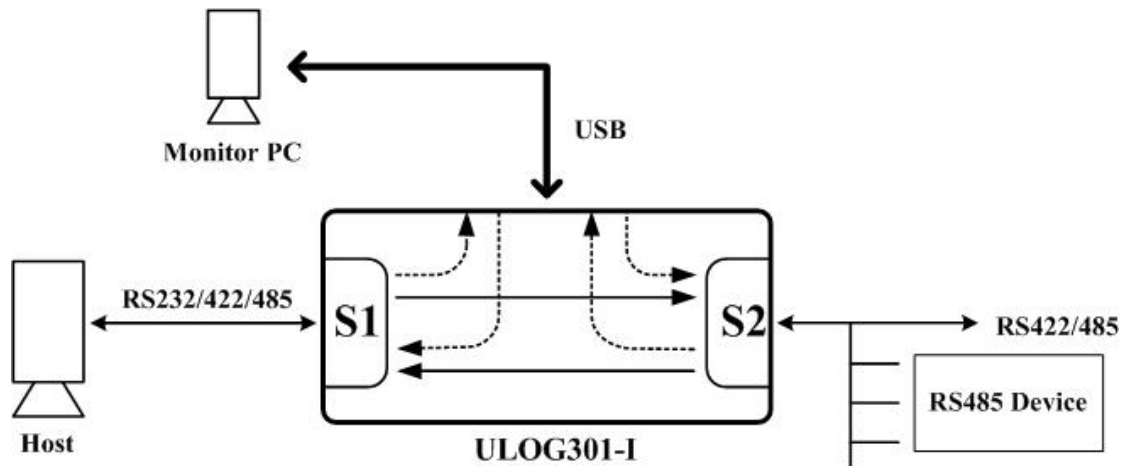
In serial port application environment you can send mail to info@rayontech.com.tw or rayon@ms1.hinet.net to talk with over 35 years experience engineer.