

## **TWIN485DB-I box is your solution in rigid environment**

---

### **Introduction:**

TWIN485DB-I box can support two sets RS232 to Ground Isolated RS422/485 interface converter. From hardware point of view we can find opto-isolation between each connector and power supply to support robust protection from Ground loops and stray currents. From software point of view we can have Auto-Data-Direction-Control feature in Full-duplex and Half-duplex interface convert function without special software involved in control signal. So TWIN485DB-I box is your optimum solution in serial port communication environment.

When one user needs to have long distance communication capability, we can use full-duplex RS422 interface or half-duplex RS485 interface. In TWIN485DB-I box we can set each serial port to target RS422 interface mode or RS485 interface mode vi DIP SWITCH anytime.

Traditionally one RS232 to RS422/485 interface converter box just support one set converter module to work. When we find something wrong, it is not easy to confirm where is the point for problem. And it is not easy to recover the function to run, except you have another box in hand to replace. Now RAYON Technology have the product TWIN485DB-I box to help you. Because we have two sets RS232 to RS422/RS485 interface converter module in one box, so we can use another interface converter module to exchange the malfunction interface converter module to recover the system. It means that one TWIN485DB-I box can have one set RS232 to RS422/RS485 interface converter module as working one and the other interface converter module as standby one for backup.

Traditionally we need to extend the distance for RS422 connection or the number nodes of RS485 network, we may need one dedicated RS422 repeater box to extend connection range or dedicated RS485 Bridge box to add nodes in RS485 network. In RAYON Technology TWIN485DB-I box we can arrange to run as RS422 repeater function or RS485 Bridge function. It means that one TWIN485DB-I box can be your RS232 to RS422/485 interface converter box, RS485 Bridge box and RS422 repeater box. So we can simplify the system structure and save your cost in stock for maintenance. In traditional solution we need to prepare one box for RS232 to RS422/RS485 interface converter function, one box for RS485 Bridge

function or one box for RS422 repeater function. Now the fancy TWIN485DB-I box can keep only one box in stock for maintenance purpose.

### Application structure:

1. to be used as two sets RS232 to RS422 interface converter.



Now you can have two RS232 devices to connect with remote device via RS422 interface connection.

2. to be used as two sets RS232 to RS485 interface converter.



Now your can have two RS232 device to connect in RS485 network.

### Special Application structure:

3. We can just use one set RS232 to RS422 interface converter module and the other for backup purpose.



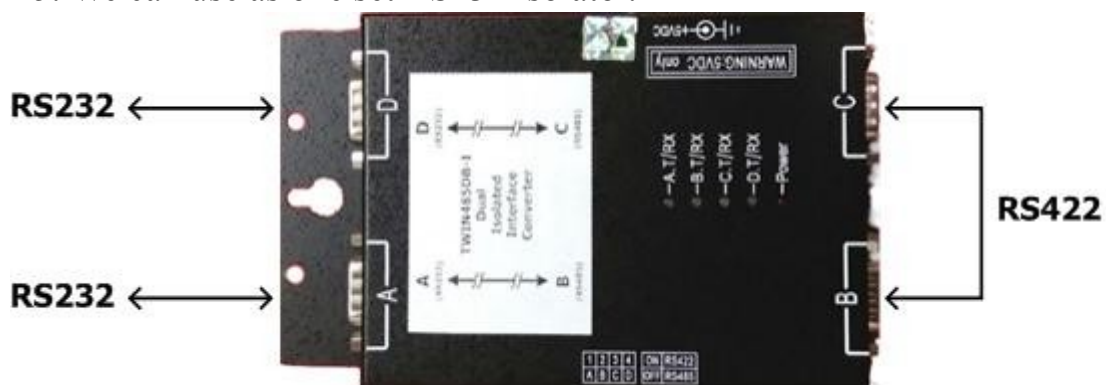
When we find something wrong in working one, we can exchange to backup one immediately.

4. We can just use one set RS232 to RS485 interface converter module and the other for backup or monitor purpose.



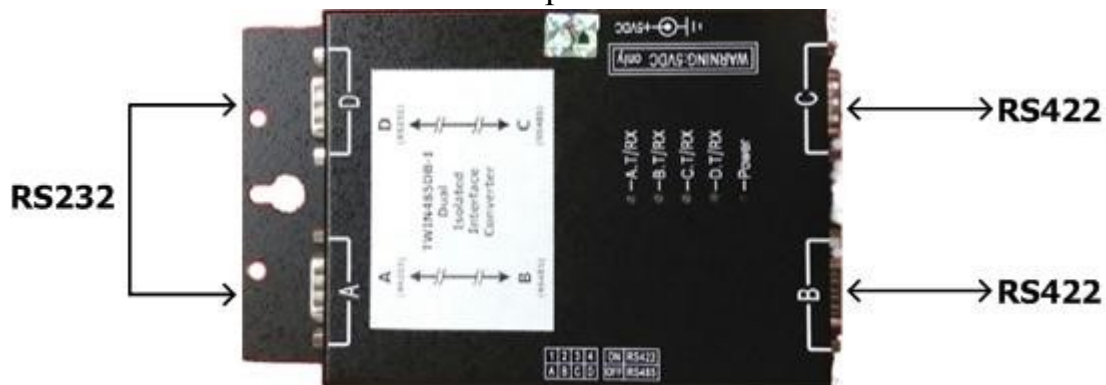
- 1) We can use Monitor Port to check the activity in whole RS485 network.
- 2) When we find something wrong in working one, we can use Monitor Port to replace working one

5. We can use as one set RS232 isolator.



When we need to connect two RS232 device with GROUND isolated feature, we can set TWIN485DB-I box as two sets RS232 to RS422 interface converter. Then we can use one NULL MODEM cable between two RS422 ports. So two RS232 ports will be used as RS232 isolator.

6. We can use as one set RS422 repeater.



When we need to extend the range for RS422 connection, we can set TWIN485DB-I box as two sets RS232 to RS422 interface converter. Then we can use one NULL MODEM cable between two RS232 ports. So two RS422 ports will be used as RS422 repeater.

7. We can use as one set RS485 Bridge



- 1) When we need to support more RS485 nodes in one RS485 network, then we need to use one RS485 Bridge to split RS485 network.
- 2) We can set TWIN485DB-I box as two sets RS232 to RS485 interface converter. Then we can use one NULL MODEM cable between two RS232 ports. So two RS485 ports will be used as RS485 Bridge.

8. We can use as one set full-duplex RS422 to half-duplex RS485 interface converter.



- 1) When one RS422 device need to work in RS485 network, we can use TWIN485DB-I box as such converter box. One set of module in TWIN485DB-I box is set in RS232 to RS422 interface converter function. The other set of module in TWIN485DB-I box is set in RS232 to RS485 interface converter function. Then we can use one NULL MODEM cable between two RS232 ports. So we can have RS422 to RS485 interface converter available.