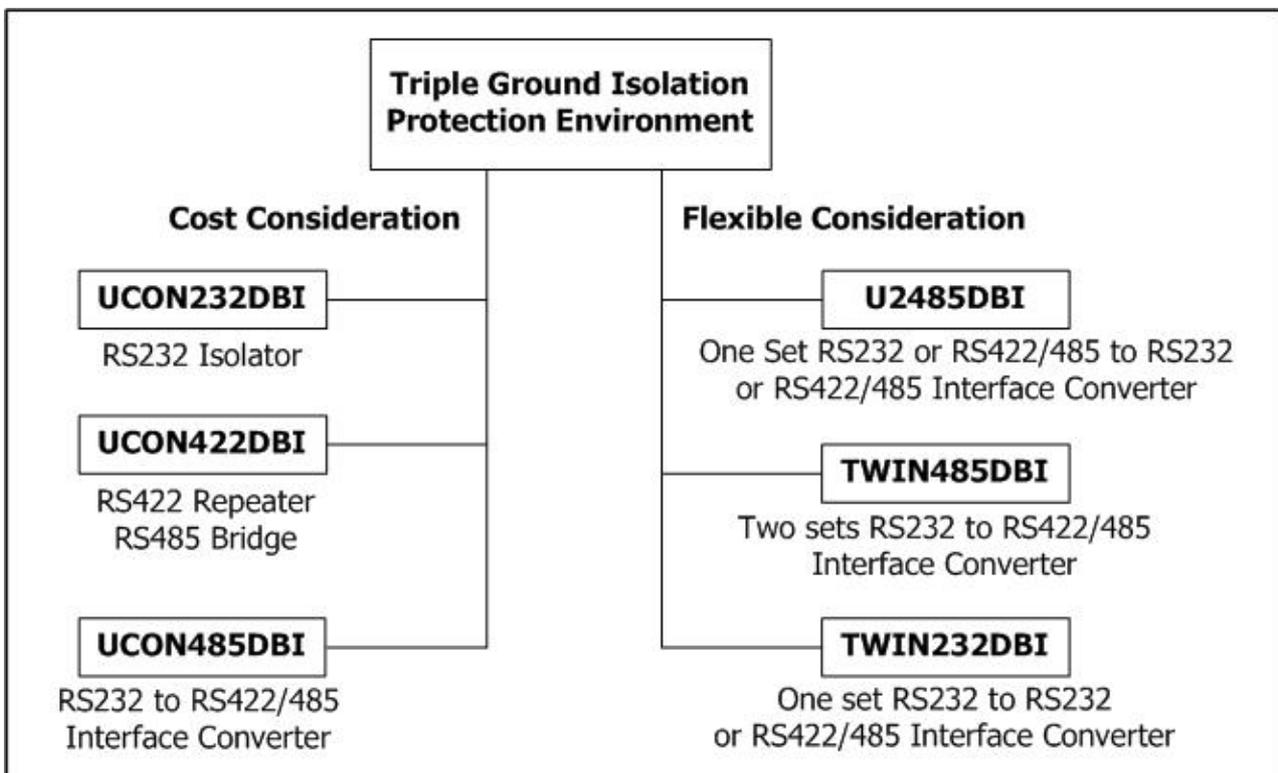


# How to select a rigid interface converter

In rigid environment it is not easy to know the problem in Ground loops and stray currents. When we need to protect communication safety between different devices, we may need to have triple opto-isolation feature in input, output and power supply sections. So we can break the Ground loops and remove stray currents in rigid application environment.

RAYON Technology can have different model product for user to use. User may need to have cost issue or flexible issue consideration. When cost issue is critical point, then we may have dedicated function to use. When flexible issue is critical point, then we may have less expensive product to use. Following information will help you to choose one product in your application environment.

Generally we may select one dedicated function product to meet known application environment for less cost. When we need on product to meet unknown application environment or complex environment, we may need to prepare one multi-function product for less maintenance cost.



UCON232DBI box can support RS232 input to RS232 output Ground isolator feature. So we can protect our connection between two RS232 devices.

UCON422DBI box can support RS422/RS485 input to RS422/RS485 output interface isolated feature. When we use DIP Switch to set input and output interface type in full-duplex RS422 or half-duplex RS485 mode, then UCON422DBI box can be used as RS422 Repeater or RS485 Bridge function. Of course we can use UCON422DBI box as full-duplex RS422 input to half-duplex RS485 output interface converter function.

UCON485DBI box can support RS232 input to RS422/RS485 output interface converter feature. When we use DIP Switch to set output interface type in full-duplex RS422 or half-duplex RS485 mode, then UCON485DBI box can be work as full-duplex RS232 to RS422 interface converter or full-duplex RS232 to half-duplex RS485 interface converter function.

U2485DBI box can support one RS232 input connector with one RS422/RS485 input connector and one RS232 output connector with one RS422/RS485 output connector. We can use DIP Switch to set target interface type in full-duplex RS422 or half-duplex RS485 mode. Then we can use different connector in input and output to work as all functions of UCON232DBI 、UCON422DBI 、UCON485DBI box to support. So U2485DBI box is one universal interface converter. You just need to prepare one U2485DBI box in stock, then you support all interface converter requirement in your target environment and save your maintenance cost.

For such user cost issue is critical point, TWIN485DBI box is good choice. TWIN485DBI box can support two sets RS232 input to RS422/RS485 output interface converter function and with same cost as U2485DBI box. When we need to have function as UCON485DBI box, we may just have one set interface converter in U2485DBI box (one U2485DBI box is same function as one UCON485DBI box and cost more). But TWIN485DBI box can support two sets interface converter function and work as two UCON485DBI boxes in hand. When we need to use one TWIN485DBI box to work as UCON232DBI box for RS232 isolator function, then we just need to set two RS422/RS485 output connectors in RS422 mode and use one Null Modem cable to connect between both connectors. Now one TWIN485DBI box can work as UCON232DBI box for RS232 isolator function. When we need to let one TWIN485DBI box to work as UCON422DBI box for RS422/RS485 isolator function, we just need to use one Null Modem cable to connect between two RS232 input connectors. Then one TWIN485DBI box can be used as UCON422DBI box in

two RS422/RS485 connectors.

TWIN232DBI box is another product to consider cost issue and flexible issue for user. One TWIN232DBI box can support one RS232 input connector to one RS232 output connector and one RS422/RS485 output connector. So one TWIN232DBI box can be used as UCON232DBI box for RS232 isolator function and can be used as UCON485DBI box for RS232 to RS422/RS485 interface converter function. TWIN232DBI box can have less cost than U2485DBI box and meet all functions in RS232 application environment and remove such function as UCON422DBI box.

So you may find one RAYON Technology product to meet your rigid application environment with Ground isolated feature. If you had another special feature requirement, then you can send Email to [info@rayontech.com.tw](mailto:info@rayontech.com.tw) or [rayon@msl.hinet.net](mailto:rayon@msl.hinet.net) for more support.

If your target application environment were general environment and cost critical, then RAYON Technology can also offer general opto-isolation product for such general environment. You can check another document about “ How to select a general interface converter” to select one product to meet your application environment.