**Introduction**

**GDA-HLU1** is a USB-to-RS485 adapter(automatic data direction control) for all **Gicren**'s standard devices, whose conversion mechanism is "USB <-> UART(FT232RL) <-> RS485(SP485EEN)", so it can also be used for other general purpose via pin header, such as “USB<->UART”, “USB<->RS485” and ”UART<->RS485”.

Taking into account security issues, there are only D+ and D- pins connected to SP485EEN. In other words, the front-end circuit and back-end circuit do not share the same ground in the printed circuit board, but it is recommended to connect them manually to avoid excessive common-mode voltage when you are sure the connection is correct.

In addition, the onboard high-quality D-Sub-9Pin-Female, SMT-PH2.0-9Pin, Header-2.54mm-Pitch-9Pin, fuse and selectable matching resistor make this adapter more flexible and reliable.