Relevant Device

This application note applies to the following device:

UC-2102，CH340G

1   Summary

The UC-2102 and UC-340G use standard pin define as the Arduino USB2Serial Light cable, the pitch of the connector is 2.54mm , this interface was used for UNO Lite / Mega2560-Core / DUE-Core / etc. for some model (like UNO-Core / UNO NANO) , the board size is limit , so we reduce the pin pitch to 2.0mm , in this case , user need to use a 2.54mm to 2.0mm adaptor for the connection . **we call it S-Type convertor.**

Aduino used the DTR pin to reset the MCU, before uploading operate, Arduino IDE will pull-low the DTR pin, the DTR signal will generate a negative pulse through a capacitor to RESET pin of the MCU, to reset the MCU and then entry bootload mode.
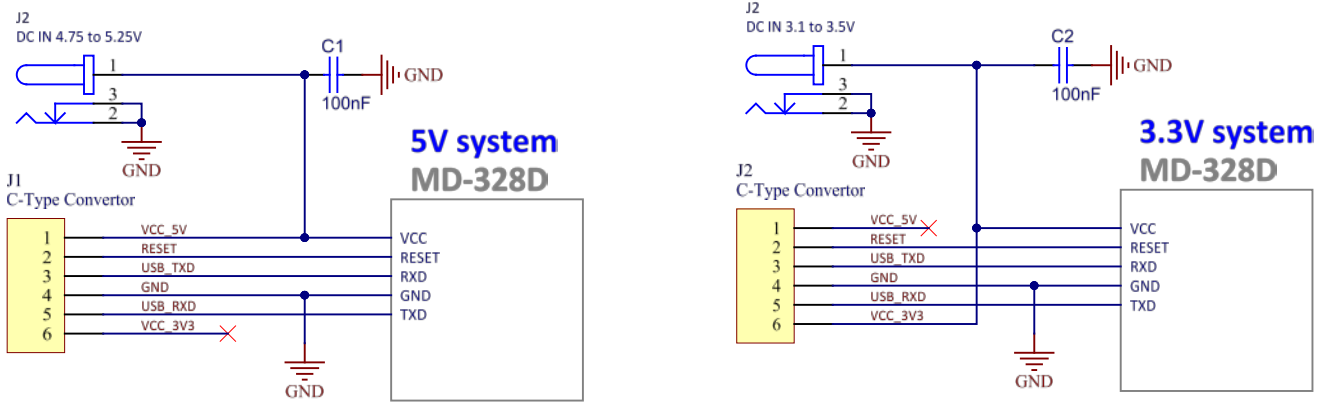
Most Arduino development board has put the circuit of DTR part on the board , but in some application , the board size is very compact , and the DTR part is not necessary , so we build a new convertor for this case , the new convertor has integrated a 3.3V LDO / DTR circuit , **we call it C-Type convertor** , it's used for compact Arduino development board , like RF-1531.

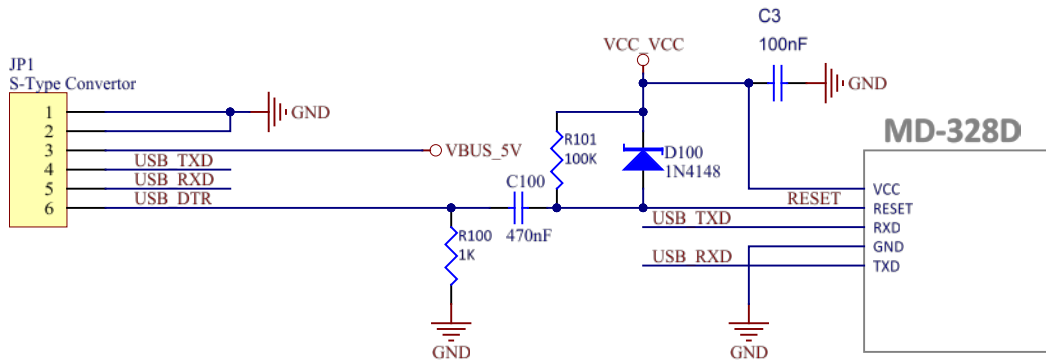## 2 Difference of the both S-Type and C-Type convertor

Item	S-Type Adaptor (Simple type)	C-Type Adaptor (Completed type)
Picture		
Schematic		
Pinout（2.0mm side）	1 - GND 2 - GND 3 - VBUS（5V） 4 – USB_TXD 5 – USB_RXD 6 - DTR	1 – VCC_5V 2 - RESET 3 – USB_TXD 4 – GND 5 – USB_RXD 6 – VCC_3V3
Application	BUONO / Massduino UNO Lite BUONO / Massduino Core BUONO / Massduino NANO Mega2560-Core DUE-Core Etc.	INHAOS Smart System series: RF-1531 AL-1000 DM-1000 RM-1000 Etc.

3   Application of the both S-Type and C-Type convertor

C-Type convertor application system:

S-Type convertor application system:

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