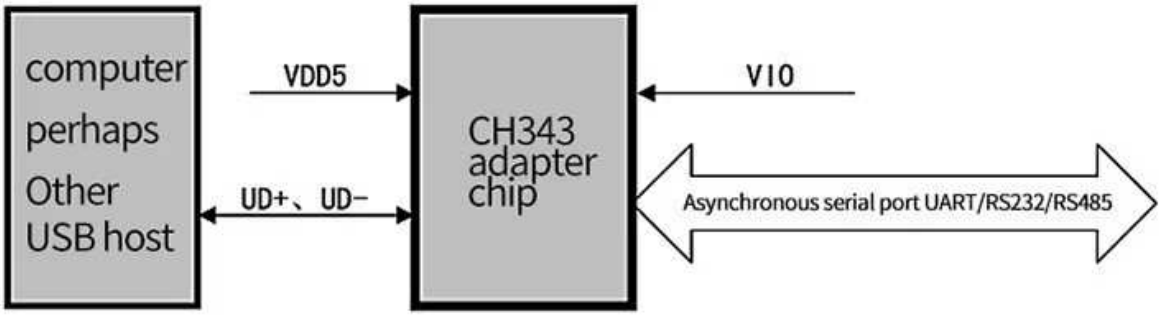
CH343

Product Introduction

CH343 is a USB bus switching chip, which can convert USB to high-speed asynchronous serial port. It also supports automatic identification and dynamic adaptation of communication baud rate of 115200bps and below. It provides a common MODEM contact signal, which is used to expand the asynchronous serial port for computers, or directly upgrade ordinary serial port devices or MCU to USB bus.

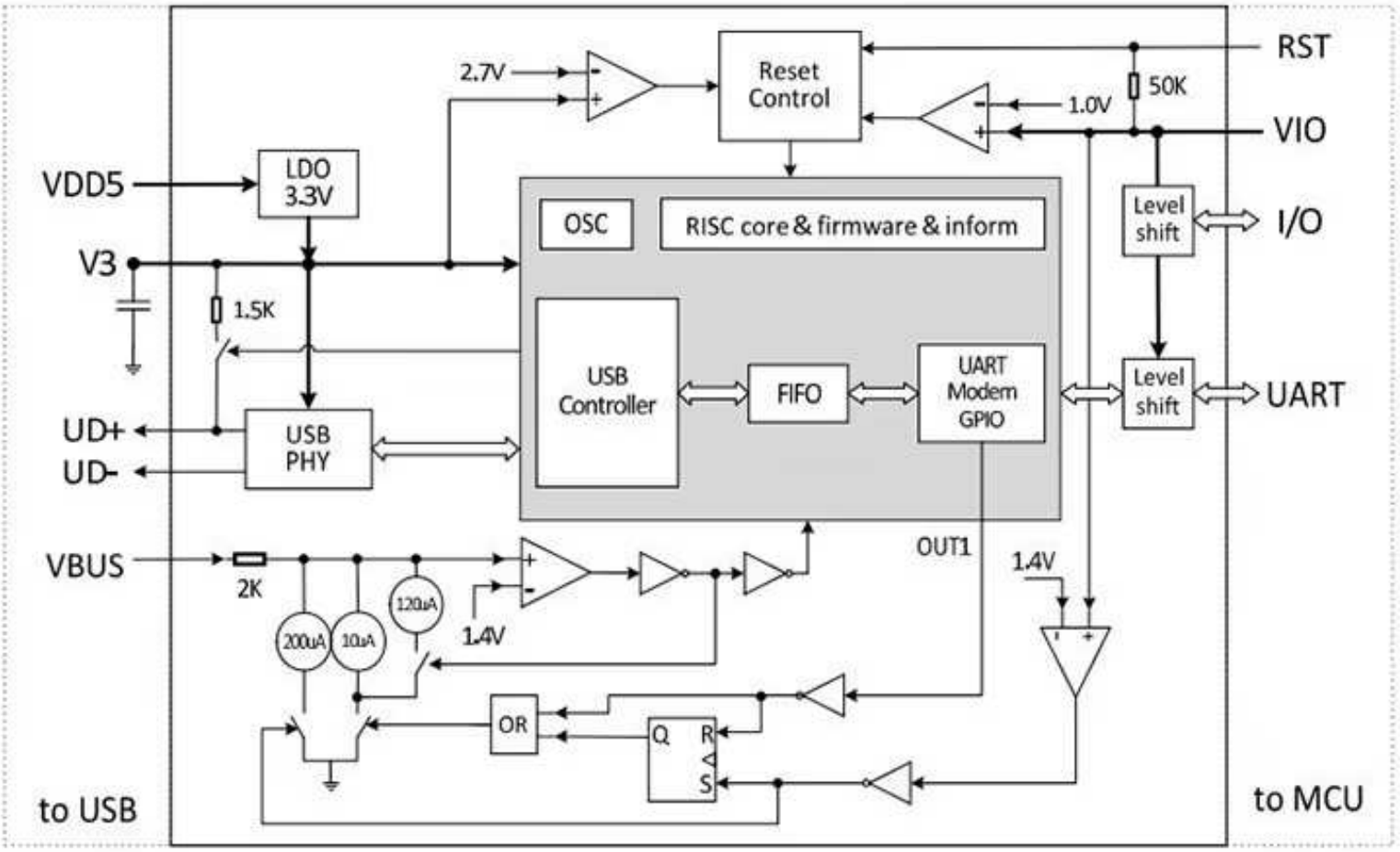


characteristic

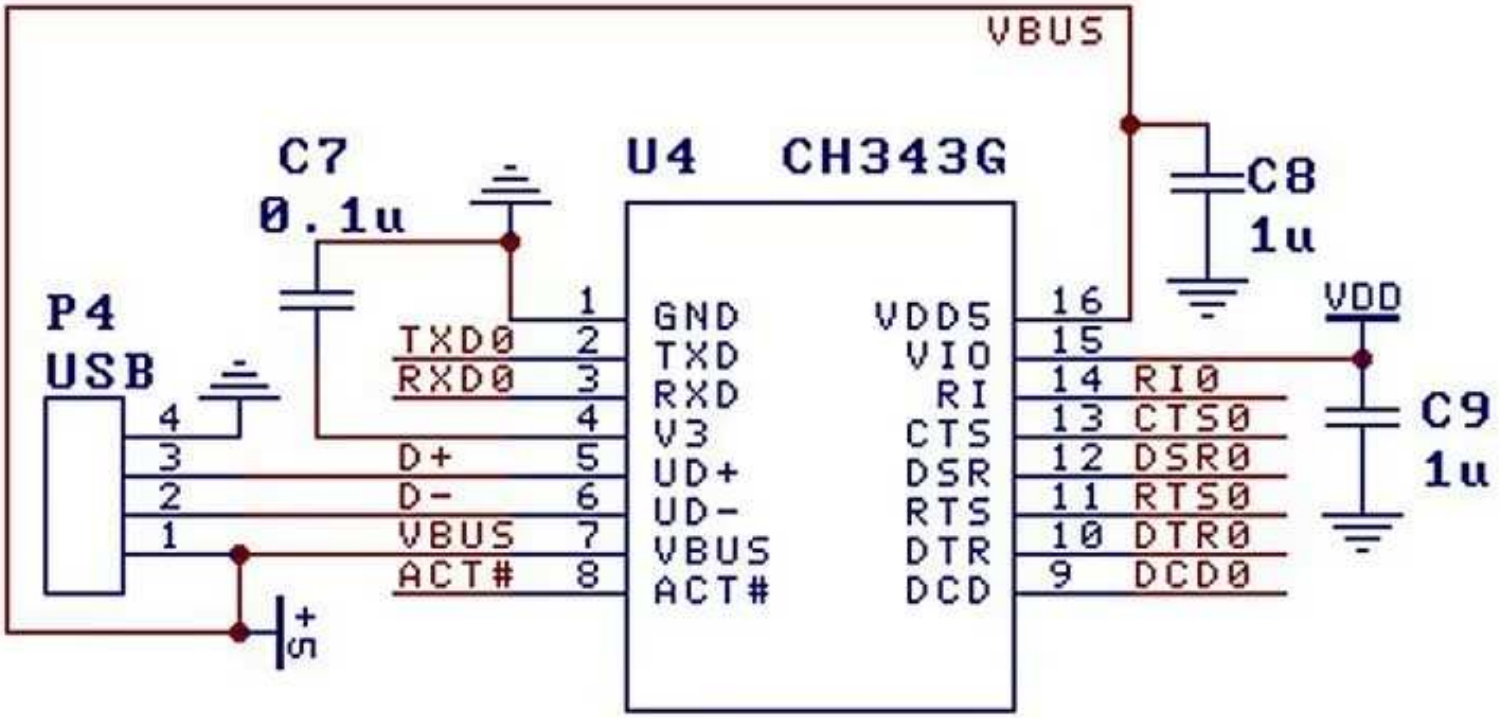
- Full speed USB device interface, compatible with USB V2.0.
- Built in firmware, simulating standard serial port, used to upgrade original serial port peripherals, or via USB Add additional serial ports.
- The serial port application program under the Windows operating system at the computer end is fully compatible and does not need to be modified.
- Support the installation free operating system with built-in CDC driver or multi-functional high-speed VCP Vendor driver.
- Hardware full duplex serial port, built-in independent transceiver buffer, supporting communication baud rate 50bps～6Mbps。
- Common communication baud rate of 115200bps and below can be selected for automatic identification and dynamic adaptation.
- Serial port supports 5, 6, 7 or 8 data bits, odd check, even check, blank Mark and no check.
- Support common MODEM contact signals RTS, DTR, DCD, RI, DSR and CTS.
- Support CTS and RTS hardware automatic flow control.
- Support half duplex and provide sending status TNOW to support RS485 switching.
- Support RS232 interface through external level converter.
- USB terminal supports 5V power supply voltage and 3.3V power supply voltage.
- The serial port I/O is powered independently and supports 5V, 3.3V, 2.5V and 1.8V power supply voltages.
- Built in power on reset, built-in clock, without external crystal oscillator.
- CH343P has built-in EEPROM, which can be configured with chip VID, PID, maximum current value, manufacturer And product information string.
- Unique ID (USB Serial Number) is built into the chip.
- Provide SOP16, ESSOP10 and QFN16 lead-free packages, which are compatible with RoHS.

Pin

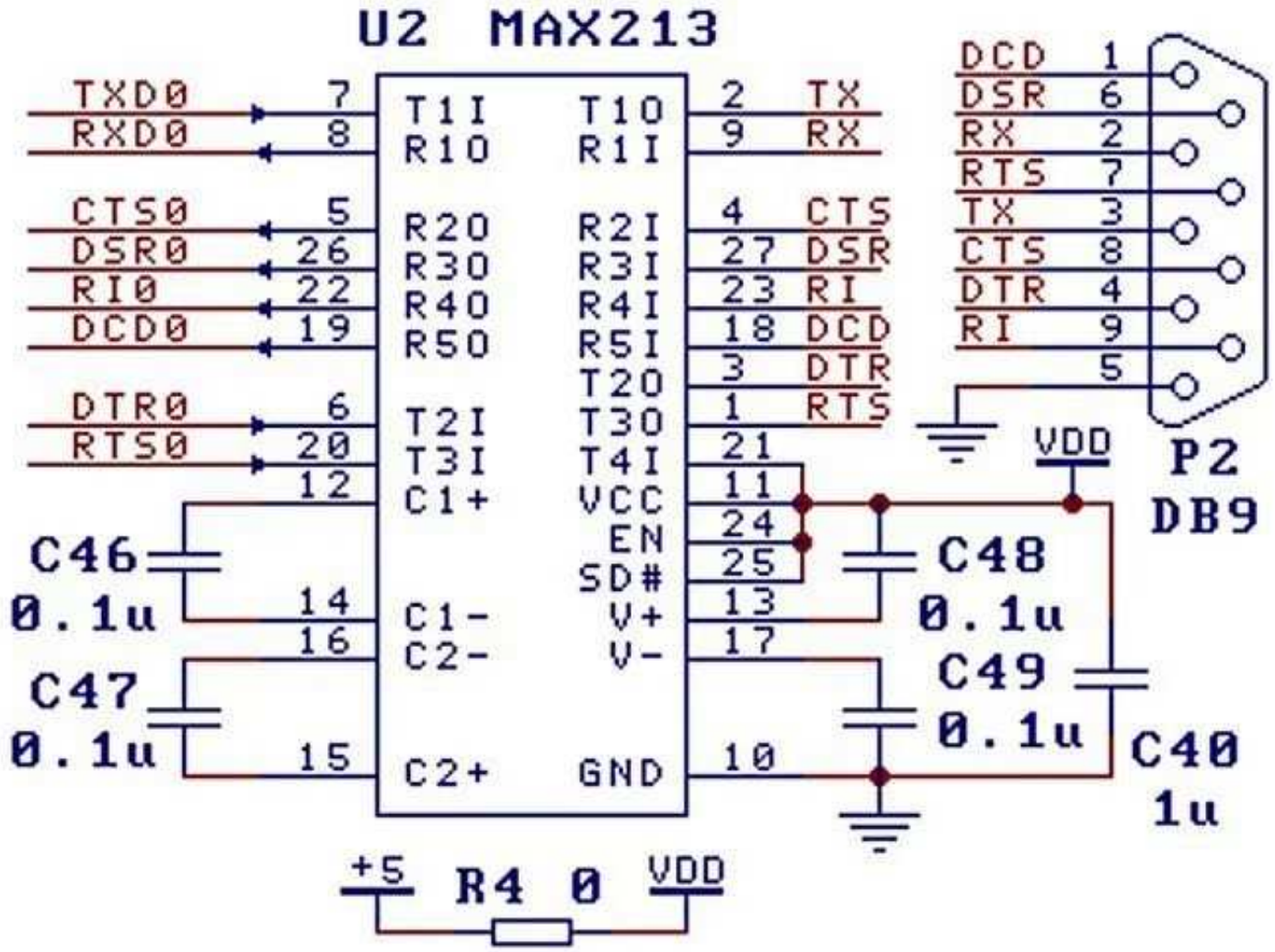
QFN16 Pin No	Pin name	type	Pin Description
3	VDD5	Power Supply	The positive power input terminal of the power regulator needs external decoupling capacitor
1	VIO	Power Supply	Power input terminal of I/O port requires external decoupling capacitor
2, 0	GND	Power Supply	The common grounding terminal needs to be connected to the ground wire of USB bus
6	V3	Power Supply	Internal power regulator output and core and USB power input. When VDD5 voltage is less than 3.6V, connect VDD5 input external power supply. When VDD5 voltage is more than 3.6V, connect external decoupling capacitor
nothing	RST	input	External reset input terminal, effective at low level, with built-in pull-up resistor
7	UD+	USB signal	D+data line directly connected to USB bus, no additional resistance can be connected in series
8	UD−	USB signal	D-data line directly connected to USB bus, no additional resistance can be connected in series
9	VBUS	input	VBUS status detection input of USB bus, built-in pull-down resistor
4	TXD	ioutput	Serial data output of serial port, idle state is high level
5	RXD	input	Serial data input of serial port, built-in pull-up resistor
15	CTS	input	MODEM contact input signal, clear transmission, low effective
	CTS 或 DTR	Default Input Automatic Convert to output	The default is MODEM contact input signal, which is cleared and sent, and is valid at low level. When the DTR set in the computer end software is effective, it will automatically switch to the MODEM contact output signal, and the data terminal is ready, low effective
14	DSR	input	MODEM contact input signal, data device ready, low effective
16	RI	input	MODEM contact input signal, ringing indication, low effective
11	DCD	input	MODEM contact input signal, carrier detection, low effective
12	DTR TNOW	ioutput	MODEM contact output signal, the data terminal is ready, valid at low level. If an external pull-down resistor is detected during power on, it will be switched to the serial port to send the ongoing status indication, valid at high level
13	RTS	ioutput	MODEM contact output signal, request sending, low effective
10	ACT#	ioutput	USB configuration completion status output, valid at low level, invalid when suspended. If an external pull-down resistor is detected during power on, the communication baud rate adaptive mode will be switched, and the software can also enable this mode



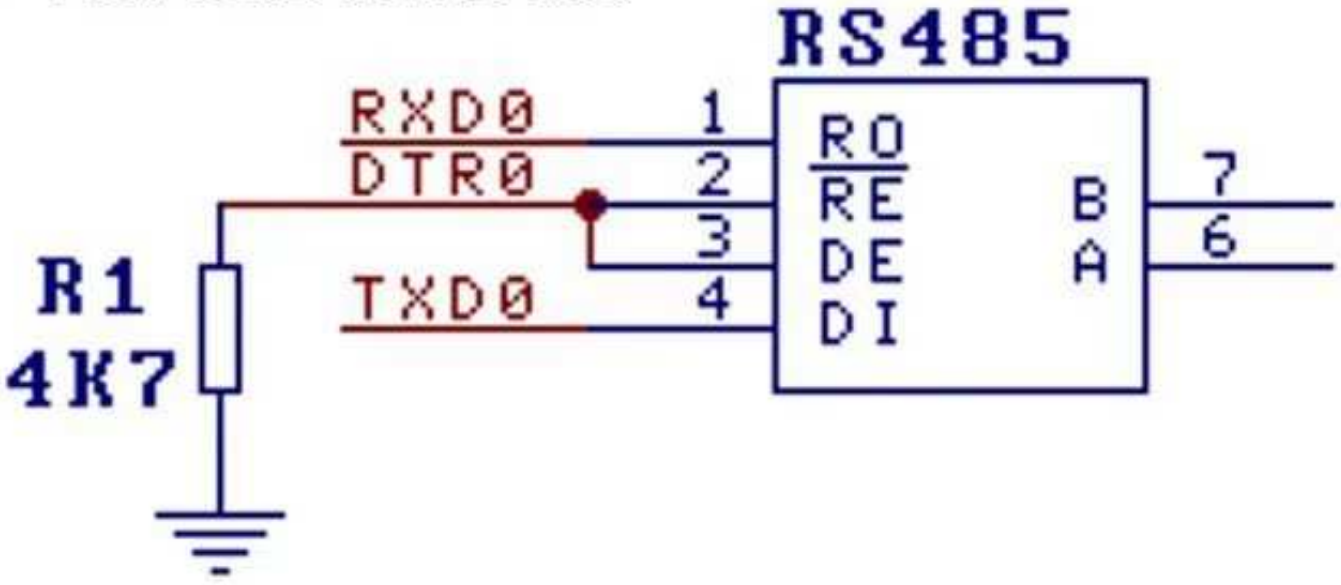
7.1. USB to 9-wire TTL serial port



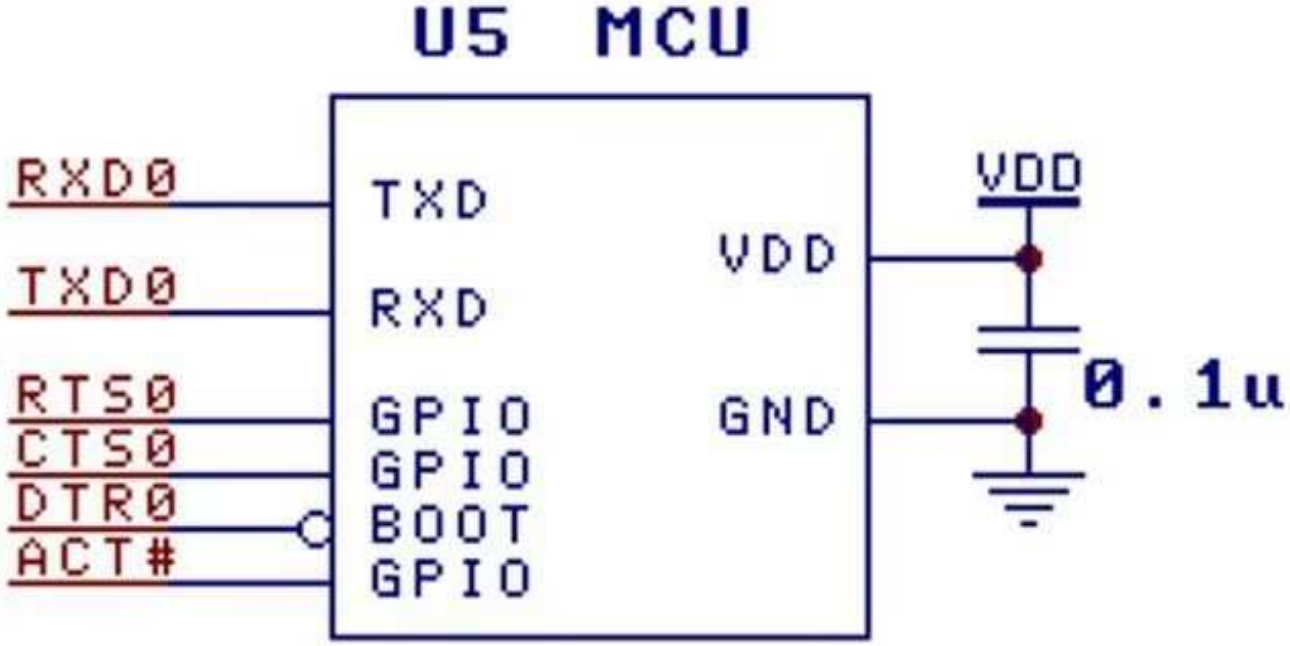
7.2. USB to 9-wire RS232 serial port



7.3. USB to RS485



7.4. Connect the serial port of single chip microcomputer for power supply



Product size