

[ch9326-test.py](#)

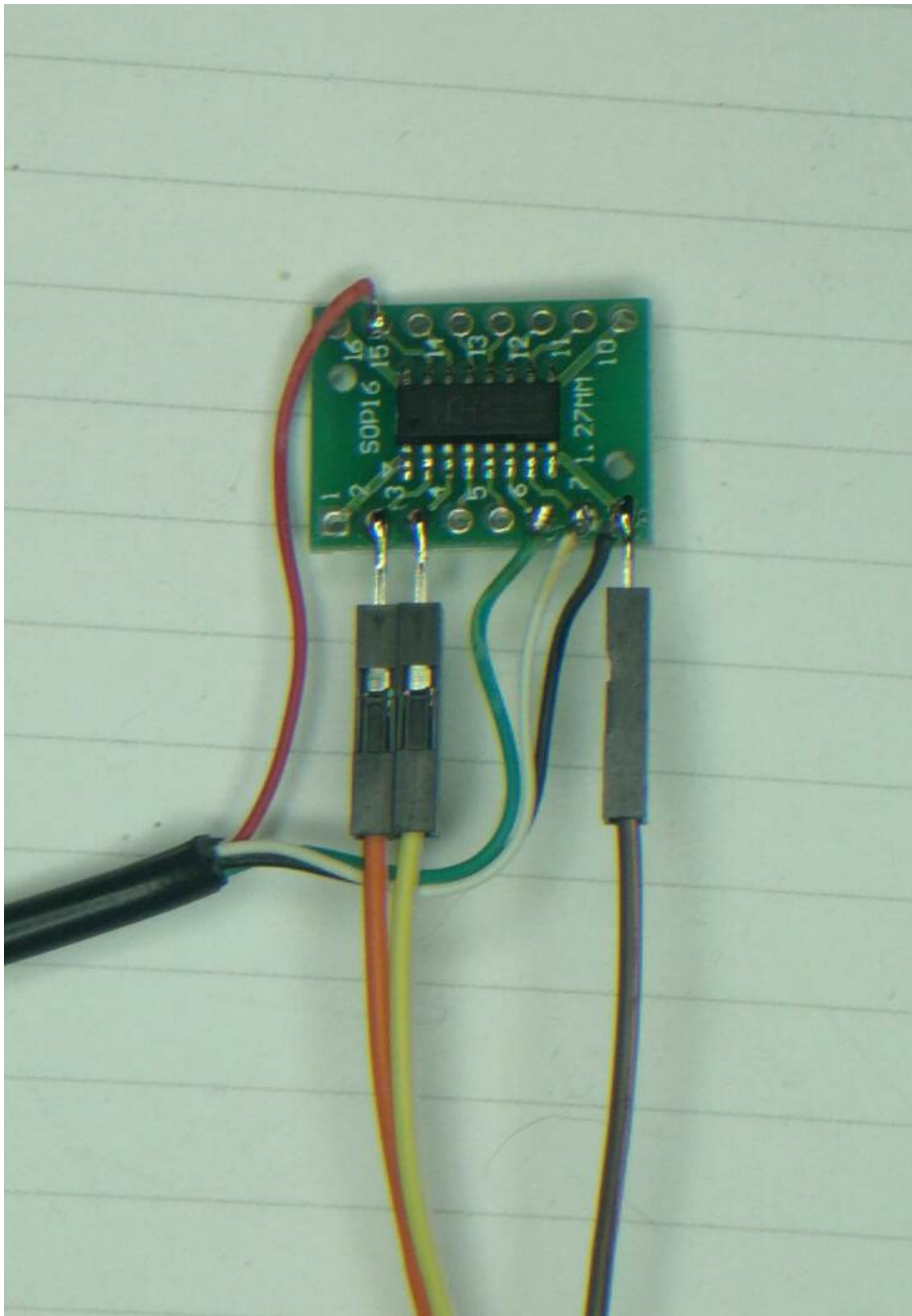
[CH9326DS1.PDF](#)

UART to USB 1.1 HID

I first learned about this chip from video <https://youtu.be/jJoD2ioJPP0>

chip on sop16 breakout

Connecting only VCC, GND USB- and USB+ to target and UART RX, TG and GND to USB serial works without any additional components.



```
[2022258.670458] usb 1-5.2.3: new full-speed USB device number 41 using ehci-pci
[2022258.780644] usb 1-5.2.3: New USB device found, idVendor=1a86, idProduct=e010, bcdDevice=34.00
[2022258.780657] usb 1-5.2.3: New USB device strings: Mfr=1, Product=2, SerialNumber=3
[2022258.780663] usb 1-5.2.3: Product: HID To Serial
[2022258.780669] usb 1-5.2.3: Manufacturer: WCH.CN 4
[2022258.780674] usb 1-5.2.3: SerialNumber: 12345678
[2022258.791635] hid-generic 0003:1A86:E010.000D: hiddev3,hidraw3: USB HID v1.00 Device [WCH.CN 4]
```

I does not create normal /dev/input device under Linux, but sending chars over serial at 9600 8n1 does produce output at /dev/hidraw3 device

```
dpavlin@x200:~$ microcom -s 9600 -p /dev/ttyUSB0
```

lsusb

```
dpavlin@x200:~$ sudo lsusb -d 1A86:E010 -v
```

```
Bus 001 Device 041: ID 1a86:e010 QinHeng Electronics
```

```
Device Descriptor:
```

```
  bLength                18
  bDescriptorType         1
  bcdUSB                  1.00
  bDeviceClass            0
  bDeviceSubClass        0
  bDeviceProtocol        0
  bMaxPacketSize0        8
  idVendor                0x1a86 QinHeng Electronics
  idProduct               0xe010
  bcdDevice               34.00
  iManufacturer          1 WCH.CN 4
  iProduct               2 HID To Serial
  iSerial                3 12345678
```

```
  bNumConfigurations     1
Configuration Descriptor:
```

```
  bLength                9
  bDescriptorType        2
  wTotalLength           0x0029
  bNumInterfaces         1
  bConfigurationValue    1
  iConfiguration        4 (error)
  bmAttributes           0x80
    (Bus Powered)
```

```
  MaxPower               100mA
```

```
Interface Descriptor:
```

```
  bLength                9
  bDescriptorType        4
  bInterfaceNumber       0
  bAlternateSetting      0
  bNumEndpoints          2
  bInterfaceClass        3 Human Interface Device
  bInterfaceSubClass     0
  bInterfaceProtocol     0
  iInterface             0
```

```
  HID Device Descriptor:
```

```
    bLength              9
```

```

    bDescriptorType      33
    bcdHID                1.00
    bCountryCode         0 Not supported
    bNumDescriptors      1
    bDescriptorType      34 Report
    wDescriptorLength    37
Report Descriptors:
  ** UNAVAILABLE **
Endpoint Descriptor:
  bLength                7
  bDescriptorType       5
  bEndpointAddress      0x82 EP 2 IN
  bmAttributes          3
    Transfer Type       Interrupt
    Synch Type          None
    Usage Type          Data
  wMaxPacketSize        0x0020 1x 32 bytes
  bInterval              1
Endpoint Descriptor:
  bLength                7
  bDescriptorType       5
  bEndpointAddress      0x02 EP 2 OUT
  bmAttributes          3
    Transfer Type       Interrupt
    Synch Type          None
    Usage Type          Data
  wMaxPacketSize        0x0020 1x 32 bytes
  bInterval              1
can't get debug descriptor: Resource temporarily unavailable
Device Status:      0x0000
  (Bus Powered)

```