

# 1、USB 驱动安装与加载

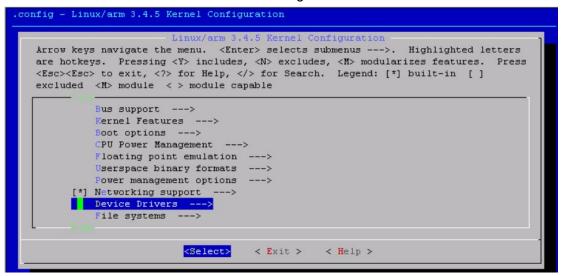
## 1.1 USB 信息

PID	VID	接口号	注释
		0	ZTE CMCC AT Interface
0x19D2	0x0199	1	以太网卡
		2	ZTE CMCC Modem Interface
		3	ZTE CMCC Log Interface

Linux3.8 及以上内核已经支持上述 PID 以及接口组合的驱动。只需要按下面的方法配置内核即可。

## 1.2 USB 串口驱动的安装

USB 接口中的 0、2、3 三个接口需要安装 USB 转串口驱动。需要编译内核的 drivers/usb/serial 模块。通过 make menuconfig 配置内核编译该模块的方法如下:



```
Arrow keys navigate the menu. <Enter> selects submenus --->. Highlighted letters are hotkeys. Pressing <Y> includes, <N> excludes, <M> modularizes features. Press <Esc><Esc> to exit, <?> for Help, </> for Search. Legend: [*] built-in [] excluded <M> module <> module capable

Sonics Silicon Backplane --->
Broadcom specific AMBA --->
Multifunction device drivers --->
[] Voltage and Current Regulator Support --->
<> Multimedia support --->
<>> Craphics support --->
[] HID Devices --->
[] USB support --->
<> MMC/SD/SDIO card support --->

<Select> < Exit > < Help >
```

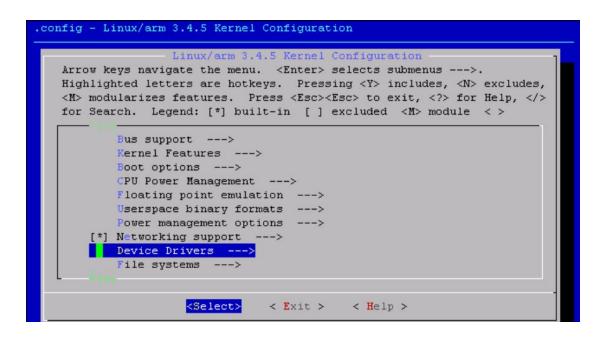
```
.config - Linux/arm 3.4.5 Kernel Configuration
   Arrow keys navigate the menu. <Enter> selects submenus --->. Highlighted letters
   are hotkeys. Pressing \langle Y \rangle includes, \langle N \rangle excludes, \langle M \rangle modularizes features. Press
   <Esc><Esc> to exit, <?> for Help, </> for Search. Legend: [*] built-in []
   excluded <M> module < > module capable
                USB Wireless Device Management support (NEW)
                USB Test and Measurement Class support (NEW)
                *** NOTE: USB_STORAGE depends on SCSI but BLK_DEV_SD may ***
                *** also be needed; see USB STORAGE Help for more info ***
                The shared table of common (or usual) storage devices (NEW)
                *** USB Imaging devices ***
                USB Mustek MDC800 Digital Camera support (NEW)
                *** USB port drivers ***
                USB Serial Converter support -
                *** USB Miscellaneous drivers ***
                              <Select>
                                          < Exit >
                                                      < Help >
```

```
.config - Linux/arm 3.4.5 Kernel Configuration
                              USB Serial Converter support
   Arrow keys navigate the menu. <Enter> selects submenus --->. Highlighted letters
   are hotkeys. Pressing 	ext{<Y>} includes, 	ext{<N>} excludes, 	ext{<M>} modularizes features. Press
   <Esc><Esc> to exit, <?> for Help, </> for Search. Legend: [*] built-in []
   excluded <M> module < > module capable
               USB Safe Serial (Encapsulated) Driver (NEW)
               USB Siemens MPI driver (NEW)
         < >
               USB Sierra Wireless Driver (NEW)
         < >
               USB Symbol Barcode driver (serial mode) (NEW)
         < >
         < >
               USB TI 3410/5052 Serial Driver (NEW)
               USB REINER SCT cyberJack pinpad/e-com chipcard reader (NEW)
               USB Xircom / Entregra Single Port Serial Driver (NEW)
               USB driver for GSM and CDMA modems
               USB ZyXEL omni.net LCD Plus Driver (NEW)
         < >
               USB Opticon Barcode driver (serial mode) (NEW)
                             <Select>
                                       < Exit > < Help >
```

### 1.3 网卡驱动安装

USB 接口中的接口 1 为网络数据接口。如果设备枚举的是标准的 CDC 类网络设备(如 ECM) 驱动的加载不在这里描述。

首先需要配置将文件 drivers/net/usb 下的 qmi\_wwan.c 编译到内核, 通过 make menuconfig 配置内核编译该模块



```
config - Linux/arm 3.4.5 Kernel Configuration
                                 Device Drivers
   Arrow keys navigate the menu. <Enter> selects submenus --->. Highlighted
   letters are hotkeys. Pressing <Y> includes, <N> excludes, <M> modularizes
  features. Press <Esc><Esc> to exit, <?> for Help, </> for Search. Legend:
   [*] built-in [ ] excluded <M> module <> module capable
      <*> Memory Technology Device (MTD) support --->
      < > Parallel port support --->
      [*] Block devices --->
          Misc devices --->
          SCSI device support --->
      < > Serial ATA and Parallel ATA drivers --->
      [ ] Multiple devices driver support (RAID and LVM) --->
      [*] Network device support
[ ] ISDN support --->
          Input device support --->
                        <Select> < Exit > < Help >
```

#### .config - Linux/arm 3.4.5 Kernel Configuration Network device support Arrow keys navigate the menu. <Enter> selects submenus --->. Highlighted letters are hotkeys. Pressing <Y> includes, <N> excludes, <M> modularizes features. Press <Esc><Esc> to exit, <?> for Help, </>> for Search. Legend: [\*] built-in [ ] excluded <M> module < > < > Universal TUN/TAP device driver support Virtual ethernet pair device < > \*\*\* CAIF transport drivers \*\*\* Ethernet driver support ---> PHY Device support and infrastructure ---> < > Micrel KS8995MA 5-ports 10/100 managed Ethernet switch PPP (point-to-point protocol) support SLIP (serial line) support USB Network Adapters ---> Wireless LAN <Select> < Exit > < Help >

# .config - Linux/arm 3.4.5 Kernel Configuration

```
USB Network Adapters
Arrow keys navigate the menu. <Enter> selects submenus --->.
Highlighted letters are hotkeys. Pressing <Y> includes, <N> excludes,
<M> modularizes features. Press <Esc> to exit, <?> for Help, </>
for Search. Legend: [*] built-in [ ] excluded <M> module < >
   < > USB CATC NetMate-based Ethernet device support (EXPERIMENTAL)
   < > USB KLSI KL5USB101-based ethernet device support (NEW)
   < > USB Pegasus/Pegasus-II based ethernet device support (NEW)
     > USB RTL8150 based ethernet device support (EXPERIMENTAL) (NEW
   <<mark>*</mark>> Multi-purpose USB Networking Framework
        ASIX AX88xxx Based USB 2.0 Ethernet Adapters (NEW)
   -*-
         CDC Ethernet support (smart devices such as cable modems)
         CDC EEM support (NEW)
   < >
   <*>
         CDC NCM support (NEW)
    < >
         Davicom DM9601 based USB 1.1 10/100 ethernet devices (NEW)
                  <Select>
                              < Exit > < Help >
```

#### .config - Linux/x86\_64 3.8.13 Kernel Configuration **USB Network Adapters** Arrow keys navigate the menu. <Enter> selects submenus --->. Highlighted letters are hotkeys. Pressing <Y> includes, <N> excludes, <M> modularizes features. Press <Esc> to exit, <?> for Help, </>> for Search. Legend: [\*] built-in [ ] excluded <M> module <> [\*] AnchorChips 2720 based cables (Xircom PGUNET, ...) [\*] eTEK based host-to-host cables (Advance, Belkin, ...) [\*] Embedded ARM Linux links (iPaq, ...) [\*] Epson 2888 based firmware (DEVELOPMENT) [\*] KT Technology KC2190 based cables (InstaNet) Sharp Zaurus (stock ROMs) and compatible <M> <> Conexant CX82310 USB ethernet port Samsung Kalmia based LTE USB modem QMI WWAN driver for Qualcomm MSM based 3G and LTE modems <M> Option USB High Speed Mobile Devices <Select> < Exit > < Help >