

- **Applicable platform:** SDM660/SDM670/MSM8998/SDM845
- **Issue/problem description:**

Issue reproduce steps:

1. power off SDM660.
2. SDM660 connects SDP/CDP port and charge through the USB line.
3. The charge current  $\leq 100\text{mA}$ .

- **Issue Analysis:**

When connect to SDP/CDP, the charge current depends on USB bus status. As per USB specification, device can draw no more than 100mA if connected but not configured, and can draw  $> 500\text{mA}$  if device configured and USB bus is active, and no more than 2mA if bus suspended. We need check USB bus status accordingly for the charge current setting.

- **Solution**

We can follow below steps to check:

1. Check the USB enumeration. Ensure that the enumeration is completed and usb bus not suspended.
2. If USB bus suspend, follow "KBA-171218012414 How to change charger current when usb bus suspend while connect to SDP/CDP?" to step forward.
3. if USB device not enumerated, check if composition set properly. Because USB enumeration depends on the property settings, thus cannot works if property set/access fail. Here take SDM660 for example, we can make below changes to enable usb storage device on power off charge mode.

File [init.qcom.usb.sh](#)

.....

on charger

```
- setprop sys.usb.config mass_storage
+ mount configs none /config
+ mkdir /config/usb_gadget/g1 0770 shell shell
+ mkdir /config/usb_gadget/g1/strings/0x409 0770 shell shell
+ write /config/usb_gadget/g1/bcdUSB 0x0200
+ write /config/usb_gadget/g1/os_desc/use 1
+ write /config/usb_gadget/g1/strings/0x409/serialnumber ${ro.serialno}
```

```
+ write /config/usb_gadget/g1/strings/0x409/manufacture ${ro.product.manufacturer}
+ write /config/usb_gadget/g1/strings/0x409/product ${ro.product.model}
+ mkdir /config/usb_gadget/g1/functions/mass_storage.0
+ mkdir /config/usb_gadget/g1/configs/b.1 0770 shell shell
+ mkdir /config/usb_gadget/g1/configs/b.1/strings/0x409 0770 shell shell
+ write /config/usb_gadget/g1/os_desc/b_vendor_code 0x1
+ write /config/usb_gadget/g1/os_desc/qw_sign "MSFT100"
+ symlink /config/usb_gadget/g1/configs/b.1 /config/usb_gadget/g1/os_desc/b.1
+ write /config/usb_gadget/g1/configs/b.1/strings/0x409/configuration "msc"
+ write /config/usb_gadget/g1/idVendor 0x05C6
+ write /config/usb_gadget/g1/idProduct 0xF000
+ symlink /config/usb_gadget/g1/functions/mass_storage.0 /config/usb_gadget/g1/configs/b.1/f1
+ setprop sys.usb.controller "a800000.dwc3"
+ write /config/usb_gadget/g1/UDC ${sys.usb.controller}
+ setprop sys.usb.state ${sys.usb.config}
```

#### ■ Risks & Side effects

- None.

#### ■ Q&A

- [Q] Why does the USB not enumeration when the composition on USB does not take effect?

[A] USB enumeration depends on the property settings, thus cannot works if property access fail.