

[Platform]:msm8953 msm8937 msm8940

- How to get the vbus voltage.

## 1. msm8953.dtsi

```
usb3: ssusb@7000000{
```

```
...
```

```
++ qcom,usbin-vadc = <&pmi8950_vadc>;
```

```
...
```

```
};
```

## 2. kernel/drivers/usb/dwc3/dwc3-msm.c

```
++#include <linux/qnpn/qnpn-adc.h>
```

```
struct dwc3_msm {
```

```
...
```

```
++ struct qnpn_vadc_chip *vadc_dev;
```

```
};
```

```
++static int
```

```
++dwc3_get_prop_usbin_voltage_now(struct dwc3_msm *mdwc)
```

```
++{
```

```
++ int rc = 0;
```

```
++ struct qnpn_vadc_result results;
```

```
++
```

```
++ if (IS_ERR_OR_NULL(mdwc->vadc_dev)) {
```

```
++ mdwc->vadc_dev = qnpn_get_vadc(mdwc->dev, "usbin");
```

```

++ if (IS_ERR(mdwc->vadc_dev))

++ return PTR_ERR(mdwc->vadc_dev);

++ }

++

++ rc = qnp_vadc_read(mdwc->vadc_dev, USBIN, &results);

++ if (rc) {

++ pr_err("Unable to read usbin rc=%d\n", rc);

++ return 0;

++ } else {

++ return results.physical;

++ }

++}

static int dwc3_msm_power_get_property_usb(struct power_supply *psy,

enum power_supply_property psp,

union power_supply_propval *val)

{

...

++ case POWER_SUPPLY_PROP_VOLTAGE_NOW:

++ val->intval = dwc3_get_prop_usbin_voltage_now(mdwc);

++ break;

case POWER_SUPPLY_PROP_USB_OTG:

...

}

```

```
static enum power_supply_property dwc3_msm_pm_power_props_usb[] = {
...
++ POWER_SUPPLY_PROP_VOLTAGE_NOW,
POWER_SUPPLY_PROP_USB_OTG,
};
```

- How to get the usbin current.

### 1. pmi8952/pmi8937/pmi8940 VADC support this function.

Get the vchg\_sns voltage.refer this formula (  $V\_CHG = I\_CHG \times 0.84 \Omega$  ),we can get the usbin current.

### 2. qnp-smbcharger.c

Refer this code:

```
static int smbchg_get_iusb(struct smbchg_chip *chip)
{
int rc, iusb_ua = -EINVAL;

struct qnpn_vadc_result adc_result;

...

if (chip->vchg_vadc_dev && chip->vchg_adc_channel != -EINVAL) {

rc = qnpn_vadc_read(chip->vchg_vadc_dev,
chip->vchg_adc_channel, &adc_result);

...

iusb_ua = div_s64(adc_result.physical * 1000, 840);

}

return iusb_ua;

}
```

```

static int smbchg_battery_get_property(struct power_supply *psy,
enum power_supply_property prop,
union power_supply_propval *val)
{
...

case POWER_SUPPLY_PROP_INPUT_CURRENT_NOW:
val->intval = smbchg_get_iusb(chip);

break;

...
}

static int smb_parse_dt(struct smbchg_chip *chip)
{
...

OF_PROP_READ(chip, chip->vchg_adc_channel, "vchg-adc-channel-id", rc, 1);

...
}

static int smbchg_probe(struct spmi_device *spmi)
{
...

if (of_find_property(spmi->dev.of_node, "qcom,vchg_sns-vadc", NULL)) {
vchg_vadc_dev = qpnp_get_vadc(&spmi->dev, "vchg_sns");

...
}

...
}

```

```
}
```

In summary:

```
msm-pmi8950.dtsi
```

```
qcom,qnp-smbcharger {
```

```
...
```

```
+ qcom,vchg_sns-vadc = <&pmi8950_vadc>;
```

```
+ qcom,vchg-adc-channel-id = <3>;
```

```
...
```

```
};
```

### **3. then we can get the usbin current**

```
adb shell
```

```
cat sys/class/power_supply/battery/input_current_now
```