

Lenovo Thinkpad Tablet

tegra20-2.6.36 [0,0]

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EC_battery

https://github.com/dpavlin/linux/blob/thinktabletopensource-2.6.36/drivers/power/EC_battery.c

battery info from shell

```
dpavlin@tegra20:~$ cat batt-info.sh
#!/bin/sh

printf 'BatCapacity: %d %%\n' `i2cget -y 5 0x58 0x00 w`
printf 'BatFullCapacity: %d\n' `i2cget -y 5 0x58 0x07 w`
printf 'BatDesignCapacity: %d\n' `i2cget -y 5 0x58 0x08 w`
printf 'ChargerStatus: %d\n' `i2cget -y 5 0x58 0x0b w`
printf 'UsbStatus: %d\n' `i2cget -y 5 0x58 0x5b w`

printf 'voltage: %d\n' `i2cget -y 5 0x58 0x01 w`
printf 'temperature: %d\n' `i2cget -y 5 0x58 0x0a w`

ec_status=`i2cget -y 5 0x58 0x0b w`
case $ec_status in
    0x0000) ec_status_dec="discharging" ;;
    0x0001) ec_status_dec="charging" ;;
    0x0002) ec_status_dec="full" ;;
    *) echo "unknown $ec_status" && exit 1
esac
printf 'EC_status: %d [%s]\n' $ec_status $ec_status_dec

dpavlin@tegra20:~$ sudo ./batt-info.sh
BatCapacity: 29 %
BatFullCapacity: 2670
BatDesignCapacity: 3250
ChargerStatus: 1
UsbStatus: 0
voltage: 7477
temperature: 2912
EC_status: 1 [charging]
```

kernel 2.6 /sys/EcControl

```
shell@android:/sys/EcControl # grep . *
AssetNumber:
```


linux-2.6/drivers/power/EC_battery.c

```
# ready?
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x48 w
0x0008
# ready = ret & 0x00000008;

# BatCtlEnable_show

root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x5b w
0x0000

# EcVer_show

root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x30 w
0x3f00
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x31 w
0x2100

# UUID_show

for(i=0;i<16;i++)
{
    val32 = i2c_smbus_read_word_data(EC_Bat_device->client,0x60);
    val16 = val32 & 0x0000ffff;
    TransformToByte(val16, &val8[2*i], &val8[2*i+1]);
    msleep(10);
}

root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x60 w
0x5768
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x60 w
0x6668
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x60 w
0x6567
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x60 w
0x5456
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x60 w
0x5070
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x60 w
0x5552
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x60 w
0x5651
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x60 w
0x5770
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x60 w
0x6948
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x60 w
0x4949
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x60 w
0x5549
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x60 w
0x6856
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x60 w
0x4966
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x60 w
0x4869
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x60 w
0x6965
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x60 w
0x4854
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x60 w # 17 repeat?
0x5768
```

```
# BatCapacity_show
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x00 w
0x004d

# BatFullCapacity_show
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x07 w
0x0773

# BatDesignCapacity_show
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x08 w
0x0965

# BTMAC_show
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x62 w
0xbd9d
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x62 w
0x68ac
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x62 w
0x742f
## repeat?
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x62 w
0xbd9d

# ChargerStatus_show
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x0b w
0x0001

# UsbStatus_show
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x5b w
0x0000

# ECRead_show
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0xF1 w
0x0c12

# Shutdown_store
i2c_smbus_write_word_data(EC_Bat_device->client,0x52,0);

# Suspend_store
i2c_smbus_write_word_data(EC_Bat_device->client,0x53,0);

# Coldboot_store
Coldboot_val = buffer & 0x0000FFFF;
i2c_smbus_write_word_data(EC_Bat_device->client,0x55,Coldboot_val);

# Resume_store
Resume_val = buffer & 0x0000FFFF;
i2c_smbus_write_word_data(EC_Bat_device->client,0x56,Resume_val);

# RecoveryMode_store
i2c_smbus_write_word_data(EC_Bat_device->client,0x58,val);

# MicSwitch_store
//echo 0 > MicSwitch(front) , echo 1 > MicSwitch(back), echo 2 > MicSwitch(normal)
//echo 3 > MicSwitch(echo cancellation test), echo 4 > MicSwitch(disable echo cancellation)
i2c_smbus_write_word_data(EC_Bat_device->client,0x44,MicSwitch_val);

# ThreeGPower_store
//echo 1 > ThreeGPower(poweron) , echo 0 > ThreeGPower(poweroff), echo 2 > ThreeGPower(backtoOri)
i2c_smbus_write_word_data(EC_Bat_device->client,0x45,ThreeGPower_val);

# enable_ThreeGPower
ThreeGPower_val = 1; # 1 = enable, 0 = disable
i2c_smbus_write_word_data(EC_Bat_device->client,0x45,ThreeGPower_val);
```

```

# SerialNumber_show
for(i=0;i<=7;i++) {
val32 = i2c_smbus_read_word_data(EC_Bat_device->client,0x66);
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x66 w # 0
0x5451
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x66 w # 1
0x5468
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x66 w # 2
0x8048
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x66 w # 3
0x5277
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x66 w # 4
0x8290
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x66 w # 5
0x5157
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x66 w # 6
0x4956
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x66 w # 7
0x4983
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x66 w # 0
0x5451

# SkuNumber_show
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x68 w
0xffff

# LEDAndroidOff_store
i2c_smbus_write_word_data(EC_Bat_device->client,0x5a,0);

# Reset_store
i2c_smbus_write_word_data(EC_Bat_device->client,0x54,0);

# BatCurrent_show
i2c_smbus_read_word_data(EC_Bat_device->client,0x03);
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x03 w
0xff43
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x03 w
0xff42

# BatLifeTime_show
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x70 w
0x0000

# BoardID_show
root@tegra20:/mnt/nuc/Tegra# i2cget -y 5 0x58 0x32 w
0xfefe

# GPSPower_store
#         if(GPS_val == 0)         OFF
i2c_smbus_write_word_data(EC_Bat_device->client,0x47,0);
# else if(GPS_val == 1)         ON
i2c_smbus_write_word_data(EC_Bat_device->client,0x4a,0);

# PsensorPower_store
//echo 0 > PsensorPower(off), echo 1 > PsensorPower(on), echo 2 > PsensorPower(normal control)
i2c_smbus_write_word_data(EC_Bat_device->client,0x4b, PsensorPower_val);
root@tegra20:/mnt/nuc/Tegra# i2cset -y 5 0x58 0x4b 0x1 w

```