[Description]:
Can we change the pull up resistor of BATT_THERM_BIAS from 68.1k to 10k?

[Platform]:
MSM8998, SDM845, SDM660, SDM670

[Solution]:

In HW side, the pull up resistance is determined by NTC resistor inside battery pack, in MTP and QRD phone we have different battery so the pull up is different. The pull up resistor value need to be equal to battery thermal NTC value at 25 degree.

In SW side, please change the C1/C2/C3 coefficients according to doc 80-VT310-138 <Table 2-3 BATT_THERM master beta coefficient>, the doc 80-VT310-138 has detailed description for this coefficients: "To convert from voltage measurements to temperature readings, the PMIC uses a linear approximation of the Steinhart-Hart equation. This approximation uses the coefficients listed in Table 2-3. To function correctly, these coefficients must be programmed into the fuel gauge for the thermistor value selected. Failure to do this can result in inaccurate temperature measurement."

There're two places can change the coefficients: (SDM660)
1, In UEFI
@boot_images\QcomPkg\Drivers\QcomChargerDxe\QcomChargerConfig_VbattTh_Sdm660.cfg
ProgramBattThermCoeffs = TRUE
BattThermC1 = A1
BattThermC2 = 50
BattThermC3 = FF
2,In kernel
@arch/arm/boot/dts/qcom/msm-pm660.dtsi
pm660_fg: qpnp,fg {
.....
qcom,battery-thermal-coefficients = [9d 50 ff];

>>UEFI config path in other platforms:
8998: @boot_images\QcomPkg\Drivers\QcomChargerDxe\QcomChargerConfig_VbattTh_8998.cfg
845: @boot_images\QcomPkg\Drivers\QcomChargerDxe\QcomChargerConfig_VbattTh_SDM845.cfg
670: @boot_images\QcomPkg\SDM670Pkg\Settings\PMIC\core\QcomChargerConfig_VbattTh.cfg