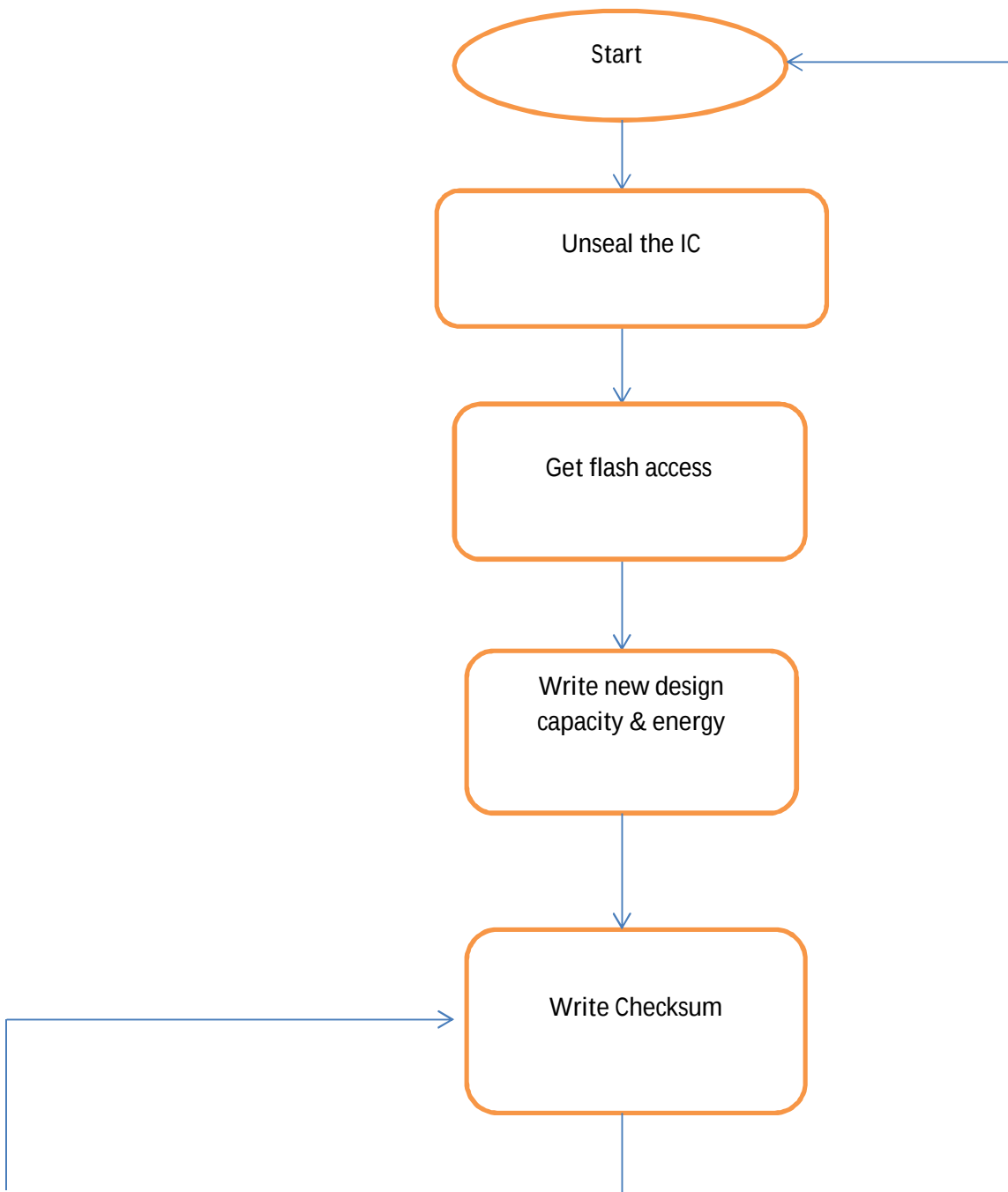


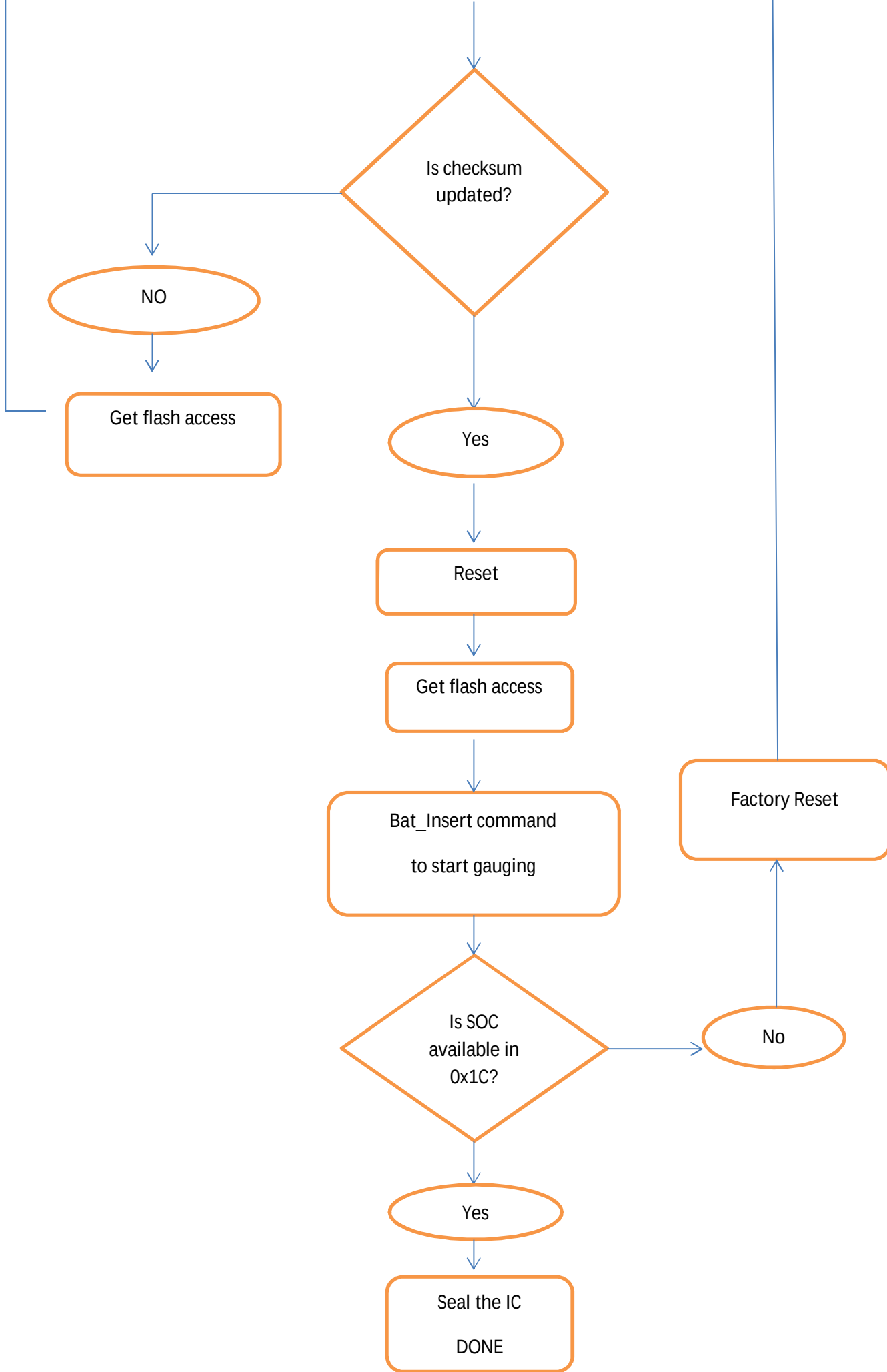
Battery Fuel Gauge IC BQ27410

Configuration

This document provides detailed algorithm for configuring TI's Fuel Gauge IC for your hardware.

1. The default design capacity configuration is 1340 mAh & default design energy is 4960 mWh(3.7 times default design capacity).
2. The design capacity can be seen in register 3C/3D.
3. To update the design capacity & energy following algorithm can be used.





Here is the detailed process

- In this demo we are using i2cset tools for writing in the IC & i2cdump to read IC.
- These are tools provided by Freescale, for IMx controller.
- Eg command i2cset -y 2 0x55 0x00 0x14 b

I2cset: Command for writing into ic

-y: flag/option

2: port number

0x55: i2c slave address

0x00: target address

0x14: value to be written

b: write a byte

1. (UNSEAL)

i2cset -y 2 0x55 0x00 0x14 b

i2cset -y 2 0x55 0x01 0x04 b

i2cset -y 2 0x55 0x00 0x72 b

i2cset -y 2 0x55 0x01 0x36 b

2. (GET FLASH ACCESS)

i2cset -y 2 0x55 0x61 0x00 b

i2cset -y 2 0x55 0x3e 0x30 b

i2cset -y 2 0x55 0x3f 0x00 b

3. (WRITE DESIGN CAPACITY & DESIGN ENERGY REF:sula596)

i2cset -y 2 0x55 0x53 0x1d b

i2cset -y 2 0x55 0x54 0x4c b

i2cset -y 2 0x55 0x55 0x60 b

i2cset -y 2 0x55 0x56 0x66 b

4. (WRITE CHECKSUM)

i2cset -y 2 0x55 0x60 0x1e b

5. DUMP TO SEE IF ITS UPDATED
IF NO:

6. (AGAIN GET FLASH ACCESS)

i2cset -y 2 0x55 0x61 0x00 b

i2cset -y 2 0x55 0x3e 0x30 b

i2cset -y 2 0x55 0x3f 0x00 b

7. (WRITE CHECKSUM)

i2cset -y 2 0x55 0x60 0x1e b

```
i2cset -y 2 0x55 0x00 0x41 b
i2cset -y 2 0x55 0x01 0x00 b
```

10. IF OK GET FLASH ACCESS TO SEE VALS INSTEAD OF ZEROS (GET FLASH ACCESS)

11. (BATTERY INSERT TO START BATTERY GAUGING)

12. CHECK 0X1C VAL IF SOC IS APPEARING,
IF YES DONE NOW:

```
i2cset -y 2 0x55 0x00 0x20 b
i2cset -y 2 0x55 0x01 0x00 b
DONE
```

```
i2cset -y 2 0x55 0x00 0x15 b
i2cset -y 2 0x55 0x01 0x00 b
```

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