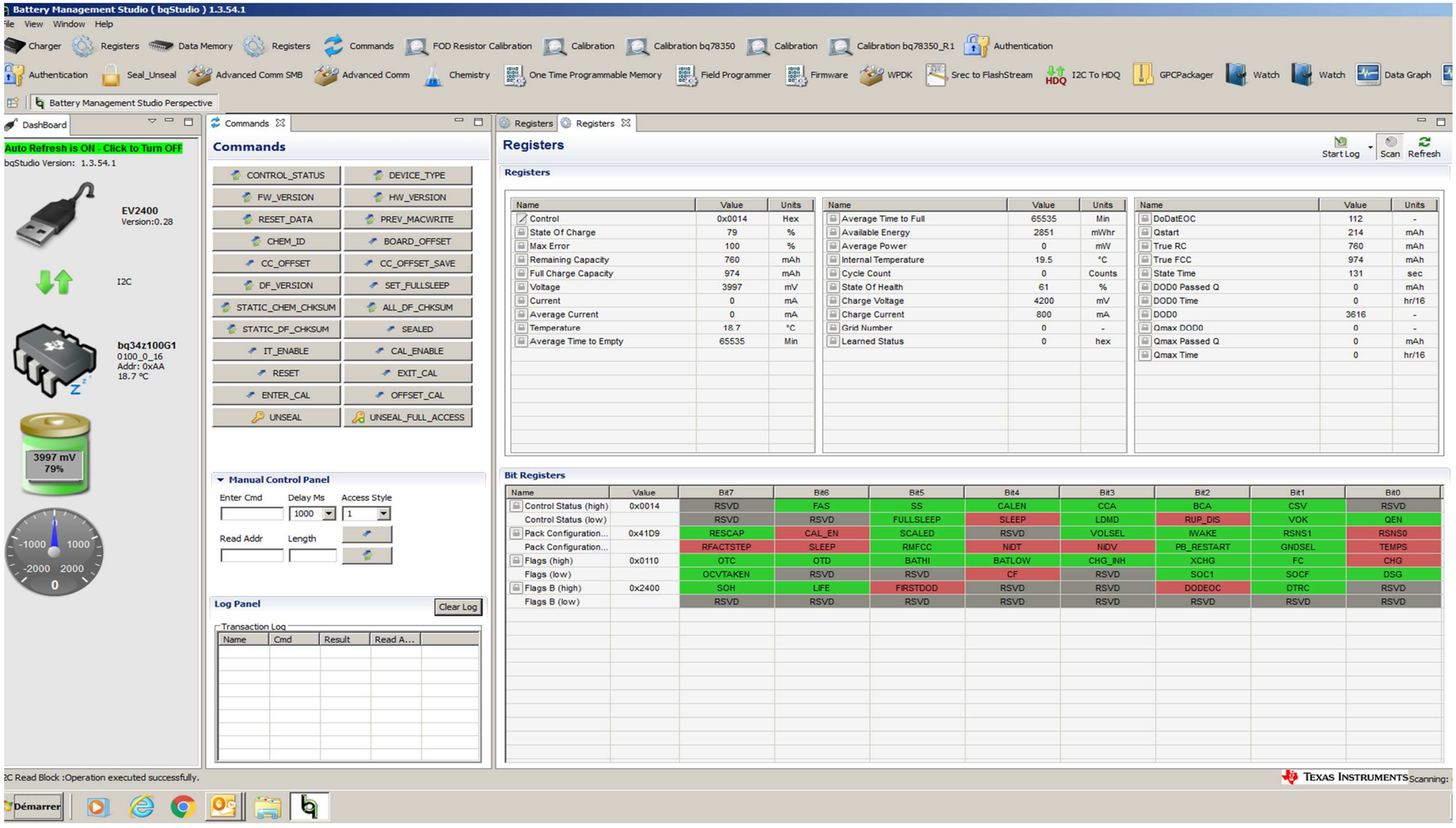
11/06/2019
Bq studio 1.3.54.1
EV2400
Bq34Z100G1
Before Voltage calibration :

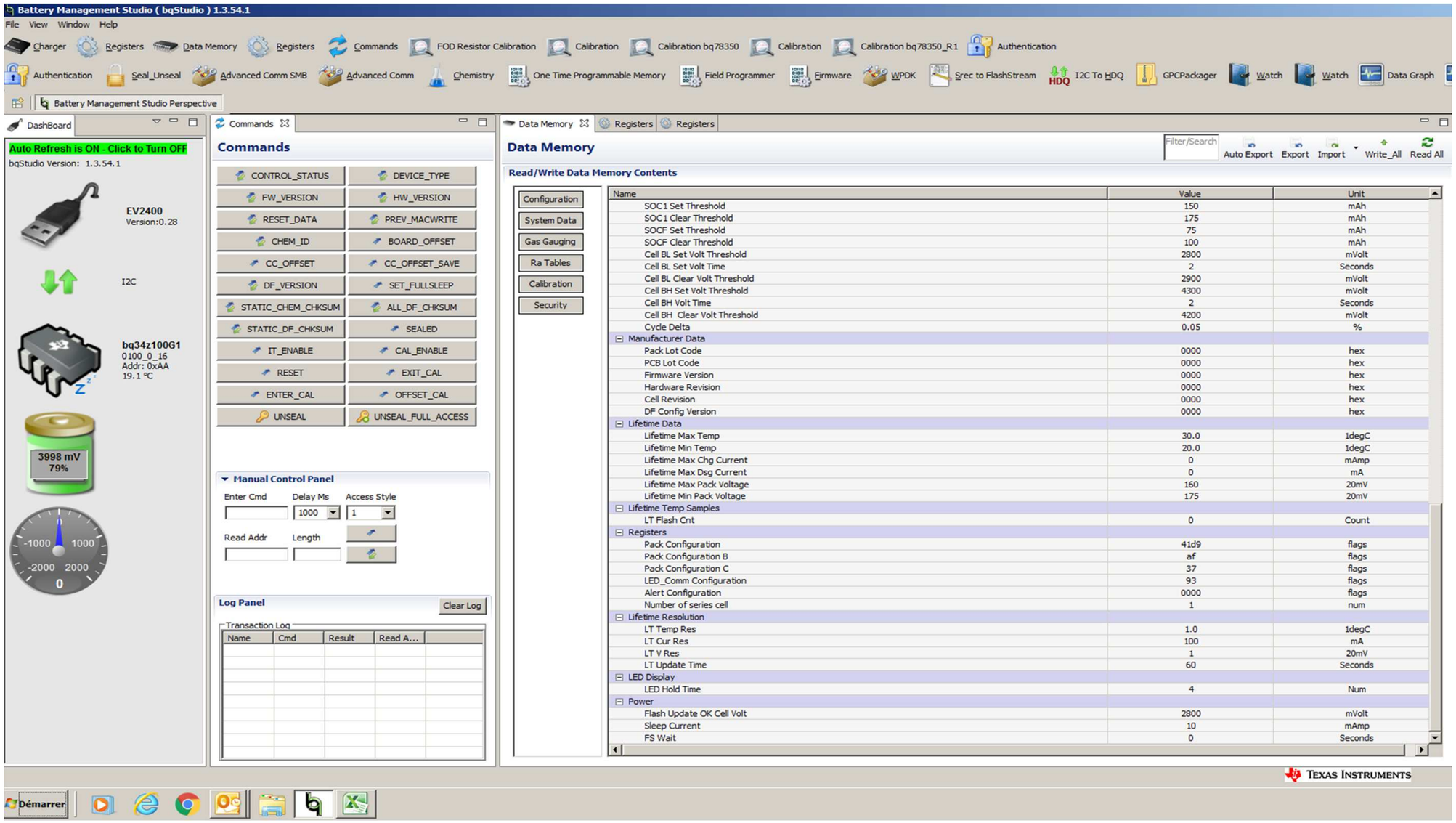


VOLSEL = 0L →So we use the internal divider of the Bq34Z100G

We are unseal full acess.

Now , I trie to calibrate the voltage mode of the BQ34Z100G

'Data Memory'':
With all parametres..



Data Memory | Registers | Registers

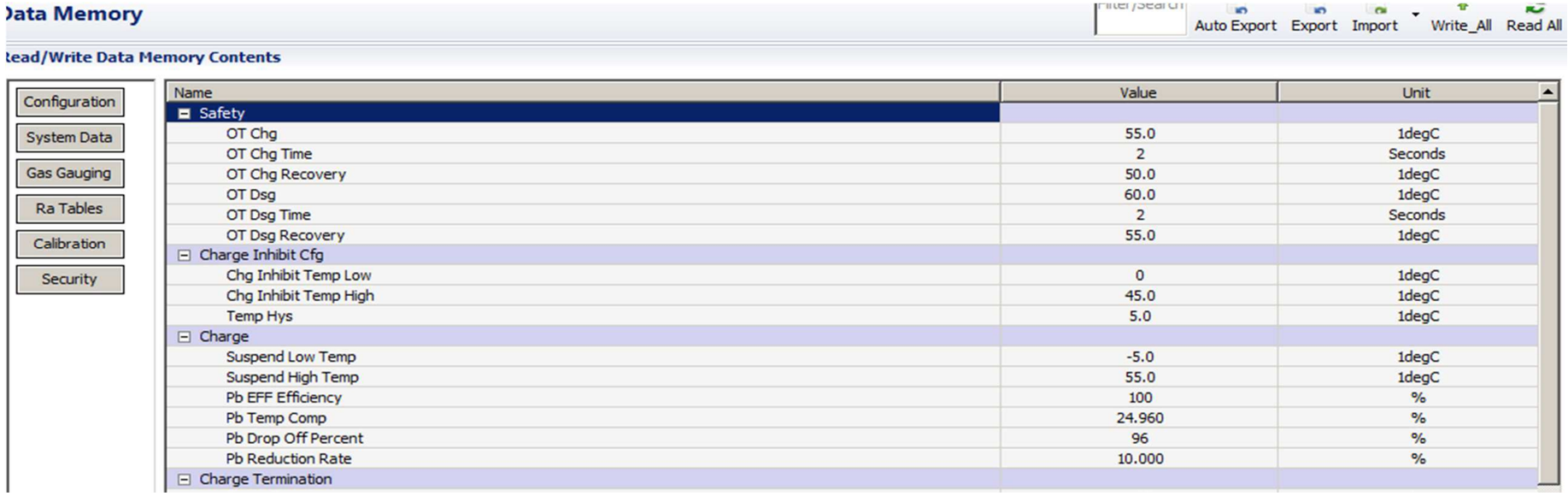
Data Memory

Filter/Search | Auto Export | Export | Import | Write_All | Read All

Read/Write Data Memory Contents

- Configuration
- System Data
- Gas Gauging
- Ra Tables
- Calibration
- Security

Name	Value	Unit
Charge Termination		
Taper Current	100	mAmp
Min Taper Capacity	25	mAmpHr
Cell Taper Voltage	100	mVolt
Current Taper Window	40	Seconds
TCA Set %	99	Percent
TCA Clear %	95	Percent
FC Set %	100	Percent
FC Clear %	98	Percent
DODatEOC Delta T	10.0	1degC
NiMH Delta Temp	3.0	1degC
NiMH Delta Temp Time	180	Seconds
NiMH Hold Off Time	100	Seconds
NiMH Hold Off Current	240	mAmp
NiMH Hold Off Temp	25.0	1degC
NiMH Cell Negative Delta Volt	17	mVolt
NiMH Cell Negative Delta Time	16	Seconds
NiMH Cell Neg Delta Qual Volt	4200	mVolt
Data		
Manufacture Date	1980-1-1	Day + Mo*32 + (Yr -1980)*256
Serial Number	0001	hex
Cycle Count	0	Count
CC Threshold	900	mAmpHr
Max Error Limit	100	%
Design Capacity	1600	MilliAmpHour
Design Energy	6720	MilliWattHour
SOH Load I	-400	MilliAmp
Cell Charge Voltage T1-T2	4200	mV
Cell Charge Voltage T2-T3	4200	mV
Cell Charge Voltage T3-T4	4100	mV
Charge Current T1-T2	10	Percent
Charge Current T2-T3	50	Percent
Charge Current T3-T4	30	Percent
JEITA T1	0	degC
JEITA T2	10	degC
JEITA T3	45	degC
JEITA T4	55	degC
Design Energy Scale	1	Number
Device Name	bq34z100-G1	-
Manufacturer Name	Texas Inst.	-
Device Chemistry	LION	-
Discharge		
SOC1 Set Threshold	150	mAh
SOC1 Clear Threshold	175	mAh
SOCF Set Threshold	75	mAh



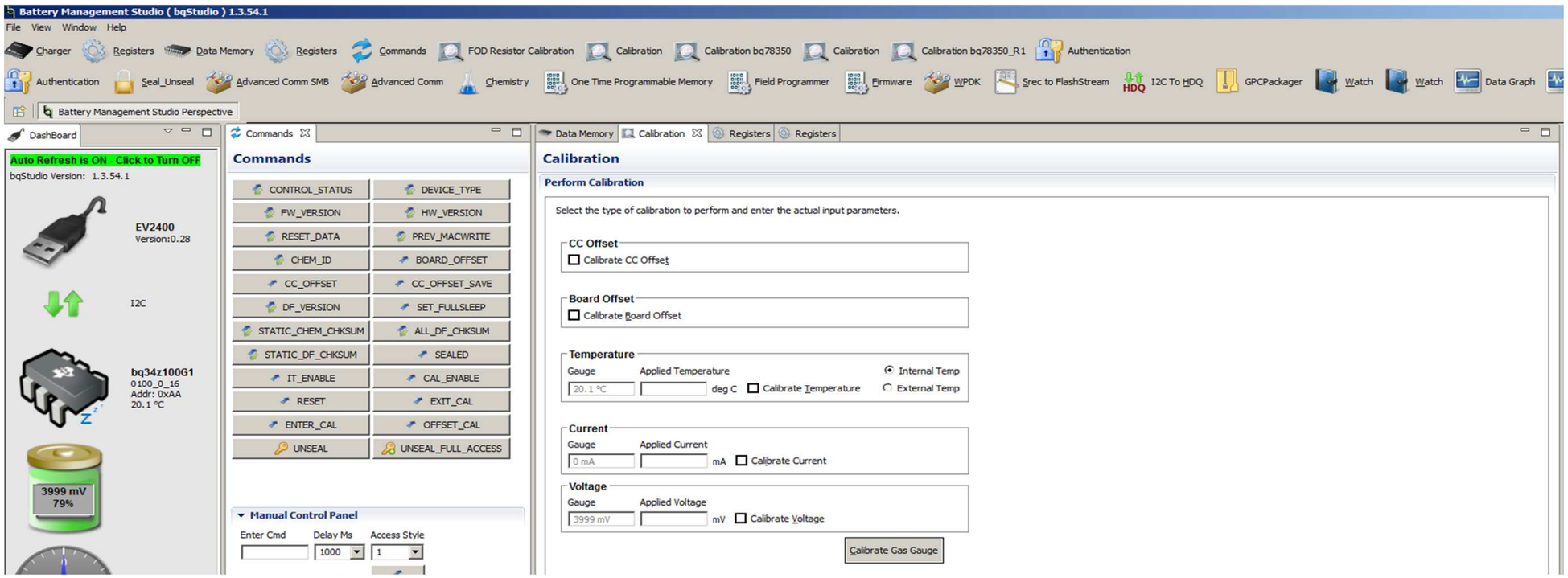
In Register : → Number of cell is : 1

→ Serial Number 0001 H

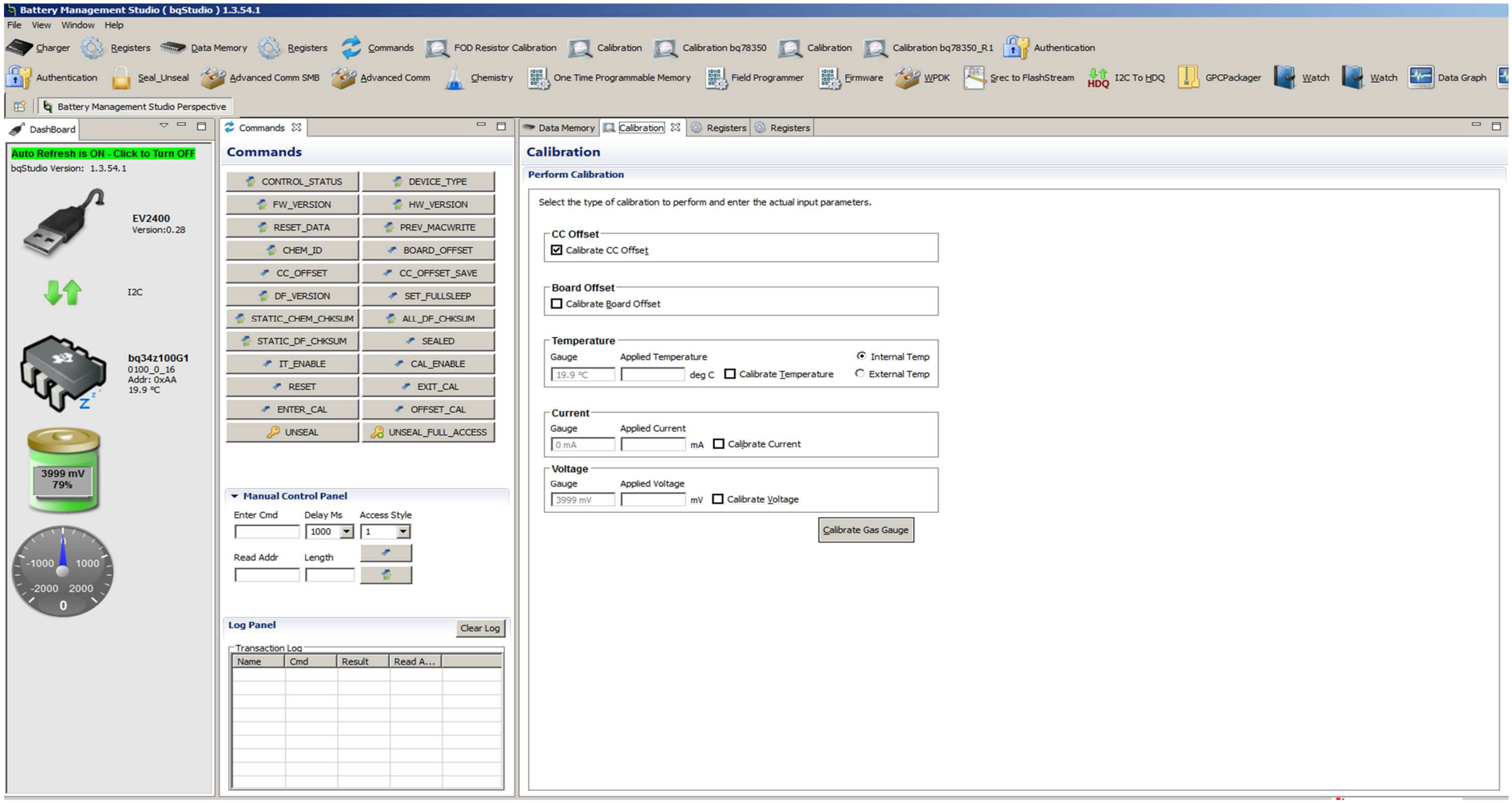
Question Bq34Z100 do not use all the indiacation?

What Bq34Z100G use exactly?

Now I go in calibration nenu, the third on the right at the top of the screen.



I calibrate CC offset



Data Memory | Calibration | Registers | Registers

Calibration

Perform Calibration

Select the type of calibration to perform and enter the actual input parameters.

CC Offset

☑ Calibrate CC Offset

Board Offset

☐ Calibrate Board Offset

Temperature

Gauge	Applied Temperature			
19.9 °C		deg C	☐ Calibrate Temperature	◉ Internal Temp / ○ External Temp

Current

Gauge	Applied Current		
0 mA		mA	☐ Calibrate Current

Voltage

Gauge	Applied Voltage		
3999 mV		mV	☐ Calibrate Voltage

Calibrate Gas Gauge

I calibrate board offset

alibration

erform Calibration

Select the type of calibration to perform and enter the actual input parameters.

CC Offset

☐ Calibrate CC Offset

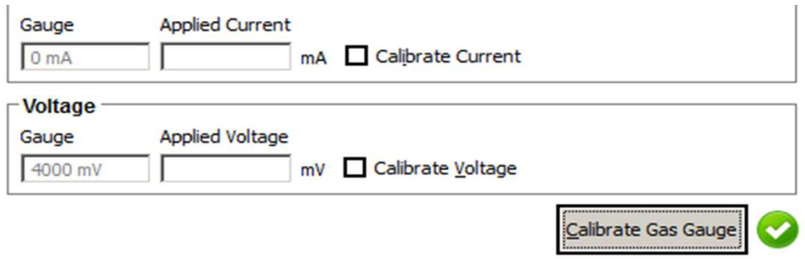
Board Offset

☑ Calibrate Board Offset

Temperature

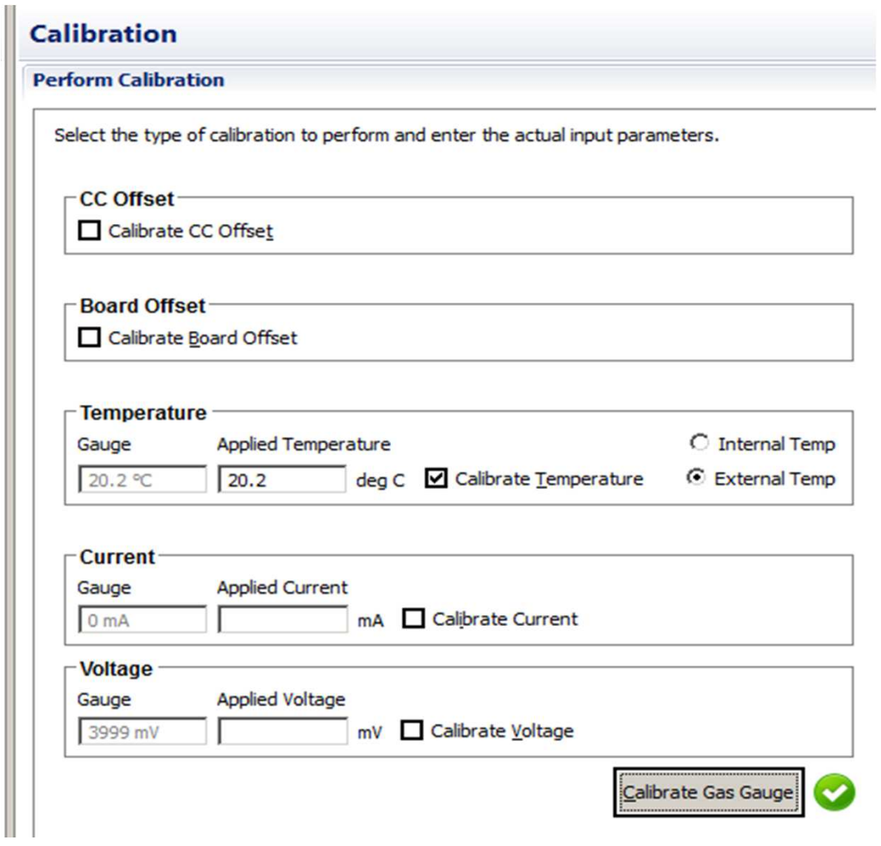
Gauge	Applied Temperature			
20.0 °C		deg C	☐ Calibrate Temperature	◉ Internal Temp / ○ External Temp

Current



I calibrate temperature :

I mesure the température in the room. 20,3°C
Bq34Z100EVM use an external CTN 10K. So I configure external température.



The calibration for the température is OK
I glance an eye on my reference thermemetor The temperatuture is 20,0°C
I trie a new temperature calibration.

DashBoard

Auto Refresh is ON - Click to Turn OFF

bqStudio Version: 1.3.54.1

EV2400
Version:0.28

I2C

bq34z100G1
0100_0_16
Addr: 0xAA
20.4 °C

4000 mV
79%

-1000 1000
-2000 2000
0

Commands

Commands

CONTROL_STATUS | DEVICE_TYPE
FW_VERSION | HW_VERSION
RESET_DATA | PREV_MACWRITE
Reports the firmware version on the device type
CHEM_ID | BOARD_OFFSET
CC_OFFSET | CC_OFFSET_SAVE
DF_VERSION | SET_FULLSLEEP
STATIC_CHEM_CHKSUM | ALL_DF_CHKSUM
STATIC_DF_CHKSUM | SEALED
IT_ENABLE | CAL_ENABLE
RESET | EXIT_CAL
ENTER_CAL | OFFSET_CAL
UNSEAL | UNSEAL_FULL_ACCESS

Manual Control Panel

Enter Cmd | Delay Ms (1000) | Access Style (1)

Read Addr | Length

Log Panel

Clear Log

Transaction Log

Name	Cmd	Result	Read A...	

Data Memory | Calibration | Registers | Registers

Calibration

Perform Calibration

Select the type of calibration to perform and enter the actual input parameters.

CC Offset
☐ Calibrate CC Offset

Board Offset
☐ Calibrate Board Offset

Temperature
Gauge: 20.5 °C | Applied Temperature: 20 deg C | ☑ Calibrate Temperature | ○ Internal Temp | ◉ External Temp

Current
Gauge: 0 mA | Applied Current: mA | ☐ Calibrate Current

Voltage
Gauge: 4000 mV | Applied Voltage: mV | ☐ Calibrate Voltage

Calibrate Gas Gauge

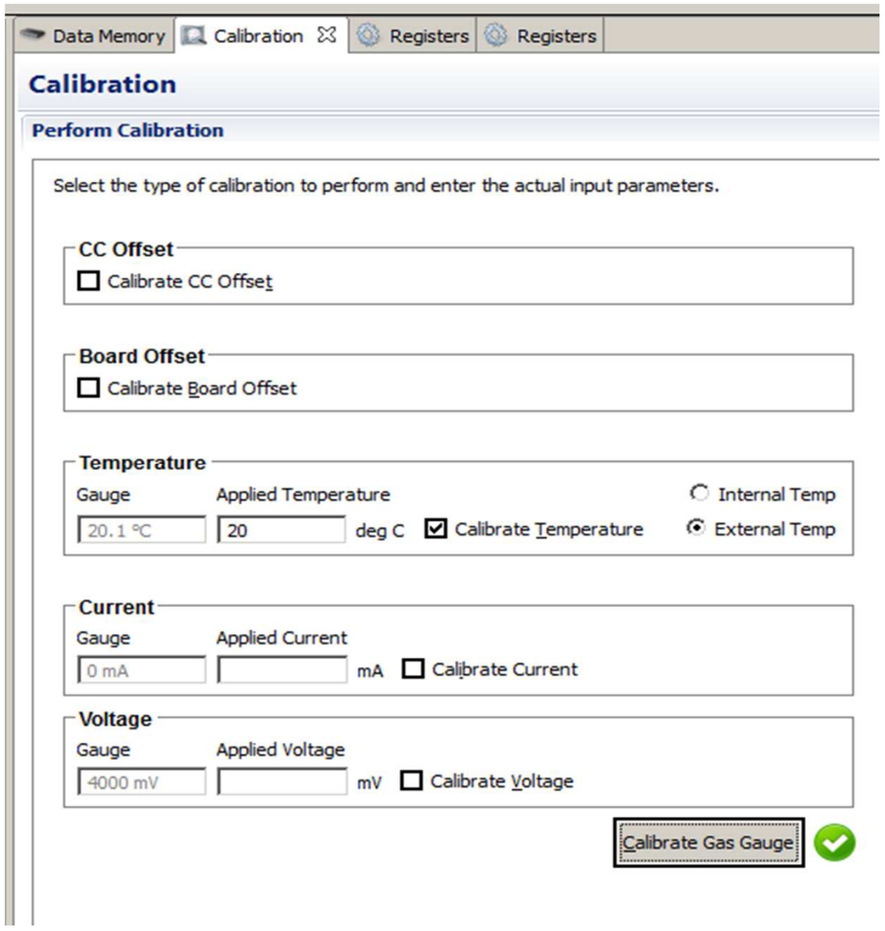
Calibration - A read of data written failed comparison.

Démarrer

Why the calibration is now not possible?

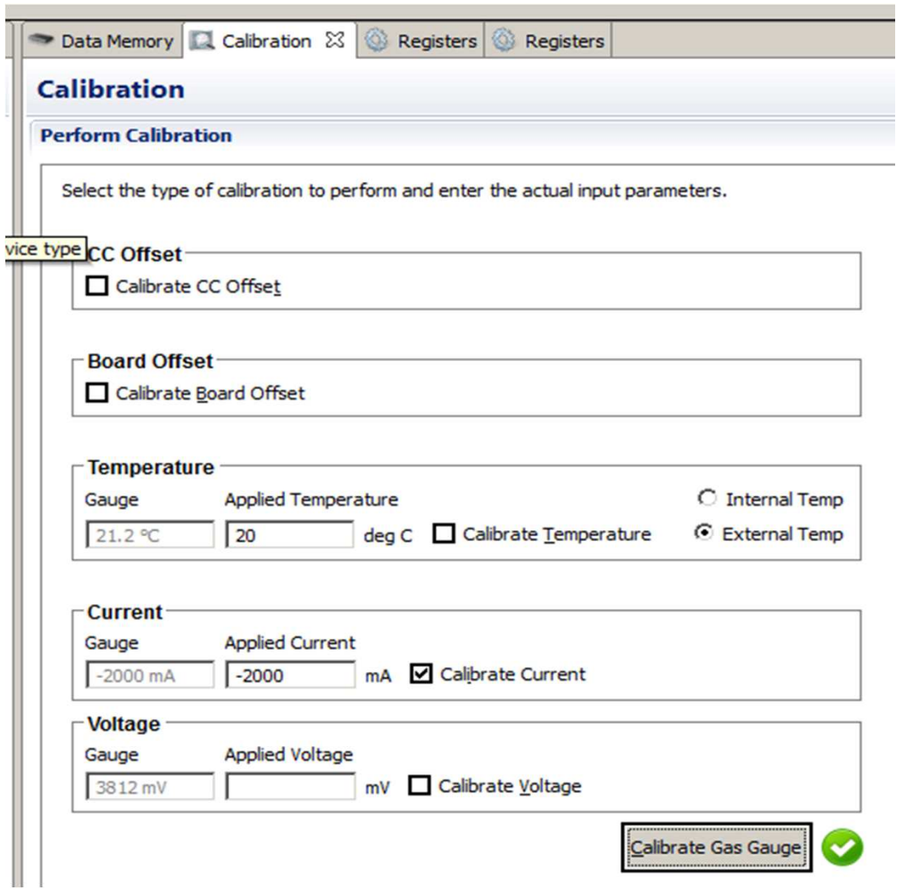
I trie again. Not good.
I trie again not good.

I trie again Good.



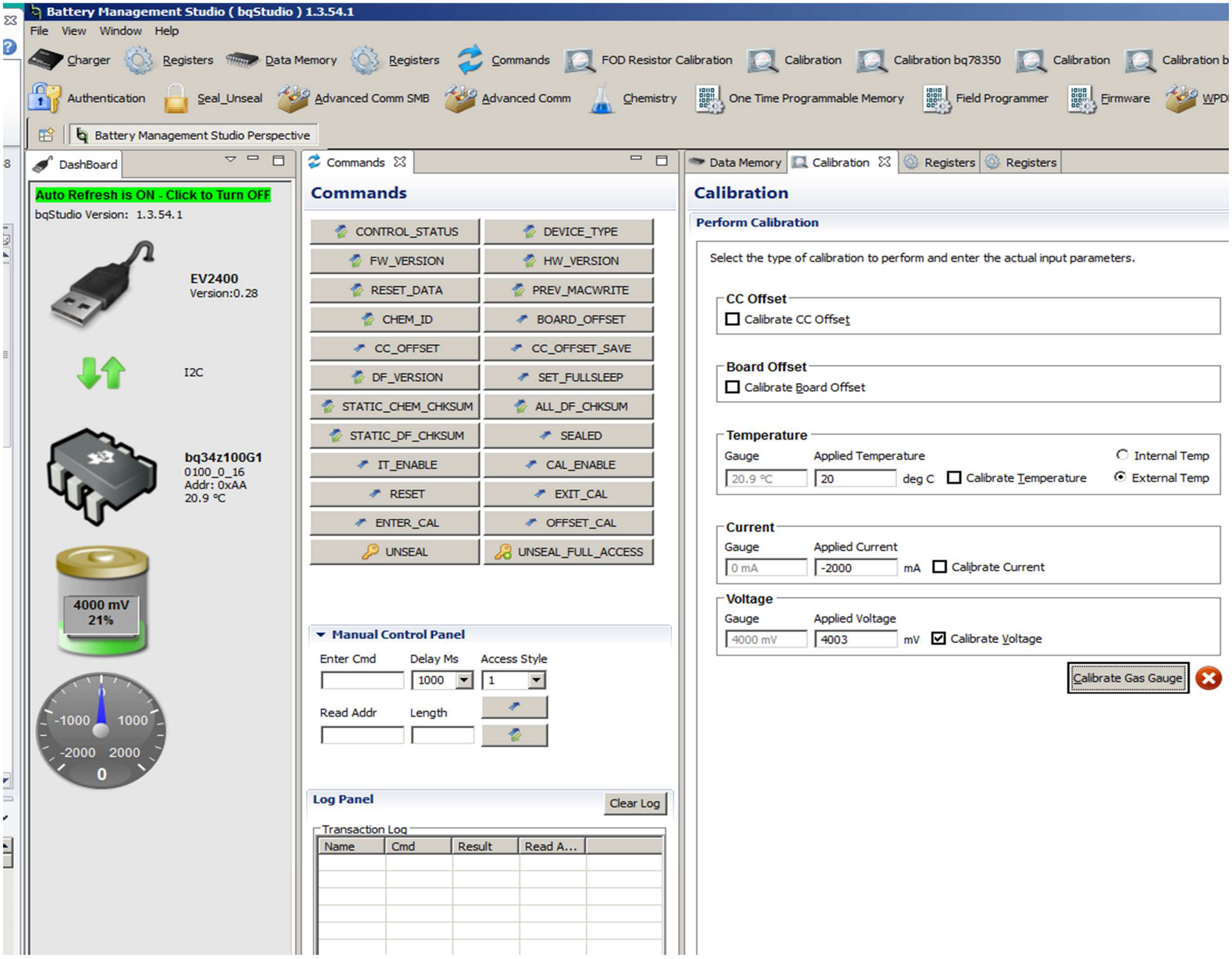
Now curent calibration :

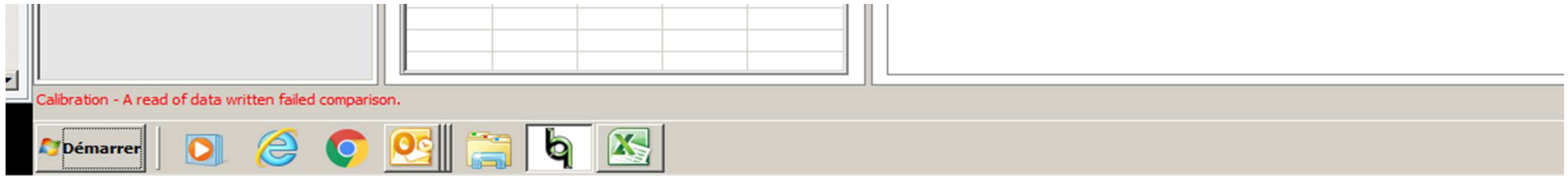
I use a charge curent set to 2A



The calibration is OK.

I trie now, to calibrate the voltage system.
I mesure the voltage of the batterie : Vbat = 4003 mV I enter the value in the calibration software





I can trie again. No good.