

EV2400

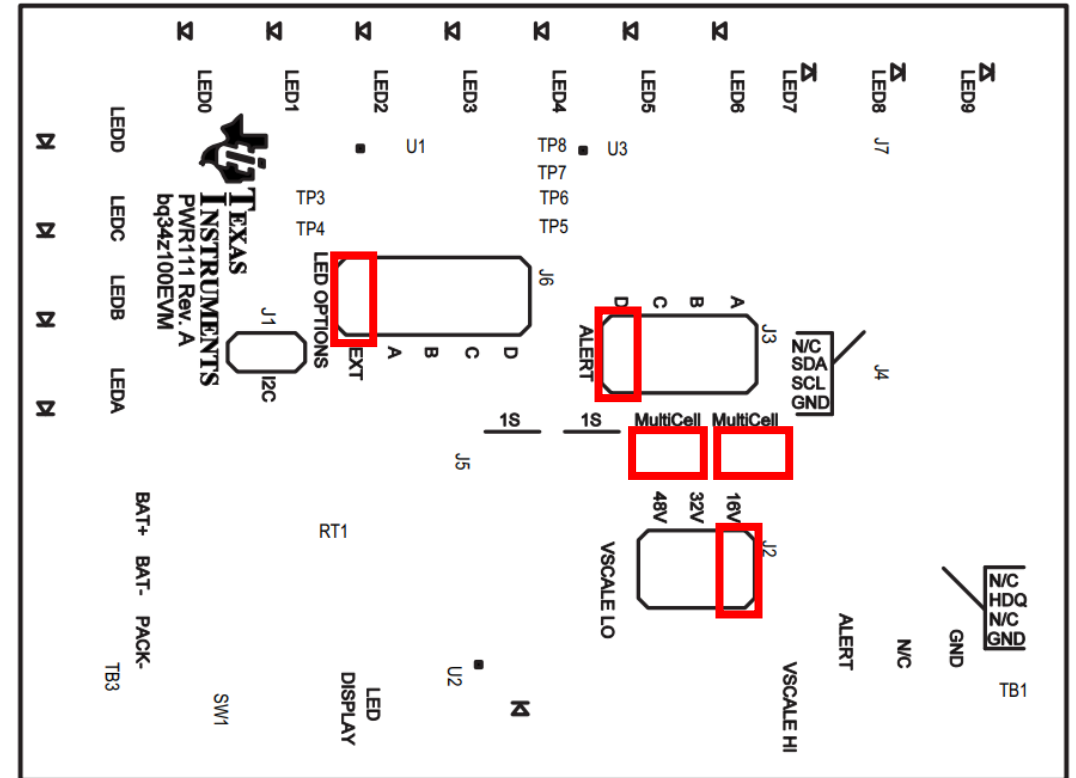
PC

alyzer

EVM

BAT+ BAT- PACK

Li-ion battery is used in two cells after calibration



□ : jumpers

Data Memory

Battery Management Studio (bqStudio) 1.3.120

File View Window Help

Registers Data Memory Commands Calibration Advanced Comm Chemistry Programming Golden Image I2C To HDQ Watch Data Graph Errors

Dashboard

Auto Refresh is ON - Click to Turn OFF
bqStudio Version: 1.3.120

EV2400
Version: 0.18

I2C

bq34z100
0100_2_01
Addr: 0xAA
24.7 °C

4150 mV
0%

1

Data Memory

Filter/Search

Auto Export Export Import Write All Read All

Read/Write Data Memory Contents

Configuration System Data Gas Gauging Ra Table Calibration Security

Name	Value	Unit
SOCF Clear Threshold	100	mAh
Cell BL Set Volt Threshold	2800	mV
Cell BL Set Volt Time	2	Seconds
Cell BL Clear Volt Threshold	2900	mV
Cell BH Set Volt Threshold	4300	mV
Cell BH Volt Time	2	Seconds
Cell BH Clear Volt Threshold	4200	mV
Cycle Delta	0.05	%
Manufacturer Data		
Pack Lot Code	0000	hex
PCB Lot Code	0000	hex
Firmware Version	0000	hex
Hardware Revision	0000	hex
Cell Revision	0000	hex
DF Config Version	0000	hex
Integrity Data		
Static Chem DF Checksum	0000	Number
Lifetime Data		
Lifetime Max Temp	30.0	1degC
Lifetime Min Temp	20.0	1degC
Lifetime Max Chg Current	0	mA
Lifetime Max Dsg Current	0	mA
Lifetime Max Pack Voltage	160	20mV
Lifetime Min Pack Voltage	175	20mV
Lifetime Temp Samples		
LT Flash Cnt	0	Count
Registers		
Pack Configuration	4999	flags
Pack Configuration B	81	flags
Pack Configuration C	37	flags
LED_Comm Configuration	00	flags
Alert Configuration	0000	flags
Number of series cell	2	num
Chemie resolution		
LT Temp Res	1.0	1degC
LT Cur Res	100	mA
LT V Res	1	20mV
LT Update Time	60	Seconds
LED Display		
LED Hold Time	4	Num
Power		
Flash Update OK Cell Volt	2800	mV
Sleep Current	10	mA
FS Wait	0	Seconds

Commands

CONTROL_STATUS
DEVICE_TYPE
FW_VERSION
HW_VERSION
RESET_DATA
PREV_MACWRITE
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

Log Panel

Clear Log

Transaction Log

Name	Cmd	Result	Reac
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TEXAS INSTRUMENTS

When VOLSEL=1 (External) and Number of series cell=2 were set, the battery voltage value was 4150mV.

Calibration

Battery Management Studio (bqStudio) 1.3.120

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EV2400
Version: 0.18

I2C

bq34z100
0100_2_01
Addr: 0xAA
24.6 °C

16000 mV
0%

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 ☒ Internal Temp
24.6 °C deg C ☐ Calibrate Temperature ☐ External Temp

Current
Gauge Applied Current
0 mA mA ☐ Calibrate Current

Voltage
Gauge Applied Voltage
16000 mV mV ☒ Calibrate Voltage

☒

Commands

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CC_OFFSET_SAVE
DF_VERSION
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STATIC_CHEM_CHKSUM
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TEXAS INSTRUMENTS

Applied Voltage was set to 8000mV and Calibrate Gas Gauge was run.
Battery voltage indication was now 16000mV.

Registers

Battery Management Studio (bqStudio) 1.3.120


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DashBoard

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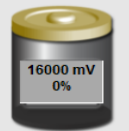
EV2400
Version: 0.18



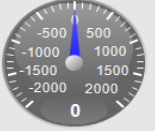
I2C



bq34z100
0100_2_01
Addr: 0xAA
24.7 °C



16000 mV
0%



Registers

Registers

Name	Value	Units
<input checked="" type="checkbox"/> Control	0x0014	Hex
<input type="checkbox"/> State Of Charge	0	%
<input type="checkbox"/> Max Error	100	%
<input type="checkbox"/> Remaining Capacity	0	mAh
<input type="checkbox"/> Full Charge Capacity	978	mAh
<input type="checkbox"/> Voltage	16000	mV
<input type="checkbox"/> Current	0	mA
<input type="checkbox"/> Average Current	0	mA
<input type="checkbox"/> Temperature	24.7	°C
<input type="checkbox"/> Average Time to Empty	65535	Min
<input type="checkbox"/> Average Time to Full	65535	Min

Name	Value	Units
<input type="checkbox"/> Volt Scale	1	Number
<input type="checkbox"/> Current Scale	1	Number
<input type="checkbox"/> Energy Scale	1	Number
<input type="checkbox"/> Available Energy	0	cWh
<input type="checkbox"/> Average Power	0	cW
<input type="checkbox"/> Internal Temperature	24.0	°C
<input type="checkbox"/> Cycle Count	0	Counts
<input type="checkbox"/> State Of Health	98	%
<input type="checkbox"/> Charge Voltage	8400	mV
<input type="checkbox"/> Charge Current	500	mA
<input type="checkbox"/> FullChargeCapacity_CWH	374	cWh

Name	Value	Units
<input type="checkbox"/> Grid Number	0	-
<input type="checkbox"/> Learned Status	0	hex
<input type="checkbox"/> DoDateOC	48	-
<input type="checkbox"/> Qstart	978	mAh
<input type="checkbox"/> True RC	-20	mAh
<input type="checkbox"/> True FCC	978	mAh
<input type="checkbox"/> State Time	484	sec
<input type="checkbox"/> DOD0 Passed Q	0	mAh
<input type="checkbox"/> DOD0 Time	2	hr/16
<input type="checkbox"/> DOD0	16384	-
<input type="checkbox"/> Qmax DOD0	0	-
<input type="checkbox"/> Qmax Passed Q	0	mAh
<input type="checkbox"/> Qmax Time	2	hr/16

Bit Registers

Name	Value	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
<input type="checkbox"/> Control Status (high)	0x0014	RSVD	FAS	SS	CALEN	CCA	BCA	CSV	RSVD
<input type="checkbox"/> Control Status (low)		RSVD	RSVD	FULLSLEEP	SLEEP	LDMD	RUP_DIS	VOK	QEN
<input type="checkbox"/> Pack Configuration ...	0x09D9	RESCAP	CAL_EN	SCALED	RSVD	VOLSEL	WAKE	RSNS1	RSNS0
<input type="checkbox"/> Pack Configuration ...		RFACTSTEP	SLEEP	RMFCC	NIMH_PbA_VCT_DT	NIMH_PbA_VCT_DV	PB_RESTART	GNDSEL	TEMPS
<input type="checkbox"/> Flags (high)	0x2116	OTC	OTD	BATHI	BATLOW	CHG_INH	XCHG	FC	CHG
<input type="checkbox"/> Flags (low)		REST	RSVD	RSVD	CF	RSVD	SOC1	SOCF	DSG
<input type="checkbox"/> Flags B (high)	0x2400	SOH	LIFE	FIRSTDOD	RSVD	RSVD	DODEOC	DTRC	RSVD
<input type="checkbox"/> Flags B (low)		RSVD	RSVD	RSVD	RSVD	RSVD	RSVD	RSVD	RSVD

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CONTROL_STATUS

DEVICE_TYPE

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HW_VERSION

RESET_DATA

PREV_MACWRITE

CHEM_ID

BOARD_OFFSET

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DF_VERSION

SET_FULLSLEEP

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ALL_DF_CHKSUM

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