

IP2368 register description document

Version/revision history

Version	date	modify the content	Drafter/reviser
V1.00	2021-10-25	First edition released	IT360
V1.60	2022-05-16	Modify layout and description	IT360
V1.61	2022-07-13	Increase VSYS power output High 8 bits of register	IT360

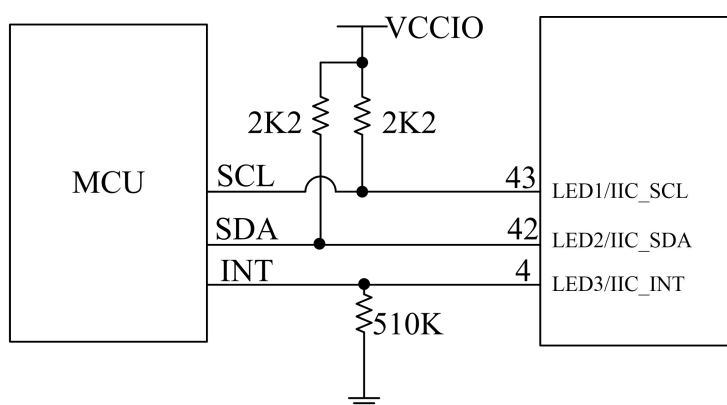


1 Typical Application Notes

1.1 I2C Connection method

IP2368 Can be used as a slave device, MCU accessible I2C interface to read or set IP2368 voltage, current, power and other information, IP2368

I2C The connection method is as follows:



1.2 I2C Precautions

- IP2368 of I2C Device address: written as 0xEA, read as 0xEB. If you need to set it to another address, you can customize it;
- **IP2368 of I2C The communication voltage is 3.3V, like MCU that's 5V voltage, you need to add a level conversion chip, go to 3.3V;**
- IP2368 INT Application instructions: IP2368 Detected while sleeping. If INT is high, it will wake up. After waking up, IP2368 Take the initiative to pull up INT, 100ms after, MCU Can be carried out I2C Communication, reading and writing registers; IP2368 Before entering sleep mode, it will switch to input high impedance. Detection INT status, if it is high, it is considered MCU not allowed IP2368 Enter sleep, if it is low, then IP2368 Enter dormant; MCU After detecting INT After being low, 16ms To stop access within IC;
- IP2368 of I2C Highest support 250k Communication frequency, taking into account clock deviation, is recommended MCU of I2C For communication clock 100k-200k;
- **If you want to modify IP2368 The value of a certain register needs to be read out first, and then the value that needs to be modified is Bit proceed with After the OR operation, the calculated value is written into the register. Other unopened registers cannot be modified at will. register default value The value read shall prevail. Different I2C The default value may be different;**
- **IP2368 I2C Communication is real-time data. After receiving the request, it needs to interrupt for data preparation. The preparation time is long, so MCU exist I2C When communicating, you need to determine whether you have received it after sending the address. ACK and increase 50us Delay (reference I2C Application examples); Suggestions sheet Bytes read, 100k of I2C Communication frequency, increasing between each byte 1ms delay;**
- exist I2C Read the end of the data. After reading the last byte, you must give NACK signal, otherwise IP2368 I think it's still going on. Continue to read data, the next clock will continue to output the next data, resulting in failure to receive STOP signal, last read error;

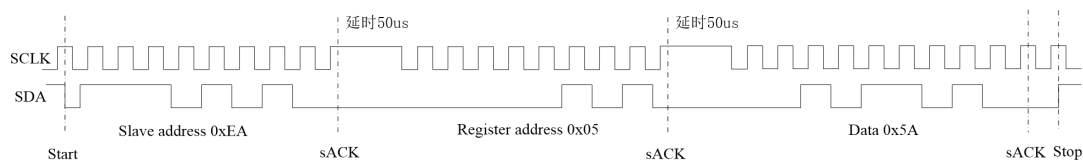
- ReservedThe registers cannot be arbitrarily written with data, and the original values cannot be changed, otherwise unpredictable results will occur. to the register
The operation must be carried out according to read-modify-write, only modify the requiredbit, other unused ones cannot be modifiedbitvalue;
- This document is only forIP2368_I2C_COUT/IP2368_I2C_NACTmodel, other models are invalid;

1.3 I2CApplcation examples

existIP2368INTpin remains high100msafter,MCUcan proceedI2CFor communication, you can initialize the register first (need to modify the special
Modify the register only when using special functions. If you do not need to modify it, you do not need to write the register); then readIP2368Internal information (power, charge and discharge status
status, button status); finally perform operations with special needs (such as special indicator lights, charge and discharge management, fast charge request management);MCUdetected
INTAfter being low,16msAccess needs to be stopped withinI2C.

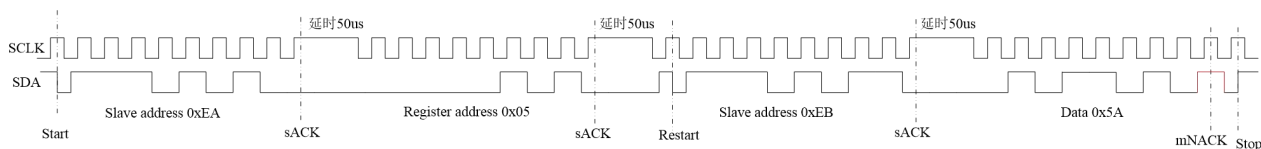
For example:

Past0x05register write data0x5A



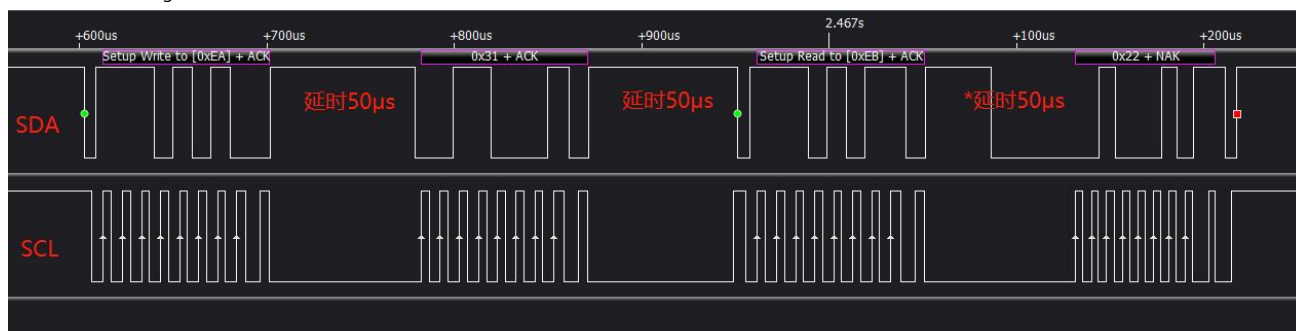
picture1 I2C Write 0x05

from0x05Register read back data



picture2 I2C Read 0x05

Actual from0x31Register read back data



picture3 I2C Read 0x31

2 Register list:

2.1 Read/write operation register

SYS_CTL0 (charge enable register)

I2C address 0XE A Register address = 0x00

Bit(s)	Name	Description	R/W	RESET
7	En_LOADOTP	Wake up after power on and reset register value enable 0: Do not reset register values 1: Reset register value Should bit 1 is not recommended to change it to 0, if it needs to be modified, the software needs to reset the register default value regularly, such as VINOK_VBUOK After the signal is triggered	R/W	1
6	En_RESETCU	MCU Reset register Write 1: Reset the register to the default value. After reset, the bit will automatically restore to 0	R/W	0
5	En_INT_low	When there is something unusual INT pull down 2MS, hint MCU an abnormality occurs 1: Enable 0: disable	R/W	0
4	En_Vbus_SinkDPdM	CMouth input DM DP Fast charging enabled 1: Enable 0: disable	R/W	1
3	En_Vbus_SinkPd	CMouth input Pd Fast charging enabled 1: Enable 0: disable	R/W	1
2	En_Vbus_SinkSCP	CMouth input SCP Fast charging enabled 1: Enable 0: disable	R/W	1
1	En_Vbus_Sinkctrl	CMouth MOS Input enable 1: Enable, Open CMouth MOS 0: disable, closure CMouth MOS	R/W	1
0	En_Charger	Charger Charging enabled (cannot be charged after turned off) 1: Enable 0: disable	R/W	1

SYS_CTL1 (Series cell number setting, battery type, current setting mode)

I2C address 0XE A Register address = 0x01

Bit(s)	Name	Description	R/W	RESET
7:4	Reserved			
3	En_BATmode_set	Set the battery type enable (the battery type is determined by the register 0x01[2]) 1: Enable, allows setting the battery type 0: disable, does not allow setting the battery type	R/W	0

2	Set_BATmode	Battery type setting 0: Lithium iron phosphate battery, single cell trickle constant current voltage 2.5V, full voltage 3.6V about 1: Ordinary lithium battery, single cell trickle constant current voltage 3.0V, full voltage 4.2V about	R/W	1
1	En_Isetmode_set	Select current setting mode enable 1: Enable, allows selection of current setting mode 0: disable, does not allow selection of current setting mode	R/W	0
0	Set_Isetmode	Select current setting mode (current and power register 0x03 [6:0]) 0: Iset What is set is the battery terminal current 1: Iset The input power is set	R/W	1

SYS_CTL2(Vsetfull voltage setting)

I2C address 0XEA Register address = 0x02

Bit(s)	Name	Description	R/W	RESET
7	En_Vset_set	Set full voltage enable 1: Enable, allowing setting of full voltage 0: disable, it is not allowed to set the full voltage	R/W	0
6:0	Vset	full voltage setting When in lithium iron phosphate battery mode (0x01[2]=0), a single battery is fully charged $V_{set} = N * 10 + 3500 \text{mV}$ (Highest 3.7V) In ordinary lithium battery mode (0x01[2]=1), a single battery is fully charged $V_{set} = N * 10 + 4000 \text{mV}$ (Highest 4.4V)		00 1010

SYS_CTL3(IsetCharging power or current setting)

I2C address 0XEA Register address = 0x03

Bit(s)	Name	Description	R/W	RESET
7	En_Iset_set	Set charging power or current enable 1: Enable, allows setting the charging power or current 0: disable, does not allow setting the charging power or current	R/W	0
6:0	Iset	Battery terminal current or power setting When set to battery terminal current (0x01[0]=0), battery terminal current $I_{set} = N * 100 \text{mA}$ (maximum 5A) When set to charging input power mode (0x01[0]=1), the set charging power $P_{max} = N * 1 \text{W}$ (The maximum charge is 100W)	R/W	0111100

SYS_CTL4(battery capacity setting)

I2Caddress0XEA Register address =0x04

Bit(s)	Name	Description	R/W	RESET
7	En_FCAP_set	Set battery capacity function enable 1:Enable, allows setting the battery capacity 0:disable, does not allow setting the battery capacity	R/W	0
6:0	Fcap	battery capacityFCAP= N*200mAh	R/W	0101000

SYS_CTL6(Current battery level)

I2Caddress0XEA Register address =0x06

Bit(s)	Name	Description	R/W	RESET
7:0	Cap_Now	Current battery level (readable and writable) Cap_Now=N	R/W	x

SYS_CTL7(Trickle charge current, threshold and charge timeout settings)

I2Caddress0XEA Register address =0x07

Bit(s)	Name	Description	R/W	RESET
7:4	ikk	Trickle charge current setting (maximum trickle charge current400ma) Itk=N*50mA	R/W	0100
3:2	wxya	Single cell trickle constant current charging voltage threshold When set to lithium iron phosphate mode (0x01[2]=0) 00:2.3V 01:2.4V 10:2.5V 11:2.6V When set to normal lithium battery mode (0x01[2]=1) 00:2.8V 01:2.9V 10:3.0V 11:3.1V	R/W	10
1:0	Charge_OT	Charging timeout setting 00:disable, no charging timeout function 01: 24 hours 10:36h 11:48h	R/W	10

SYS_CTL8(Stop charging and recharging threshold settings)

I2C address 0XEA Register address =0x08

Bit(s)	Name	Description	R/W	RESET
7:4	Istop	Stop charging current setting Istop=N*50mA	R/W	0010
3:2	wxya	recharge threshold 00: No recharging function after full charge 01: V _{TRGT} - N*0.05 10: V _{TRGT} - N*0.1 11: V _{TRGT} - N*0.2 V TRGT-----Full charge voltage N----Number of battery cells in series	R/W	10
1:0	Reserved			

SYS_CTL9(standby enable and low battery voltage settings)

I2C address 0XEA Register address =0x09

Bit(s)	Name	Description	R/W	RESET
7	En_Standby	Standby enable 1: Enable 0: Disabled	R/W	1
6	En_BATlow_Set	Battery low voltage setting enable (battery voltage setting register 0x0A) 0: disable 1: Enable	R/W	0
5	En_BAT_Low	Turn off battery low power shutdown function 0: disable 1: Enable	R/W	0
4:0	Reserved			

SYS_CTL10(Battery low voltage setting)

I2C address 0XEA Register address =0x0A

Bit(s)	Name	Description	R/W	RESET
7:5	Set_BATlow	Battery low voltage setting 000: lithium battery 2.80V*N/Lithium iron battery 2.3V*N 001: lithium battery 2.90V*N/Lithium iron battery 2.4V*N 010: lithium battery 3.00V*N/Lithium iron battery 2.5V*N 011: lithium battery 3.10V*N/Lithium iron battery 2.6V*N 100: lithium battery 3.20V*N/Lithium iron battery 2.7V*N Number of battery cells in series	R/W	010
4:0	Reserved			

SYS_CTL11(Output enable register)

I2C address 0XEA Register address = 0x0B

Bit(s)	Name	Description	R/W	RESET
7	En_Dc-Dc_Output	Discharge output enable (cannot output after shutdown) 1: Enable 0: Disabled	R/W	1
6	En_Vbus_Src_DP dM	Cport output DP/DM Fast charging enabled 1: Enable 0: disable	R/W	1
5	En_Vbus_SrcPd	Cport output Pd Fast charging enabled 1: Enable 0: disable	R/W	1
4	En_Vbus_SrcSCP	Cport output SCP Fast charging enabled 1: Enable 0: disable	R/W	1
3:0	Reserved			

SYS_CTL12(Output maximum power selection register)

I2C address 0XEA Register address = 0x0C

Bit(s)	Name	Description	R/W	RESET
7:5	Vbus_Src_Power	Vbus1 Output power selection: 000: 20W 001: 25W 010: 30W 011: 45W 100: 60W 101: 100W	R/W	101
4:0	Reserved			

100W Need to add Mark Identify the circuit.

TypeC_CTL8(TYPE-C mode control register)

I2C address 0XEA Register address = 0x22

Bit(s)	Name	Description	R/W	RESET
7:6	Vbus_Mode_Set	Vbus CCM mode selection 00: UFP 01: DFP 11: DRP	R/W	0
5:0	Reserved			

TypeC_CTL9(outputPdoCurrent setting register)

I2C address 0XEA Register address = 0x23

Bit(s)	Name	Description	R/W	RESET
7	En_5VPdo_3A/2.4A	5VPdoCurrent setting 1:3A 0:2.4A	R/W	1
6	En_Pps2Pdo_Iset	Pps2 PdoCurrent setting enable 1:Enable 0:disable <small>* After enabling, the output power and overcurrent are set byPdoThe current is based on the setting, and the overcurrent is based on the settingPdoCurrent1.1times</small>	R/W	0
5	En_Pps1Pdo_Iset	Pps1 PdoCurrent setting enable 1:Enable 0:disable <small>* After enabling, the output power and overcurrent are set byPdoThe current is based on the setting, and the overcurrent is based on the settingPdoCurrent1.1times</small>	R/W	0
4	En_20VPdo_Iset	20VPdoCurrent setting enable 1:Enable 0:disable <small>* After enabling, the output power and overcurrent are set byPdoThe current is based on the setting, and the overcurrent is based on the settingPdoCurrent1.1times</small>	R/W	0
3	En_15VPdo_Iset	15VPdoCurrent setting enable 1:Enable 0:disable <small>* After enabling, the output power and overcurrent are set byPdoThe current is based on the setting, and the overcurrent is based on the settingPdoCurrent1.1times</small>	R/W	0
2	En_12VPdo_Iset	12VPdoCurrent setting enable 1:Enable 0:disable <small>* After enabling, the output power and overcurrent are set byPdoThe current is based on the setting, and the overcurrent is based on the settingPdoCurrent1.1times</small>	R/W	0
1	En_9VPdo_Iset	9VPdoCurrent setting enable 1:Enable 0:disable <small>* After enabling, the output power and overcurrent are set byPdoThe current is based on the setting, and the overcurrent is based on the settingPdoCurrent1.1times</small>	R/W	0
0	En_5VPdo_Iset	5VPdoCurrent setting enable 1:Enable 0:disable	R/W	0

TypeC_CTL10(5VPdcurrent setting register)

I2Caddress0XEA Register address =0x24

Bit(s)	Name	Description	R/W	RESET
7:0	5VPdo_Iset	5VPdoCurrent setting 5VPdo=20mA*N (default3A,Max=3A)	R/W	0x96

TypeC_CTL11(9VPdcurrent setting register)

I2Caddress0XEA Register address =0x25

Bit(s)	Name	Description	R/W	RESET
7:0	9VPdo_Iset	9VPdoCurrent setting 9VPdo=20mA*N (default3A,Max=3A)	R/W	0x96

TypeC_CTL12(12VPdcurrent setting register)

I2Caddress0XEA Register address =0x26

Bit(s)	Name	Description	R/W	RESET
7:0	12VPdo_Iset	12VPdoCurrent setting 12VPdo=20mA*N(default3A,Max=3A)	R/W	0x96

TypeC_CTL13(15VPdcurrent setting register)

I2Caddress0XEA Register address =0x27

Bit(s)	Name	Description	R/W	RESET
7:0	15VPdo_Iset	15VPdoCurrent setting 15VPdo=20mA*N(default3A,Max=3A)	R/W	0x96

TypeC_CTL14(20VPdcurrent setting register)

I2Caddress0XEA Register address =0x28

Bit(s)	Name	Description	R/W	RESET
7:0	20VPdo_Iset	20VPdoCurrent setting 20VPdo=20mA*N(default5A, need to identify emark,Max=5A)not recognizedmarkfor3A	R/W	0xFA

TypeC_CTL23(Pps1 Pdocurrent setting register)

I2Caddress0XEA Register address =0x29

Bit(s)	Name	Description	R/W	RESET
7:0	Pps1Pdo_Iset	Pps1 PdoCurrent setting Pps1 Pdo=50mA*N (default5A, need to identify emark,Max=5A)not recognizedmarkfor3A	R/W	0x3C

TypeC_CTL24(Pps2 Pdocurrent setting register)

I2Caddress0XEA Register address =0x2A

Bit(s)	Name	Description	R/W	RESET
7:0	Pps2Pdo_Iset	Pps2 PdoCurrent setting Pps2 Pdo=50mA*N (default5A, need to identify emark,Max=5A)not recognizedmarkfor3A	R/W	0x3C

TypeC_CTL17(outputPdosetting register)

I2Caddress0XEA Register address =0x2B

Bit(s)	Name	Description	R/W	RESET
7	Reserved		R/W	R
6	En_Src_Pps2Pdo	Pps2 PdoEnable 1:Enable 0:disable *disableno afterPps2 Pdo	R/W	1
5	En_Src_Pps1Pdo	Pps1 PdoEnable 1:Enable 0:disable *disableno afterPps1 Pdo	R/W	1
4	En_Src_20VPdo	20VPdoEnable 1:Enable 0:disable *disableno after20V PD	R/W	1
3	En_Src_15VPdo	15VPdoEnable 1:Enable 0:disable *disableno after15V Pdo	R/W	1
2	En_Src_12VPdo	12VPdoEnable 1:Enable 0:disable *disableno after12V Pdo	R/W	1
1	En_Src_9VPdo	9VPdoEnable 1:Enable 0:disable	R/W	1

		*disableno after9V		
0	Reserved		R/W	R

2.2 read-only status indication register
SOC_CAP_DATA (Cell power data register)

I2C address 0XE Register address = 0X30

Bit(s)	Name	Description	R/W
7:0	Soc_Cap	Cell percentage power data (%) Soc_Cap=N	R

STATE_CTL0 (Charge status control register)

I2C address 0XE Register address = 0X31

Bit(s)	Name	Description	R/W
7:6	Reserved		R
5	CHG_En	Charging flag 1: charging (VOEven in charging state) 0: Non-charging state	R
4	CHG_End	full status flag 1: Charging is fully charged 0: Charging is not fully charged	R
3	Output_En	Discharge status flag 1: Discharge state and the output port is open, without any abnormality 0: The discharge status output is not turned on or there is a discharge abnormality.	R
2:0	Chg_state	Chg_state 000: Standby 001: Trickle 010: Constant current charging 011: Constant voltage charging 100: Waiting for charging (including charging not turned on, etc.) 101: full status 110: Charging timeout	R

STATE_CTL1 (Charge status control register)

I2C address 0XE Register address = 0X32

Bit(s)	Name	Description	R/W
7:6	Chg_State	Chg_state 00: 5V input charging 01: High voltage input fast charging	R
5:0	Reserved		R

STATE_CTL2(enterPdstatus control register)

I2Address0XEAREgister address =0X33

Bit(s)	Name	Description	R/W
7	Vbus_Ok	Vbus_Ok 1:VbusThere is electricity 0:Vbusno power	R
6	Vbus_Ov	Vbus_Ov 1:VbusInput overvoltage 0:VbusThere is no overvoltage on the input	R
5:3	Reserved		
2:0	Chg_Vbus	Charging voltage 111:20VCharge 110:15VCharge 101:12VCharge 100:9VCharge 011:7VCharge 010:5VCharge	R

TypeC_STATE(System status indication register)

I2Address0XEAREgister address =0X34

Bit(s)	Name	Description	R/W
7	Sink_Ok	TypeC SinkInput connection flag 1:efficient 0:invalid	R
6	Src_Ok	TypeC SrcOutput connection flag 1:efficient 0:invalid	R
5	Src_Pd_Ok	Src_Pd_OkOutput connection flag 1:efficient 0:invalid	R
4	Sink_Pd_Ok	Sink_Pd_OkInput connection flag 1:efficient 0:invalid	R
3	Vbus_Sink_Qc_Ok	Enter the fast charging valid flag bitQcQandPP5Not counting fast chargingOk 1:efficient 0:invalid	R
2	Vbus_Src_Qc_Ok	Output fast charge valid flag bitQcQandPP5Not counting fast chargingOk 1 :efficient 0:invalid	R
1:0	Reserved		

MOS_STATE(enter MOS status indication register)

I2Address0XEAREgister address =0X35

Bit(s)	Name	Description	R/W
7	Reserved		R
6	Vbus_Mos_State	Vbusmouth input MOS state 0: Disabled 1: On state	R
5:0	Reserved		R

STATE_CTL3(System overcurrent indication register)

I2Address0XEAREgister address =0X38

Bit(s)	Name	Description	R/W
7:6	Reserved		R
5	Vsys_Oc	Vsys Output overcurrent flag bit, needs to be written 1 clear 0 1: Vsys The output has a trigger overcurrent signal 0: Vsys The output does not trigger an over-current signal. When the first short-circuit signal is detected, write first 1 clear 0, and then read again, if 600ms If the overcurrent signal is detected twice or more continuously within a period, the overcurrent signal is considered valid.	R
4	Vsys_Scdt	Vsys Output short circuit flag, need to write 1 clear 0 1: Vsys The output has a trigger short circuit signal 0: Vsys The output does not trigger a short-circuit signal. When the first short-circuit signal is detected, write first 1 clear 0, and then read again, if 600ms If the short-circuit signal is detected twice or more continuously within a period, the short-circuit signal is considered valid.	R
3:0	Reserved		R

BATVADC_DAT0(VBAT voltage register)

I2Address0XEAREgister address =0X50

Bit(s)	Name	Description	R/W
7:0	BATVADC[7:0]	BATVADC data low 8bit VBAT PIN voltage	R

BATVADC_DAT1(VBAT voltage register)

I2Address0XEAREgister address =0X51

Bit(s)	Name	Description	R/W
7:0	BATVADC[15:8]	BATVADC high data 8bit	R

		VBATPINvoltage VBAT=BATVADC (mV)	
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VsysVADC_DAT0(Vsysvoltage register)

I2Caddress0XEAREgister address =0X52

Bit(s)	Name	Description	R/W
7:0	VsysVADC[7:0]	VsysVoltage data of low8bit VsysPINvoltage	R

VsysVADC_DAT1(Vsysvoltage register)

sendI2Caddress0XEAREgister address =0X53

Bit(s)	Name	Description	R/W
7:0	VsysVADC[15:8]	VsysHigh voltage data8bit VsysPINvoltage Vsys= VsysVADC (mV)	R

IVbus_Sink_IADC_DAT0(input current register)

I2Caddress0XEAREgister address =0X54

Bit(s)	Name	Description	R/W
7:0	IVbus ADC[7:0]	The charging input current data is low8bit Vbusinput current	R

IVbus_Sink_IADC_DAT1(input current register)

sendI2Caddress0XEAREgister address =0X55

Bit(s)	Name	Description	R/W
7:0	IVbusADC[15:8]	The charging input current data is high8bit Vbusinput current Iin=IVbusADC(mA)	R

When charging, the current is stored in0X54and0x55middle.0x31registerbit5It is the charging flag.

IVbus_Src_IADC_DAT0(Output current register)

I2Caddress0XEAREgister address =0X56

Bit(s)	Name	Description	R/W
7:0	IVbus ADC[7:0]	The discharge output current data is low8bit	R

		VbusOutput current	
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IVbus_Src_IADC_DAT1(Output current register)

sendI2Caddress0XEAREgister address =0x57

Bit(s)	Name	Description	R/W
7:0	IVbusADC[15:8]	The discharge output current data is high8bit VbusOutput current Iout=IVbusADC(mA)	R

When discharging, the current is stored in 0x56 and 0x57 middle. 0x31 register bit 5 It is the discharge flag.

IBATIADC_DAT0(BAT terminal current register)

I2Caddress0XEAREgister address =0x6E

Bit(s)	Name	Description	R/W
7:0	IBATIADC[7:0]	Cell terminal current IBATIADC data low8bit	R

IBATIADC_DAT1(BAT terminal current register)

I2Caddress0XEAREgister address =0x6F

Bit(s)	Name	Description	R/W
7:0	IBATIADC[15:8]	Cell terminal current IBATIADC high data8bit IBAT= IBATIADC(mA)	R

ISYS_IADC_DAT0(IVsystem terminal current register)

I2Caddress0XEAREgister address =0x70

Bit(s)	Name	Description	R/W
7:0	ISYSIADC[7:0]	IVsystem terminal current VsysIADC data low8bit	R

IVsys_IADC_DAT1(IVsystem terminal current register)

I2Caddress0XEAREgister address =0x71

Bit(s)	Name	Description	R/W
7:0	IVsysIADC[15:8]	IVsystem terminal current VsysIADC high data8bit IVsys = VsysIADC(mA)	R

Vsys_POW_DAT0(Vsysterminal power register)

I2Caddress0XEAREgister address =0X74

Bit(s)	Name	Description	R/W
7:0	Vsys_POW_ADC [7:0]	VsysTerminal powerADCdata low8bit	R

Vsys_POW_DAT1(Vsysterminal power register)

I2Caddress0XEAREgister address =0X75

Bit(s)	Name	Description	R/W
7:0	Vsys_POW_ADC[15:8]	VsysTerminal powerADCdata in8bit	R

Vsys_POW_DAT2(Vsysterminal power register)

I2Caddress0XEAREgister address =0X76

Bit(s)	Name	Description	R/W
7:0	Vsys_POW_ADC[23:16]	VsysTerminal powerADChigh data8bit Vsys_POW= Vsys_POW_ADC(mW)	R

INTC_IADC_DAT0(NTCoutput current register)

I2Caddress0XEAREgister address =0X77

Bit(s)	Name	Description	R/W
7	NTC_IADC_DAT	0:output20uA 1:output80uA	R
6:0	Reserved		

VGPI00_NTC_DAT0(VGPI00_NTC_ADCvoltage register)

I2Caddress0XEAREgister address =0X78

Bit(s)	Name	Description	R/W
7:0	VGPI00_DAT0 [7:0]	VGPI00_ADCdata low8bit	R

VGPI00_NTC_DAT1(VGPI00_NTC_ADCvoltage register)

I2Caddress0XEAREgister address =0X79

Bit(s)	Name	Description	R/W
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7:0	VGPI00_DAT1 [15:8]	VGPI00_ADChigh data8bit VGPI00_DAT= VGPI00_ADC (mV)(0~3.3V)	R
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VGPI01_Iset_DAT0(VGPI01_Iset_ADCvoltage register)

I2Caddress0XEAREgister address =0X7A

Bit(s)	Name	Description	R/W
7:0	VGPI01_DAT0 [7:0]	VGPI01_ADCdata low8bit	R

VGPI01_Iset_DAT1(VGPI01_Iset_ADCvoltage register)

I2Caddress0XEAREgister address =0X7B

Bit(s)	Name	Description	R/W
7:0	VGPI01_DAT1 [15:8]	VGPI01_ADChigh data8bit VGPI01_DAT= VGPI01_ADC (mV)(0~3.3V)	R

VGPI02_Vset_DAT0(VGPI02_Vset_ADCvoltage register)

I2Caddress0XEAREgister address =0X7C

Bit(s)	Name	Description	R/W
7:0	VGPI02_DAT0 [7:0]	VGPI02_ADCdata low8bit	R

VGPI02_Vset_DAT1(VGPI02_Vset_ADCvoltage register)

I2Caddress0XEAREgister address =0X7D

Bit(s)	Name	Description	R/W
7:0	VGPI02_DAT1 [15:8]	VGPI02_ADChigh data8bit VGPI02_DAT= VGPI02_ADC (mV)(0~3.3V)	R

VGPI03_FCAP_DAT0(VGPI03_FCAP_ADCvoltage register)

I2Caddress0XEAREgister address =0X7E

Bit(s)	Name	Description	R/W
7:0	VGPI03_DAT0 [7:0]	VGPI03_ADCdata low8bit	R

VGPI03_FCAP_DAT1(VGPI03_FCAP_ADC voltage register)

I2C address 0XE8 Register address = 0X7F

Bit(s)	Name	Description	R/W
7:0	V GPIO3_DAT1 [15:8]	VGPI03_AD high data 8bit VGPI03_DAT = VGPI03_ADC (mV) (0~3.3V)	R

VGPI04_BATNUM_DAT0(VGPI04_BATNUM_ADC voltage register)

I2C address 0XE8 Register address = 0X80

Bit(s)	Name	Description	R/W
7:0	VGPI04_DAT0 [7:0]	VGPI04_ADC data low 8bit	R

VGPI04_BATNUM_DAT1(VGPI04_BATNUM_ADC voltage register)

I2C address 0XE8 Register address = 0X81

Bit(s)	Name	Description	R/W
7:0	V GPIO4_DAT1 [15:8]	VGPI04_AD high data 8bit VGPI03_DAT = VGPI03_ADC (mV) (0~3.3V)	R

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