PowerHub PMS I2C Protocol

V1 (FW Version)
2025/10/16

REG MAP (Addr:0X50)		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	note
Power Enable Reg	**0x00 W/R**	LED Power Enable (0x00)	USB Power Enable (0x01)	Grove Red Power Enable (0x02)	Grove Blue Power Enable (0x03)	PWR485& PWRCAN Power Enable (0x04)	VAMeter Power Enable (0x05)	Charge Power Enable (0x06)										**LED Power Enable:** **1: LED power on** **0: LED power off(default)** **USB Power Enable:** **1: USB power on** **0: USB power off(default)** **Grove Red Power Enable:** **1: Grove red power on** **0: Grove red power off(default)** **Grove Blue Power Enable:** **1: Grove blue power on** **0: Grove blue power off(default)** **PWR485&PWRCAN Power Enable:** **1: PWR485&PWRCAN power on** **0: PWR485&PWRCAN power off(default)** **VAMeter Power Enable:** **1: VAMeter power on** **0: VAMeter power off(default)** **Charge Power Enable:** **1：Charge power on** **0：Charge power off(default)**
USB Mode	**0x10 W/R**	USB Mode (0x10)																**USB Mode：** **0：Slave mode，USB->ESP32(default)** **1：Host mode(USB TypeA)，ESP32->USB TypeA device** **2：Host mode(USB TypeC)，ESP32->USB TypeC device**
PWR485&PWRCAN Config	**0x20 W/R**	Voltage LSB (0x20)	Voltage MSB (0x21)	Current Limit Value (0x22)	Power Output Control (0x23)	Power Direction Control (0x24)												**Voltage:** **Range 3000mV~20000mV, step 20mv** **Current Limit Value:** **0-232,** **Iout limit(mA) = (Current Limit Value+1)*8/0.62** **Power Output Control:** **1: Power output enable(default)** **0：Power output disable** **Power Direction Control:** **1: Power output direction** **0：Power input direction(default)**
SC8721 Config Read	**0x90 R**	Get SC8721 Config (0x90)	CSO (0x91)	SLOPE COMP (0x92)	VOUT SET_MSB (0x93)	VOUT SET_LSB (0x94)	GLOBAL CTRL (0x95)	SYS_SET (0x96)	RESERVED (0x97)	FREQ_SET (0x98)	STATUS_1 (0x99)	STATUS_2 (0x9A)						**see SC8721 datasheet**
Voltage&Current Monitor	**0x30 R**	V_BAT LSB (0x30)	V_BAT MSB (0x31)	I_BAT LSB (0x32)	I_BAT MSB (0x33)	V_PWRCAN LSB (0x34)	V_PWRCAN MSB (0x35)	I_PWRCAN LSB (0x36)	I_PWRCAN MSB (0x37)	V_PWR485 LSB (0x38)	V_PWR485 MSB (0x39)	I_PWR485 LSB (0x3A)	I_PWR485 MSB (0x3B)	V_USB LSB (0x3C)	V_USB MSB (0x3D)	I_USB LSB (0x3E)	I_USB MSB (0x3F)	**V_BAT:** **0~36000mV** **I_BAT:** **-8000mA~8000mA** **V_PWRCAN:** **0~36000mV** **I_PWRCAN:** **-8000mA~8000mA** **V_PWR485:** **0~36000mV** **I_PWR485:** **-8000mA~8000mA** **V_USB:** **0-36000mV** **I_USB:** **-8000mA~8000mA** **V_GROVE_RED:** **0~36000mV** **I_GROVE_RED:** **-8000mA~8000mA** **V_GROVE_BLUE:** **0~36000mV** **I_GROVE_BLUE:** **-8000mA~8000mA**
	0x40 R	V_GROVE_RED LSB (0x40)	V_GROVE_RED MSB (0x41)	I_GROVE_RED LSB (0x42)	I_GROVE_RED MSB (0x43)	V_GROVE_BLUE LSB (0x44)	V_GROVE_BLUE MSB (0x45)	I_GROVE_BLUE LSB (0x46)	I_GROVE_BLUE MSB (0x47)									
Detect Status	**0x50 R**	Charge Status (0x50)	VIN Status (0x51)															**Charge Status：** **0：no charge** **1：charging** **2：error** **VIN Status:** **0：no input** **1：input present**
LED Color	**0x60 W/R**	USB TypeC B (0x60)	USB TypeC G (0x61)	USB TypeC R (0x62)	Dummy Byte (0x63)	USB TypeA B (0x64)	USB TypeA G (0x65)	USB TypeA R (0x66)	Dummy Byte (0x67)	Grove Blue B (0x68)	Grove Blue G (0x69)	Grove Blue R (0x6A)	Dummy Byte (0x6B)	RS485&CAN B (0x6C)	RS485&CAN G (0x6D)	RS485&CAN R (0x6E)	Dummy Byte (0x6F)	**LED Color**
	0x70 W/R	Grove Red B (0x70)	Grove Red G (0x71)	Grove Red R (0x72)	Dummy Byte (0x73)	BAT Charge B (0x74)	BAT Charge G (0x75)	BAT Charge R (0x76)	Dummy Byte (0x77)	Power_L B (0x78)	Power_L G (0x79)	Power_L R (0x7A)	Dummy Byte (0x7B)	Power_R B (0x7C)	Power_R G (0x7D)	Power_R R (0x7E)	Dummy Byte (0x7F)	
LED Brightness	**0x80 W/R**	USB TypeC Brightness (0x80)	USB TypeA Brightness (0x81)	Grove Blue Brightness (0x82)	RS485&CAN Brightness (0x83)	Grove Red Brightness (0x84)	BAT Charge Brightness (0x85)	Power_L Brightness (0x86)	Power_R Brightness (0x87)									**Brightness: 0-100**
Button	**0xA0 R**	Button (0xA0)																**bit0: 0:button 1 press; 1:button 1 no press**
Wakeup Source	**0xB0 R**	nSTBY_WKUP (0xB0)	VIN_DET (0xB1)	nButton2_WKUP (0xB2)														**nSTBY_WKUP: 0,disable; 1,enable(default)** **VIN_DET: 0,disable; 1,enable(default)** **nButton2_WKUP: 0,disable; 1,enable(default)**
RTC Time	**0xC0 W/R**	Sec (0xC0)	Minute (0xC1)	Hour (0xC2)	Day (0xC3)	Month (0xC4)	Year (0xC5)	Week Day (0xC6)										**Sec: 0-59** **Minute: 0-59** **Hour: 0-23** **Day: 1-31** **Month: 1-12** **Year: 0-99** **Week Day:0x01, Sunday; 0x02, Monday; 0x04, Tuesday; 0x08, Wednesday;**
RTC Alarm	**0xD0 W/R**	Minute (0xD0)	Hour (0xD1)	Day (0xD2)	Alarm Enable (0xD3)													**Minute: 0-59** **Hour: 0-23** **Day: 1-31** **Alarm Enable: 1: Alarm Enable; 0: Alarm Disable**
System Command	**0xE0 W**	Power Off (0xE0)	Reset (0xE1)	Download Mode (0xE2)														**写1触发**
Bootloader Version	**0xF0 R**													Version (0xFC)				**Version:** bootloader version number
Firmware Version	**0xF0 R**															Version (0xFE)		**Version:** firmware version number
I2C Address	**0xF0 R**																Address (0xFF)	**Address:** 1-127