

PowerHub PMS I2C Protocol

V1 (FW Version)
10/16/2025

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_PWR485_LSB (0x34)	V_PWR485_MSB (0x35)	I_PWR485_LSB (0x36)	I_PWR485_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)	0~36000mV I_BAT: -8000mA~8000mA V_PWR485: 0~36000mV I_PWR485: -8000mA~8000mA V_PWR485: 0~36000mV I_PWR485: -8000mA~8000mA V_USB: 0~36000mV I_USB: -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)									V_GROVE_RED: 0~36000mV I_GROVE_RED: -8000mA~8000mA V_GROVE_BLUE: 0~36000mV I_GROVE_BLUE: -8000mA~8000mA
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; 0x10: Thursday; 0x20: Friday; 0x40: Saturday; 0x80: Sunday
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)														Write 1 to trigger
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