

# Charge and Discharge Management Board

## UPS POWER MANAGEMENT CONTROL BOARD FOR For 4S Li-ion/Li-Polymer Battery Packs

4S Li-ion and Li-Polymer battery pack UPS, With intelligent MCU control, with 12V DC-IN and 12V DC-OUT;  
Also with 5V 2.1A USB output

This board is the mother board for 4S battery packs portable UPS, can offer Uninterrupted Power Supply.

Manufacturer Part Number: HCX-H284V1 (YDDY-H284V1-001)

This Board is specially designed for Li-ion/Li-Polymer Battery Packs, Compatible with 4S battery Packs, with intelligent MCU control, with Gas/Fuel gauge, with DC 12V input, with 5V 2.1A USB output, with DC output 12V @ 3.5A (Max)

This board is the mother board for 4S battery packs portable UPS, can offer Uninterrupted Power Supply, giving customers the powers all the time.

\* Input: 12V 4A (Max)

\* USB Output: 5V 2.1A

\* DC Output: 12V 3.5A (Max)

Item	Contents		Criteria(Adjustable)
1	Model	HCX-H284V1 (YDDY-H284V1-001)	UPS Power Management Board (4S)
2	Battery Type	Compatible with Li-ion/Li-Polymer	
3	Battery Packs	4S Battery Packs	
4	DC Input	12V	
5	USB Output	5V 2.1A	
6	DC Output	12V 3.5A (max)	
7	Fuel/Gas Gauge	3 LEDs=one for discharge indicator,one for fully charged indicator,one for charging indicator(with different colors,check the picture above); During discharging,the “Discharge Blue LED” will be on; When the Power is low,the “Charge Red LED” will start blinking; During charging,the” charge Red LED” will be on; After fully charged,the “Fully Charged Blue LED” will be on;	
8	Over Charge (per cell)	Overcharge Protection Voltage	4300±50mV
		Overcharge Recovery Voltage	4050±100mV
9	Over Discharge (per cell)	Over Discharge Protection Voltage	2400±100mV
		Over Discharge Recovery Voltage	3000±100mV
10	Resistance and Self-Consumption (per cell)	Inner Resistance	≤ 100mΩ
		Self-Consumption	≤ 200uA
11	Size (L*W*H)	L78.7mm*W35mm*H15mm	

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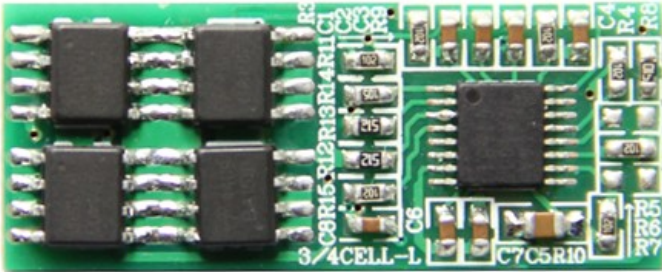
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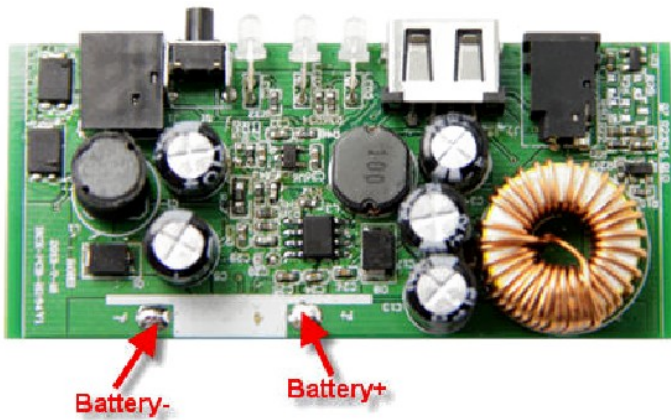
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**Connection:**

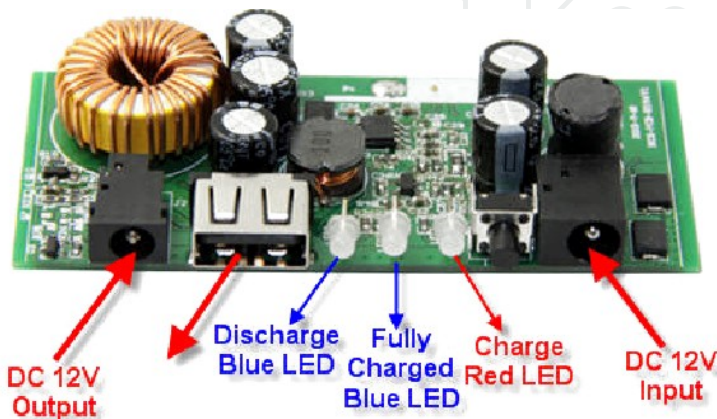
1) Please connect the 4S battery pack to the 4S PCM(HCX-D033)



2) Then Please connect the battery packs with PCM to the mother board as below



3) Operation diagram



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