

# Technical Data Sheet

## Power Management Module RRC-PMM240



### Power Management Module for Mobile Applications

#### Features:

- Wide DC input voltage range
- 82 Watt max. output power to battery
- 240 Watt max. output power to application
- 3D data available of power management module and batteries for easy integration into user application
- Automatic power source selection
- Fits to all standard smart batteries from RRC (e.g. RRC2020, RRC2024, RRC2040, RRC2040-2, RRC2054, RRC2057, ...)

#### Applications:

- Power management and smart battery charging capability for medical and industrial applications

### Specification

<b>Input</b>		<b>Application Output</b>	
Input voltage range	7.5 - 24VDC	Output voltage range	Equal to DC input voltage if ext. DC power supply is present. Equal to battery voltage if no ext. DC power supply is present.
Total input power	192W max.	Total output power	240W max. (turbo boost mode)
Input fuse	8A	Output fuse	10A
Protection	Reverse polarity, short circuit, over voltage & over current	<b>Charger Output</b>	
Standby current	Typical 3mA	Battery charge voltage	Up to 19.2V (± 0,5%)
<b>Power Management</b>		Battery charge current	Up to 6.2A (± 3%)
Automatic power source selection with seamless transition between ext. DC power supply and battery		Protection	Battery short circuit, over temperature, over voltage, over current & reverse polarity
<b>Environmental Condition</b>		<b>User Interface</b>	
Operating temperature range	-20°C - +60°C	UI via GPIO / available info	Charging: yes/no Ext. DC power supply: yes/no Battery/hardware error
		SMBus commands to set	Charge current limit, input current limit
		Battery information available via standard SMBus	

Recommended Voltage Ranges for External AC/DC Power Supplies			
Battery architecture	DC input voltage	Power supply wattage @ 4A max input current	Power supply wattage @ 8A max input current
1SxP	7.5V - 24V	≥30W	≥60W
2SxP	12V - 24V	≥48W	≥96W
3SxP	16V - 24V	≥64W	≥128W
4SxP	20V - 24V	≥80W	≥160W

Regulatory Approvals	
International IEC60601-1	USA/Canada UL60601-1

Mechanical Details	
Board dimensions (LxWxH)	60mm x 50mm x 11mm, without cables and connectors
Weight	Typical 22g
Connectors:	DC input & DC output (2 pin) / User interface (6 pin) / Battery connector (5 pin smart battery connector)

To facilitate a fast design-in process for developers, RRC is providing 3D data of the power management module RRC-PMM240 and the battery housings of RRC smart battery. For an application note related to the power management module with additional details contact your RRC representative. For further information on the RRC smart batteries please refer to the RRC website ([www.rrc-ps.com](http://www.rrc-ps.com)).

Germany/Headquarters	USA	Hong Kong	China
RRC power solutions GmbH Technologiepark 1 D-66424 Homburg / Saar	RRC power solutions Inc. 18340 Yorba Linda Blvd., Suite 107-437 Yorba Linda, CA 92886-4104	RRC power solutions Ltd. 9/F Park Tower, 15 Austin Road Tsim Sha Tsui, Kowloon, Hong Kong	RRC power solutions Ltd. Room 520, Yuanlin Building, Aiguo Road No. 3066, Luohu District, Shenzhen 518021
Tel.: +49 6841 98090 Fax: +49 6841 9809280 Email: <a href="mailto:sales@rrc-ps.de">sales@rrc-ps.de</a> Web: <a href="http://www.rrc-ps.de">www.rrc-ps.de</a>	Tel.: +1 714 777 3604 Fax: +1 714 777 3658 Email: <a href="mailto:usa@rrc-ps.com">usa@rrc-ps.com</a> Web: <a href="http://www.rrc-ps.com">www.rrc-ps.com</a>	Tel.: +852 2376 0106 Fax: +852 2376 0107 Email: <a href="mailto:hkrcc@rrc-ps.com">hkrcc@rrc-ps.com</a> Web: <a href="http://www.rrc-ps.com">www.rrc-ps.com</a>	Tel.: +86 755 8374 1908 Fax: +86 755 8374 1861 Email: <a href="mailto:hkrcc@rrc-ps.cn">hkrcc@rrc-ps.cn</a> Web: <a href="http://www.rrc-ps.com">www.rrc-ps.com</a>