

# SBDATA Specification for BM3396 Platform Summary

## Introduction

This document lists the command messages (SBDATA) communicated between the BM3396 platform and the host system via different communication interfaces (SMBus, RS232, CAN ...), also provide an example of command definition of (0x08) - reading the cell temperature.

**\*\*\* Full command definition <3396\_SBDATA\_V14.pdf> can be requested by contacting our sales \*\*\***

The specifications of SMBus, RS232 or CAN Bus protocol are covered by other documents.

SMBus: [www.smbus.org](http://www.smbus.org)

RS232: BMT106\_COM\_Protocol\_V15.pdf

CAN Bus: BM3396\_CAN\_Protocol\_V10.pdf

This specification is generic and disregards the type of battery chemistry, battery pack voltage and battery pack capacity.

## Audience

The audience for this document could be:

- Smart Battery manufacturers
- Designers of embedded host controller to the smart battery system

## Command List

Command List – SBDATA		Command List - Data Log
0x08 Cell_Temperature	0x1b ManufactureDate	0x31 CellOVP
0x06 / 0x09 PackVoltage	0x1c SerialNumber	0x32 PackOVP
0x04 / 0x0a Current	0x20 ManufacturerName	0x33 CellUVP
0x0d RelativeStateOfCharge	0x21 DeviceName	0x34 PackUVP
0x0e AbsoluteStateOfCharge	0x22 DeviceChemistry	0x35 OverCC
0x0f / 0x1e RemainingCapacity	0x24 VoltageData1	0x36 OverDC
0x10 / 0x1f FullChargeCapacity	0x25 VoltageData2	0x37 OverStall
0x14 ChargingCurrent	0x2b TotalPowerOut	0x38 HardwarePRO
0x15 ChargingVoltage	0x3e Voltage16	0x39 UVP_PowerOFF
0x16 BatteryStatus	0x3f Voltage15	0x42 OverChg_Temp
0x17 CycleCount	0x57 TemperatureData	0x43 UnderChg_Temp
0x18 / 0x1d DesignCapacity	0x58 VoltageData3	0x44 OverDis_Temp
0x19 DesignVoltage		0x45 UnderDis_Temp
		0x47 Last_Chg_Time
		0x48 Max_Chg_Interval
		0x70 Operation_Time

## Command Example – 0x08

0x08 Cell_Temperature	
Command	0x08 - <a href="#">command only for 3~16s applications</a>
Command type	Read Word
Description	Returns the temperature value (0.1°K) of the battery (need hardware support) Celsius degree can be calculated as: (return value – 2731)/10 e.g. return value=0xb90=2960(0.1°K), degree Celsius = (2960-2731)/10=22.9°C
Output	unsigned integer
Unit	0.1°K
Range	2331~3931

Date	Version	Description	Document Name
2011-10-12	1.1		3396_SBDATA_V11.doc
2011-11-10	1.2	Add command 0x2b to read TotalPowerOut	3396_SBDATA_V12.doc
2011-11-16	1.3	Add command 0x0f/0x1e to read Remaining Capacity	3396_SBDATA_V13.doc
2011-11-28	1.4	Re-organize the command set	3396_SBDATA_V14.doc
2011-11-28	1.4	1 <sup>st</sup> release of Summary	3396_SBDATA_V14-Summary.doc

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