



May 6, 2008

**Application Requirements Form
Battery Electronics Units**

**Lithium Ion Battery Balancing, Monitoring,
And Cell Bypass Device Drivers**

Rev A

AEROFLEX PLAINVIEW SALES & MARKETING

Prepared by
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Requirements Worksheet: Battery Electronics Units



Introduction

The Battery Electronics Unit Application Requirements Worksheet provides a concise format to assist in defining your battery system's cell balancing and health monitoring needs.

Completing the worksheet will serve several purposes. You will have a better understanding of the functional and electrical features of Aeroflex's BEU capabilities, it will raise specific questions pertaining to your application that may not be covered by the questionnaire, and most importantly, it will give Aeroflex Engineering and Sales departments a good understanding of your system needs. This will ultimately result in very efficient responses to your technical questions and proposal requests.

Aeroflex Plainview, Sales and Marketing

Completed by:

Date:

Customer Information

Company Name:

Location:

Technical Contact Name:

Technical Contact Phone:

Technical Contact Email:

Application

Program Name:

Application Description:

Target System: Military

Space

Lab

Delivery Needs

Qty

Date

Prototypes (EM):

<input type="text"/>	<input type="text"/>
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Flight product:

<input type="text"/>	<input type="text"/>
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Launch Date:

<input type="text"/>	<input type="text"/>
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Requirements Worksheet: Battery Electronics Units



Balancing Characteristics

Battery Technology
 Battery Configuration
 Battery A-h Capacity
 Balancing Accuracy
 Maximum Desired Balancing Current
 Desired balancing current for a voltage imbalance of 100mv
 Transfer Ratio (Cell to Share Bus)

Example

Lithium-Ion
 8s1p
 100 A-h
 10 mV
 1 ampere
 100 ma
 1 ohm

Requirement

BEU Operating Voltage

Input Voltage Range (With Limits)

Example

28 V ± 6 V

Requirement

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Voltage Monitoring

Total Battery Voltage Accuracy
 Individual Cell Voltage Accuracy
 Monitor Output Voltage Telemetry Interface Format

Example

0.3% of Full Scale

BOL mV EOL mV

1553 Data Bus
 Spacewire
 CAN Bus
 RS-485 Serial
 Discrete Analog Voltages
 Other (Specify)

Requirement

Discrete Output Thresholds

Low Cell
 High Cell
 OVP (Overvoltage Protection)

	Volts
	Volts
	Volts

Mechanical Requirements

Standard Product BEU Configuration?

Yes No

BEU Series:

Size
 Weight

Example
 5" x 5" x 11"
 8 pounds

Requirement

Requirements Worksheet: Battery Electronics Units



Radiation Performance Requirements

Total Dose
 Single Event Latchup
 Single Event Upset
 ELDRS
 Neutron Fluence
 Prompt Dose
 LET

Example

> 100 krad(Si)
 Immune
 Recoverable

 80 Mev

Requirement

Environmental Conditions

Temperature Range of Battery
 Temperature Range of BEU
 Orbit
 Mission Life
 Vibration Level
 EMI

Example

0°C to +50°C
 -20°C to +70°C
 LEO
 8 years
 10 Grms
 MIL-STD-461C

Requirement

Pyroshock

Yes

No

Optional Features

Dual Redundant Balancing
 Cell Bypass Relays
 Reconditioning Load Control
 Temperature Sensor Conditioning (for temperature sensors located in the battery)

Yes
 Yes
 Yes
 Yes

No
 No
 No
 No

Other(Please Specify)

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Requirements Worksheet: Battery Electronics Units



Additional Requirements: