PRODUCT DATASHEET

52V 50Ah
E-BIKE BATTERY

Samsung INR21700-50G Cells · JBD Smart BMS

Rated 2,600Wh capacity. Built fresh to order and bench-tested before shipping.

DOCUMENT TYPE	Technical Specification & Product Data Sheet
BATTERY MODEL	BOOANT 52V 50Ah eBike Battery

Product Datasheet

52V 50Ah eBike Battery · Samsung INR21700-50G Cells · JBD Smart BMS

1. Overview

A 52V 50Ah (2,600Wh) lithium-ion battery built with 140 genuine Samsung INR21700-50G cells in a 14S10P configuration, for long-range e-bikes, DIY builds, cargo bikes, tricycles and custom electric vehicle projects up to 3,000W. The cells sit in a durable metal enclosure managed by a JBD smart Bluetooth BMS, and the pack ships with a matched 58.8V 10A Fast Charger and a fireproof safety bag. Every pack is built fresh to order and bench-tested before shipping.

2. Key Features

- **Genuine Samsung 50G cells** — 140 authentic Samsung INR21700-50G cells (14S10P) deliver a rated 2,600Wh, with stable voltage under load and no rewrapped or B-grade cells.
- **JBD smart Bluetooth BMS** — 40A, 60A or 80A options matched to motors up to 1,500W, 2,500W or 3,000W, with cell balancing and full protection monitoring via the app.
- **Metal case, 13.5 kg** — The durable metal enclosure measures 180 x 170 x 275 mm and weighs about 13.5 kg (29.76 lb), built for long-range e-bikes, cargo bikes, tricycles and custom EV projects.
- **58.8V 10A fast charger included** — A full 0 to 100% charge takes approximately 6 hours, at 1.0A per cell across the 10 parallel groups, from a Fast Charger with multi-stage protection and LED status indicators.
- **Connector of your choice** — XT60F/M, XT90F/M, Anderson SB50, QS8 plug or Wire only. Anderson SB50 is rated 50A, so for the 60A and 80A tiers choose QS8 plug or XT90F/M.
- **Bench-tested before shipping** — Every pack runs a full charge and discharge test before it leaves, and the test report is available on request. Covered by a 2-year warranty.

3. Technical Specifications

Nominal voltage	52V
Rated capacity	50Ah (2,600Wh)
Cell type & configuration	Samsung INR21700-50G, 140 cells, 14S10P
BMS	JBD smart BMS with Bluetooth: 40A / 60A / 80A
BMS peak current	120A (40A BMS) / 180A (60A BMS) / 240A (80A BMS)
Motor compatibility	Up to 1,500W (40A BMS) / 2,500W (60A BMS) / 3,000W (80A BMS)
Full-charge voltage	58.8V
Discharge cut-off voltage	39.2V
Cycle life	600 cycles to 70% capacity
Charger	58.8V 10A Fast Charger, multi-stage protection, included
Charge time	Approx. 6 hours (0 to 100%)
Dimensions	180 x 170 x 275 mm
Weight	Approx. 13.5 kg (29.76 lb)
Discharge connectors	XT60F/M / XT90F/M / Anderson SB50 / QS8 plug / Wire only

App	JBD app (XiaoxiangBMS), iOS & Android
Enclosure	Durable metal enclosure, fireproof safety bag included

4. Smart BMS & Bluetooth App

The JBD Smart Bluetooth BMS supports real-time monitoring through iOS and Android apps, including voltage, current, cell voltage balance, capacity information and battery protection status. It protects the pack against overcharge, over-discharge, over-current, short circuit and temperature issues.

5. Charging

Charge only with the included 58.8V 10A Fast Charger, with multi-stage charging protection and LED charging status indicators. The indicator shows solid red during active charging or fault protection, and turns green when charging is fully complete or when the charger is un-coupled in standby. A full charge takes approximately 6 hours. At 10A across 10 parallel groups, each cell charges at about 1.0A.

6. Enclosure & Fitment

The pack measures 180 x 170 x 275 mm and weighs about 13.5 kg. Check your mounting space against these dimensions before ordering; this is a rigid metal case, not a soft pack. The metal enclosure suits demanding DIY e-bike and EV conversion projects.

7. What's Included

Battery pack with your selected BMS rating and discharge connector, 58.8V 10A Fast Charger, AC power cable (plug matched to your country), fireproof safety bag, discharge lead with your selected connector, and an app download QR code inside the package. The pack is built fresh to order for your selection.

8. Warranty & Support

Covered by the BOOANT 2-year warranty (24 months or 600 cycles to 70% capacity retention, whichever comes first, per the BOOANT warranty policy). Questions about this product: support@booant.com.

Specifications are taken from the product data for this model. BOOANT packs are built to order; if your setup needs a different connector or BMS rating, select it on the product page or contact us before ordering.