LITHION

BMS Up To 72V System

Lithion - Essentials

Vision

- To Be Amongst Top 3 Global BMS Manufacturers In Low/Medium Power Electric Vehicle Market (48-72 Volts)

Mission

- Design And Manufacture BMS Upto 72V For Electric Vehicles Market

Location

- Locations – India (Noida And Delhi)
- Sales Office In India And Singapore
- 10k Sq Ft Location For R&D And Administration
- >20k Sq Ft Location For Factory And Warehouse

Head Count

- 80+ Employees Across Functions (Expanding To 125+)

About

- Established In 2016
- Largest BMS Manufacturer In India
- MSME25 Ranking & Innovation Index 2.7

15+ Patents Filed In India

Management Team

Experience In Leading Global Fortune 500 Companies

Piyush Gupta, CEO
- MBA INSEAD, B. Tech - IIT, Kharagpur (2000)
- Ex VP – Axiata Group, Director (TE Connectivity)

Dr. Manish Chauhan, Head - Product Management
- B. Tech – IIT Mumbai (2000) & PhD - California
- Material Science and Manufacturing expert

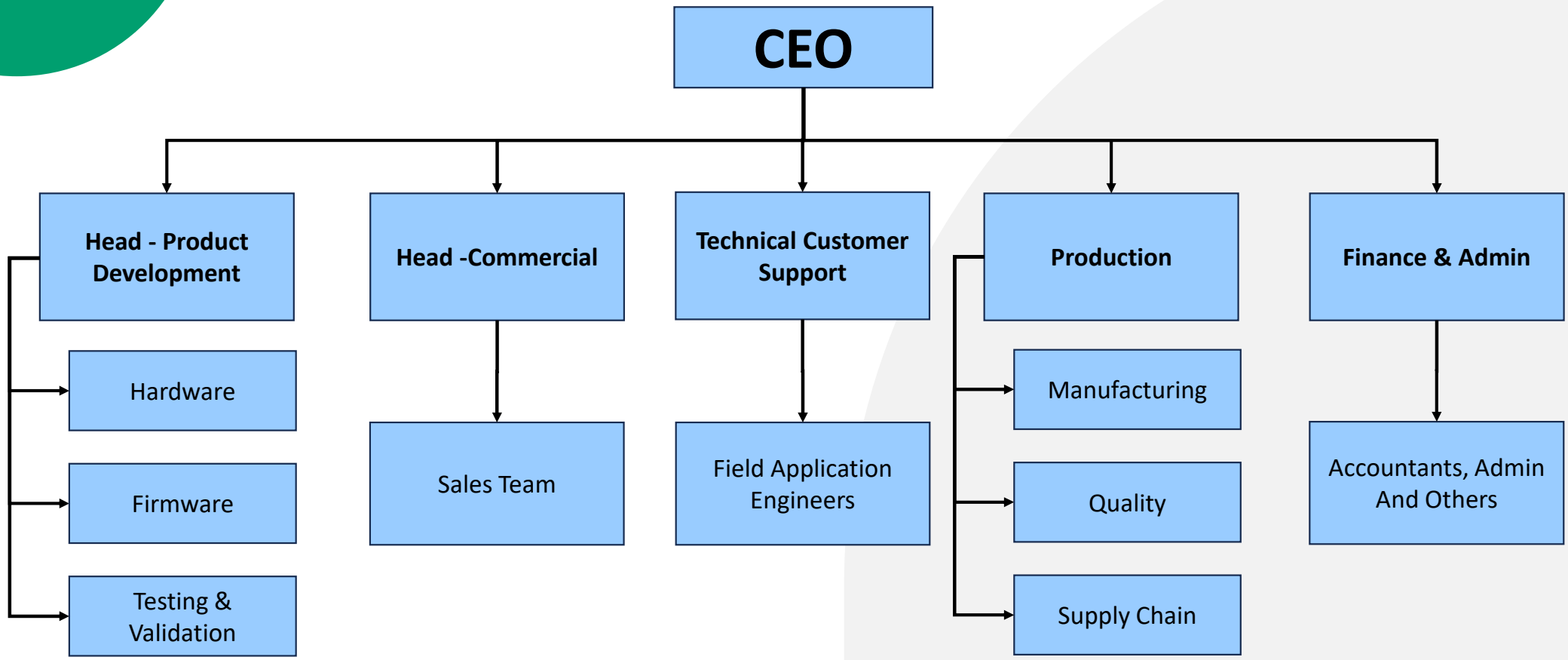
Prabhat Khare – CEO/ Charger Business & Head-Operations
- B. Tech (Electrical) – IIT Roorkee 1982
- Ex – Tata Motos, Honda Cars India, Ashok Leyland

Manoj Bansal , Head - Commercial Management
- B. Tech (Mechanical) – IIT Roorkee 1982
- Ex – L&T, Knorr-Bremse, PPAP Technologies

Chandrashekhar Bhide, Head- Organization Management
- MBA – IIM Ahmedabad, BTech- IIT Mumbai (1999)
- Ex DBS Bank, Yes Bank, Idea Cellular

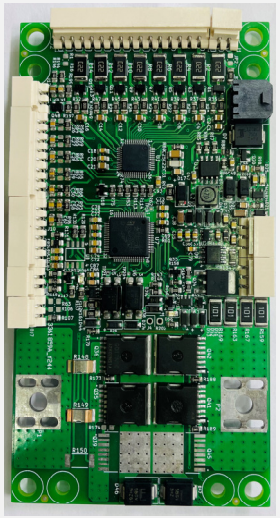
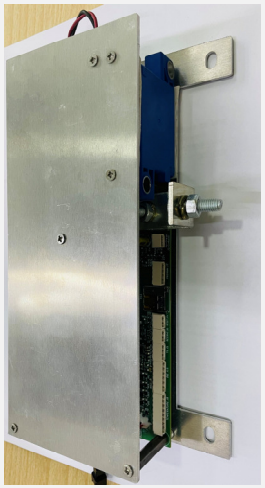
80+ Team Members In R&D, Product Development And Operations

Organizational Chart



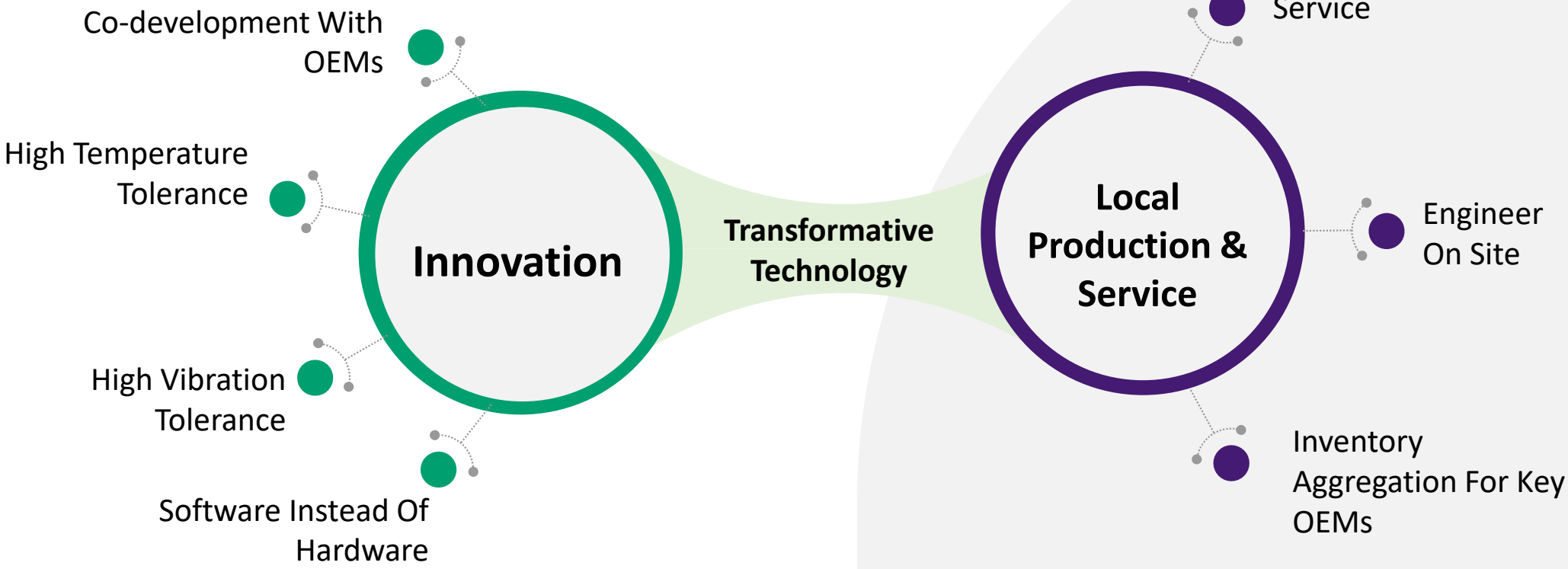
Rapidly Expanding Team

BMS is our Key Product

Low Cost 2S/3S/4S	I Series	T Series	SS Series	AQ Series	SQ Series	CT Series
						
2A/3A/10A	5A~120A	10A~60A	Up to 120A	Up to 150A	Up to 60A	Up to 300A

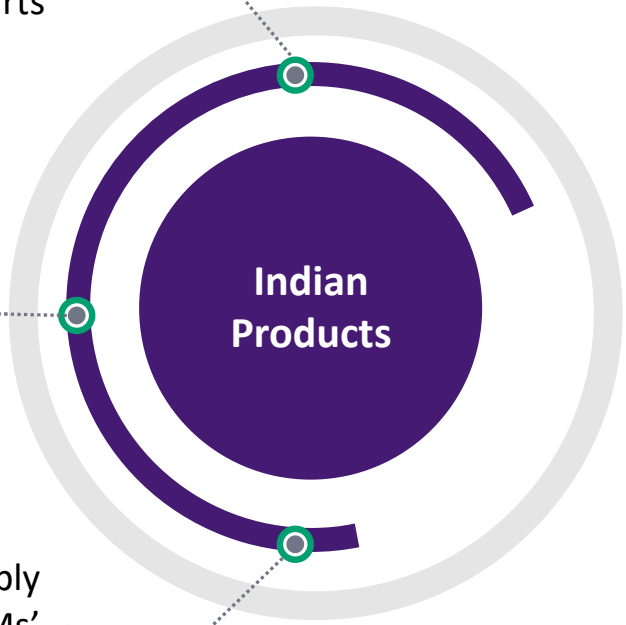
BMS Up To 72V And 300 Amps - Overall ~100 Types Of BMS

Our Technology Buildup



Lithion Is Solving EV Problem By Localizing Supply Chain

WHY Lithion?



No Reliance On Chinese Parts

We Spend 80% Of Time On Field Validation

Our Products Comply With Major OEMs' Requirements

Product Replacement Cycles Are 3-5 Years – We Will Be Around To Provide Service

Co-development With Customers

Pan India Service Staff

We Win Because We Co-develop Products With Our Customers And Excel In Customer Service

Market Accepted Products

Supply Chain Stabilized

- 40+ SKUs Stabilized.
- Manufacturing Partners And Suppliers Working For 12+ Months

Long Term Customer Contracts

- 12 Months Supply Visibility For Key Customers

Manufacturing Setup

- 30+ Staff Trained In BMS Manufacturing.

Quality Processes

- Quality Processes Implemented
- Quality Driving Product Team

ERP Implementation

- SaaS Based ERP Implemented To Help Scaleup Faster

Customer Service Team

- Team To Support Technical Debugging And Support
- Biggest Advantage

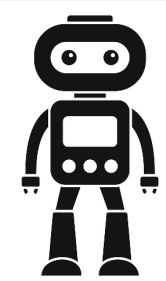
Able To Serve Large Indian EV Companies With Highest Quality

Key Use Cases

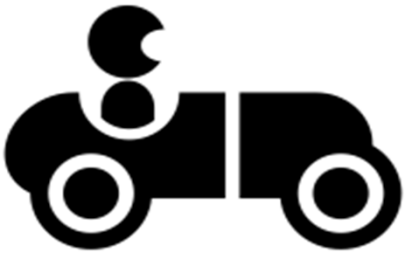
48V, 40 Amps

48V, 80 Amps

48V, 300 Amps



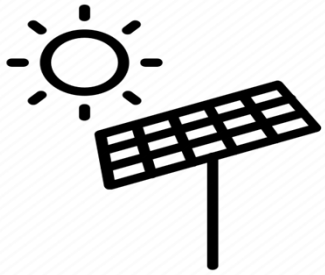
24V, 30 Amps



48V, 300 Amps

24V, 60 Amps

48V, 100 Amps



12V, 10 Amps

Customization Of BMS For Special Use Cases

BMS Integration Capability For Varied Customer's Requirements

LITHION

- Standard CAN Implementation
- Charger Integration
- Integration with Fleet Management
- Integration with VCU
- Tracking with IOT
- Integration with Warranty Management

Customization Of BMS For Special Use Cases

Key Customers

Largest Battery Manufacturer

- More Than 24 Months Of Billing
- 2 Products Approved
- 3 Under Approval

Top 5 EV Manufacturer

- 1 Product Approved (Through Battery Companies)

Top 3 Inverter Manufacturer

- Major Export Market
- 3 Products Approved

Top 3 Inverter Manufacturer

- New Customer
- Flagship Product Under Approval. High Expected Demand

New Age Small Car

- Contactor Based Product Under Approval

ICE Engine Majors

- Product Under Approval Through Battery Pack Assembler Customer

Able To Serve Large Indian EV Companies With Highest Quality

Example – Lithion BMS Integrated Zbee Digital Display

AQ Series BMS – Lithion's BMS

SOC Meter Display – Customer Had A VCU And SOC Meter

CAN Protocol Integration with VCU and SOC

Example - Integrated Aftek Digital Display With BMS

AQ Series BMS – Lithion's BMS

SOC Meter Display – Customer Had An Imported SOC Meter

CAN Protocol Integration With SOC Meter

Example - Integrated IoT Devices with BMS

TELTONIKA Telematics

Industry standard GPS

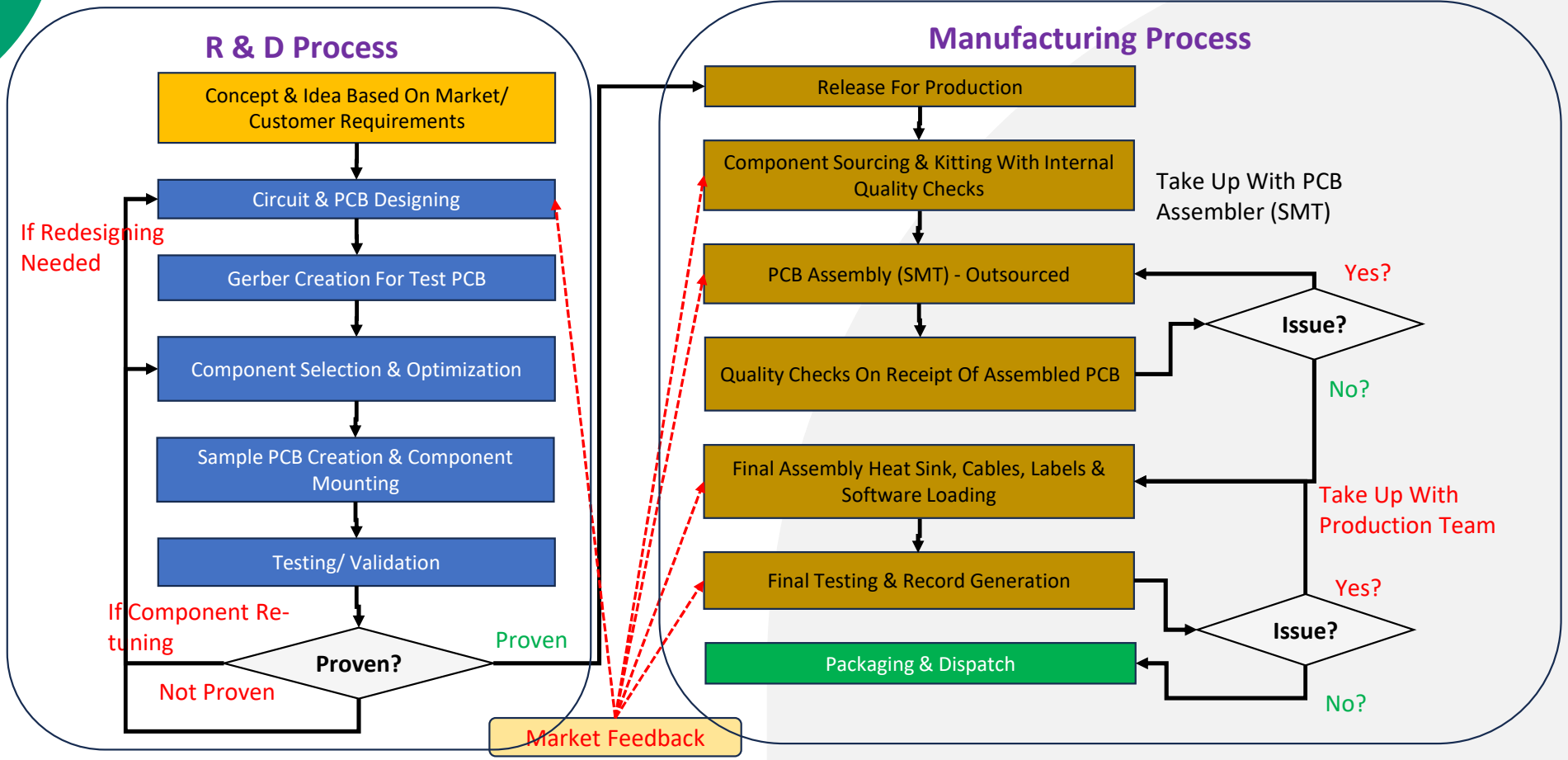
AQ Series – Lithion's BMS

INTELLICAR DRIVEN BY DATA

Industry standard GPS

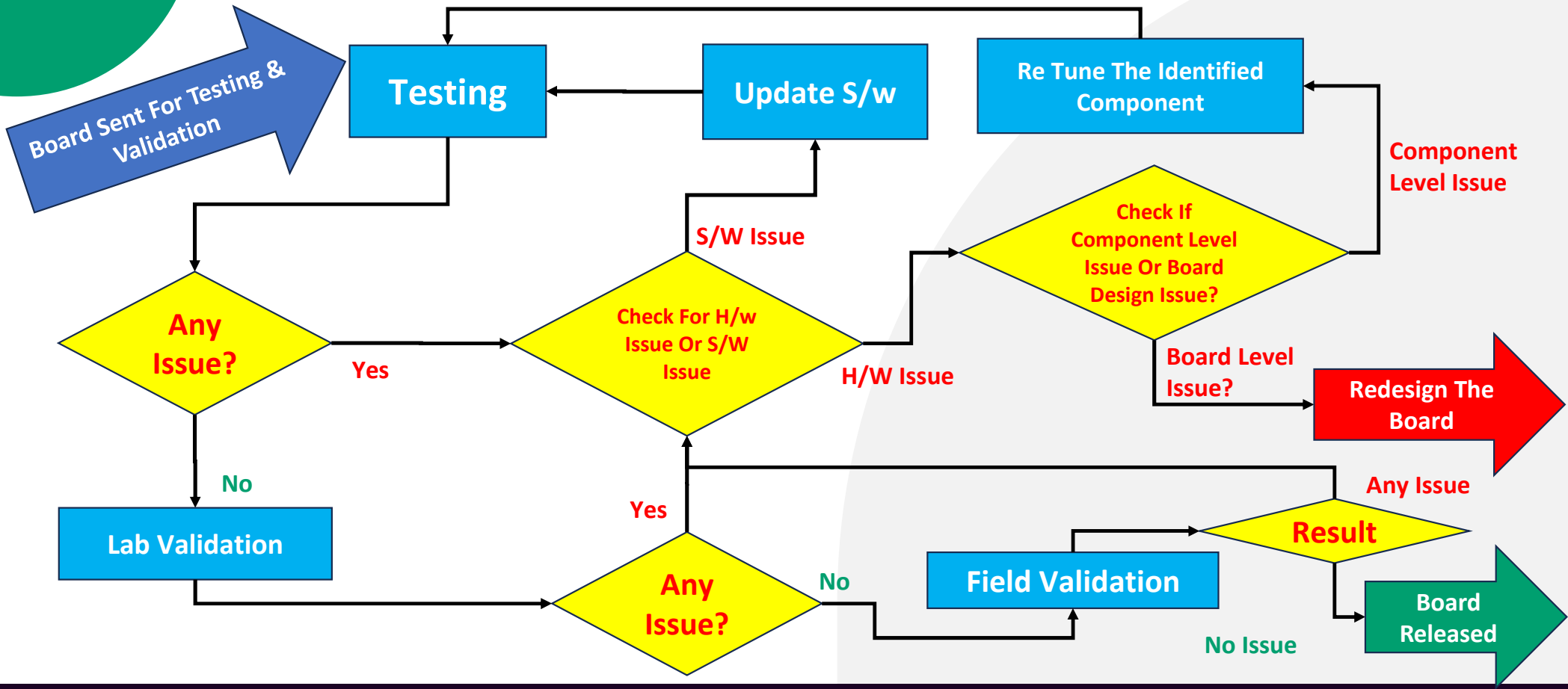
Our Smart BMSes Have Been Integrated With Various Makes Of IOT Devices

Product Commercialisation Process



Systematic Product Commercialisation Process

Testing and Validation Process



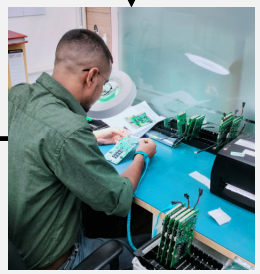
Stong Testing and Validation Process In Place

Manufacturing Process

PCB Release For Production

Component Sourcing & Kitting With Internal **Quality Checks**→

PCB Assembly (SMT) - Outsourced



Quality Checks On Receipt Of Assembled PCB

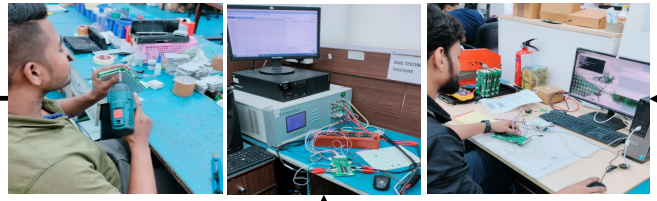
NG

Quality Status?

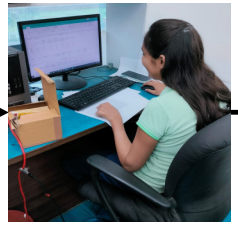
OK

Take Up With PCB Assembler (SMT)

Final Assembly Heat Sink, Cables, Labels & Software Loading



Battery Testing & Record Generation



Validation Through CAN

Quality PDI

Take Up With Production Team

Product Status?

OK

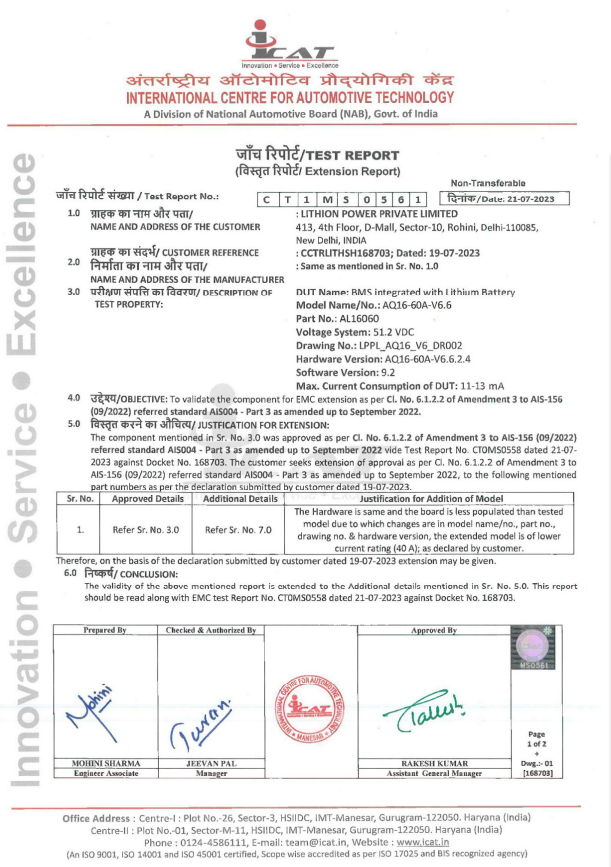
Packaging & Dispatch

Lean Manufacturing Process

Certifications

https://icat.in/

ICAT - International Centre for Automotive Technology



अंतर्राष्ट्रीय ऑटोमोटिव प्रौद्योगिकी केंद्र
INTERNATIONAL CENTRE FOR AUTOMOTIVE TECHNOLOGY
A Division of National Automotive Board (NAB), Govt. of India

जाँच रिपोर्ट/TEST REPORT
(विस्तृत रिपोर्ट/ Extension Report)

Non-Transferable

जाँच रिपोर्ट संख्या / Test Report No.: CT1M5056 1 — दिनांक/Date: 21-07-2023

1.0 ग्राहक का नाम और पता/ NAME AND ADDRESS OF THE CUSTOMER: : LITHION POWER PRIVATE LIMITED, 413, 4th Floor, D-Mall, Sector-10, Rohini, Delhi-110085, New Delhi, INDIA
ग्राहक का संदर्भ/ CUSTOMER REFERENCE: : CCTRLITHSH168703; Dated: 19-07-2023
2.0 निर्माता का नाम और पता/ NAME AND ADDRESS OF THE MANUFACTURER: : Same as mentioned in Sr. No. 1.0
3.0 परीक्षण संपत्ति का विवरण/ DESCRIPTION OF TEST PROPERTY: DUT Name: BMS integrated with Lithium Battery
Model Name/No.: AQ16-60A-V6.6
Part No.: AL16060
Voltage System: 51.2 VDC
Drawing No.: LPPL_AQ16_V6_DR002
Hardware Version: AQ16-60A-V6.6.2.4
Software Version: 9.2
Max. Current Consumption of DUT: 11-13 mA

4.0 उद्देश्य/OBJECTIVE: To validate the component for EMC extension as per Cl. No. 6.1.2.2 of Amendment 3 to AIS-156 (09/2022) referred standard AIS004 - Part 3 as amended up to September 2022.

5.0 विस्तृत करने का औचित्य/ JUSTIFICATION FOR EXTENSION:
The component mentioned in Sr. No. 3.0 was approved as per Cl. No. 6.1.2.2 of Amendment 3 to AIS-156 (09/2022) referred standard AIS004 - Part 3 as amended up to September 2022 vide Test Report No. CT0MS0558 dated 21-07-2023 against Docket No. 168703. The customer seeks extension of approval as per Cl. No. 6.1.2.2 of Amendment 3 to AIS-156 (09/2022) referred standard AIS004 - Part 3 as amended up to September 2022, to the following mentioned part numbers as per the declaration submitted by customer dated 19-07-2023.

Sr. No.	Approved Details	Additional Details	Justification for Addition of Model
1.	Refer Sr. No. 3.0	Refer Sr. No. 7.0	The Hardware is same and the board is less populated than tested model due to which changes are in model name/no., part no., drawing no. & hardware version, the extended model is of lower current rating (40 A); as declared by customer.

Therefore, on the basis of the declaration submitted by customer dated 19-07-2023 extension may be given.

6.0 निष्कर्ष/ CONCLUSION:
The validity of the above mentioned report is extended to the Additional details mentioned in Sr. No. 5.0. This report should be read along with EMC test Report No. CT0MS0558 dated 21-07-2023 against Docket No. 168703.

Prepared By	Checked & Authorized By		Approved By	
MOHINI SHARMA, Engineer Associate	JEEVAN PAL, Manager		RAKESH KUMAR, Assistant General Manager	Page 1 of 2 + Dwg.- 01 [168703]

Office Address : Centre-I : Plot No.-26, Sector-3, HSIIDC, IMT-Manesar, Gurugram-122050. Haryana (India)
Centre-II : Plot No.-01, Sector-M-11, HSIIDC, IMT-Manesar, Gurugram-122050. Haryana (India)
Phone : 0124-4586111, E-mail: team@icat.in, Website : www.icat.in
(An ISO 9001, ISO 14001 and ISO 45001 certified, Scope wise accredited as per ISO 17025 and BIS recognized agency)

अंतर्राष्ट्रीय ऑटोमोटिव प्रौद्योगिकी केन्द्र
INTERNATIONAL CENTRE FOR AUTOMOTIVE TECHNOLOGY
[A Division of NATRiP Implementation Society (NATIS), Govt. of India]

Non-Transferable

जाँच रिपोर्ट/TEST REPORT

यू. एस. आर नंबर/ULR No. : TC536023050000243F
जाँच रिपोर्ट संख्या/ Test Report No.*: CTOM5034 8 — दिनांक/Date: 01-05-2023

1.0 ग्राहक का नाम और पता / NAME AND ADDRESS OF THE CUSTOMER: : LITHION POWER PRIVATE LIMITED, 413, 4th Floor, D-Mall, Sector-10, Rohini, Delhi-110085, New Delhi, INDIA
ग्राहक का संदर्भ/CUSTOMER REFERENCE: : CCTNLITHSD166310; Dated: 18-04-2023
2.0 निर्माता का नाम और पता / NAME AND ADDRESS OF THE MANUFACTURER: : Same as mentioned in sr. no. 1.0
3.0 परीक्षण संपत्ति का विवरण/DESCRIPTION OF TEST PROPERTY :
DUT Name: BMS integrated with Lithium Battery
Model Name/No.: AQ16-60A-V6.6
Part No.: AL16060
Voltage System: 51.2 VDC
Drawing No.: LPPL_AQ16_V6_DR002
Hardware Version: 6.6
Software Version: 9.2
Max. Current Consumption of DUT: 11-13mA

4.0 परीक्षण संपत्ति की प्राप्ति की तिथि/ DATE OF RECEIPT OF TEST PROPERTY: 11-04-2023
5.0 परीक्षण संपत्ति की स्थिति/ CONDITION OF TEST PROPERTY: Test Property received in good condition.
6.0 परीक्षण उद्देश्य/ TEST OBJECTIVE: To conduct tests as mentioned in Sr. No. 14.0 on DUT as per Cl. No. 6.1.2.2 of Amendment 3 to AIS-156 (09/2022) referred standard AIS004 - Part 3 as amended up to September 2022.
7.0 परीक्षण विधि /TEST METHOD: As per Cl. No. 6.1.2.2 of Amendment 3 to AIS-156 (09/2022) referred standard AIS004 - Part 3 as amended up to September 2022.
8.0 परीक्षण विधि से कोई विचलन या बहिष्करण/ ANY DEVIATION OR EXCLUSION FROM TEST METHOD: NA
9.0 कार्यात्मक सत्यापन /FUNCTIONAL VERIFICATION: Performance was observed before, during & after test by visual monitoring of parameters such as load currents(Charging current at 20A and Discharging current at 60A), temperature etc. in both charging and discharging modes using CAN software in laptop provided by customer.
10.0 निष्कर्ष/ CONCLUSION: The component mentioned in Sr. No. 3.0 above meets the requirements as per Cl. No. 6.1.2.2 of Amendment 3 to AIS-156 (09/2022) referred standard AIS004 - Part 3 as amended up to September 2022.
11.0 परीक्षण विवरण/TEST DESCRIPTION: EMC/EMI testing as per Cl. No. 6.1.2.2 of Amendment 3 to AIS-156 (09/2022) referred standard AIS004 - Part 3 as amended up to September 2022.

This report supersedes EMC report No. CD0MS0327 dated 19-04-2023 against Docket no. 166310 due to error in Model Name/No., Hardware Version and Software Version provided by customer.

Prepared By	Checked & Authorized By		Approved By	
RUPESH KUMAR, Engineer Associate	JEEVAN PAL, Manager		RAKESH KUMAR, Assistant General Manager	Page 1 of 18 + Dwg.-01 [166310]

Office Address : Centre-I : Plot No.-26, Sector-3, HSIIDC, IMT-Manesar, Gurugram-122050. Haryana (India)
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Phone : 0124-4586111, Fax : +91-124-2290005. E-mail: team@icat.in, Website : www.icat.in
(An ISO 9001, ISO 14001 and ISO 45001 certified, scope wise NABL accredited and BIS recognised Test House)

EMI/ EMC Certification Of Our BMS from ICAT

Recognition

Sagacious IP

Sagacious IP
When Results Really Matter

Certificate of
Recognition for Innovation Excellence

India's MSME25 Innovation Index

Congratulations on being one of the
Most Innovative MSMEs in India

LITHION

The rank is based on the number of **IP Applications** filed by the company.

Tarun Kumar Bansal
President,
Sagacious IP

Vivek Singh
Head - IP Prosecution Practice,
Sagacious IP

Certificate

This is to certify that

LITHION POWER PRIVATE LIMITED

413, 4TH FLOOR, D MALL, SECTOR 10, ROHINI, DELHI - 110085, INDIA

Has been found in compliance with requirement of

Quality Management System

ISO 9001:2015

For The Following Scope:

"DESIGN, DEVELOPMENT, MANUFACTURING AND TESTING OF EV COMPONENTS AND SOFTWARE."

Certificate No	:	QMS/092020/10115
Original Certificate Date	:	21st- September-2021
Issue Date	:	21st- September-2021
Expiry Date	:	20th - September -2024

To check this certificate status visit http://euroukals.org.uk/check-certified-org.php

Authorised Signatory

Office: Gebirgsjaegerstrasse 29, Kirchdorf In Tirol, 6382, Austria

www.euroukals.org.uk

International Standards Certification (ISC) accredit by "Euro UK" This Certification remains the property of "ISC" to whom it must be returned on request.

ISO 9001:2015

High On Innovation Index & ISO Certification

Reach Us, For Support

Our Team Would Love To Provide Solutions To Your Battery Related Issues

https://lithionpower.com/

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+91-89290 65286

Thank You!!