WELCOME

to this company presentation

LIVELINE ELECTRONICS



All information in this presentation is proprietary and confidential. Without the express prior written consent of the Company, the Presentation and any information contained within it may not be (i) reproduced (in whole or in part), (ii) copied at any time, (iii) used for any purpose other than your evaluation of the Company or (iv) provided to any other person, except your employees and advisors with a need to know who are advised of the confidentiality of the information. Doc no : LL/profile/01/17-18 Rev- 00





Today power electronics is powering up every single business process

 \gg



POWER ELECTRONICS

"Power electronics, the basic technology for electric power conversion and control, has achieved great progress utilizing the advanced power semiconductor devices such as thyristor, GTO, IGBT and IPM. The application areas of power electronics are very wide from power utility systems and uninterruptible power sources to express train drives and robot arm drives. Combined with the progress of advanced control theories and microprocessors, power electronics has been playing an indispensable role in our society."

Power that protects your power



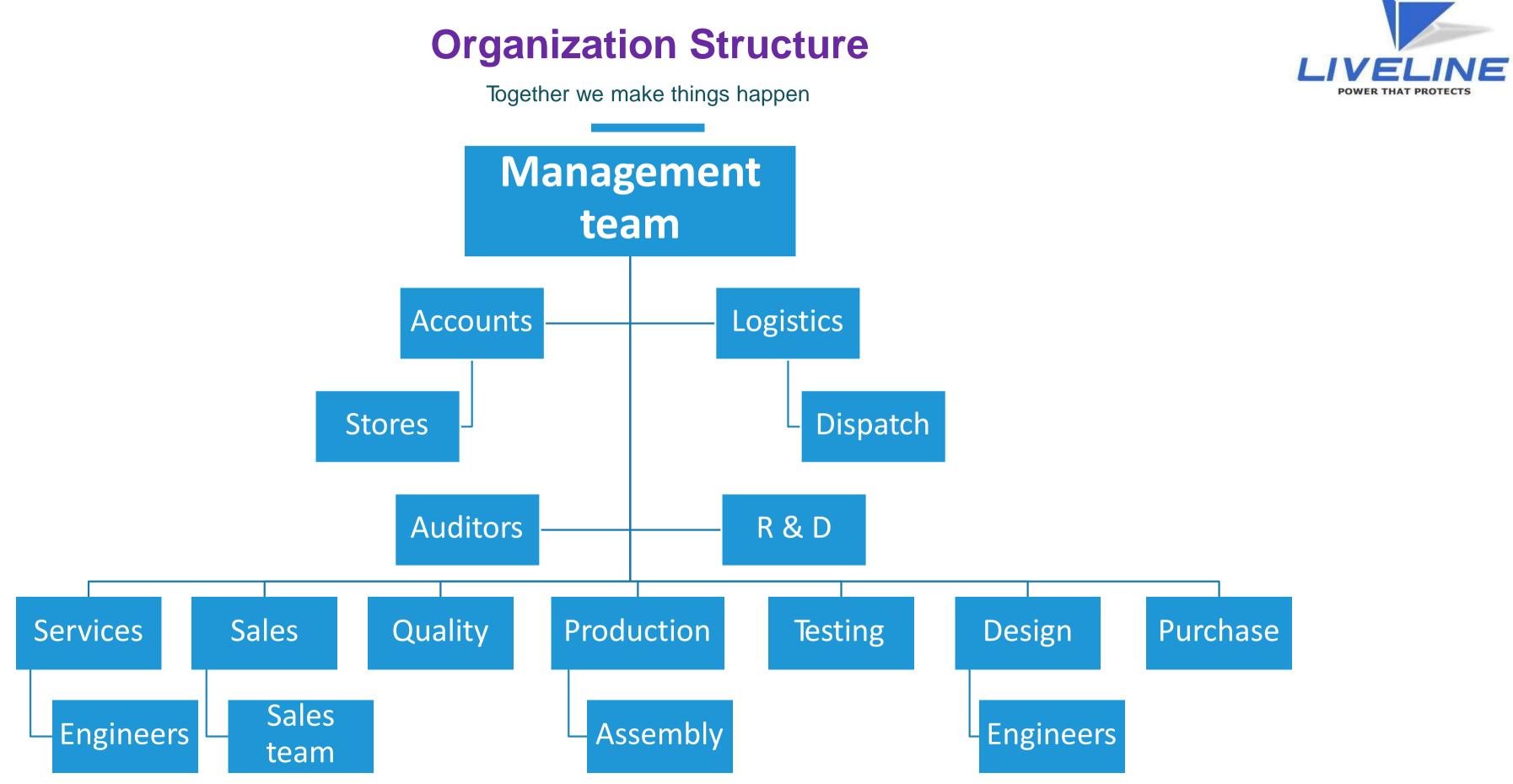
Our Business is to protect your Power "Design, development, engineering, manufacturing, testing, supply, installation ,commissioning and services of industrial Power electronics products."

Our proposed new factory



MISSION

To establish Ourselves as the leading industrial power electronics product manufacturing company by way of adopting the latest cutting edge technologies.















CRISIL – SME4

Manufacturing Facility

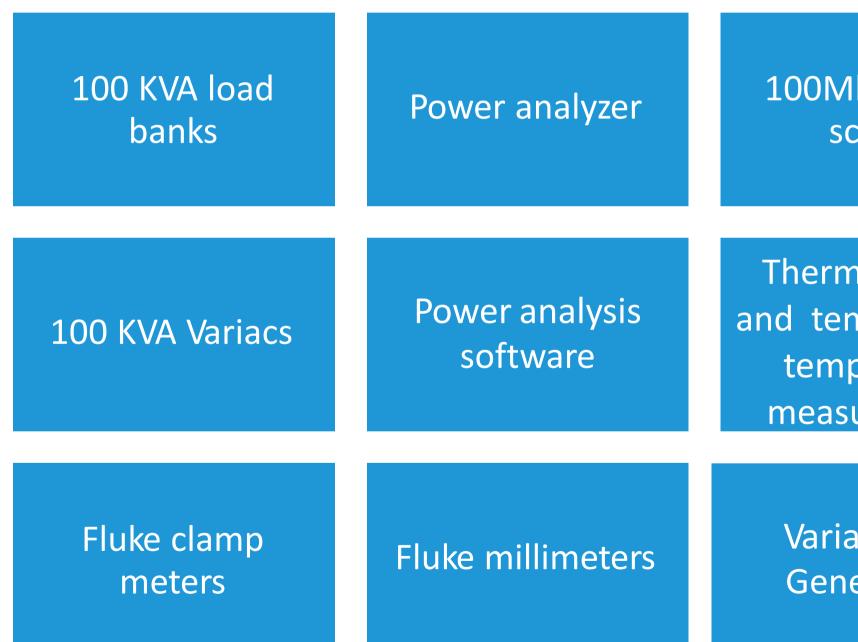
This is where we cook

Currently 5000 sq feet manufacturing area	Building up new factory with 20000 sq feet proposed area	ERP
Adequate material handling facility	Latest test facilities	Dedicat and er
Software tools for design and simulations	Drilling machines	Metal cu













<pre>/hz Digital copes</pre>	Variable DC sources
mocouples mp guns for perature surements	Noise meters
able AC erators	Water loads

Product Portfolio

Just Industrial



INDUSTRIAL UPS

Fully engineered to customers specs for industrial applications



BATTERY CHARGERS

Engineered to suit all type of batteries and comes with multiple configurations

CVCF CONVERTERS

Depending on the application, we can conceptualize, design, engineer, and manufacture power quality and protection systems of any kind. Most of our systems are targeted for industrial applications from diverse industrial sectors like Metals, Mining, Oil & Gas, Petrochemicals, Thermal & Hydroelectric Power, Cement, Defense, Railways, Public Health Engg, Nuclear etc. All these solutions are tailor made to suit highly demanding industrial harsh atmosphere.





For applications that need different voltages and frequencies



CUSTOM CONVERTERS

Tailor made conversion solutions for specific industrial needs.

Product Certifications

Manufactured as per the international standard

IP-42 as per IEC/IS

Charger Type Test as per IEC/IS





UPS Type Test as per IEC

Third party inspection compliant

Key product features

Manufactured to future market requirements

Technicals

~___

- Truly industrial design
- Digital control with 97% efficiency
- Redundant configuration
- Fully compliant with IEEE specs
- Latest MMI
- Custom built to highest quality

Communications • Wi-Fi • RS-485 Ethernet • GPS

- CAN
- Cloud App







Environmentals

• Suitable for 50degree ambient

- IP-42 class of panel protection
- Forced cooling
- Also natural cooling

Technology offerings

Cutting edge technology

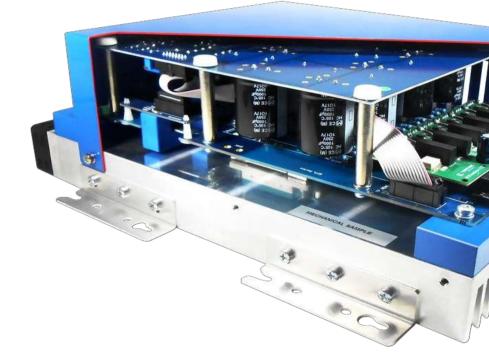


IGBT based active converter & inverter technology that is highly efficient and conforms to international standards. Equipped to deliver multiple topologies to address diverse applications.



DSP - Control Strategy

Latest DSPs are adopted to develop and implement complex control algorithms to support multiple topologies.





Graphical MMI Interfaces



Graphical LCD display and touch panels to enhance user experience. Easy to use menu driven UI with event loggers for simple diagnostics.

Communications



RS-485, Ethernet, USB, CAN , GSM, Wi-Fi, Zigbee etc

Research & Development Team

Concentrating on development of a power electronic ecosystem



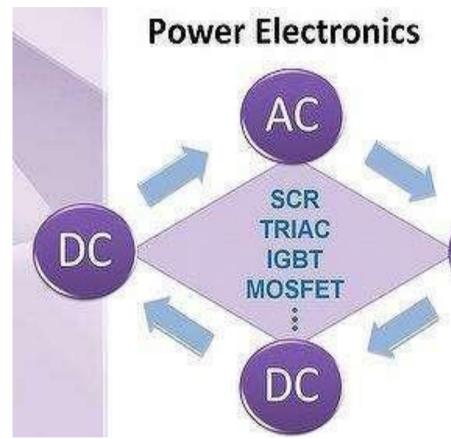
In-house team

In-house team of engineers with the required skills and experiences to conceptualize and structure the development of new products and also responsible for testing & commercialization.



External Development

A team of external developers with skills n experiences for both power electronic hardware designs as well as writing software n algorithms including thermal engineering, PCB layouts etc.







Outsourcing



A great deal of our developments are outsourced to external outfits, research and development organizations, companies.etc.



We are also engaging interested engineering colleges and providing developmental project in order to expedite our own process and also to inculcate power electronic skills among students. There by nurturing the eco system

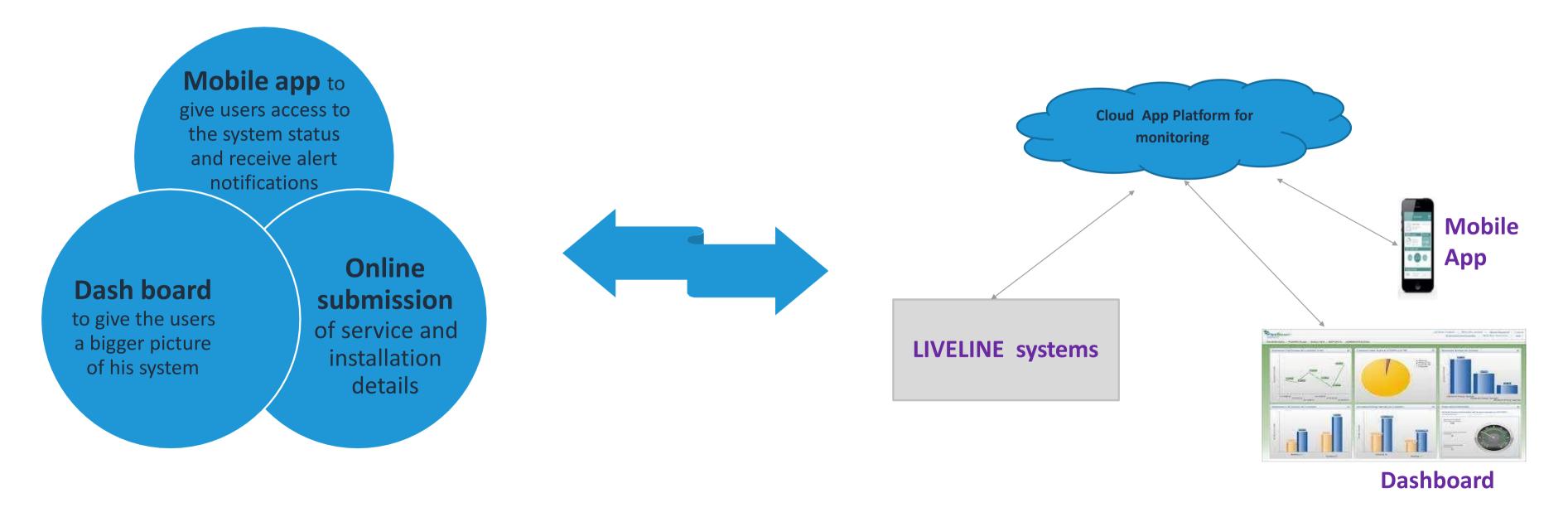


81.9

Research & Development

Cloud makes it easy

Proposed cloud application to enhance after sales services experience

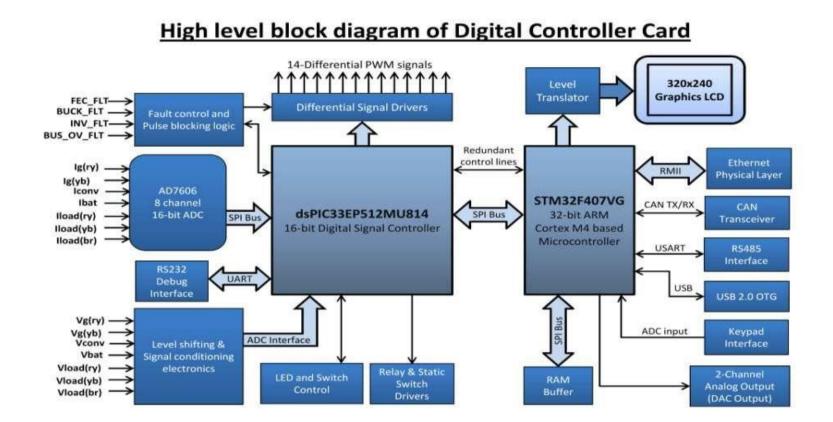






Research & Development

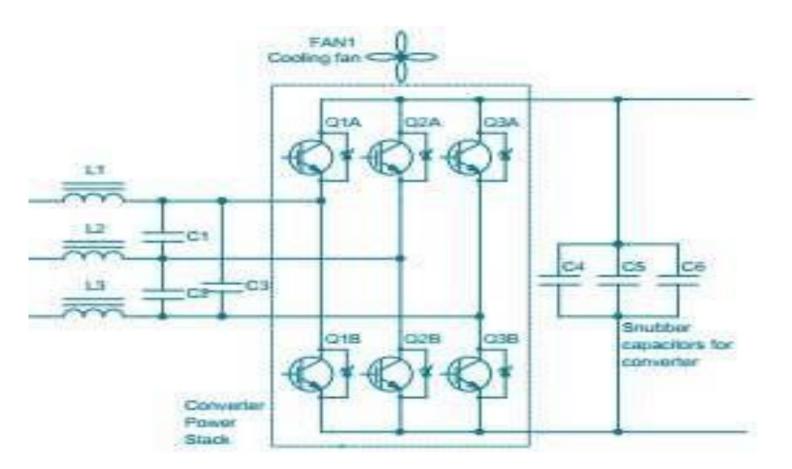
What we have commercialized so far



Fully digital control strategy

Consisting of a 16 bit DSP to handle the control algorithms of three converters and a 32 bit microcontroller to handle communication & MMI functionalities. Thereby this controller can implement any kind of power converters including custom built systems as well. Advantages of an IGBT based active rectifier front end is well known for its numerous power quality benefits like low input current harmonic distortion and improved input power factor.





IGBT based active rectifier

Future R&D projects

Leading the way by technology

Bidirectional DC-DC converters for motor ()1 back up application . Today, large number of industries are looking for cheaper motor back up systems for increased productivity.

02

Three phase Solar inverters – 10KW to 200KW – to benefit from the booming solar market . India is going to be solar capital of the world.

03

Chargers for Li-Ion batteries for industrial and automobile applications. Li-lon is being envisaged as the future of power stage for its multiple tech advantages.





Bidirectional AC-DC converters for charger/ discharger application for batteries

05

Electronic AC/DC load banks for multiple applications like testing and battery discharging needs.

06

Large capacity inverters (up to 1 MW) for solar as well as UPS systems



We cater to all

Consultants

EPC vendors

End users

Three most important communities to increase our business.

We go the full distance to increase our reach.

End customers to consultants & EPC vendors are the key to our business. We thrive everyday to reach and get our products n services known and evaluate by them.



We have worked with them

Metals

- TISCO
- BOKARO STEEL
- IISCO STEEL PLANT
- ROURKELA STEEL PLANT
- DURGAPORE STEEL PLANT
- NMDC STEEL
- VIZAG STEEL

Oil N Gas

- IOCL, Bongaigaon
- IOCL,Guwahati
- IOCL, Mathura
- IOCL, Panipat
- ONGC
- OIL INDIA
- IOCL, Haldia
- IOCL, Barauni





- NHPC
- NEEPCO
- CESC
- JHABUA POWER
- JAYPEE VENTURES
- NTPC
- OPTCL
- NPCIL

We have worked with them

Public Health

- DHANBAD WATER SUPPLY
- KEIP
- KMC
- PHED, West Bengal
- PHED, Rajasthan
- TWAD, Vellore, Tamil Nadu
- DELHI JAL BOARD

Defense

- MES
- AIR FORCE
- INDIAN NAVY
- GRSE, Kolkata



Transmission & Distribution

- MECL, Shillong
- NESCO
- CESU
- WBSETCL
- NBPDCL
- JVBNL
- OPTCL ODSSP

We have worked with them

Railways

- Eastern Railways
- South Eastern Railways
- East Central railways

Cement

- Shayona Cement, Africa
- Goldstone Cement
- Meghalaya Cement
- Amrit Cement
- Sarbattom Cement



Manufacturing

- Linde India
- Manaksia Ltd
- Adani Wilmar
- Maxwatt Turbines
- Chryso
- Invitrogen
- Jaiswal Neco

We have worked with them

EPC Vendors

- LnT ECC
- SIEMENS
- SCHNEIDER
- ABB
- ION EXCHANGE
- VOLTAS
- MECON
- LnT EBG
- MCNALLY BHARAT

Exports

- NIGERIA
- BANGLADESH
- NEPAL
- KENYA
- ETHIOPIA
- SRILANKA



Consultants

- MECON
- DCL
- MND
- WAPCOS
- KORUS
- TATA CONSULTING
- FITCHNER

Get in Touch with Us

Just get in touch





North ramchandrapur Narendrapur, Sonarpur, South 24 paraganas Kolkata-700103, West Bengal







Our Phone

(033) 6452 0115 (033) 6452 0116



info@livelineindia.com www.livelineindia.com

Thank you



All information in this presentation is proprietary and confidential.

Without the express prior written consent of the Company, this presentation and any information contained within it may not be (i) reproduced (in whole or in part), (ii) copied at any time, (iii) used for any purpose other than your evaluation of the Company or (iv) provided to any other person, except your employees and advisors with a need to know who are advised of the confidentiality of the information. Doc no : LL/profile/01/17-18 Rev- 00

