

ALWAYS ON  
**DUBAS®**



# In **Quest** of **Self-reliance** for **Three DECADES**

Conceptualized, designed and manufactured by India



Way back in 1989, knowingly or unknowingly in our own little way we started a marathon called indigenous products for India.

With primary interest and competence in power electronics, we started with a simple low capacity voltage stabilizer design and manufacturing in the early years. The product-lines progressed as the years rolled. Every product progress has its own story to write. It is only through the time, we realized that it takes decades of focus and dedication to build reliable products and product culture.

Today, DUBAS has designed and deployed most advanced AC and DC power electronics systems for some of the challenging applications used by Indian Missile launcher programs, Oil and gas pipelines, Power plants, Airport runway lighting systems, ISRO launching infrastructures, EV testing facilities and thousands more. Our products have the capability to compete with the best in the world in its category.

We believe our efforts to design and develop indigenous power electronics systems has added up a few inches to the miles long ambition of a self-reliant India.

**Our commitment gives us confidence to move on....**

- Industrial AC Systems
- Industrial DC Power Systems
- Defence Power Systems
- Static Frequency Converters
- Industrial Inverters
- Customized Power Racks
- Bidirectional Converters
- Grid Interactive Systems
- Power Emulators
- Power Simulators
- Programmable Power Supplies
- High Power Rectifiers
- Static Power Conditioners
- Active Power Factor Controllers
- Active AC and DC Load banks

## Indigenous Hardware Configurable Platform

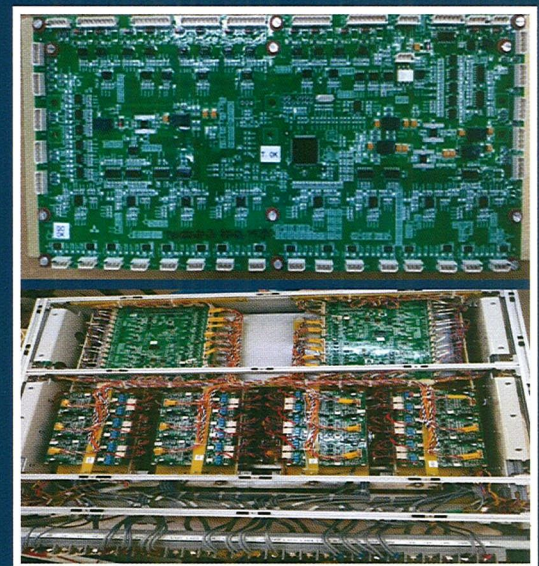
**Versatile:** DUBAS designed & developed multilayer embedded board suitable for different configurations.

**Precision and Real-Time Processing:** Developed in house digital platform ensures precise real-time power management.

**Advanced Control Features:** Active Front End Power Factor Correction (AFE-PFC) is a standard feature even in bi-directional systems.

**Programmability:** DUBAS proprietary developed embedded software technology is customizable to different applications.

**Efficiency & Reliability:** Achieved using PCBA meeting IPC/MIL standards.



## Module Architecture

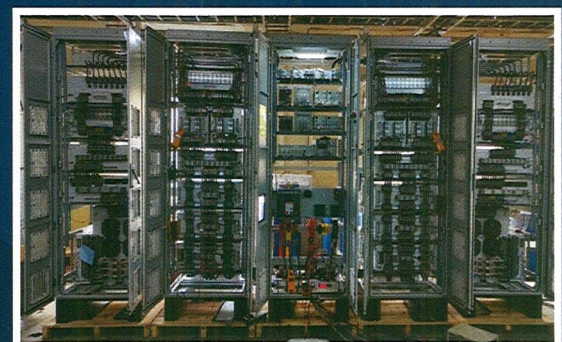
**Scalability:** Factory configurable units to meet different voltage current requirements of the customer. Multi dimensional advantage in terms of enhancing capacity / configurability, site handling / ease of transportation & maintenance.

**Maintenance of Spares:** In multi module configuration, common spare offers distinct advantage of reduced inventory.

**Reduced Downtime:** Modular design minimizes service interruption down time.

**Enhanced Flexibility:** Multi module construction for parallel line production and quality control. Adapts easily to changing requirements or configurations.

**Distributed Cooling:** Reduces the hotspots and concentrated heating.





## Indigenous Proprietary Embedded Program

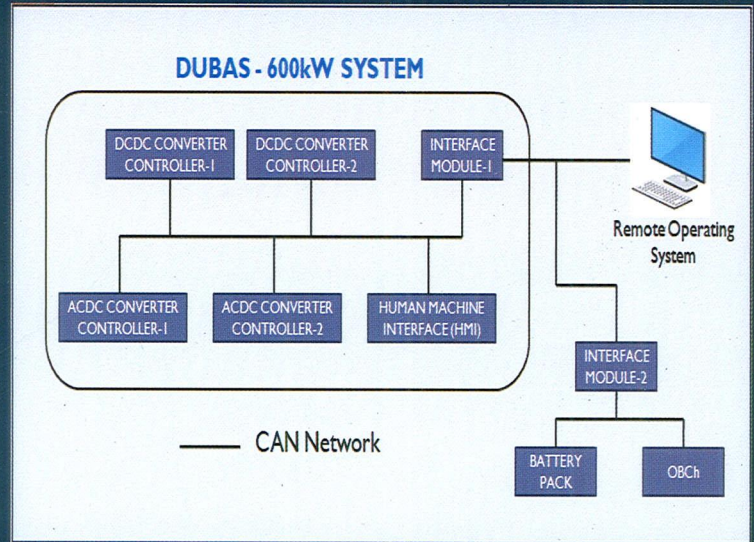
**Real time control :** Continuously monitored, controlled & protections,. Input current, power, I-THD, PF,. Output voltage, current, power, transient response.

**Real-time Communication:** High-speed CAN bus data exchange for seamless integration with controllers, monitoring systems.

**Data Integrity & Error Detection:** Built-in error checks (CRC), acknowledgment and re-transmission for reliable communication.

**Control Mechanisms:** Software manages charger modes (CV, CC, CP) to optimize voltage, current, and power for battery charging even in bi-directional four quadrant system.

**Configuration & Calibration:** User-friendly interface for setting charging profiles, limits, and mode adjustments via CAN.



## HMI Display

**Interactive and Intuitive:** High-quality resistive touch screen for easy user interaction.

**7-Inch Display:** Provides excellent clarity and touch sensitivity.

**Versatile :** Various information on input & output parameters, configurable protections. Delivers reliable performance under severe operating conditions.

**Safety :** Meets safety and environmental standards.

**User-Friendly Design:** Ensures easy and hassle free operation.



## Indigenous Proprietary Special Design Magnetics

**Compact:** High frequency magnetic ensures smaller foot print.

**Efficiency:** Specialty grade magnetic material / conductors suitable for high frequency with lower losses enhances efficiency

**Customization:** Optimal selection of magnetic material gives flexibility.

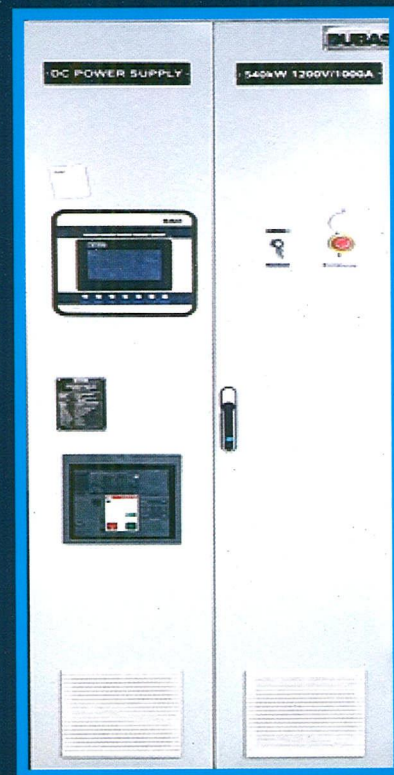
**Thermal Management:** proprietary construction enables efficient thermal management.





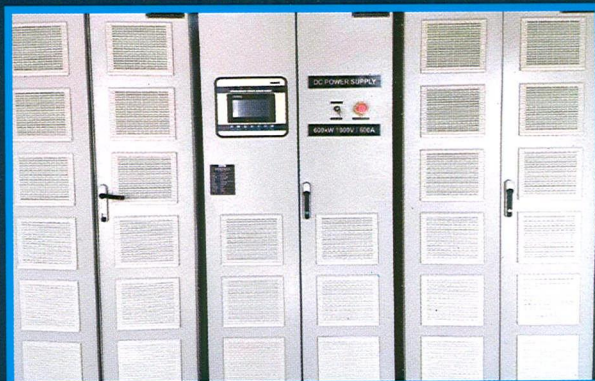
## Bi-directional AC/DC Converters and Battery Emulators

- DUBAS offers a comprehensive range of Bidirectional AC and DC Power Systems custom built for wide range of feed and simulation applications.
- DUBAS bi-directional DC Power Supply Systems offer complete test bench power systems meeting the wide spectrum of automotive testing and simulation applications.
- The System are available from low voltage ratings to high ratings up to 1200V / 2400 Amps. The systems are modular and scalable with capacity up to 1200KW.
- DUBAS DC-DC converters are available in high power modules and are scalable to Mega Watt rating applications. These DC-DC Converters are specifically designed for testing applications of EV charging system / EV power train components.
- DUBAS offers Programmable AC sources for advanced bidirectional grid simulations, with precision frequency and load regulation. The systems are scalable up to 1200KVA.
- DUBAS bi-directional systems serve as Regenerative loads for both AC and DC flexible and programmable loading with advanced in-built measurement systems.



## EV Fast Chargers

- DUBAS has been an established battery charger manufacturing organization based on PWM technologies and SMPS module-based systems in larger capacity ratings. This track record has helped DUBAS to migrate easily into the EV Fast Charger product line.
- DUBAS offers DC Fast Chargers of high capacity with modules ratings up to 300KW and scalable to 1200 KW rating.
- The product focuses on every technical aspect of the EV charging application and user-friendly digital interfacing.
- DUBAS EV Fast charger is compatible for different types of batteries, specifically built for buses, trucks and heavy-duty applications.
- DUBAS Fast chargers have one of the lowest foot-print in the industry.



## Programmable AC / DC Power Supplies

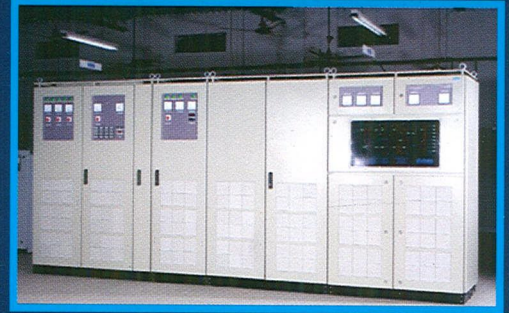
- From modular power supplies to rack-mounted subsystems, Dubas is a pioneer in conceptualising, manufacturing precision & programmable AC and DC power supplies. DUBAS power supplies combine intelligence and flexibility with high advanced platform for programming various key parameters of AC/DC power. Using a state-of-the-art switching architecture and Digital Signal Processing, DUBAS ensures a robust, high-power AC/DC power supply. DUBAS programmable power supplies provides users with options of variable DC, variable AC voltage, Variable Frequency and current.
- These products are easy-to-configure covering a wide spectrum of single and three-phase AC power sources or single-channel and multi-channel DC power supplies. DUBAS systems can fulfil test requirement with add-on test application routines for military and commercial avionics testing.





## High Power Rectifiers

- With a highly efficient and reliable IGBT based custom-built rectifier series ranging from 500KW to several MW ratings, Dubas high power rectifier provide optimized and flexible solution across industry applications.
- DUBAS IGBT based rectifiers deploy Active Power Factor controller providing near unity power factor at the incoming source. The input current harmonics are limited to very low levels complying to IEEE standards.
- The systems are built to offer very low ripple as required by the application.
- Highly efficient with large scale consistent savings on the power bills.
- Scalable architecture providing high flexibility and reliability redundancy.
- The system can be built to customer application requirements and is fully customizable.



## Static Frequency Converters

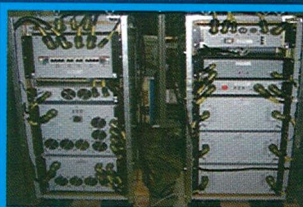
DUBAS has been one of leading static frequency converters supplier to meet end user application needs. Normally, these frequency converters are for providing 400Hz or 800Hz or Variables frequency applications. Some of the types of frequency converters supplied by DUBAS include :-

- 100 KVA rated 300-800 Hz, variable Voltage frequency converter for test labs / ground floor power applications in avionics.
- 40KVA / 60KVA / 90KVA / 180KVA frequency converters on trolleys for airport mobile ground power applications
- Modular rack mounted 3 KVA frequency converters for Aeronautical lab applications.
- 2KHz and upto 30KHz frequency converters for machine load and testing applications
- Frequency converter for Naval applications.
- 400Hz frequency converters for Radar applications.
- 160KVA 400Hz system for Airborne testing centre.



## Defence Power Systems

- DUBAS has been a part of Indian Power electronics innovation for over last two decades after we built our first 3 KVA ruggedized frequency converter indigenously for military application way back in 1997.
- DUBAS offers a comprehensive range of AC, DC power systems with fixed / variable current, voltage or frequency, fully ruggedized to military standards.
- The systems are tested for stringent MIL / JSS 55555 standards and have undergone all specified operating environmental tests.
- DUBAS designs system with form-factor to suit the applications and are customs built, with multiple redundancies.
- DUBAS offers custom configured Power Systems as a completely ready to connect Power rack / power container based on customer applications. The systems are also offered with NEMP compliance standards.
- Power range 3KVA to 500KVA.



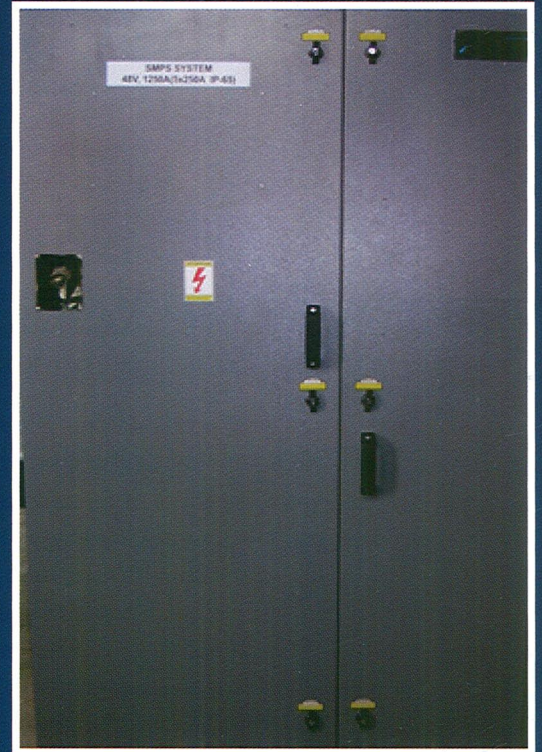


# Industrial AC and DC Systems

DUBAS Industrial UPS systems and DC systems are built to meet the stringent application requirements of process industry, power generation, oil & gas and nuclear installation and many other critical operations.

DUBAS G7 Industrial UPS system product series is one of the most reliable UPS systems for critical applications, with customizable architecture on DSP platform. G7 Series architecture has the absolute capability to customize as per the applications requirement with systems adept even for IP65 constructions or seismic qualification tests. DUBAS employs advanced technology and standards to build highly reliable product platforms with unique capability to suit extreme operational environments and specific load demand applications.

DUBAS offers full suite of DC systems covering SCR-controlled systems, PWM-based systems and SMPS-based systems. DUBAS battery chargers, rectifier systems cater to every industrial application, be it a process plant, an atomic energy centre, an offshore oil platform, a power plant installation or a metro rail network. Technologically, DUBAS systems are one of the most advanced systems in the world offering great reliability and flexibility to the applications. DUBAS provides bus parallel-able high power SMPS modular systems which can be stacked even up to 6000 Amps at industrial voltage standards. The design and the product follow IEC 60146 guidelines.



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- YAHOO • ZYDUS

**THREE  
DECADES OF  
PRODUCT  
DEVELOPMENT**

**OVER 20000  
CRITICAL  
INSTALLATIONS**

**IN 20 COUNTRIES**



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