



Power Solution
Logistics
Energy
Mobility
Module
Military

Supercapacitor
Fuel cell
Polymer capacitors

Power Solution



VIVA

VINATech

Innovative Energy Solutions

VINATech, Where Innovation and Trust Meet

Discover world-class capacitors and energy solutions that can further enhance your technology with unparalleled efficiency and performance.

Innovative Energy Solutions by VINATech

As a leader in the supercapacitor field, VINATech is opening new horizons in energy storage solutions. Through continuous research and development and innovation, we provide high-performance and high-quality supercapacitors and contribute to the development of various industries.

**Based on the happiness of all members,
We contribute to the society of coexistence by providing eco-friendly products.**

Happiness of All Members

The term 'all members' refers to employees (internal customers), customers (external customers), and shareholders, with employees being the first priority. Employee happiness must be just and ethical, and while it may be compromised for the benefit of customers and shareholders, it always takes precedence. VINA's most important customers are its employees, and as such, the responsibility for the happiness of external customers and shareholders is equally significant.

Providing Eco-friendly Products

The products we produce must help preserve and improve the environment, and this principle must be upheld throughout the production activities. If there are factors causing environmental destruction during production, they must be improved, and if they cannot be avoided during the manufacturing process, they must be addressed through other means. We are convinced that this is a key factor to the company's sustainable growth.

Contribution to a Society of Coexistence

After establishing a solid foundation in South Korea, we will first commence the establishment of overseas factories in China and Vietnam. We will establish a distribution network in key global hubs, with products supplied from our factories in South Korea, China, and Vietnam. Additionally, we will gradually expand our overseas production bases, while continuously creating employment and increasing the production of eco-friendly products.

Join VINATech today!

VINATech is leading the future of energy storage solutions with innovative supercapacitor technology, and we promise to be the best partner for your success. Join VINATech in creating a sustainable world without advanced technology.



VINATech’s product range includes various capacitors, such as hybrid capacitors, supercapacitors, and customized energy modules tailored to meet the specific requirements of diverse customers.

From logistics and energy to mobility and defense, our solutions are essential to support a sustainable future.

We specialize in C2M(Cell to Module), M2S(Module to System) and S4B(System for Business) processes, and our products lead the market not only in performance but also in reliability and sustainability.

With a focus on the future, VINATech is committed to expanding its business range through the NAVIcap brand, an intelligent capacitor module designed to revolutionize energy storage.

Supercapacitors enhance efficiency and stability in electronic devices/ power systems.

Supercapacitors provide innovative power back-up solutions in a variety of applications, including FR-ESS, OHT, Drive Back-up, E-Latch, and next-generation standard modules. This module enables more stable and efficient power supply by replacing or complementing conventional batteries, thanks to its superior charge and discharge speed, high energy density, and long lifespan. In particular, it enhances the stability of electronic devices and systems, allowing for rapid recovery in the event of power loss, making it increasingly important across various industries.



Energy that Sustains, Technology that Inspires

In 1999, VINATech was established and began research and development of supercapacitors

In 2004, Mass production of supercapacitors commenced, and the company obtained ISO certification

In 2010, The development of 3V-class supercapacitors was completed, and HRD Excellence Certification was obtained

In 2013, The company went public on KONEX and entered the fuel cell and environmental filter materials business

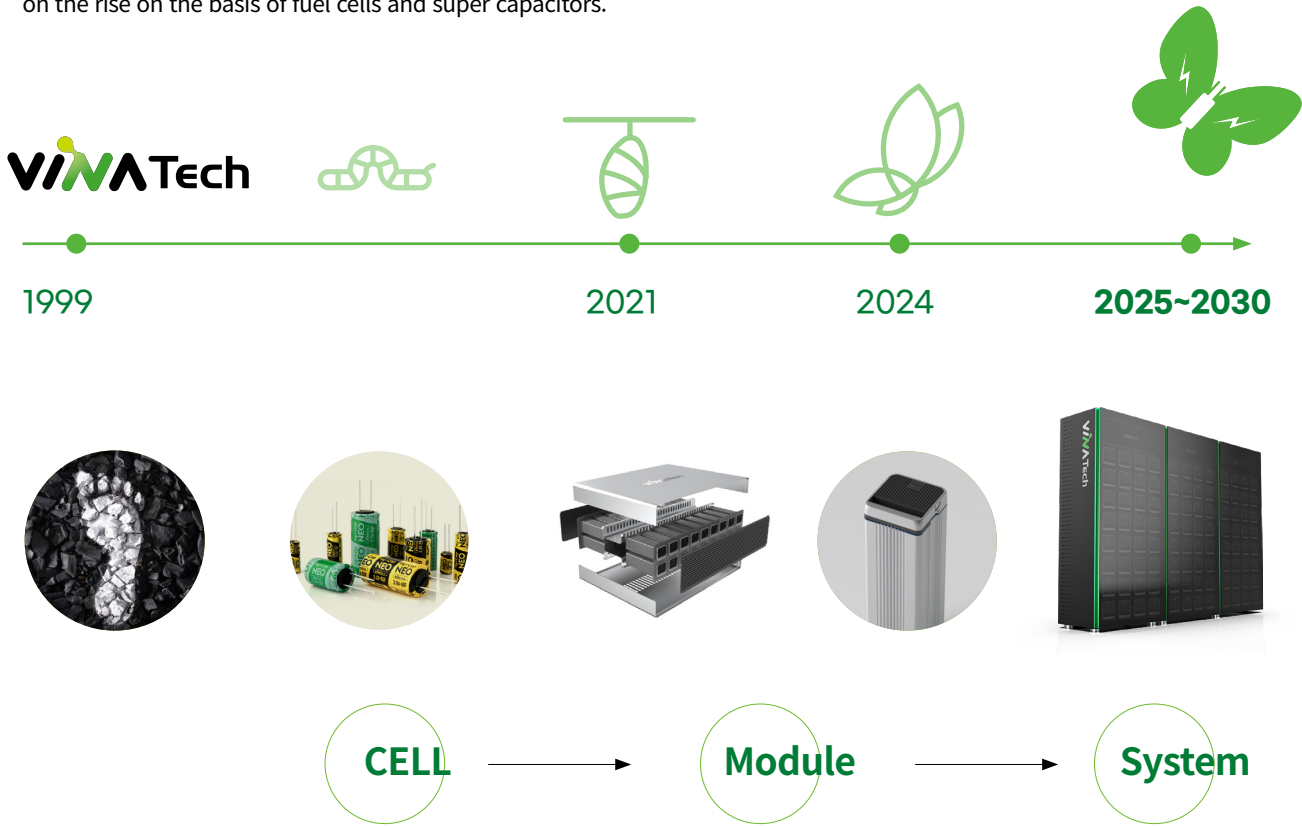
In 2017, A subsidiary was established in Vietnam, marking the expansion into international markets

In 2020, It was listed on KOSDAQ and acquired Ace Creation, a fuel cell bipolar plate manufacturer, further expanding its fuel cell business

In 2023, Fuel cells and supercapacitors were selected as the world’s best products, and their technological competitiveness was recognized in the global market based on innovative carbon-based technology.

Power Solution Division

As Vinatech’s world-class products, NAVI in the power solution sector is on the rise on the basis of fuel cells and super capacitors.

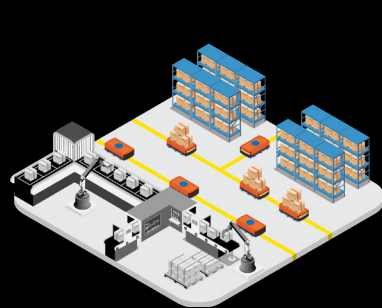


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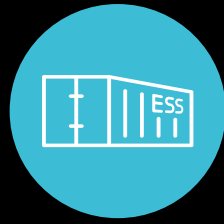
고출력
화재안전
무선충전
급속충전
24시간운전

High Output
Fire Safety
Wireless Charging
Fast Charging
24/7 Operation



Logistics

1



단주기
빠른응답성
빠른충방전
장수명
출력안정화
주파수조정
에너지하베스팅

Short Cycle
Fast Responsiveness
Rapid Charge and
Long Lifespan
Output Stabilization
Frequency Regulation
Energy Harvesting



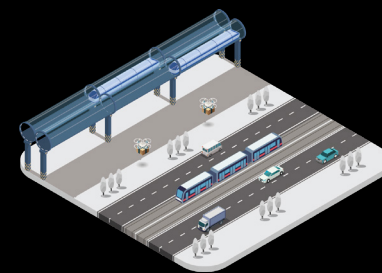
Energy

2



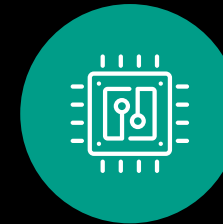
급가속 & 고출력
하이브리드
화재안전
회생제동
급속충전
연료전지
무가선

Rapid Acceleration
& High Output
Hybrid
Fire Safety
Regenerative Braking
Fast Charging
Fuel Cell
Catenary-Free



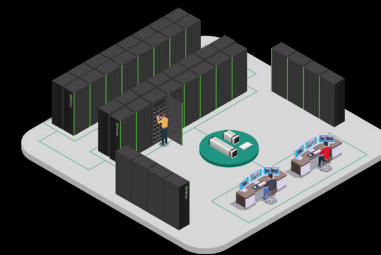
Mobility

3



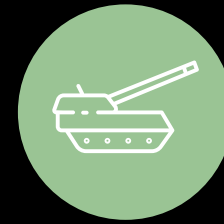
장수명
고출력
백업
단주기
친환경
화재안전

Long Lifespan
High Output
Backup
Short Cycle
Eco-Friendly
Fire Safety



Module

4



고출력
기동출력
회생제동
기동성
저온
화재안전
전차

High Output
Starting Power
Regenerative Braking
Mobility
Low Temperature
Fire Safety
Electric Train



Military

5

VINATech provides innovative energy solutions in five major business areas based on supercapacitor technology.



Standing at the center of logistics innovation

Experience the innovation of energy solutions with supercapacitors

Logistics

Supercapacitors are an innovative technology that maximizes energy efficiency and sustainability, providing new value in a variety of applications.

1. High Output

Supercapacitors provide powerful output to maximize the performance of high-power demanding devices and systems. It is an optimized solution for electric vehicles, industrial equipment, and energy storage systems that require instantaneous high-power supply.

2. Fire Safety

The durable and reliable supercapacitors are designed with enhanced fire safety and operate safely in extreme temperatures and environments. This makes them ideal for use in logistics warehouses, vehicles, and high-risk industrial environments.

3. Wireless Charging

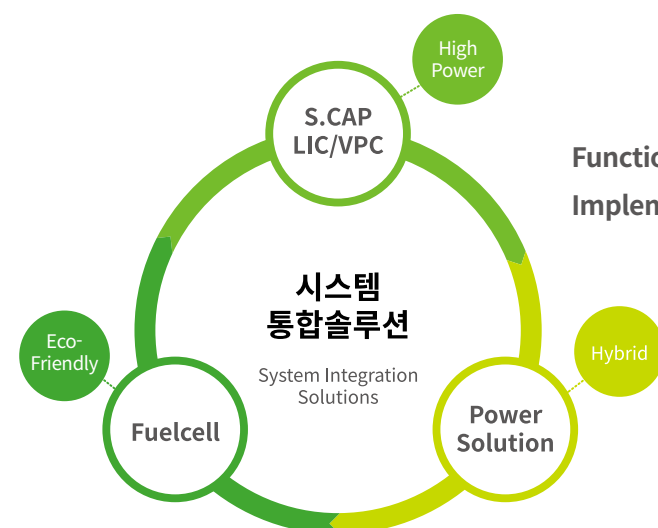
Supercapacitors that support fast charging speeds are fully compatible with wireless charging systems. This increases the operating rate and maximizes operational efficiency in automated systems such as logistics robots and electric forklifts.

4. Fast Charging

Supercapacitors can be fully charged within seconds, minimizing downtime. This enables efficient energy management in logistics and industrial environments.

5. 24/7 Operation

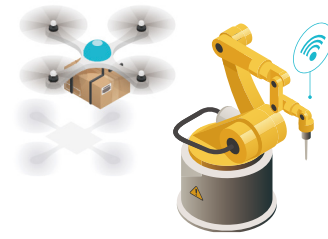
Supercapacitors provide reliable performance even in 24/7 continuous operation environments. Continuous operation can be possible through rapid charging during loading and unloading, they are suitable for various industrial environments, including logistics, manufacturing, and energy storage systems.



Providing a new concept of energy solution, it has emerged as a 'essential material' beyond the 'complementary material' of the battery

VINATech Logistics

- No Rest : 24-hour logistics system operation.
- For 'charging while in progress', a wireless charging system is installed at the work environment location to allow charging to proceed.
- Even with 'minimal downtime', wireless charging technology can be used to charge S-Cap. (batteries)



Business Areas



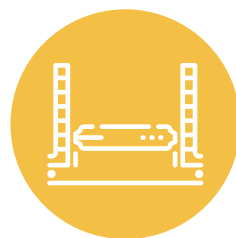
OHT



AGV



Rack Master



Pallet Shuttle

Technology/Experience



Japanese D co. Rack-Master

- Voltage 320V,
- capacitance 4.0F
- Size 795*189*192mm



Japanese M co. OHT

- Voltage 60V,
- capacitance 5.0F
- Size 174*74*50.8mm

Customer's needs



Safety

No Fire Risk



Fast Charge / Discharge

No-Delay : Fast/Wireless charging
No-Rest : 24-hour operation

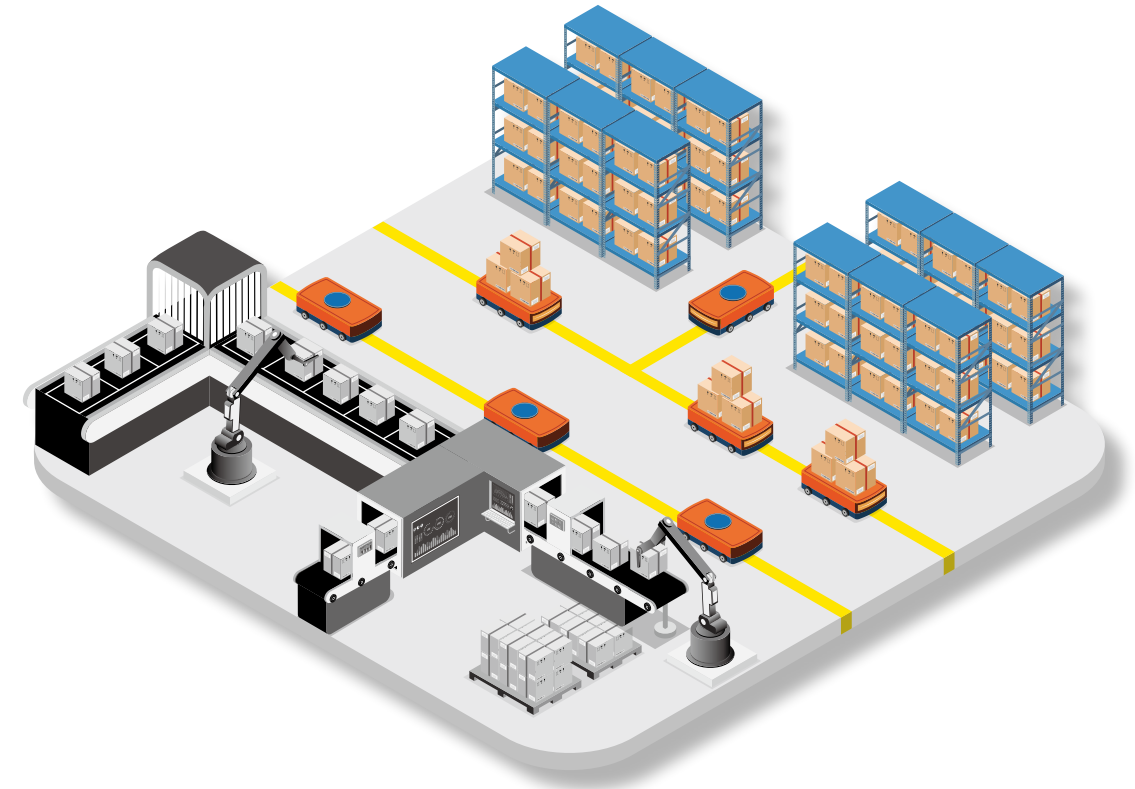
Expanding new markets

- Expanding applications of domestic and international logistics systems.
- Building a logistics line that is safe, high-output, and capable of 24-hour operation through the No-Risk, No-Delay, No-Rest.



Energy paradigm shift in the logistics, energy, and mobility sectors.

- Super Capacitor standalone module / No Rest ! (24/7 Operating)
- Super Capacitor + Battery(LIB, LFP) / Hybrid Fusion Product necessity and Market expansion



AC → DC

From AC power
to DC power



No Rest

24-hour logistics system
operation



No Risk

Reduce fire risk with S-cap
and wireless charging



Energy Blending

S-Cap + LIB Hybrid Control
: Heterogeneous energy
mixing technology



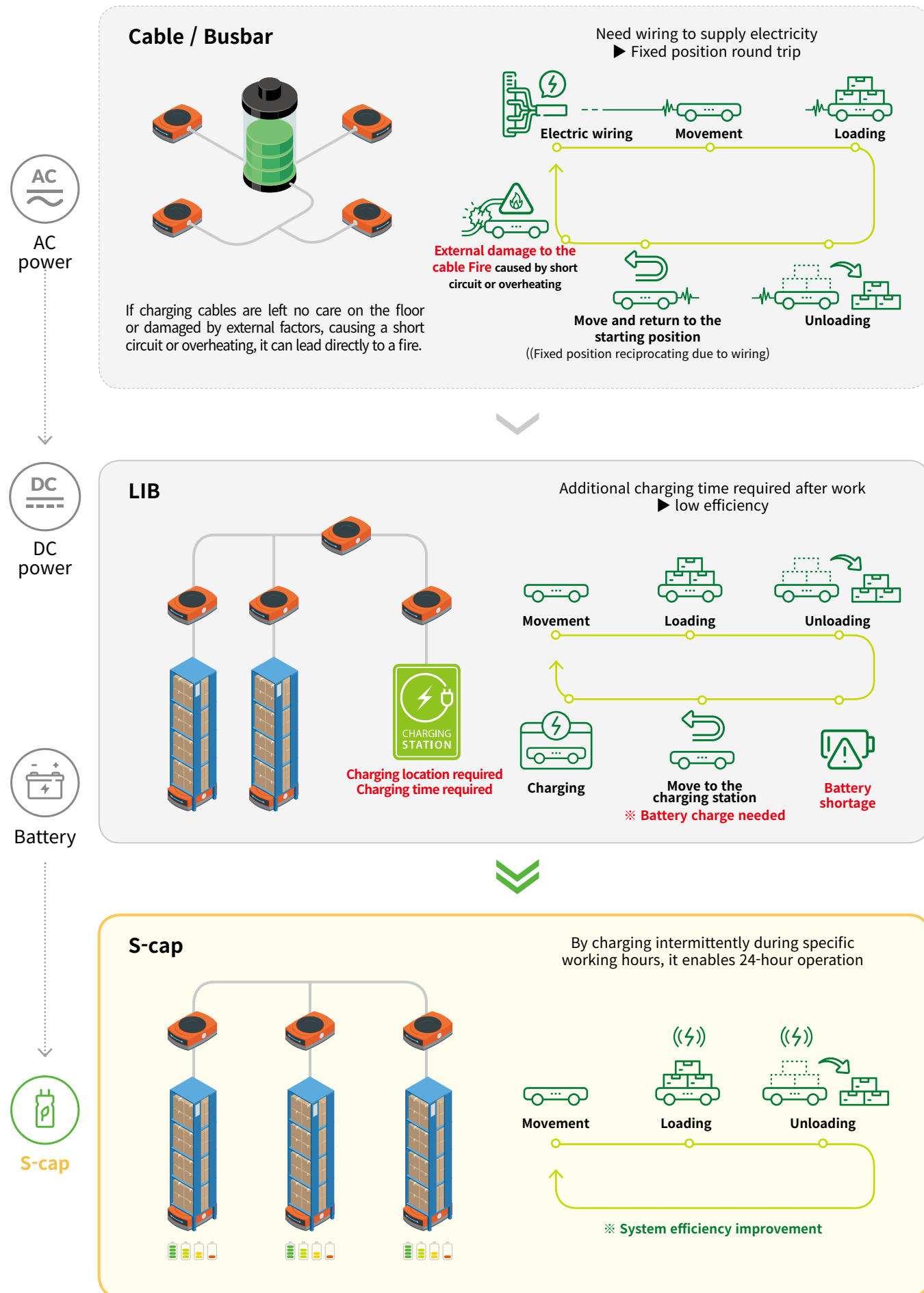
S-Cap

Eco-friendly, without using
hazardous metals to the
environment



Wireless

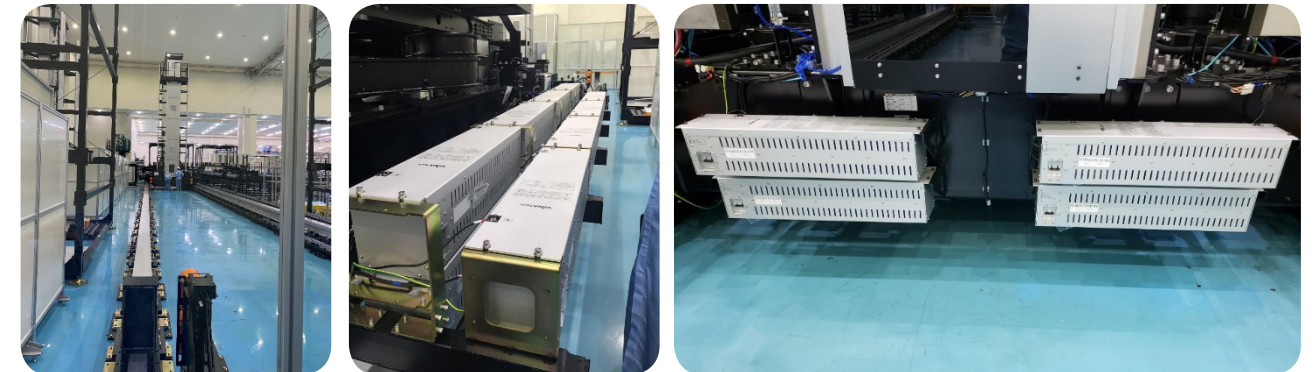
Improving logistics system
efficiency by applying wireless
charging technology solutions



In-factory logistics transportation system for smart factories operates in various forms, including Rack Master, CSC, and OHT. These logistics systems utilize supercapacitors as a power source, allowing for repeated operation without connecting power cables.

※ Product applied to Company D : In delivery (2021~)

Actual installation photos

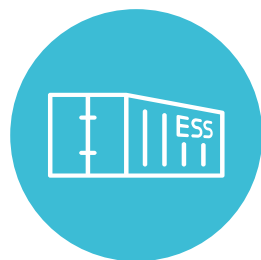


Supercapacitor module specification

Rated Voltage	Capacitance(F)	Max. ESR (mΩ), DC	Max. Current(A) (Non-repeated)	Leakage Current(mA) (CELL Leakage+ Circuit Leakage)
320V	4.0	450	75	16.5
Dimension (mm)				Max. Weight (kg)
Length	Width	Height		
795 ± 0.5	189 ± 0.5	192 ± 0.5	20.5	

Rackmaster Specification (estimation)

Item	Division	Value
Weight(kg)	Rackmaster	25,000
	Cassette	2,000
Driving speed(m/min)		210
Rail length(m)		50 ~ 100
Capacitor output(kW)	Unit Module	5.5
	Maximum SET Mounting (20 Modules)	110
Operating Time(m/min)		A few seconds



Partner in sustainable energy solutions

Supercapacitors maximize the efficiency and reliability of energy management and storage systems.

Energy

Supercapacitors are next-generation solutions that bring innovation to energy storage and management. With fast charging and discharging, high output stability, and cost-effectiveness, this technology delivers optimal performance across various energy-related applications.

1. Short Cycle

Supercapacitors possess short-cycle characteristics, allowing them to perform rapid charging and discharging repeatedly, making them efficient in systems where energy storage and high output are critical. This makes them ideal for dynamic energy management systems such as smart grids.

2. Fast Responsiveness

Supercapacitors address power quality issues with instant response time and enhance the stability of energy storage and distribution systems. This makes them an optimized solution for power frequency regulation and load balancing.

3. Rapid Charge and Discharge

Fast charge and discharge capabilities maximize energy balance and resilience in power grids. This is a key technology that enhances efficiency in applications such as the stability of solar and wind energy and Data Center.

4. Long Lifespan

Supercapacitors with high temperature characteristics, long life and fire safety ensure safe use in energy storage systems (ESS) and high-risk industrial environments.

5. Output Stabilization

Through output stabilization, supercapacitors mitigate the imbalance between renewable energy and the power grid, enhancing the continuity and quality of power supply.

6. Frequency Regulation

Designed to address frequency fluctuation issues in power grids, supercapacitors stabilize the frequency with instant energy supply and play a crucial role in smart grids and in the distributed energy business.

7. Energy Harvesting

It efficiently stores and utilizes renewable energy sources (solar, wind) to maximize energy efficiency. This performs exceptionally well in IoT and smart systems.



2

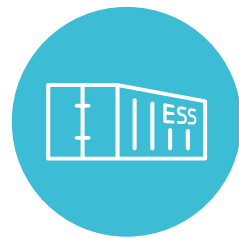
VINATech
Energy

VINATech Energy

- Utilizing the supercapacitor's key advantages, including high output support, fast response to short frequency output patterns, and long lifespan, in a wide ranges of products



Business Areas



FR-ESS



UPS/D.Center



Renewable Energy



Voltage-Sag

Technology/Experience



Korea Electric Power Corporation FR-ESS
For frequency adjustment

Module / Pack
Securing technology

Slave-CMS, CMS, CMU
Securing technology

Firmware, SOC, SOH
Securing algorithm technology

Customer's needs



Safety
No fire risk



Fast Charge / Discharge
Fast Charging: Effective on frequency fluctuations



Long lifespan & High durability
Long-Life: Achieving Economic advantage

Expanding new markets

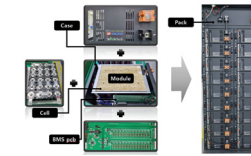
- Initial entry into overseas markets – Connection to domestic grid
- Application to short-cycle high-output power system applications
- GRID : FR-ESS frequency stabilization
- Renewable : Wind power output stabilization
- Backup Power : UPS, Voltage-Sag



Super-Capacitor Business Model in the Energy Industry

Enhanced power quality by applying S-Cap for short-cycle high-output use that is safe from fire!

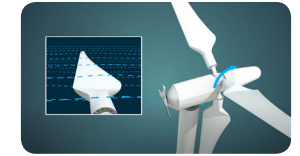
VINATech Technology/Experience



Super-Cap Module / Pack
(for FR-ESS)

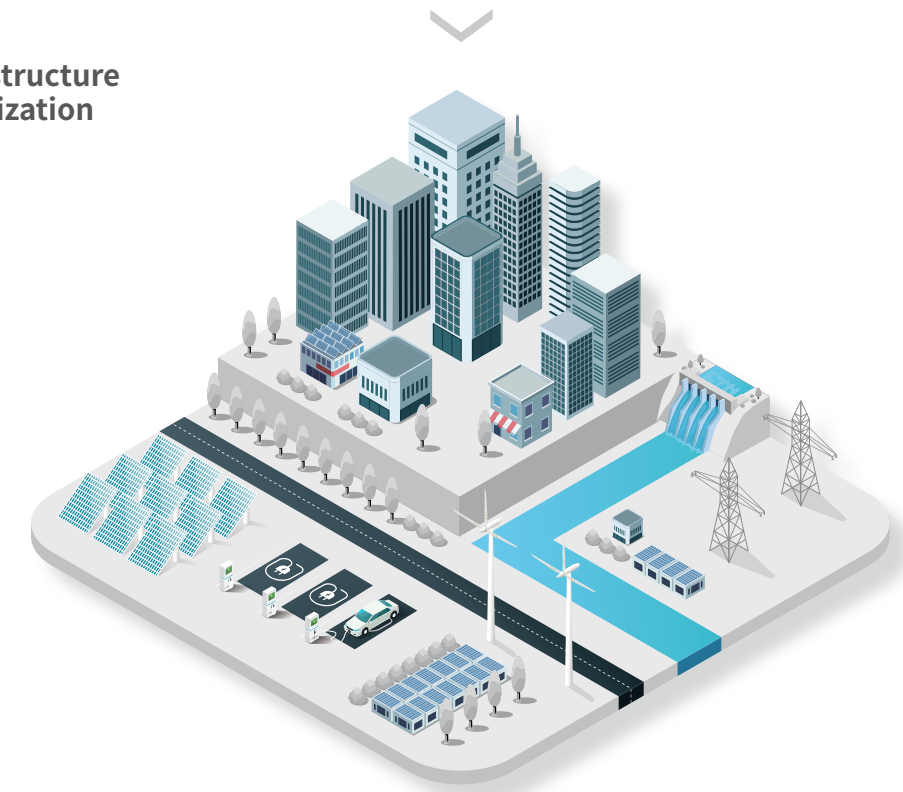


Master CMS
(ESS Control Program)



Pitch Control Module

Smart Infrastructure Commercialization



Business Model

Medium and low voltage distribution system

FR-ESS

Voltage-Sag

Smart grid operation

Medium voltage power system

Microgrid

Renewable energy

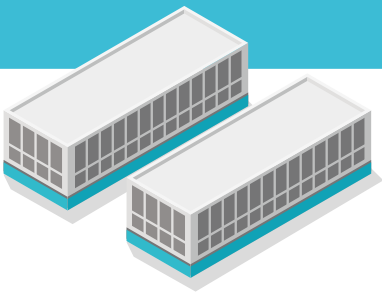
Peak assist

Turbine UPS

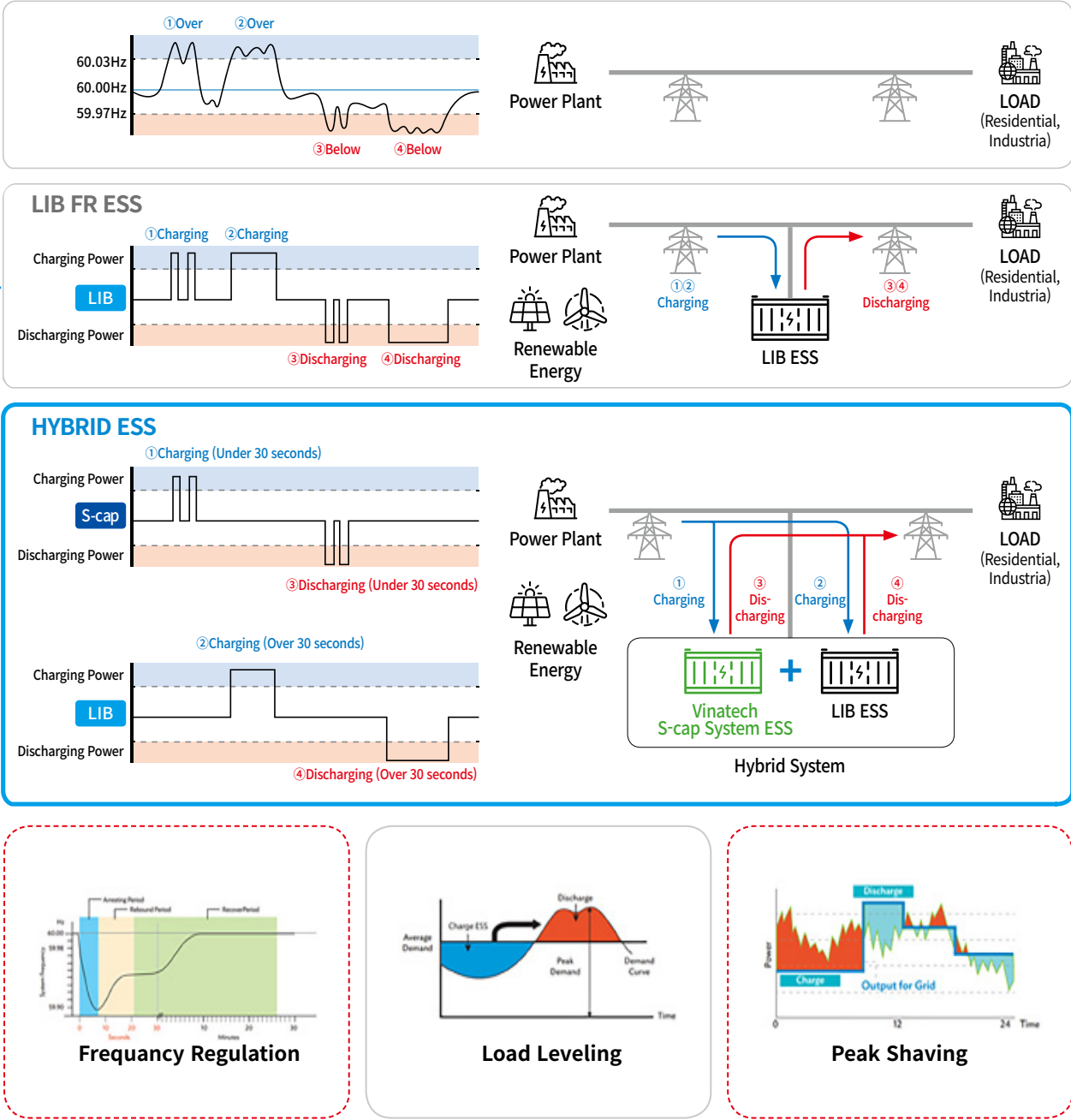
Market leader in smart infrastructure

- Expanding network capacity – allowing high-power charging on weak grid connections, balancing peak loads, and efficiently managing loads.
- Supercapacitors-applied FR-ESS, UPS-based grid operation, and high efficiency of renewable energy through Voltage-Sag and Peak Shaving.

- The functions of ESS are now moving toward energy storage and power quality stabilization. Among them, FR-ESS and Peak-Shaving are suitable for supercapacitors



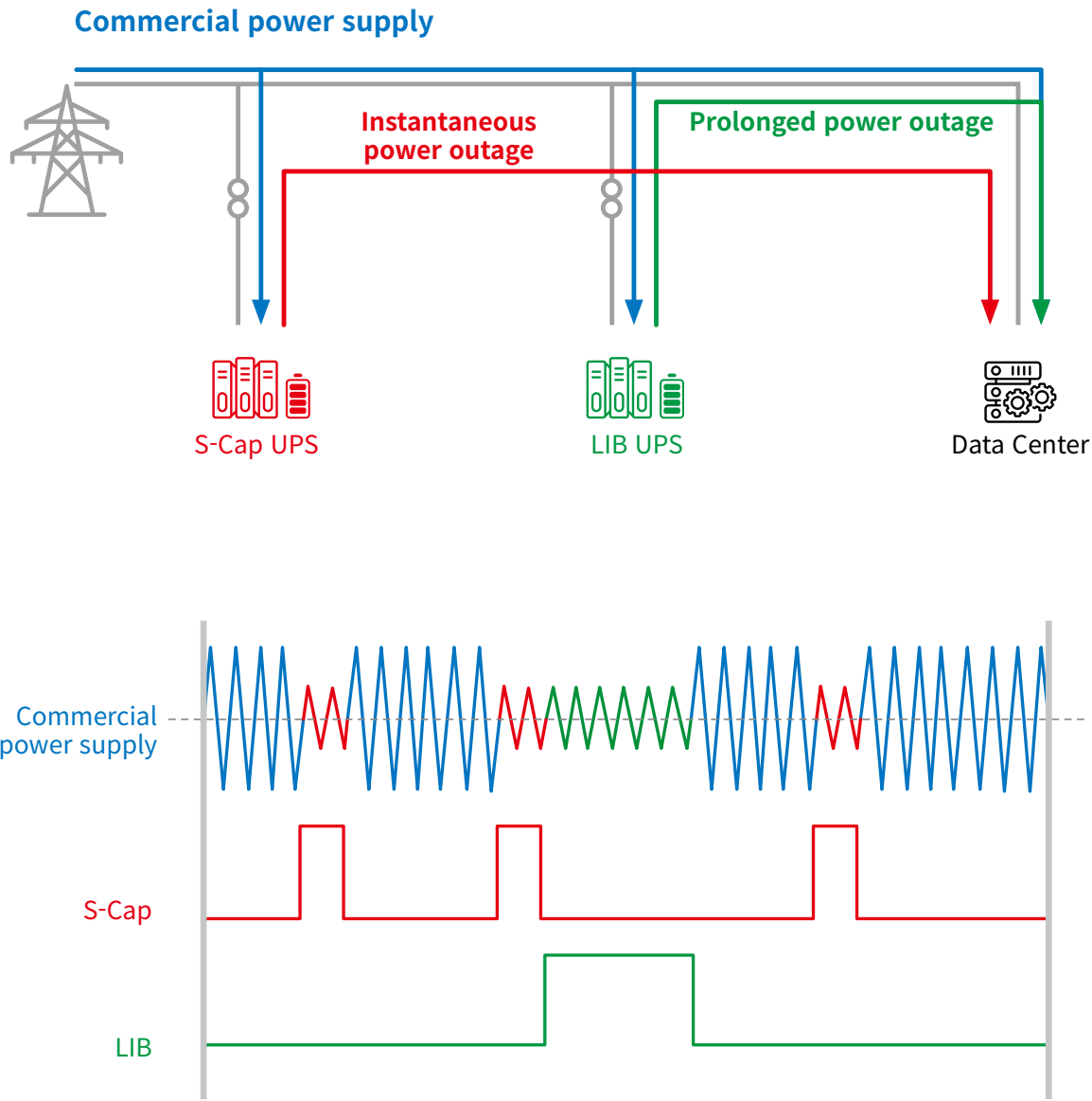
Frequency Regulation



- UPS system for momentary power outage response
- Systems that can be operated independently or in cooperation with LIB UPS



Super Capacitor + LIB : parallel operation





The optimal choice for future mobility

Supercapacitors are at the core of sustainable mobility solutions, providing both energy efficiency and reliability.

Mobility

Supercapacitors are the optimal energy solution that meets the high performance, safety, and sustainability demands of the mobility industry.

1. Rapid Acceleration & High Output

Supercapacitors provide powerful output in situation requiring rapid acceleration. It enhances acceleration performance, particularly in electric and hybrid vehicles, and provides an agile driving experience.

2. Hybrid

Supercapacitors are used alongside batteries in hybrid systems to support efficient energy management. It extends the battery's lifespan and contributes to reducing energy consumption

3. Fire Safety

With a design that minimizes fire risk, it ensures high safety even in extreme environments. This meets the essential safety requirements of the mobility industry.

4. Regenerative Braking

Supercapacitor efficiently store and recycle the energy generated by the regenerative braking system, reducing energy loss and improving fuel efficiency.

5. Fast Charging

Fully charged in a few seconds, minimizing charging downtime. This enables high operational efficiency in electric buses, tram, and logistics vehicles.

6. Fuel Cell

Supercapacitors are used with fuel cell systems to assist with transient power needs and enhance the stability and efficiency of the fuel cell.

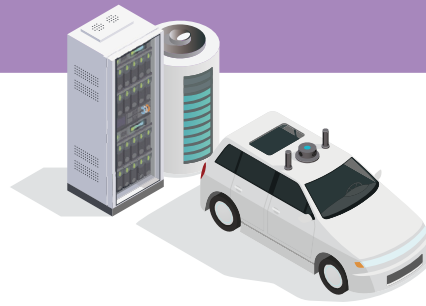
7. Catenary-Free

As a key energy storage device for catenary-free systems, it reduces the charging infrastructure requirements for electric buses and trams while providing operational flexibility.



VINATech Mobility

- Supercapacitor module/pack products and hybrid configurations for instantaneous high power and energy recovery through regenerative braking, ranging from internal combustion engines to hydrogen fuel cells.



Business Areas



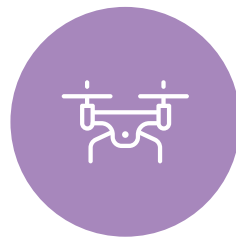
FE-Car



TRAM



Golf-Car



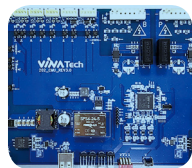
Drone

Technology/Experience



Fuel cell vehicle
For startup power

Module / Pack
Securing technology



Slave-CMS, CMS, CMU
Securing technology

Firmware, SOC, SOH
Securing algorithm technology

Customer's needs



Safety
No Fire risk



Fast Charge / Discharge
Fast Charging: Fuel cell energy storage
Regenerative Braking: Brake regenerated Energy Vehicle



Long lifespan & High durability
Long-Life: Achieving Economic advantage

Expanding new markets

- Promotion of commercialization through linkage with national projects and demonstration initiatives
- Domestic wireless tram project in progress
- Ongoing development of modules for overseas customers, to be applied in Mahindra(automobiles),Chetak(motorcycles) and other products



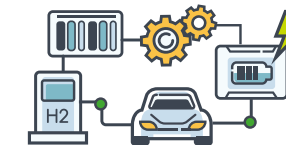
Super-Capacitor Business Model in the Mobility Industry

Application of S-Cap Energy Blending technology to overcome the high output limitations of rechargeable batteries!

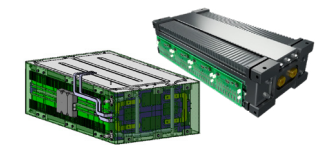
VINATech Technology/Experience



Wireless Tram
Super-Cap Pack

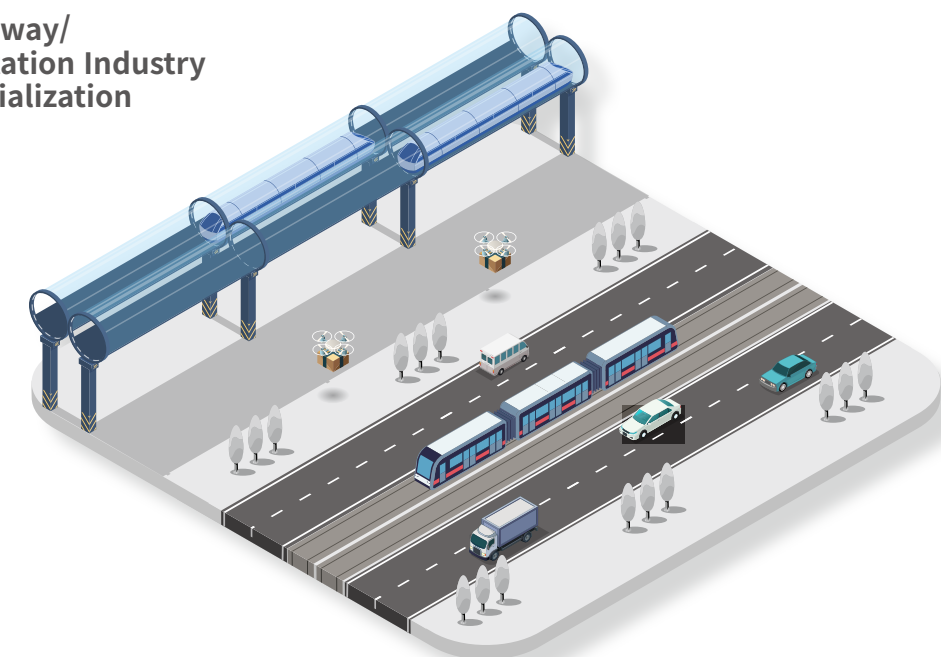


Next generation electric
propulsion system Hybrid control

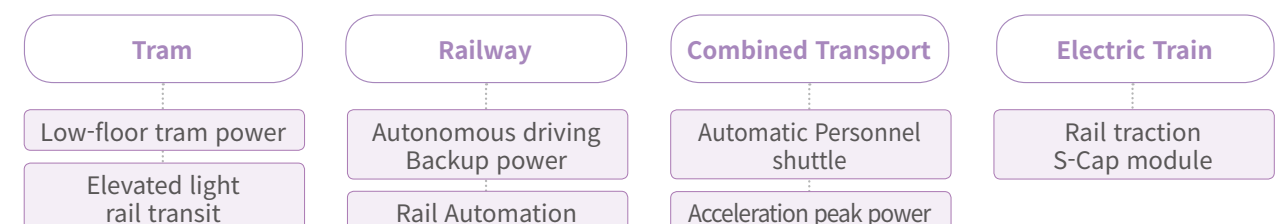


FE-Car 150kW 급
S-Cap Pack

Tram/Railway/ Transportation Industry Commercialization



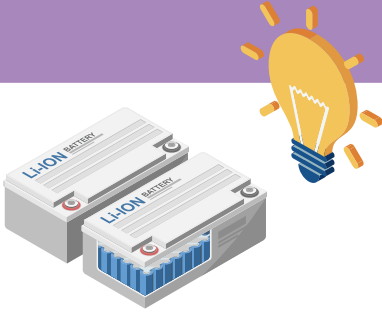
Business Model



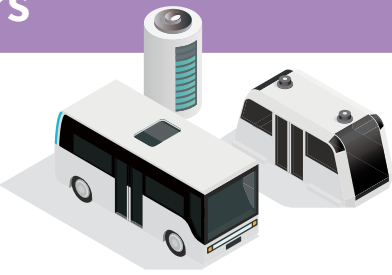
**Market leader
in the mobility
industry**

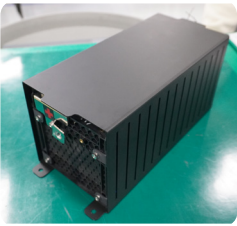


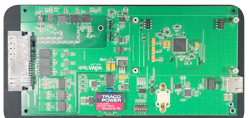
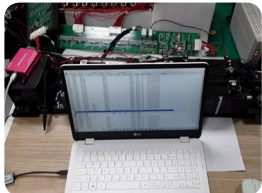
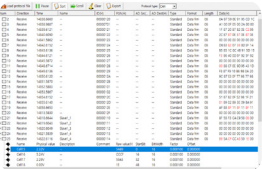
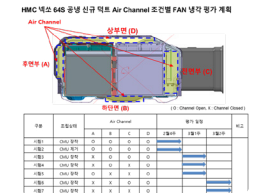
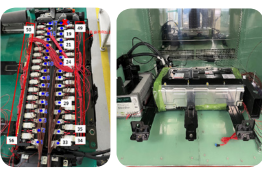
- Rail electrification – End-to-end rail network infrastructure based on supercapacitors for stop-and-go acceleration peak backup
- High power support during train startup and fast response and operation of short-cycle load patterns

- Supercapacitor module/pack products and hybrid configurations for instantaneous high power and energy recovery through regenerative braking, ranging from internal combustion engines to hydrogen fuel cells



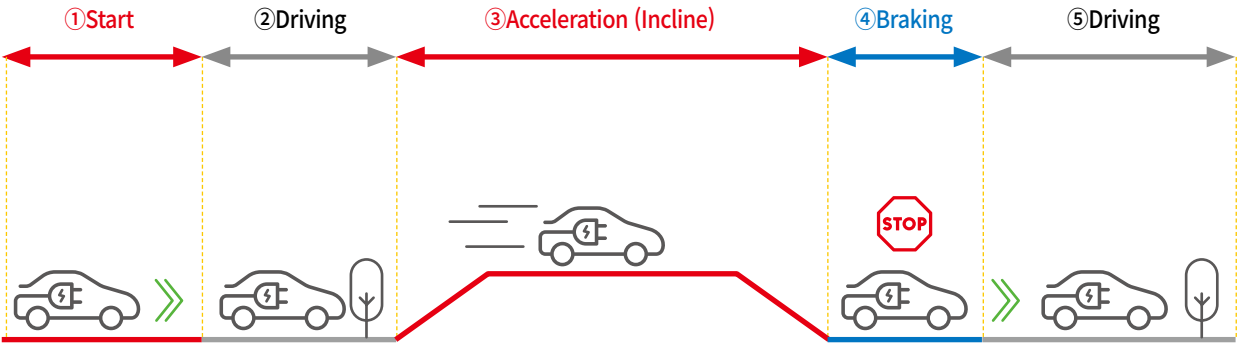
- Supercapacitor modules/packs are widely applied for the energy recovery through instantaneous high-power and regenerative braking from internal combustion engines (ICE) to hydrogen fuel cells. This means that supercapacitors play an important role in energy recovery and regenerative braking systems that require instantaneous high-output.



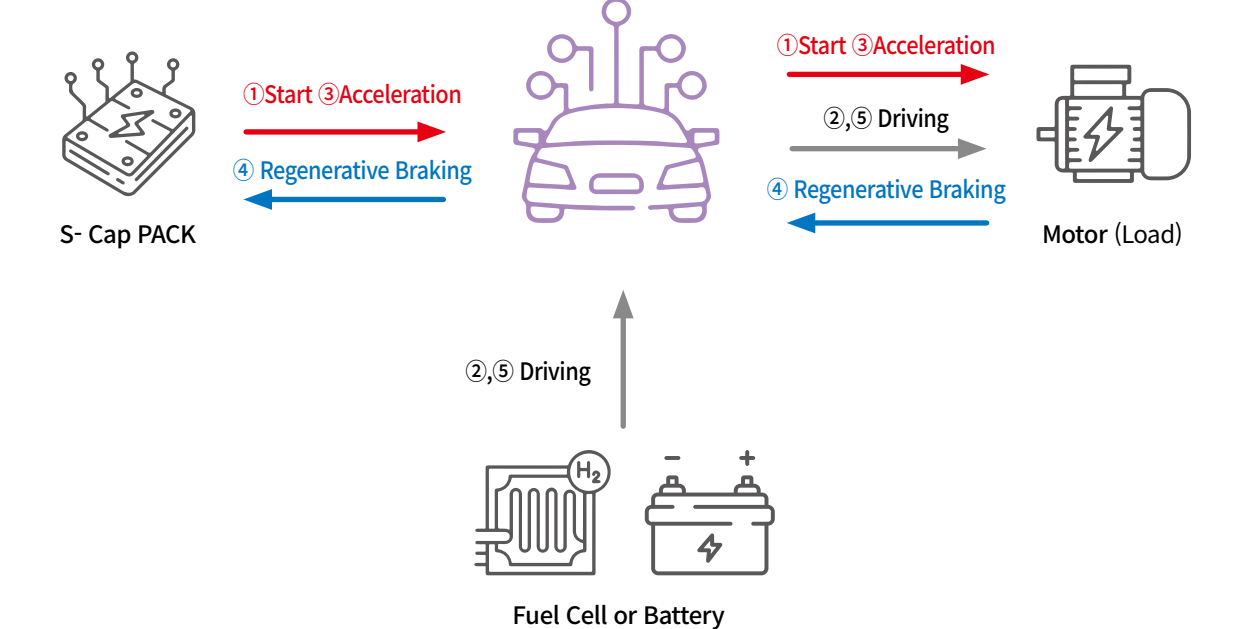
Module / Pack	CMS Capacitor Management System	Firmware, SOC/SOH Algorithm	Reliability
 	 	 	 

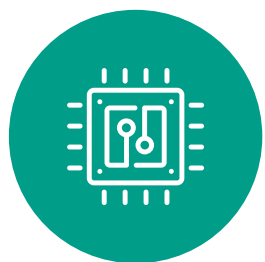
Hydrogen Fuel Cell + LIB Hybrid	Hydrogen Fuel Cell + Super Capacitor Hybrid
 2차전지 사용 문제점  화재 위험성  저출력  가속시 다량의 에너지 소비 발생	 슈퍼커패시터 사용 확대  화재 안전성  고출력  에너지 효율 (화생제동)

Boosting Power



Hybrid Control





New Possibilities of Supercapacitor Modules

Supercapacitor modules are driving innovation in the energy storage and management sector with their long lifespan, high power output, and eco-friendly design.

Module

Supercapacitors modules are essential components in energy management and storage solutions, providing outstanding performance and reliability.

1. Long Lifespan

Supercapacitors modules can withstand over a million charge and discharge cycles, offering significantly longer lifespan compared to batteries. Their long lifespan reduces maintenance costs and enhances the sustainability of the system.

2. High Output

Capable of providing instantaneous high power, it reliably meets a wide range of energy demands. The high power characteristics particularly shine in environments where rapid changes in power are required.

3. Backup

It provides stable power in emergency situations, ensuring the operation of critical systems. This plays a crucial role in industrial facilities and data centers

4. Short Cycle

With fast charge and discharge performance, energy can be stored and released in short cycles, maximizing the efficiency of energy management.

5. Eco-Friendly

Supercapacitor modules are manufactured with eco-friendly materials and design to minimize their impact on the environment. They provide sustainable energy solutions with high recyclability.

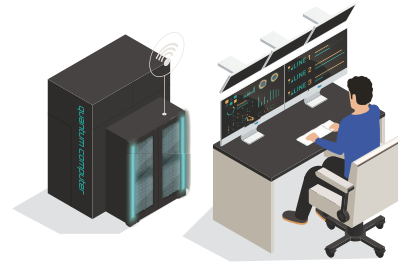
6. Fire Safety

The design, enhanced for fire safety, ensures stable operation even in extreme temperatures and environments, guaranteeing the safety of the power system.

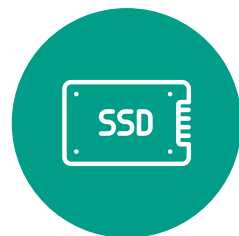
4
VINA Tech
Module

VINATech Module

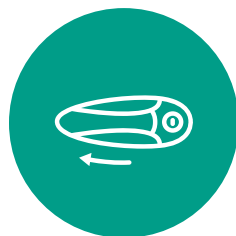
- Launching the next-generation standard module/rack system
- Server SSD Backup
- E-latch(Smart Latch)
- Power Backup
- Solar Panel Angle Adjustment
- Wind Turbine Blade Pitch Control



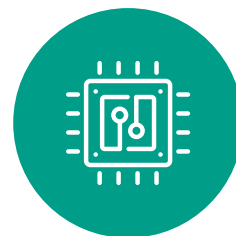
Business Areas



SSD Backup



E-Latch



Standard M/D



Automotive

Technology/Experience



Pliops Co. SSD Backup
Module development completed



Power Backup for Emergency
Module development completed

Customer's needs



Safety
No Fire Risk



Fast Energy Supply
Fast response when running the back-up power

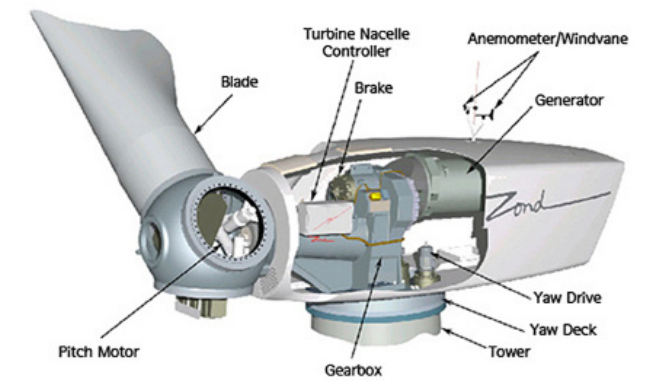
Expanding new markets

- Application of supercapacitors in various backup power markets.
- Backup power : SSD, Memory backup.
- E-Latch : Backup power for motor drive.
- In progress to secure product competitiveness with standard modules.

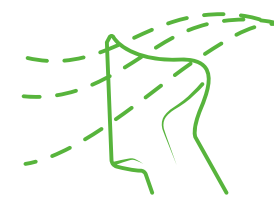


Wind Turbine Pitch Control

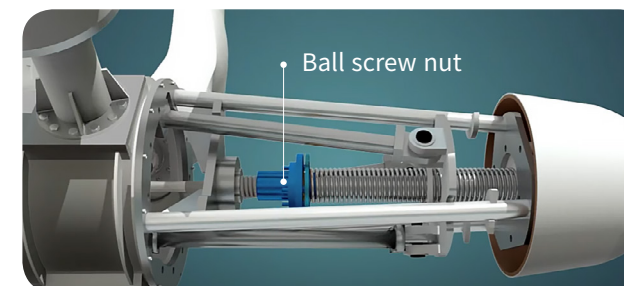
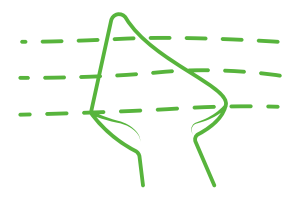
To maintain a constant blade speed despite changes in wind flow, a supercapacitor module for pitch control is applied to adjust the blade angle when necessary.



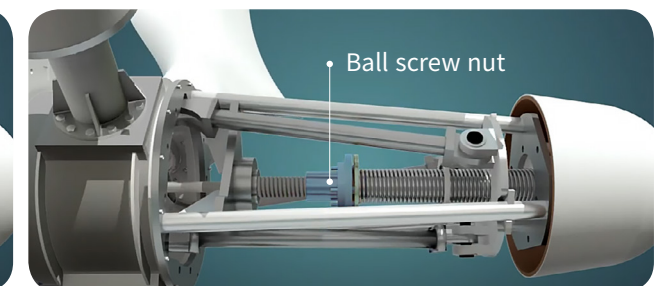
Above normal speed
9~20 m/sec
Blade pitch angle is adjusted



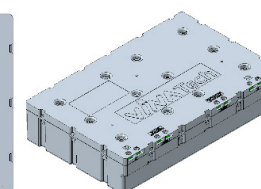
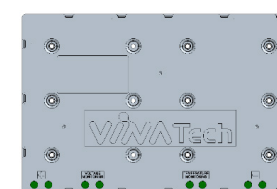
In strong winds of 20 m/s and above, the blade pitch angle is adjusted up to a maximum of 90 degrees.



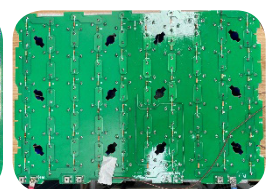
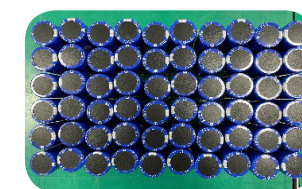
Ball screw nut



Ball screw nut

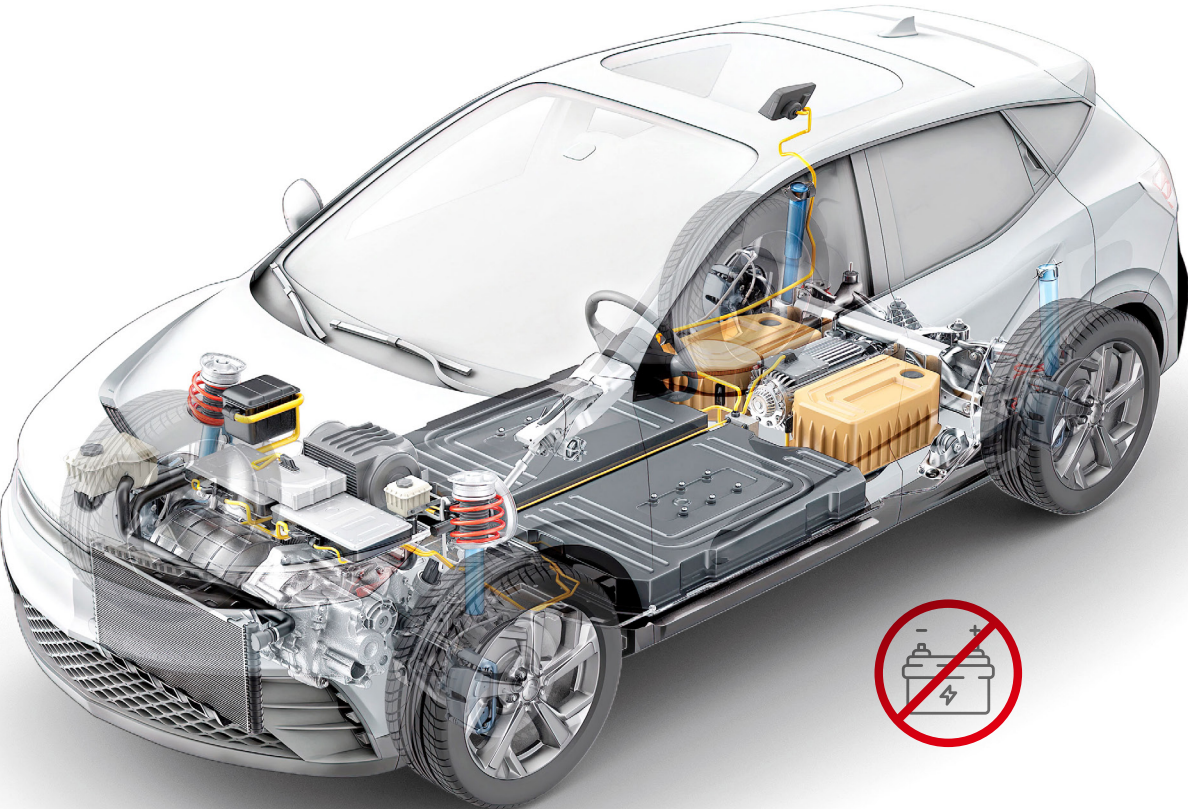
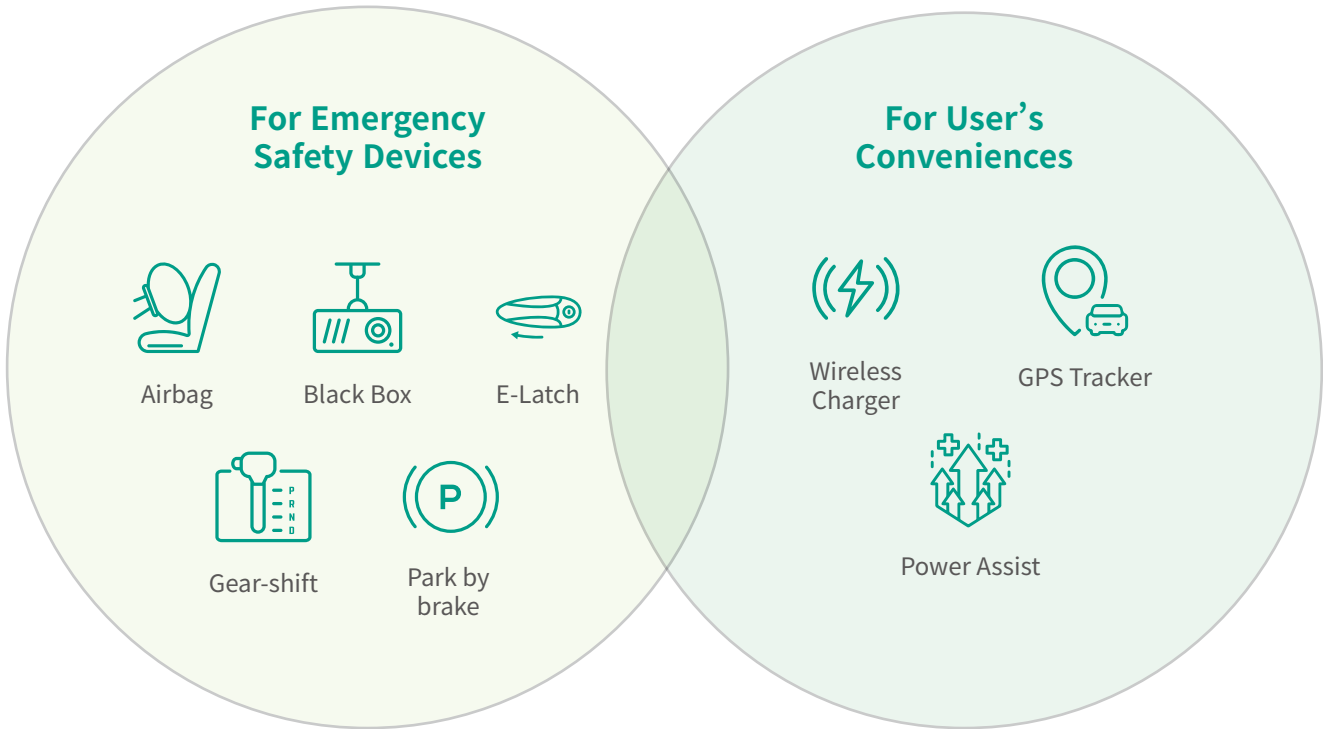


Module Exterior



Module Interior

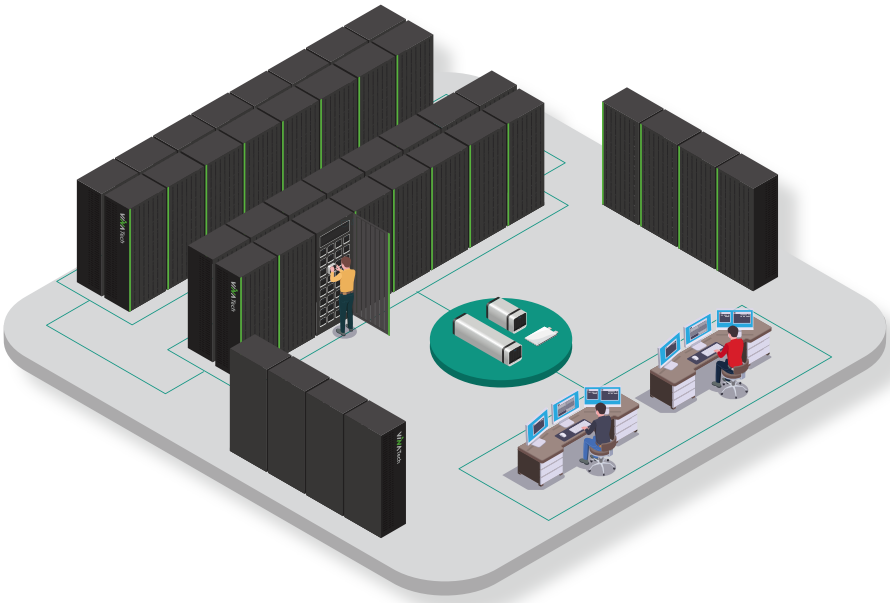
Automotive Electrical S-Cap Application



Module / Pack (Data Backup, Vehicle Product, Smart Grid)

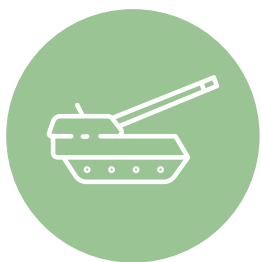
Available Categories

- Dash cam (DVR)
- Data Server
- Smart Meter
- Brake System
- Airbag



Next-Gen Standard Module





A Solution that Innovates Military Technology

Supercapacitor modules are driving innovation in the energy storage and management sector with its long lifespan, high power output, and eco-friendly design.

Military

Supercapacitors are a key technology that enhances the reliability and efficiency of combat environments. They ensure high power output, long lifespan, and stable operation even in extreme conditions, meeting the demands of modern military technology.

1. High Output

Supercapacitors can instantly meet high power demands, supporting high power performance of military equipment. This is essential for prompt maneuvers and the operation of electronic systems.

2. Starting Power

In situations where high power is needed momentarily, capacitors provide powerful starting output. This enables rapid operation of vehicles, aircraft, tanks, etc.

3. Regenerative Braking

Supports efficient energy management by storing and reusing energy generated from the regenerative braking systems of military vehicles and tanks.

4. Mobility

Capacitors with a compact design and high power density maximize the mobility of military equipment. They can be applied to various mobility devices, including combat vehicles and drones.

5. Low Temperature

Supercapacitors operate reliably even in extreme cold environments, ensuring the reliability of military equipment under various climatic conditions.

6. Fire Safety

The safe design minimizes the risk of fire and explosion even in high-risk operational environments.

7. Electric Train

In military electric vehicles, such as tanks, capacitors provide high efficiency during acceleration, maneuvering, and braking. This supports the agility of military operations.

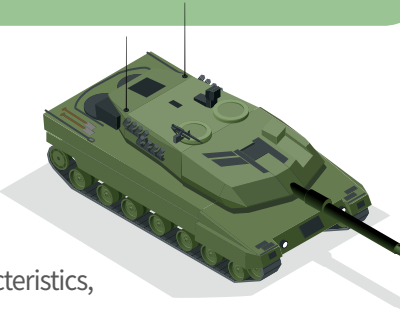


5

VINATECH
Military

VINATech Military Defence

- Increase in new defense business applying high-reliability, high-output S-cap for next generation electric propulsion system
- Improvement of cold-start performance in diesel engine transport vehicles
- Turret rotation and the angle change of elevation for the power of 76 mm warships, etc
- Suitable for defense market requiring high-output, temperature characteristics, high-reliability and high-stability



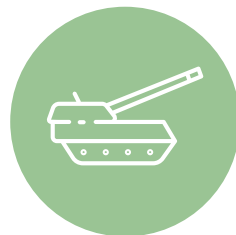
사업영역



Warship



Military Truck

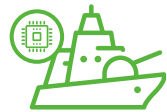


Self-propellant
Artillery



Tank

Technology/Experience



High-power module for turret rotation and the angle change of elevation
Development completed and in production



Military truck module for improved cold-start performance
Development completed

Customer's needs



Safety
No Fire risk



Fast Energy Supply
Fast response when running the back-up power



Wide range of temperature
-40°C ~ +85°C operating range

Expanding new markets

- Application to military equipment where durability is critical
- Entry into the Daewon Electronics warship module business
- Completion of project for military trucks
- Developing and collaborating on supercapacitor-based weapon system technologies for the defense industry



Supercapacitor Application Cases in the Defense Industry

Increase in new defense business with the application of high-reliability, high-power S-caps for next generation electric propulsion systems!

VINATech Technology/Experience

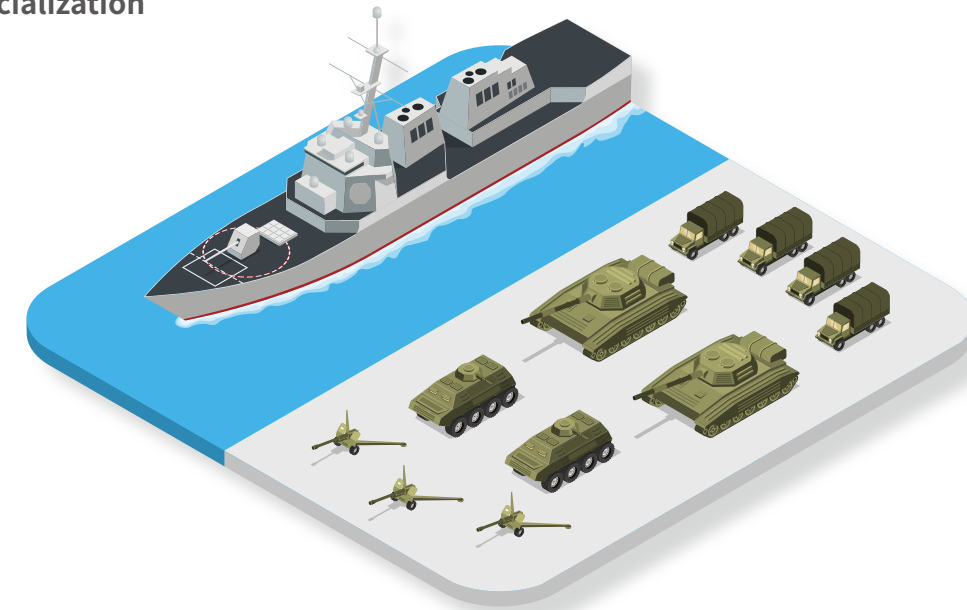


Diesel Engine Transport Vehicles
Improved cold-start performance



Turret rotation and the angle change of elevation for the power of 76 mm warships

Defense Industry Commercialization



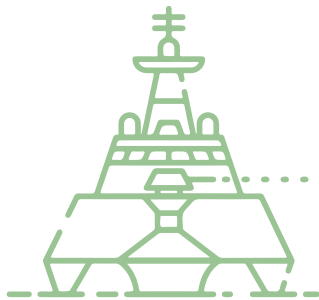
Business Model

Army	Navy	Air Force	Other Equipment
Self-propellant Artillery	Naval Artillery	Drone	Laser / Railgun
Tank	Electric Ship	Projectile	Radio Jamming and Reconnaissance

Market leader in the defense industry

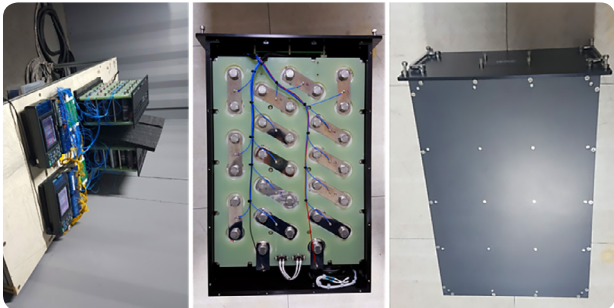
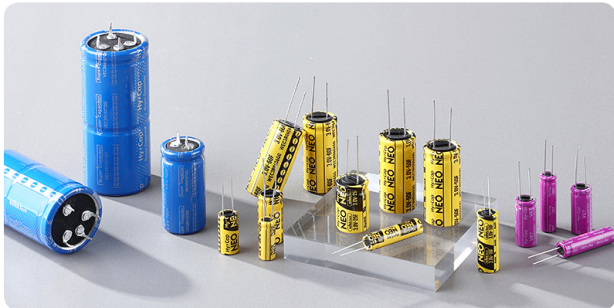
- Ensures excellent durability by utilizing a wide range of temperature
- Optimized for military equipment as it can be used even at ultra-low temperature
- Output assistance for instantaneous operation with excellent high-power characteristics

Rotator drive power for 76 mm warships



- Instantaneous output of 100A ~ 200A required for turret rotation
- The output is supplied by the electricity stored in the supercapacitors within the turret control unit

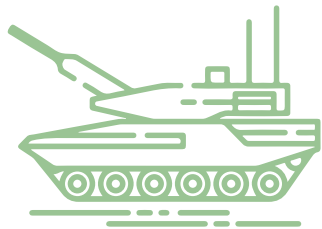
Project title	Development of Cylindrical Supercapacitor Technology for Rotator Drive Power of 76 mm Warships
Lead Institution	VINATech Co., Ltd.
Research Institution	December 20, 2017 - December 19, 2018 [12 months]



Development Goal
60phi-EDLC development : 2.7V/3,500F
Implementation of DC ESR < 0.26mΩ for high power output

Result: Success and Commercialization
Development of the world's highest capacity cylindrical supercapacitor completed (>3,800F, <0.2mΩ) @ IEC62391
Applied to 76 mm gun (Since 2019)

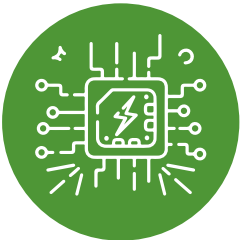
Battery Pack for next generation electric propulsion systems



Tank



Development of hybrid power propulsion system
(Diesel + S-cap / LIB + Electric motor)



Development of Hybrid Power Supply



Super Capacitor (S-cap)



Recharged Battery (LIB)

1	Development of hybrid power propulsion system	<ul style="list-style-type: none">- Supercapacitor/LIB hybrid application- In-house Development of VINATech(Core Technology)- Simultaneous Development of FCU (Power Distribution Unit) Including BMS
2	High power with supercapacitors during sudden start and sudden braking	<ul style="list-style-type: none">- Avoiding maneuvers, high-speed driving, instantaneous maneuvers

Establishing Global Research Collaboration and Test Beds

Collaboration with overseas research institutes and companies: VINATech is developing new materials and technologies in collaboration with various global research institutes and companies. For example, we are working with major European and Asian electric vehicle manufacturers to commercialize supercapacitor and fuel cell technologies.

Establishing a Test Bed: VINATech is establishing a test bed that can test supercapacitors and fuel cells in real operating environments both domestically and internationally, and is collecting data necessary for research and development to further improve product stability and performance.

8 overseas patents

186 domestic patents

30 global networks

Global Network



국내

전주본사



완주공장



해외(Vietnam)

박닌공장



박장공장



하남공장



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