



Intelligent DG Cranking Solution

Ensuring Reliable Generator Starts for Mission-Critical Operations

HYBRID SUPER CAPACITOR TECHNOLOGY

SMART BATTERY CHARGING

INTELLIGENT CRANKING CONTROL

IOT MONITORING

Every Second of Downtime Matters

When utility power fails, your diesel generator must start immediately. Unexpected DG start failures result in critical downtime, production losses, SLA penalties, emergency maintenance, and increased operating costs.

Battery Degradation

High cranking current degrades batteries over time, causing frequent replacements

Unexpected Failures

Limited visibility into battery health leads to unexpected DG start failures

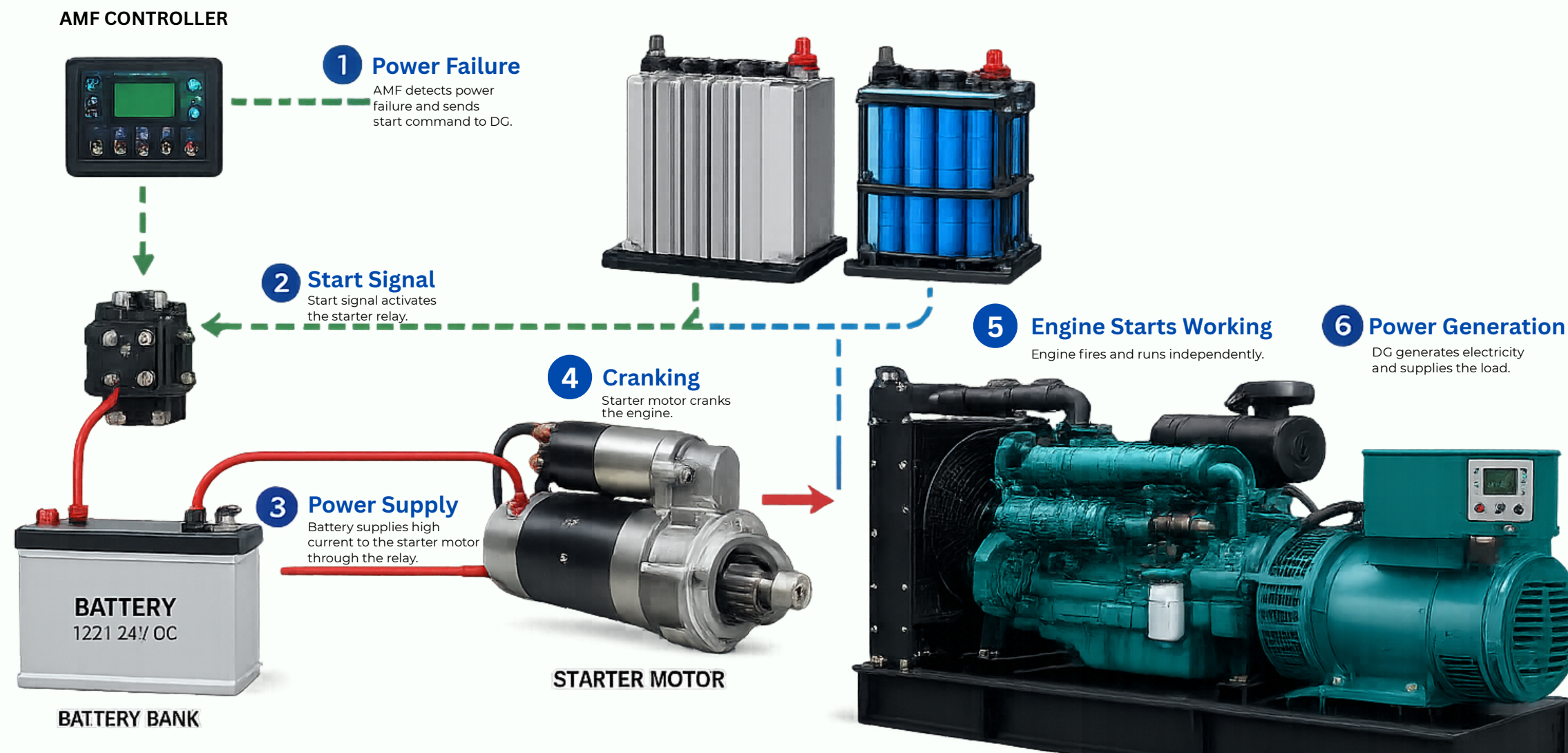
Business Impact

Higher maintenance costs, downtime during power failures, and business continuity risks



Understanding the DG Starting System

A DG Starting System enables a diesel generator to start automatically or manually during a power outage. If any component fails to perform, the generator may not start when required.



Core Components

- Starter Motor
- Battery Bank
- Smart Battery
- Charger Starter
- Relay
- AMF Controller
- ATS Interface

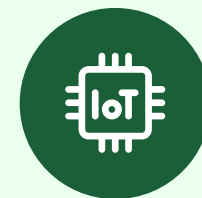
JSD Intelligent DG Starting Solution

JSD Electronics combines intelligent power electronics with advanced monitoring to improve DG starting reliability. Designed for critical applications where dependable generator starting is essential.

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Smart Battery Charger



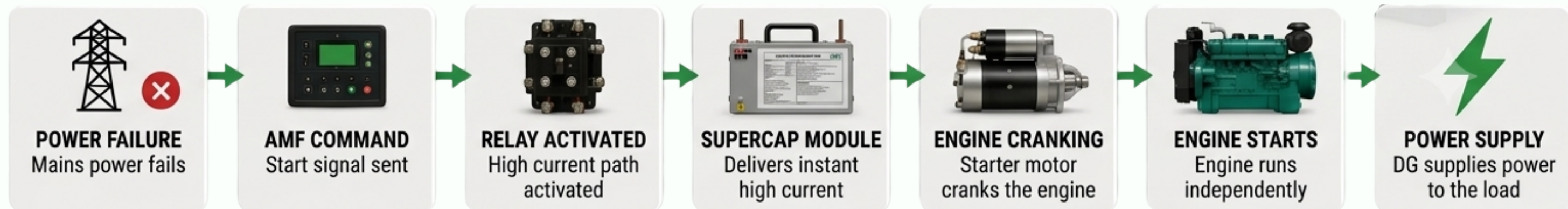
Optional IoT Monitoring



Intelligent Cranking Controller

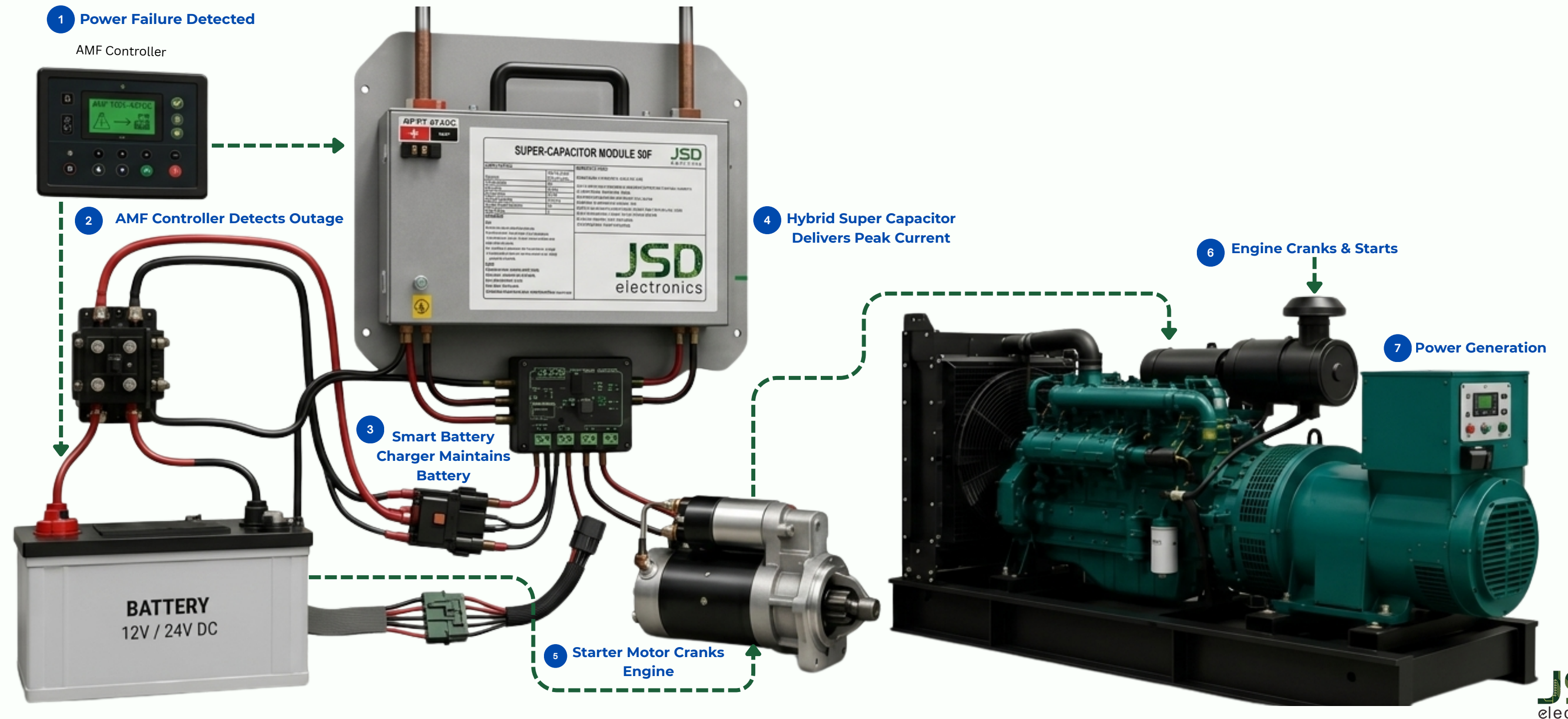


Hybrid Super Capacitor Module



Solution Architecture

The system flows from utility power through intelligent charging and energy storage to reliable generator starting, with optional IoT monitoring for remote visibility.



Product Components



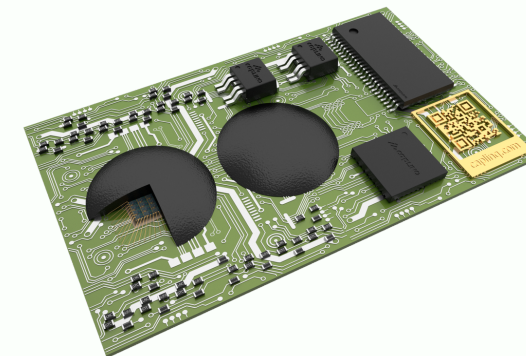
Smart Battery Charger

Intelligent battery charging with battery protection and reliable charging performance



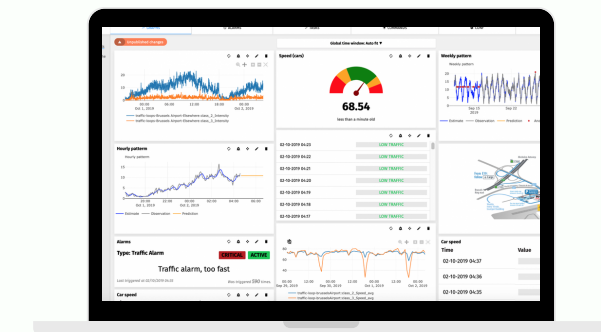
Hybrid Super Capacitor Module

Instant high-current delivery, fast charge / discharge, reduced battery stress, improved cranking



Intelligent Cranking Controller

Intelligent cranking control, integrated DG starting operation, reliable system coordination

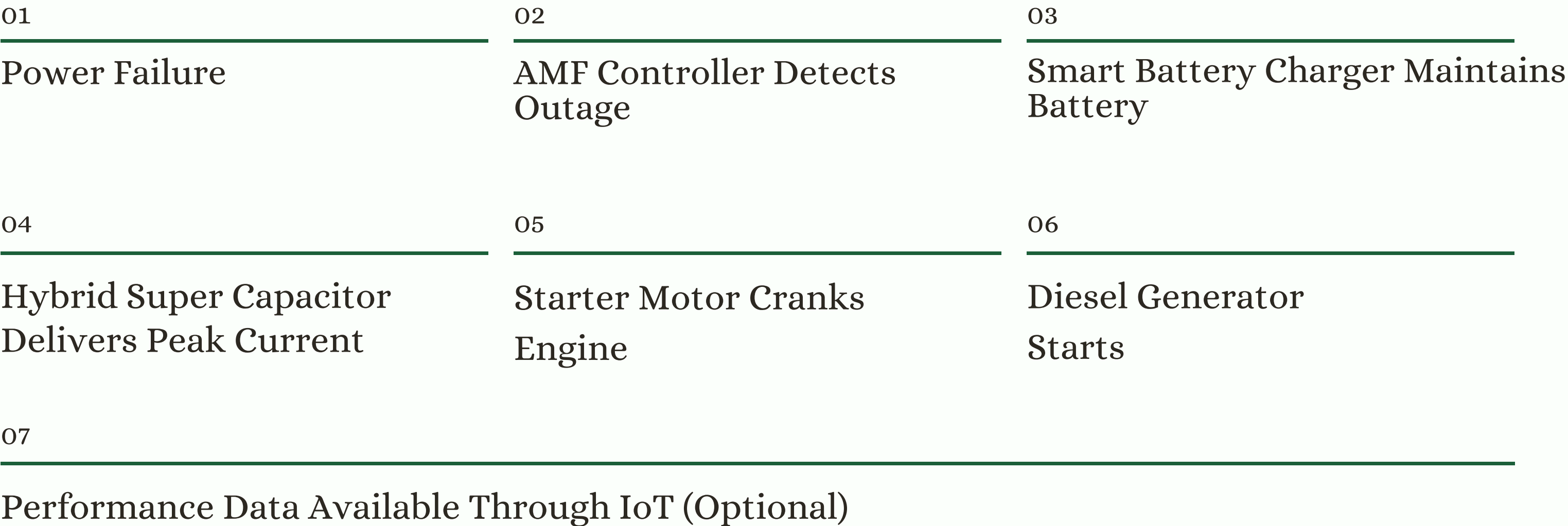


Optional IoT Monitoring

Battery SOC, cranking current logs, start-failure alerts, remote diagnostics, predictive maintenance

How It Works

The intelligent DG starting process ensures reliable generator activation during power outages.



Why Hybrid Super Capacitor Technology?

Conventional Battery System	JSD Hybrid Solution
Battery alone delivers cranking current	Super Capacitor assists during cranking
Higher battery stress	Reduced battery stress
Performance degrades over time	Improved cranking performance
More maintenance interventions	Reduced maintenance requirements
Limited system visibility	Optional remote monitoring

Key Advantages

- ✔ Super Capacitor assists during cranking, reducing battery stress
- ✔ Improved cranking performance that doesn't degrade over time
- ✔ Reduced maintenance requirements and emergency service visits
- ✔ Optional remote monitoring for better system visibility

Customization & Applications

Available Customizations

- 12V & 24V variants for different DG capacities
- OEM branding, custom firmware & charging logic
- IoT & cloud dashboard integration
- Custom mechanical design, wiring harness & enclosure Private label manufacturing

Designed for Critical Infrastructure

- Telecom Towers, Hospitals, Data Centers Manufacturing Plants,
- Commercial Buildings, Oil & Gas
- Airports, Railways
- Mining Operations, Construction
- Equipment Infrastructure Projects, Industrial Utilities

Why JSD Electronics?

Your engineering and manufacturing partner— in-house electronics design, embedded hardware, firmware development, power electronics, IoT solutions, OEM manufacturing support, and Make in India manufacturing.

Operational Benefits

Improved DG starting reliability, reduced battery stress and maintenance, remote monitoring, predictive maintenance support, better equipment availability

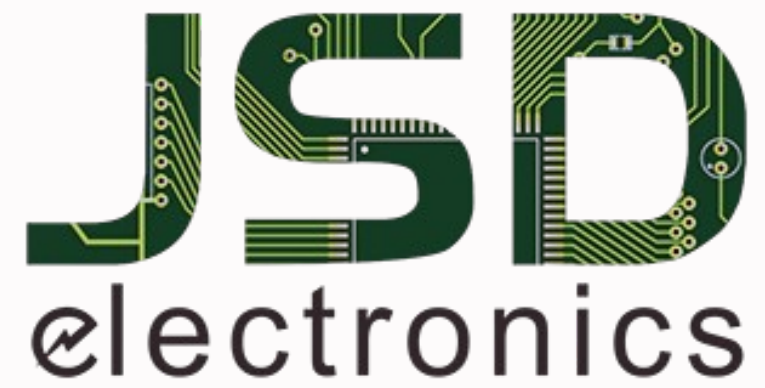
Business Benefits

Lower maintenance costs, reduced emergency service visits, improved operational continuity, better asset utilization, increased backup power reliability

Use Case: Telecom

Hybrid super capacitor-assisted DG starting with smart charging and IoT monitoring — improved reliability, reduced battery stress, better maintenance visibility, lower service interventions





THANK YOU

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