



POWERED BY  ElectricFish

# 400squared™



SPECIFICATIONS | 2026

# 400squared™

## Plug-and-Play Energy Storage & Ultra-Fast Charging System



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### Device Overview:

The **400squared™** is a grid-interactive, AC-powered, battery-integrated energy storage system designed to revolutionize electric vehicle infrastructure and decentralized energy networks. The 400squared™ integrates 400kW DC ultra-fast charging with an intelligent power electronics backbone, optimized by ElectricFish's Stargazer™ AI engine for adaptive grid interaction, predictive demand response, and resilient local backup. Housed in a compact modular chassis, the 400squared™ features Dual-port DC charging — 2x400 kW, CCS1 / NACS connectors, with < 3 % current ripple and ~92% roundtrip efficiency under continuous load, with operating voltage up to 1,000V DC.

### Charging Capabilities:

- Equipped with two CCS / NACS charging ports, the 400squared™ can charge electric vehicles at an impressive 400kW, providing more than 150 miles of range in just 10 minutes for consumer EVs.

#### Stargazer™ Optimization Engine:

- Features the innovative Stargazer™, an optimization engine that enhances energy efficiency by load balancing to optimize power distribution, forecasting EV charging demand for smarter energy use, and opens up new revenue opportunities through grid services and a subscription-based software model.

#### Reliability and Security:

- Built with fault-tolerant satellite connectivity for continuous operation.
- Offers top-tier security to safeguard your system and data, ensuring transparent and reliable performance.

Visit [www.ef-reef.co](http://www.ef-reef.co) to explore comprehensive site monitoring and additional details about the 400squared™ system.

### Operational Modes:

- **Grid-Connected:** Operates as a grid-supporting fast charger with active and reactive power control
- **Islanded Microgrid:** Powers on-site loads during outages using integrated battery storage
- **Peak-Shaving / Demand Charge Management:** Discharges energy during utility peaks to lower costs
- **Virtual Power Plant (VPP) Node:** Participates in aggregated grid-service markets for frequency regulation and demand response

### Applications:

- **Fleet depots & logistics hubs** — rapid turnaround charging for delivery, utility, and transit fleets
- **Gas stations & C-stores** — upgrade legacy infrastructure to future-proof EV convenience hubs
- **Utility & municipal installations** — deploy decentralized backup and grid-balancing assets



# 400squared™ Specifications



	Light Commercial 33kVA 120/240V single phase 138A	Commercial 45kVA 208V three phase 125A	Industrial 108kVA 480V three phase 130A
<b>Physical</b>			
Dimensions (W X D X H)	4.9ft * 10.2 ft * 7.5ft		
Charging Cable Lengths	10 ft (3m) / 14 ft (4.2m) / 20 ft (6m)		
Weight	~4,555 kg ( 10,042 lbs)	~5,555 kg ( 12,250 lbs)	~6,016 kg (13,264 lbs)
Operating Temp Range	-20°C (-4F) to 60°C (140F)		
<b>Electrical Input Specification</b>			
AC Input Voltage (+/- 15%)	Split-phase 120/240 VAC	3-phase 208Y/120 VAC	3-phase 480Y/277 VAC
AC Input Nominal Power	33 kVA	45 kVA	108 kVA
AC Input Current	138 Amps	125 Amps	130 Amps
Power Factor	~0.92	0.9-1	0.9-1
Frequency	60Hz (59.5Hz~60.5Hz)		
<b>Electrical Output Specification</b>			
Peak DC Current (per port)	600 Amps		
DC Output Voltage	250 - 999 V		
DC Power Peak (simultaneous)	400kW (200kW)		
<b>Optimization Specs</b>			
TOU Engine	Time-of-use bill management, real-time energy trading, and demand response		
Real-time Optimizer	Intelligently schedules charging/discharging of battery		
Inputs	System meter data, site, and critical loads		
Cloud Support	AWS Greengrass, Lambda, EC2, Redshift and S3, Azure		
<b>Interaction</b>			
Display	32" TF T-LCD		
Ad Screen (Optional)	39" x 78" / 27" x 47.9"		
User Authentication	RFID, Credit Card		
Connector Type	CCS + NACS over ISO 15118, DIN 70121		
Isolation Monitoring	ISO425		
<b>Protocols and Standards</b>			
Inverters	UL1741 SB		
Battery Storage System	Compliant UL1973, UN 38.3		
Charger Communication	OCPP 1.6, 2.0		
Grid Interface	IEEE2030.5/OpenADR		

