

Case Study: 250 kW High-Performance Modular Data Center for TIME dotCom Berhad, Malaysia

Client: TIME dotCom Berhad, Kuala Lumpur, Malaysia

Executed & Manufactured By: Foshan Jingong Hardware Co., Ltd

Client Overview

TIME dotCom Berhad, a leading Malaysian telecommunications and data center provider, required a 250 kW modular data center to support growing demand for cloud, enterprise hosting, and 5G backend services. The project aimed to create a high-efficiency, reliable, and scalable infrastructure that integrates with their existing facilities.

Project Objective

Foshan Jingong Hardware Co., Ltd was tasked to design, manufacture, and deploy a state-of-the-art 250 kW modular data center compliant with Tier III+ standards. The goal was to achieve high reliability, energy efficiency, and rapid scalability while ensuring 24/7 operation and intelligent monitoring.

Scope of Work

1. System Design & Engineering	Tier III+ compliant architecture, optimized load and cooling distribution, full CAD system
2. Manufacturing & Integration	Prefabrication of modular components, integration of UPS, cooling, and fire systems
3. On-Site Deployment & Commissioning	Coordination with TIME dotCom engineers, rapid on-site installation, and performance testing
4. Smart Monitoring & Control	IoT-enabled DCIM system with real-time analytics, predictive maintenance, and fault detection

Key Technical Specifications

Power Capacity	250 kW (expandable to 400 kW)
Racks Installed	40 high-density 42U racks
Cooling System	Precision InRow cooling with hot/cold aisle containment
UPS System	N+1 300 kVA online UPS with lithium battery system
Backup Power	Dual diesel generators with ATS
Fire Suppression	NOVEC 1230 advanced suppression system
Monitoring	Cloud-based DCIM with AI-driven analytics
Connectivity	Dual fiber and redundant routing
Energy Efficiency	Achieved PUE of 1.38
Availability	99.995% uptime (Tier III+)

Challenges & Solutions

Challenge 1: Ensuring energy efficiency under Malaysia's tropical climate.

Solution: Integrated advanced liquid cooling technology and dynamic airflow management to optimize performance.

Challenge 2: Tight project schedule due to growing market demand.

Solution: Modular prefabrication reduced construction time by 35%, enabling fast deployment.

Challenge 3: Maintaining operational continuity during integration.

Solution: Redundant systems design ensured zero downtime during transition.

Results

- ✓ Deployment completed in 12 weeks
- ✓ Achieved industry-leading PUE of 1.38
- ✓ Maintained 99.995% uptime
- ✓ Recognized by TIME dotCom as a benchmark for modular data center quality in Malaysia.

Conclusion

This project demonstrates Foshan Jingong Hardware Co., Ltd's advanced capabilities in designing and manufacturing high-capacity modular data centers. The 250 kW facility delivered for TIME dotCom Berhad stands as a symbol of innovation, reliability, and energy excellence for the Malaysian market and beyond.