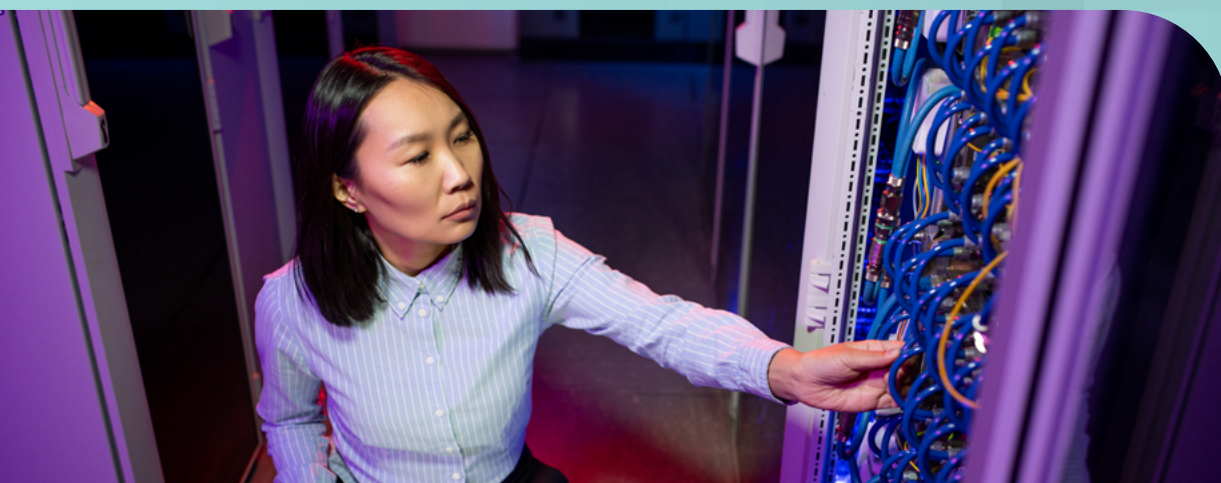# Data Centres

Redefining the Edge

Introducing FLAG Modular Data Centres

Transforming Connectivity with Flexibility where innovation knows no limits. In today's fast-paced digital landscape, the demand for data processing and storage is skyrocketing. With the rise of edge computing and exponential growth of data-intensive applications, businesses are seeking innovative solutions to meet their evolving infrastructure needs. Enter FLAG Modular Edge Data Centres– a-game-changer in the world of connectivity and data management.

Our cutting-edge modular data centre solutions offer unparalleled flexibility, scalability and reliability, empowering businesses to deploy high-performance computing and storage resources precisely where they're needed most. Whether serving as edge data centres to support emerging IoT applications or as cable landing stations for submarine fibre-optic cables, our modular facilities are engineered to deliver optimal performance in any environment.

What sets FLAG Modular Edge Data Centres apart is our commitment to customisation, flexibility, and speed to market. With two options available – sale or lease – businesses have the freedom to choose the deployment model that best suits their unique requirements and budgetary considerations. Whether you are a telecommunications provider expanding your network infrastructure or a content delivery network seeking to optimise content delivery to end-users, our modular edge data centres offer a cost-effective and scalable solution tailored to your specific needs.

At the heart of our modular edge data centre design is a focus on modularity and rapid deployment. Built using prefabricated components and state-of-the-art modular construction techniques, our facilities can be deployed quickly and efficiently, reducing time-to-market and minimising disruption to operations. With standardised building blocks that can be easily configured and interconnected, businesses can scale their infrastructure on-demand, seamlessly adapting to changing workload demands and market dynamics.
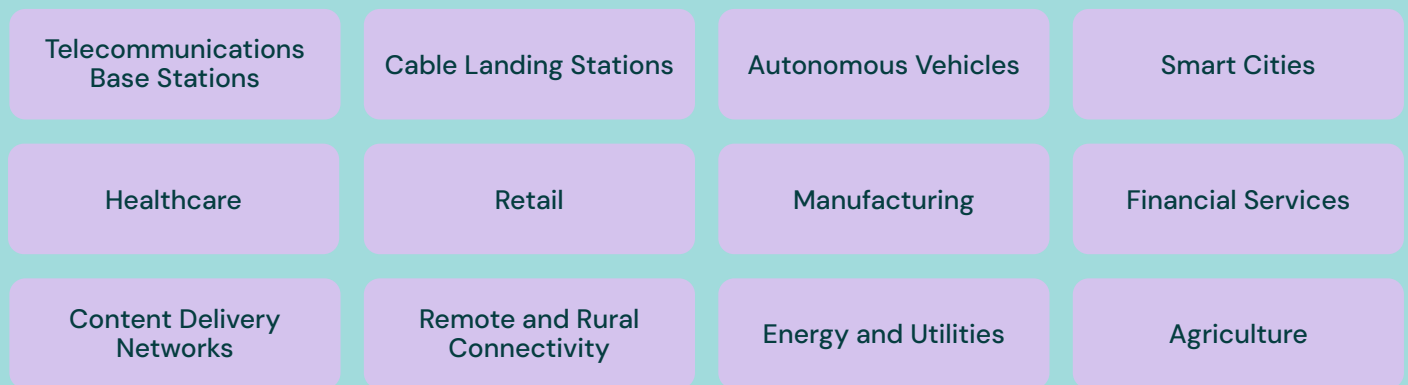
Furthermore, our edge data centres are engineered for reliability and resilience, with built-in redundancy, robust security features, and advanced environmental controls to ensure continuous operation even in the harshest conditions. Whether deployed in remote or urban locations, our facilities are designed to withstand extreme weather events, power outages, and other unforeseen challenges, providing peace of mind and operational continuity for our customers.

As we embark on this exciting journey to revolutionise connectivity and data management, FLAG Modular Edge Data Centres is committed to driving innovation and empowering businesses to thrive in the digital age. With a focus on customer satisfaction, technical excellence, and sustainability, we are poised to become the preferred partner for business seeking to harness the power.

Connecting Continents, Empowering Data: Uniting the world with Fibre Connectivity and State of the Art Modular Edge Data centres.

Use Cases

Telecommunications Base Stations	Cable Landing Stations	Autonomous Vehicles	Smart Cities
Healthcare	Retail	Manufacturing	Financial Services
Content Delivery Networks	Remote and Rural Connectivity	Energy and Utilities	Agriculture

System(s) / Component(s)	Redundancy
Primary Distribution – Tx + Switchgear (Utility Supply)	N+N
Secondary Distribution – TX + Switchgear	N+N
Fuel Delivery System (including fuel delivery, pumps, fuel polishing, controls etc.)	N+1
Generators	N+N
IT UPS	N+N
MECH UPS	N+N
Data Hall Cooling	N+1
UPS Cooling Units per room	N+1
Fresh Air AHU (HUM & DEHUM control)	N+1
Battery Room Cooling & Ventilation	N+1

Data Centre Description

- A minimum of 500kW of IT power total.
- Halls shall be approximately 3000W/m².
- Circa160 m² of gross floor technical area.
- Diversely routed fibre routes to the site (with 2 entry points onto the site and into the building).
- Target annualised PUE <1.5 (dependent on final locations environmental conditions).
- All redundant data hall supplies via diverse routes (i.e., separate fire compartments).
- No single point of failure within the design.
- The critical infrastructure, as well as the technical space shall be compartmentalised to prevent failures of individual systems from cascading and affecting other systems. Redundant components and their associated distribution paths shall be fire separated from each until they enter the white space.

- The Facility shall at minimum comply with the requirement for a fault tolerant and / or concurrently maintainable facility defined as follows:

Fault Tolerant:
There are sufficient redundant components and diverse distribution paths to ensure that "N" capacity is provided to the technical suites atier any infrastructure failure.

Concurrently Maintainable:
There are sufficient redundant components to allow each and every component to be removed from service for maintenance or replacement without impacting the services to the technical suites.

Deployment Ready Cable Landing Stations for Colocation

Skewjack
(UK)

Plerin
(France)

Wada
(Japan)

Island Park
(USA)

Toucheng
(Taiwan)

Mechanic Design Criteria:	Metric:
Data Hall	
Data Hall Server Load	500 kW / data hall
Lighting Gains	8W/m2
PUE	Targeted <1.5
Design Space Conditions	
Data Hall Environment	The environment within the Data Hall shall be maintained within the A1 param-eters as set out in the ASHRAE TC 9.9 document
Minimum Average Cold Aisle Temperature	Equal to or greater than 18°C
Maximum Average Cold Aisle Temperature	Equal to or less than 27°C
Minimum Average Cold Aisle Humidity	20%
Maximum Average Cold Aisle Humidity	60%
Design Supply Air Temperature	24°C ±0.5°C
Design Supply Air RH	40%
Design Hot / Cold Aisle	ΔT 12°C
Plant room	
Electrical Plant Room Tar-get Temp	22°C ±8°C db (This low temperature is driven by VRLA batteries)
Ventilation Rates	
Data Hall, CRAH Corridor & Electrical Plant Room Pressurisation	0.268 m3/s (Supply Air) 5 Pa
General Circulation	0.5 air changes / hour
Noise Pollution Criteria	
Noise Pollution (External)	Maximum limits of noise (average 20 minutes) Daytime: 75 dB Night-Time: 75 dB