PREFABRICATED DATA CENTRE SOLUTIONS

Overview

ABOUT OPER8 GLOBAL

Innovate. Integrate. Oper8

Oper8 Global specialises in scalable and customisable data centre solutions tailored for diverse environments, including Edge, Modular, Security, and High-Performance Computing (HPC). We have expertise in turnkey solutions, commissioning, and ongoing maintenance worldwide for clients across multiple industries.

Engineered to withstand harsh environments and offering optimal environmental control, Oper8 Global's Prefabricated Data Centres ensure the reliability and longevity of your critical systems. With a modular, scalable design, our secure data centres can adapt to your evolving needs and site requirements, allowing for rapid deployment and seamless integration.

ABOUT OPER8 GLOBAL

Oper8 Global was established in 2012 and has operations in EMEA, APAC and South America. We provide organisations with data centre solutions that extend from the cloud to the network's edge that support critical and complex industries, including healthcare, utilities, government, education, transportation, research and financial services. Oper8 Global collaborates with leading technology providers including RF Code, Equinix, Thales, Dell, HPE Chatsworth, HiRef and Modius.

Oper8 Global takes the view that customer-aligned, right-sized data centre solutions require the right mix of vendor products with integration expertise.
Oper8 Global supports the approach that no single product can deliver everything required to successfully deliver an optimised edge, hybrid cloud or HPC data centre solution.

Oper8 Global has taken advantage of the significant industry knowledge and 60+ years of experience of our management team to carefully select key partners that continue to prove their support for our innovative customer solutions. Our partners' core components, when integrated by Oper8 with other infrastructure, can provide the right blend of form, function, and cost.

Oper8 has its own product development and manufacturing capabilities that are designed to complement our solutions. We offer the following core build solutions:
• Micro Data Centre
• Prefabricated Data Centre
• Modular Data Centre
• High-Performance Compute Data Centre

In addition to the build solutions, Oper8 offers products and services aimed to complement the data centre industry.
To find out more, please visit our website by clicking the below link or scanning the QR Code:

www.oper8globalgroup.com

PREFABRICATED DATA CENTRE OVERVIEW

Introducing Oper8 Global's Prefabricated Data Centre Solutions - flexibility meets security.

Experience the next level of IT infrastructure solutions with Oper8 Global's Prefabricated Data Centres. Designed for rapid deployment, high security, and customisability, our modular data centres are the perfect choice for businesses seeking scalable and efficient data centre solutions without compromising on quality.

Oper8 Global's Prefabricated Data Centre is designed, manufactured, and assembled off-site, offering a quick and efficient way to deploy a fully functional data centre with minimal on-site disruption.

Our Prefabricated Data Centre Solutions offer a unique stackable design, allowing your business to effortlessly scale its compute resources in line with growth. Our innovative stacking approach provides an efficient use of space and minimises your physical data centre footprint, ensuring a flexible and future-proof IT infrastructure.

As your business grows, so do your IT and computing requirements. Oper8's Prefabricated Data Centre Solutions enable you to expand your infrastructure capacity with ease, providing a scalable platform that adapts to your evolving needs while maintaining optimal performance.

Key Features:

- Utilises standard data centre hardware and practices
- Able to withstand harsh environments, making them suitable for various applications and industries
- Designed with thermal efficiency in mind, maintaining optimal internal temperatures with minimal energy consumption.
- Easy to transport, rapid to deploy and relocatable
- Customisable, flexible and stackable
- Scalable with multiple enclosures that can be joined together to support over 100 IT racks
- Secure - meeting up to SR1-5 security standards

MODULAR, SECURE AND SCALABLE

Designed with a modular approach, the Oper8 Global Micro Data Centre allows for a secure, scalable solution.

Oper8 Global offers bespoke Prefabricated Data Centre solutions, tailoring the design to meet your specific requirements, including power distribution, cooling systems, and security features.

We also offer comprehensive support and maintenance services for our Prefabricated Data Centre solutions, ensuring the smooth operation and optimal performance of your IT infrastructure.

ENHANCED SECURITY AND PROTECTION

Oper8 Global's Prefabricated Data Centres offer security-rated enclosures, including SR3, SR4, and SR5 options, along with optional EMI/RF shielding. Rest assured that your critical data and equipment are protected in a secure environment.

Oper8 Global's SR Rated Prefabricated Data Centres can be custom-designed to meet SR1-5 security standards, providing the ultimate protection for your valuable IT infrastructure.

Engineered to withstand harsh environments and offering optimal environmental control, Oper8 Global's SR Rated Data Centres ensure the reliability and longevity of your critical systems. With a modular, scalable design, our secure data centres can adapt to your evolving needs and site requirements, allowing for rapid deployment and seamless integration.

Trust Oper8 Global for dependable and secure prefabricated data centre solutions, tailored to your unique business demands.

A REGULAR DATA CENTRE

The Oper8 Global Prefabricated Data Centre utilises standard data centre hardware and practices

Specify your Prefabricated Data Centre with:

- **Air Conditioning** - Flexible power densities and various cooling mediums available (DX/GE/CW) allow for efficient and controlled cooling. Oper8 Global's experience can enable you to employ a cooling system that provides optimal cooling whilst aligning with corporate and environmental goals.

- **Hot/Cold Aisle** - The Oper8 Global Prefabricated DC comes as standard with hot/cold aisle separation. The sealed rack and air barrier ensure airflow can't mix therefore providing the user with an incredibly efficient system that will protect IT as well as reduce operational costs.

- **UPS** - Oper8 Global offers a great selection of rack mounted UPS systems from well-established, industry-leading manufacturers. Systems are designed to suit a resilient infrastructure and offer a broad range of power.

- **Rack PDUs** - Supply your compute with Zero U rack-mounted PDUs in the rear mounted vertical brackets provided in every Prefabricated DC. PDUs can be provided to suit global power requirements, a host of plugs to suit any input socket and a diverse offering of compute receptacles to power any IT hardware you require. PDUs offer so much more than power. Outlet power-up sequencing protects against inrush current overload and allows users to define equipment boot-up order and timing, while billing-grade outlet level metering provides detailed equipment level power data. Remote outlet on/off switching for complete protection and control in critical environments, and so much more.

- **Rack Rails** - Like most conventional IT racks, the Oper8 Prefabricated DC uses 19" rack rails to accommodate standard data centre hardware. To maximise efficiency of the smaller footprint, it is possible to add a further 6U to the side of the rails to vertically mount switches, EMS, fire panels etc. In total, an additional 12U can be supported using the rails.

- **Fire Detection and Suppression** - Protect your environment by optioning a fire detection and suppression system. Available from 1U high, the small device can detect fire using an intelligent smoke aspirating system and extinguish any threat by the inbuilt suppression system. A range of suppression mediums are available to mitigate a fire risk to your IT estate.

- **Environment Monitoring and DCIM** - Let Oper8 Global's EMS and DCIM systems monitor the environment to mitigate risk and keep you informed as to what is going 24/7. Not only is the environment monitored, but additional hardware (UPS/fire etc.) is also able to be monitored, providing you with a great overview of your IT estate in real time, anywhere in the world.

- **Security** - Specify your Prefabricated DC with a range of security options such as CCTV or door access to ensure your IT is protected at all times. Robust defences, configurable warnings and alarms and remote monitoring will ensure your Prefabricated DC is always safeguarded from threats. Work with the Oper8 Global Team to deploy a solution that offers peace of mind.

WEATHERPROOF

The Oper8 Global Prefabricated Data Centre is specified with an IP66-rated enclosure. This option enables the Prefabricated DC is to be located in much harsher environments. This allows the Prefabricated DC to be easily sited at remote locations which, with optional remote monitoring and full support from Oper8 Global, still provides you with excellent real-time visibility over your IT estate.

Deployment is simple with Rapid Deployment. Plug and play components mean that once power is connected and a data connection established, your external DC is ready to go. With the operators in mind and to ensure robustness at remote environments, Oper8's Prefabricated DC combines a weatherproof enclosure, vandal resistance and a host of external options enabling you to deploy a secure solution quickly.

If security is a priority, then the Oper8 Global solution is perfect for you. Enhanced security through toughened locking ironmongery, door access, CCTV and alarms can help to mitigate threats. Security is further improved by optioning the installation of condensers within the cabinet. Using stainless steel mesh for the walls and secure doors, condensers can be installed with all pipework and cabling protected too.

If you are considering a new Data Centre but concerned about the remoteness or harshness of the proposed location, enquire to see how the Oper8 Global weatherproof solution can help you fulfil your IT goals.

BESPOKE DESIGN SERVICES

Right-Sized – Customer-Aligned

Oper8 Global is all about working with customers to achieve their IT and corporate goals. The personalised service offered by Oper8 Global allows customers to fully customise their products and solutions.

From simple customisation like branding and colour through to purpose designed and scaled Prefabricated DC enclosures, Oper8 Global endeavours to deliver your perfect solution.

If you have a requirement for a bespoke solution, enquire now to see how we can help.

HIGH-PERFORMANCE COMPUTING

A key application of the Oper8 Global Prefabricated Data Centre is High-Performance Computing (HPC). Oper8 Global provideS HPC Infrastructure solutions that range from small workgroup clusters to HPC clusters featured on the world Top 500 supercomputers list. The demand for High Performance parallel processing of data is growing. It is no longer possible to cool these devices with air alone, so direct liquid to chip cooling is the only way forward. Oper8 provides the IT ecosystem to be "Server Ready". To achieve this our solution comprises:

- A purpose-built rack enclosure which is 100% airtight, capable of accommodating loads of more than 2000KG per rack.
- In rack CDUs starting from 40kW through to 1.2MW, these liquid-to-liquid heat exchangers utilise centralised pumping architecture to ensure superior performance and reliability.
- In-rack liquid manifolds are mounted vertically at the rear of the rack and distribute the liquid from the CDU and the server, which are customised to suit the application. The manifolds are fitted with non-drip quick disconnects making adding or removing a server a simple task.
- In-rack cooling unit for non-liquid-cooled devices. These units deliver conditioned air along the front of the enclosed rack and remove the heat from the rear of the rack. A typical HPC configuration is based on 80% liquid cooling to 20% air cooling. How many units are required is dependent on the size of the cluster.
- Intelligent Zero U rack PDUs are installed at the rear of the rack and provide the power interface to the server. These are intelligent and indicate phase loadings, power draw per socket and kW/h
- Network switch cassettes are provided at the front of the rack. These are 1U cut-outs that accommodate various manufacturers. A total of eight slots per rack are provided and designed for front IO.

Key Benefits:

- Significantly reduces data centre whitespace through higher density cooling
- Maximised utilisation of the rack space
- High efficiency means reduction in total data centre energy consumed
- Higher return water temperatures mean 100% free cooling in most geographic regions
- A plug and play solution
- Scalability, the system can grow as your IT estate grows (faster ROI)
- Creates a neutral environment with no heat generated within the location and reduced noise

HPC SOLUTION FOR URGENT COVID-19 RESPONSE

Prefabricated Data Centre Case Study

During the COVID-19 pandemic, a government secure site urgently needed an HPC solution to facilitate genome sequencing. Oper8 Global, working in partnership with OCF, determined the need for a four-rack solution providing 100kW of IT load.

OCF designed the compute systems architecture and identified rack loadings while Oper8 Global provided the data centre infrastructure design and subsequent build.
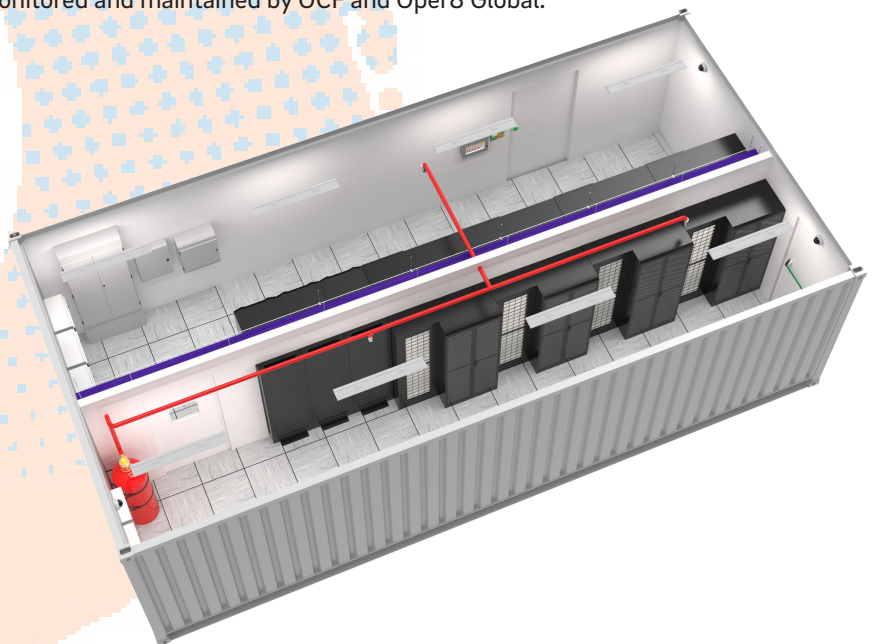
Key Requirements

The solution was required to:

- be built off-site as a single unit to enable quick deployment on a small parcel of land with minimal disruption;
- meet SR3 security rating standards and provide a minimum of a one-hour fire rating; and
- provide a resilient electrical and mechanical design to maintain compute uptime in the event of hardware or mains supply failure.

Outcomes

The project was completed on time and on budget. Early COVID-19 conditions meant significant difficulties for all stakeholders involved in the project, particularly the impact it had on the supply chain. With both OCF and Oper8 ensuring careful management to mitigate risk, the project took six months from order to lifting the data centre on-site by crane and completing client handover. Successful loadbank testing proved the data centre performed as expected, allowing OCF to install the compute. The facility is now monitored and maintained by OCF and Oper8 Global.

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