

Frontier DC Modular Data Centre Specifications

Physical

- Data Centre Modules are enclosed by 2 x 2mm reinforced steel with an insulated core and the structure is reinforced to withstand external penetration
- The Data Centre Module is 6.2m in width and populated with 45RU 1000mm or 1200mm racks.
- Data Centre Modules can be configured to scale rack capacity to reduce capital costs
- Racks have ten points of environmental monitoring each as well as security monitoring
- The Data Centre Modules can be separated into a minimum of two zones with separate access at either end
- The Data Centre Modules are TIA942a Concurrently Maintainable compliant



MODULAR DATA CENTRE

Mechanical

- Cooling is delivered via redundant chiller loops within each module
- Cooling load delivery is via 200mm Within Row Chillers (WIRC's) capable of delivering 25kw of cooling load through six fan units in an N+1 configuration
- WIRC configuration in each module is configured for N+1 capacity by default
- Chillers are configurable for automatic response to variable conditions to reduce manual management overhead
- Chillers are monitored and managed via the Frontier DC DCOS for complete control
- Modules are configured in a single cold-aisle cocoon with two hot aisles for contained cooling load delivery and reduced ambient airspace to cool
- Modules can be configured to operate within ASHRAE ranges for temperature or humidity or at higher temperatures if desired by the customer to reduce PUE

Electrical

- Power is delivered to the Data Centre via redundant Red and Blue paths
- Power distribution within the Data Centre is via power distribution areas in Red and Blue paths
- UPS in the modules is fully modular in both controller and battery. UPS is provisioned in an N+1 or 2N redundant configuration for 10 mins runtime in line with compliance to the TIA-942A and Uptime Institute Tier III standards. UPS is housed in dedicated Data Centre control cabinets, independent to the Client useable racks
- Power rails by default are monitored to the circuit level, with two circuits per power rail
- The Data Centre Module supports an average power density of 4kW per Rack across all racks in the module
- The maximum capacity in a single rack is 50kW (N+1) or 60kW (N)
- Power to each Data Centre can be scaled to support increased density requirements
- The Data Centre runs at a PUE as low as less than 1.1 depending on ICT Load

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Security

- Each Data Centre Module is hardened to resist external penetration
- Two or Three factor Secure Entry access is available at either end of the Data Centre module dependent upon customer requirements
- Racks by default are individually key locked with an electronic and audited key safe located in each module
- The Data Centre Modules are securely monitored by standalone internal and external CCTV and DCOS which can operate in island mode to the rest of the Data Centre Park
- Various options are available to increase security beyond the standard, which can be controlled by the customer even in a shared environment

Fire

- Data Centre Modules are fire rated to 2 hours and are protected by VESDA detection
- Data Centre Modules are AS1670 compliant
- Data Centre Modules use NOVEC1230 for suppression

Communications

- Communications entry is via secure Communications Entry Vaults positioned high on the Data Centre module
- All racks are connected by redundant 'Red' and 'Blue' cable paths
- Red and Blue cable paths provide structured cabling to horizontal distribution racks at the entrance to the cold aisle
- Cable options are based upon the customer requirements and include either CAT6 or Optical Fibre

Management

- Monitoring and Management is via the Frontier Red Centre DCIM, integrated into the Frontier DCOS
- Monitoring and Management is available from any location on any device
- Monitoring and Management can be conducted solely by the customer or as a service by Frontier