DUB1

CyrusOne Data Center
Dublin – Grange
Conchobar Murray Avenue
Grange Castle Business Park South
Co. Dublin
Republic of Ireland

Latitude: 53.321308
Longitude: -6.437510

CyrusOne DUB1 is a brand new purpose built state-of-the art data center campus offering cloud providers, systems integrators and multinational corporations customised, secure and resilient data center solutions within a key business hub.

Strategically located in Dublin, one of Europe's premier data centre locations, the facility will ultimately deliver 22,854 sq m (245,998 sq ft) of world-class technical space with an IT load of 54 MW, in three separate buildings of two storeys.

Overview

- 22,854 sq m (245,998 sq ft) of world-class technical space across a campus of three separate buildings
- 54 MW of total IT load to the facility, 18 MW to each of the three separate buildings
- Highly resilient, concurrently maintainable power and cooling to Tier III
- Dedicated electrical plant to each floor
- Low PUE through the use of free cooling chillers
- 900 mm heavy duty raised floor with 4,200 mm clear height in the data hall
- Active / Active dual redundant power supplies of 80 MVA
- Carrier neutrality and diverse fibre connectivity from multiple providers
- Secure managed delivery bay with 3 tonne goods lift
- Multi-layer industry leading levels of physical and electronic security with 24/7 year round onsite support

DUB1 Technical Specifications

CyrusOne

Power

- Mains power supplied via 100% rated A&B 110 kV incomers diversely routed active / active with a capacity of 80 MVA
- All IT power metered and charged as consumed
- 4.5 MW distributed redundant topology with 4 independent and compartmentalised blocks
- 99.999% reliability with the ability for concurrent maintainability
- IT power supplies are derived from primary and reserve feeds from each block via STS's creating a meshed IT distribution topology between all 4 blocks
- Distributed redundant UPS topology with 10-minute battery back-up as standard two UPS systems per block
- Fully rated distributed redundant LV back-up generators with 48-hour fuel autonomy, capable of continuous running
- Re-fuelling contracts to ensure timely replacement

Cooling

- Cooling configured on a resilient ring chilled water system
- 4.5MW IT capacity cooling solution
- N+1 Free cooling air cooled chillers
- Computer Room Air Handing Units at N+25%
- Circulation pumps N+1
- Low PUE due to cooling solution and optimum chilled water temperatures to maximise the free cooling hours
- Cooling infrastructure individually managed and linked to BMS
- Independently regulated temperature and humidity
- Power Supplies to cooling equipment for full redundancy configured in a distributed redundant topology

Energy Efficiency

- Scalable UPS capable of ECO and sequence modes
- Variable speed drive chilled water pumps
- Variable speed drive CRAH units fans
- ASHRAE TC9.9 Class A1 hall conditions
- Air cooled plant rooms with variable speed fans
- Low PUE through the use optimum chilled water temperatures

Fire Detection and Suppression

- Three stage fire detection systems into data halls and UPS plant areas
- VESDA (Very Early Smoke Detection Apparatus) in data halls and UPS plant rooms for early warning
- Fire detection in all rooms, ceiling return air plenums and in voids as required
- Nitrogen filled pre-action sprinkler system to data halls and UPS rooms
- Double knock approach sprinkler system to all areas, zone activation
- Fire detection and suppression systems interconnected to central BMS

Building & Energy Management Systems (BMS & EMS)

- Power and building monitoring systems to provide alarms
- Power surge management
- 24/7 year-round on-site M&E engineers undertaking Planned Preventative Maintenance (PPM) programmes
- Real-time monitoring of electrical and mechanical systems

Connectivity

- Carrier neutral access and diverse fibre connectivity to active A&B Meet Me Rooms from multiple telecommunication providers including euNetworks, Zayo and CenturyLink

Compliance (Operated to International Standards)

- ISO 14001 Environmental Management
- ISO 27001 Information Security Management
- ISO 9001 Quality Management
- ISO 50001 Energy Management

Security

- 3 metre high secure perimeter fence to CPNI base specification
- External CCTV
- PAS68 rated gates to protect from vehicle attack
- 24/7 year-round on-site security located in secure control room
- Extensive CCTV and access control throughout the facility
- Progressive layers of security to restrict access through the site
- Mantraps with biometric readers into data halls if required

State-Of-The-Art Engineering

- Air cooled UPS modules
- Sequence and variable mode UPS modules, dedicated to each hall
- Integrated A&B MV Infrastructure along with distributed LV generators for increased resilience
- Phasing to allow for subtle changes in each hall / tenant specification / requirements
- Remote intelligence control algorithms to remove reliance on central BMS

Typical Floor Plan