

Frankfurt IV

CyrusOne Data Center
Willhelm Fay Strasse
Frankfurt am Main
Germany

Latitude: 50 07 57.56 N
Longitude: 8 34 43.03 E

CyrusOne Frankfurt IV is a brand-new purpose-built data center offering cloud providers, systems integrators and multinational corporations customised, secure and resilient data center solutions within a key business hub.

The facility is strategically located in Sossenheim, the preferred location for data centers in Frankfurt, Germany's "Digital City". It sits just 500 meters from CyrusOne Frankfurt III delivering 11 MW of IT power to 5,392 sq m (58,039 sq ft) of world-class technical space, with each data suite customised to individual client specifications.



Overview

- 11 MW of IT power delivered to 5,392 sq m (58,039 sq ft) of world-class technical space within a four storey data center
- Active / Active 20 kV dual redundant power supplies with fully flexible IT power solutions
- Connection to the European high voltage grid via two independent substations
- Low PUE through the use of adiabatic free cooling chillers
- Highly resilient, concurrently maintainable power and cooling to Tier III
- Carrier neutral access and diverse fibre connectivity to active A&B Meet Me Rooms from multiple telecommunication providers
- Bespoke and scalable data halls
- Multilayer industry-leading levels of physical and electronic security
- Dedicated offices, buildroom and/or ancillary space adjacent to each hall
- Dedicated distributed redundant electrical infrastructure to each data hall
- Secure managed delivery bay with five tonne goods lift
- 24/7 year round onsite support

Frankfurt IV Technical Specifications

Power

- Mains power supplied via 100% rated A&B 20KV incomers diversely routed active / active with a capacity of 20 MVA
- All IT power metered and charged as consumed
- 2.75 MW distributed redundant topology with three independent and compartmentalised blocks
- 99.999% reliability with the ability for concurrent maintainability
- IT power supplies derived from primary and reserve feeds from each block creating a meshed IT distribution topology between all three blocks
- Distributed redundant UPS topology with ten-minute battery back-up as standard two UPS systems per block
- Fully rated N+1 MV 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
- 2.75 MW IT capacity cooling solution per floor
- N+1 adiabatic free cooling air chillers
- Computer room air handling units at N+50%
- 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
- 25+/-2 °C supply air control band
- 20%RH to 80%RH supply air control band
- Air cooled plantrooms when conditions permit
- Adiabatic free cooling chillers
- Low PUE through the use optimum chilled water temperatures

Connectivity

- Carrier neutral access and diverse fibre connectivity to active A&B Meet Me Rooms from multiple telecommunication providers including euNetworks and Zayo
- Megaport point of presence available onsite providing network access to services without a cloud on-ramp

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 based centralised gas suppression system to data halls and UPS rooms
- 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

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 N+1 MV generators and N+N generator panels for increased resilience
- Phasing to allow for subtle changes in each hall/tenant specification/requirements
- Dual redundant networks and BMS servers for resilience

Typical Floor Plan

