



# Your first choice in Switzerland

## greenDatacenter Zurich City 2

Advanced, secure, ecological: greenDatacenter Zurich City 2 offers data center services that meet the highest requirements.

### **Your data center in the Zurich area**

- ▶ Conceived for a greenfield site and built in accordance with the Tier 3 standard
- ▶ Maximum ecology (PUE 1.4) through use of state-of-the-art technology
- ▶ Environmentally friendly through sustainable use of energy and carbon reduction
- ▶ Consistent designated use as a data center

# KPIs – greenDatacenter Zurich City 2

## General

Operator	Green Datacenter AG
Foundation	2010 (green.ch 1995)
Company headquarters	Industriestrasse 33, 5242 Lupfig, Switzerland – 100% Swiss company
Data center structure	3 aboveground levels and 5 underground levels
Investment	Total investment of CHF 120 mio
Purpose	Consistent designated use as a data center

## Facts & figures

Site size	3,702 m <sup>2</sup>
Gross floor area (GFA)	545 m <sup>2</sup> aboveground level, 2,916 m <sup>2</sup> underground level
Useable data center area	4 x 800 m <sup>2</sup>
Equivalence in available IT racks (approx.)	1,066

## KPIs – data center module

### Location advantages

Address	Unterrohrstrasse 4, 8952 Schlieren, Switzerland
Opening	1995
Type of construction	New block constructed building – building class I
Accessibility	Basel 65 km, Bern 90 km, Luzern 40 km, Zurich 8 km (air distances)
Accessibility (public transport)	Train within walking distance (15 min)
Accessibility (highway)	Highway A3, exit Urdorf-Nord
Parking spaces	In front of the data center
Delivery access	Ground-level loading ramp and goods lock
Power supply	Through local power companies
Substations	Two independent substations

### Risk assessment

Civil risks	Switzerland is deemed "safe" – low risk of strikes, crime, or terrorism
Natural risks	No risk of natural catastrophes (e.g. earthquakes or flooding)
Industrial risks	No industries with dangerous goods or high amount of people traffic
Transport risks	Safe distance to international airports, national traffic corridors (road and rail traffic), and to large urban areas

### Building security

Type of construction	Block constructed building – building class I
Security perimeter	5 security perimeters
Use	Consistent designated use as a data center
Security personnel	Security personnel on site 24/7
Audio/video surveillance	Internal and external surveillance cameras with continuous recording
Number of interlocks	Separate personnel and goods interlocks
Personnel interlocks	Separation systems with badge and pin code checks as well as hand vein scanners
Feed	Fully redundant 40 megawatt power connection (guaranteed supply)
Number of substations	Electricity from 2 independent substations
Power feed	Separate power feeds inside and outside the building

### Emergency power

Emergency power	Several days of autonomous emergency power 3 diesel generators
Diesel generators	2 x 60,000 l diesel tank and 1,000 l day tank per generator
Electromagnetic compatibility	Protection against overvoltage, residual current, and lightning
Transformer station	Inside the building
Uninterruptible power supply	In different fire protection zones, N+N redundancy
Available power	1.0 kW/m <sup>2</sup> , 3.0 kW/rack as standard Project-specific, e.g., scalable for hot spots
Power connections	Single-phase or three-phase connections Completely separate power supplies connections with no crossing
Transformer station	Inside the building

### Cooling systems

Cooling technology	District cooling network EWZ N+N» 3 cooling machines Cold reservoirs with capacities of 55,000 and 27,000 l
Waste heat utilization	Recirculation for cooling
Convection cooling	Redundant N+1 convection cooling
Cooling concept	Cold aisle principle for maximum efficiency
Power supply	All air conditioning units and cooling production/distribution systems are equipped with an uninterruptible power supply
Ecology	Cooling contracting with Energieverbund Schlieren (Schlieren energy consortium) reduces carbon emissions by 70%

### Fire protection

Fire protection zones	Separate fire protection zones
Extinguishing systems	Redundant extinguishing systems/proven nitrogen systems
Early fire detection	Smoke and heat detectors in all data center premises

### Connectivity

Principle	Carrier-neutral data center
Number of available carriers	More than 5 carriers on site
Building access	2 independent access routes
Telecom rooms	2 meet me rooms, 2 carrier rooms
Data center interconnect	5 greenDatacenters interconnected by own, redundant fiber optic ring
Static load per m <sup>2</sup> of subflooring	1 ton per m <sup>2</sup>
Ceiling clearance	360 cm (data center area)
Depth of subflooring	80 cm

### greenIT/Ecology

Power Usage Effectiveness (PUE)	PUE factor of 1.4; international ecological benchmark is 1.7
Energy management	Comprehensive ISO 50001 energy management
Renewable energy source (hydro power)	Power available from Swiss hydroelectric stations
Cooling technology	Cooling machines, district cooling, cold reservoirs Night expansion tanks and heat exchange via heat distribution
Ecology	Schlieren district cooling network Reduction in carbon emissions by 70%

### Customized packages

Data center space	Starting at 20 m <sup>2</sup>
colocation	Rack starting at 1/3 rack
Planning and setup	Of specific data center customer infrastructure (deployment): cages, racks, cold aisle enclosures, access routes, power and network cabling
Inter-rack cabling	Available through own deployment team
Regular and emergency workplaces	InnovationTower with 4,190 m <sup>2</sup> of leasable space offers more than 300 regular and emergency workplaces
Use of common rooms	Staging and conference rooms available

### Service Level Agreement

Power supply	99.99% availability
Temperature	22 °C to 30 °C
Humidity	35% to 60%

### Certifications/Awards

Uptime Institute classification	Built in accordance with the Tier 3 standard
Information security	ISO 27001 certified by SQS and IQNet
Energy management	ISO 50001 certified by SQS and IQNet
FINMA and ISAE-3402 compliance	On request, can be audited in cooperation with a certification body
Energy efficiency award	Watt d'Or 2013 (top performance in the area of energy)
Swiss ICT award	Swiss ICT Public Award (2012)





## References



Primary and secondary data center for Europe



Primary and secondary data center Avectris Informatik



Europe-wide cloud computing center



Europe-wide data center



Primary data center



Primary data center and emergency workplaces

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