

Data centre and colocation services in Manchester

- ✓ Tier 3 standards, Tier 4 uptime record
- ✓ 70,000sq ft building
- ✓ Colocation space for 300+ server racks
- ✓ Up to 2(N+N) power resilience
- ✓ Concurrently maintainable infrastructure
- ✓ Security to BS5979 and BS8418 standards
- ✓ ISO27001 Information security management systems
- ✓ Over 20 network providers on-site
- ✓ High density areas
- ✓ Racks, cages and dedicated rooms
- ✓ Disaster recovery office space

Colocation: owned, operated, delivered



TeleData's 70,000sqft Delta House is simply one of the most resilient and secure data centres in Europe.

Located in the thriving digital City of Manchester and with capacity for hundreds of server racks it's one of the only facilities of its kind to offer 2(N+N) levels of power resilience and BS5979 security accreditation.

Network availability is as superb as it is diverse and the sheer number of providers bringing fibre into the data centre means you can connect from there to anywhere, with high capacity and low latency.

Utilised by businesses from all sectors to minimise the risks of IT downtime and designed to maximise the performance, security and availability of data, applications and online resources, TeleData's Delta House facility is the ultimate platform to accommodate your server platform.

— **Matt Edgley**

Commercial Director, TeleData Group



At a glance

Racks, cages and suites

From single racks to dedicated secure suites and cages.

Support and services

24/7 manned helpdesk and technical support engineers with guaranteed response times.

Carrier neutral connectivity

Multiple connectivity offerings including BGP and Tier1 bandwidth, point to point circuits and high performance wave-length and dark fibre solutions.

Power

High-capacity electricity supplies with backup from 2(N+N) uninterruptible power supply (UPS) systems and diesel generators with a minimum of 1 week's fuel supply on site. Our on-site substation is dual diversely fed on a 'Priority A ring' shared with a major hospital.

Cooling

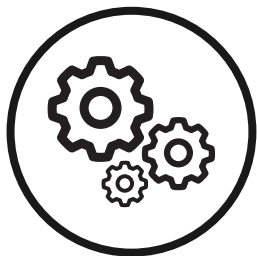
High-capacity air conditioning systems supported by an environmentally intelligent approach to energy efficiency, including cold aisle containment installations and intelligent DX and Free Air Cooling systems in a minimum resilience configuration of N+1.

Physical security and surveillance

Combined physical and technical approach to security including a 24/7/365 onsite BS5979 and BS8418 accredited Security Control Centre, perimeter protection with security fencing and virtual tripwires, double skinned man-traps, biometric scanners and turnstiles all integrated with our fully audited access control systems.

Fire security

"Very Early Smoke Detection Apparatus" (VESDA) and FM200/Argonite fire suppression to ensure comprehensive, effective and non-destructive fire security.



Key service details

Data centre space

Flexible solutions for renting dedicated data centre space to accommodate your owned equipment. Options available include single server colocation, quarter and half racks, full racks and dedicated secure suites and cages. We can accommodate up to 20kW per rack delivered on diverse power supplies for complete resilience.

Quarter racks

A 10u quarter rack is our most compact solution, provided for clients who don't require a huge amount of space but that do still require the security and resilience of a fully dedicated data centre solution. A quarter rack offers a private compartment with individual UPS protected power supplies and dedicated circuit breakers to ensure separation of electrical distribution from all other clients within the data centre. The quarter rack unit has individual, lockable front and back doors with combination locks for added security. Up to 8amps can be provided to a quarter rack.

Half racks

A half rack provides 22u of dedicated colocation space and a completely secure enclosure for your servers. A TeleData half rack is provided with dual power as standard offering a minimum of N+N UPS power protection on separate circuits. Should one of the dual power feeds be removed for any reason the other feed to your half rack will continue to provide all the UPS backed power that your rack requires. The half rack unit has individual, lockable front and back doors with combination locks for added security. Up to 16Amps can be provided to a half rack.

Full racks

For larger requirements, clients can be provided with a full 48u or 42u full rack. The full height rack is dedicated to you and stands on its own data centre footprint. Powered by dual 16 or 32Amp power circuits, depending on your power usage requirements, a full rack offers flexibility and growth potential. UPS protection is provided with up to 2(N+N) UPS resilience. Full racks can be provided with up to 32Amps continual power draw.

Dedicated cages and suites

For the ultimate in large scale colocation solutions, TeleData offer fully enclosed cages or suites for multiple rack requirements. Each private cage can be made bespoke to client specifications, with tailored growth plans for staged occupation of reserved space. Cages benefit from an additional layer of security, which can include biometric security on the cage doors and bespoke access control procedures. With a dedicated cage solution you are in control of your space and commercials are flexible to meet your anticipated usage profile over a period of time. Cages can be provided for requirements of 5 racks and over – up to over 100 racks in dedicated rooms.

Rack power overview

TeleData have direct 11,000 HV dual feeds to our own high voltage substation supply, delivered on a priority 'A' ring which also feeds a local hospital. Also, being on a ring, we have dual entry points into our substation.

Power to TeleData client racks is protected by two parallel pairs 2(N+N) of best in class Riello MT400 UPS systems. Where other facilities provision a single N+1 UPS system protecting all feeds, protection can be lost while UPS systems under go routine maintenance. Utilising parallel pair infrastructure for each feed means protected power is not at risk during maintenance and provides extra resilience should a UPS fault occur.

Utilising twin Dual Parallel Pairs of UPS systems provides TeleData customers with a number of power resilience options:

1. Single Power feed from a parallel pair infrastructure (N+N UPS)

At TeleData, even our lowest cost racks with a single power feed are better protected than most, especially in data centres where only N+1 UPS protection is provided. In a

typical N+1 UPS scenario, racks rely on a single UPS system protecting the power supply. In 'N+1' configuration this single UPS system does have an extra component (or module) in case a single module which makes up that system is lost, but, if more than one component is lost then so is UPS backed power as there is no complete failover capability.

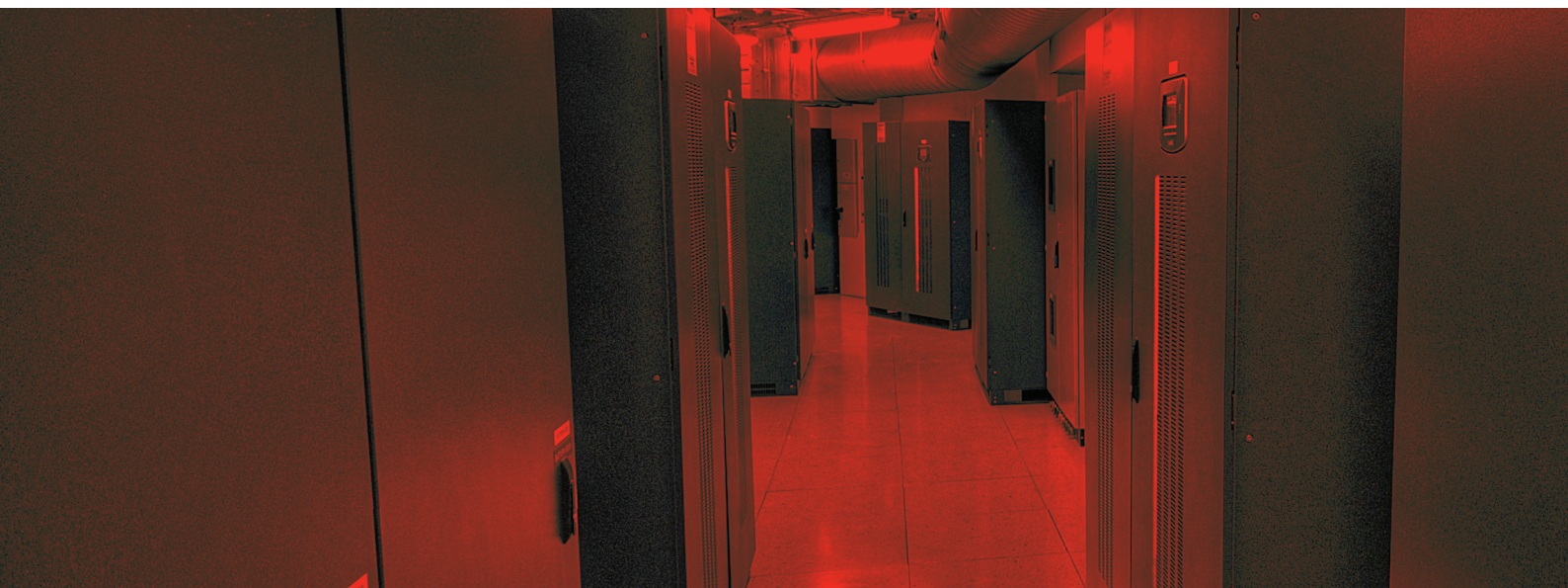
All our single fed racks are protected by a parallel pair of UPS systems. In the event that a UPS within this pair is lost the load automatically fails over to the other UPS in that pair. In effect your power is reserved on two UPS systems and a changeover panel instantly transfers your load if one or the other is lost and UPS protected power is maintained without incident.

The difference between N+1 and N+N can be explained as: N+1 is what you need plus a bit more, while N+N is what you need — *twice* — with one taking over seamlessly if the is removed.

2. Dual power feed from a parallel pair infrastructure (Dual Fed from N+N UPS)

Taking resilience one important step further than with the above configuration, TeleData offer dual fed racks protected by N+N UPS. The dual feeds are protected by a parallel pair of UPS systems, which work in a failover manner should one or the other be lost. Power is reserved on both of the UPS systems within the parallel pair.

Power to the rack is supplied on dual circuits on dual distribution paths, through independent breakers on independent power distribution units. To lose UPS protected power in this scenario we would need to lose two complete UPS systems, which is a



highly unlikely scenario. This also means we can take a full UPS system off line for maintenance without affecting UPS protected supply as the other will take charge seamlessly.

3. Dual feed from dual parallel pair infrastructure (Dual Fed from 2(N+N) UPS)

This configuration provides maximum resilience. Similar to the configuration above, power is fed to the rack on two completely independent electrical feeds on separated paths & infrastructure, but each power feed is then protected by its own independent parallel pair of UPS systems – that's 2 x UPS systems protecting each circuit.

Feed A is fed from Parallel UPS Pair A (which contains 2 x UPS systems in failover configuration and Feed B is fed from a completely separate Parallel UPS Pair B (again containing 2 x UPS systems in failover configuration). At any time either Feed A or Feed B can provide your full reserved power load to your rack.

In this case your rack power is reserved on 4 x independent strings of UPS's – two pairs of two UPS strings and each of the 4 UPS systems is capable of providing fully protected power on its own. In order to lose UPS backed power from dual powered 2(N+N) UPS we would need to lose four complete UPS systems – i.e. both UPS systems on both pairs would need to be lost at the same time.

TeleData - carrier neutral connectivity

TeleData is a major point of presence for many UK and International Tier1 network providers such as SSE, Level3, BT, Vodafone (C&W), Hibernia Atlantic and Virgin Media.

These network providers connect the UK with diverse fibre routes between key locations and data centres meaning TeleData is connected to everything and everyone, from everywhere with an internet connection. The sheer capacity of these interconnected networks means TeleData colocation clients can always achieve their ideal network solution whether that's 1Mbps internet connection, a 10Gbps optical wavelength or dedicated Dark Fibre services.

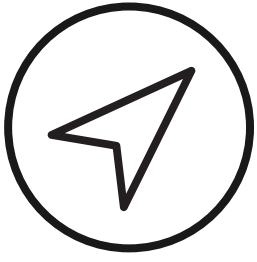
These core, highly connected networks leave the UK in multiple locations to join

transatlantic networks throughout the world with no over reliance on any single geographical location, meaning International customers and UK customers distributing data worldwide are in the perfect location at TeleData's Delta House Data Centre.

Peering groups and infrastructure partners

TeleData is a major Manchester Internet Hub delivering high performance network solutions to all our customers. The Delta House carrier neutral ecosystem boasts a wide range of Tier I and Tier II networks and immediate access to leading Internet Exchange points, cloud hubs, internet transit providers and metro ethernet circuit providers, all coming together within our data centre to offer minimal latency and the highest resilience and performance levels available.

Provider	Transit	Tier 1	P2P links	MPLS	Fibre	Microwave	VoIP
Allegro Networks	•		•	•			
Avensys	•						
BT		•	•	•	•		
Cogent	•		•				
C2 Internet	•		•				
Eison	•						
Hibernia Atlantic	•	•	•		•	•	•
Internet Connections	•		•	•		•	•
Level 3	•	•	•	•	•		•
Metronet			•	•		•	•
N3 (NHS closed network)			•	•			
SSE		•	•	•	•	•	
Virgin Media		•	•	•	•	•	
Vispa			•	•		•	•
Vodafone (C&W)			•		•		
Talk Internet	•		•	•		•	•



Location

Stand-alone, central and convenient

The data centre is completely separate, geographically and physically, from the well-known data centre clusters elsewhere in Manchester. We are within a mile of Manchester's comprehensive Motorway networks and within some of Manchester's most exciting digital developments and regeneration projects.

Central to Manchester's Airport City and Enterprise Zones

Manchester's Airport City is an £800m development project set to become a globally connected business destination within 2 miles of Delta House. A vibrant economic hub with connectivity at its heart, Airport City and the surrounding Manchester Enterprise Zones provide an influential and cutting edge digital business environment crucial to Manchester's goal to become one the world's foremost digital cities by 2020.





How to find us



By road

Junctions 4 and 5 of the M56 are just over 1 mile away, connecting us with the most comprehensive motorway network in the country.

By rail

Heald Green is the closest regional train station, with rail and bus services at Manchester Airport ground transport interchange. Main Line (Virgin trains) connections are available at Manchester Piccadilly and Stockport train stations.

By Metrolink

A modern, high quality gateway linking Manchester Piccadilly to Manchester Airport, stopping within a 2 minute walk of the data centre.

By air

Manchester International Airport is the UK's second largest airport serving over 180 worldwide destinations and is just over 1 mile away.

Delta House: full technical specification

Overview

• Location	Manchester, M22 5QZ
• Designation	Inside Manchester Airport Enterprise Zone
• Ownership	Privately designed, built, owned and operated
• Operations	On-site NOC for in-house monitoring BS 8418 (CCTV Monitoring) and environmental & operational monitoring
• Facility size	80,000 sq ft (7000 sq ft Technical space)
• Transport	Manchester Airport (2KM), Airport transport hub connects to Central Manchester and London and UK rail network. M56 <1.6KM away
• Amenities	Meeting rooms, office space available
• Efficiency	Bespoke BMS system monitoring power usage efficiency and environmental. Including dust, flood, temperature, humidity, plant operations and cooling. A combination of Adiabatic, Free Air and DX provides efficiency in cooling without compromise

Rack configurations

• Power circuits	Standard full racks provision 8, 12, 16, 20 or 32 amps
• Rack sizes	Half and quarter racks available. Full racks 42, 47 and 48U
• Caged space	Dedicated secure cages for multiple racks, bespoke sizes
• Options	N+N to 2(N+N) Single/Dual Feed Power Options
• Rack capacity	Dual feed 8KW available load to individual racks

Rack power protection

• Mains feeds	Direct 11,000 HV Dual Feed. Own High-V Sub Station. Priority A ring feeding local hospital
• UPS	2(N+N) UPS system: 4 x 400Kva.Riello UPS inc dual redundant change over panels
• Generators	Caterpillar diesel generation. 10,000L fuel on-site
• SLA	100% Power

Cooling systems

• Data centre	Dual circuit DX CRAC down flow Air Handling Units in N+1 configuration
• Plant room	Adiabatic cooling backed with multiple split AC units

Network availability

• Description	Carrier Neutral, multiple carriers' diverse points of entry. Tier 1 carriers and dark fibre available. Resilient connection options
• Providers	Level 3, Hibernia Atlantic, Cogent, Virgin Media, SSE, C2, Vodafone, Internet Connections, Allegro Networks, BT, N3, Metronet, Avensys, Eison, peering groups
• Fibre	Vodafone, SSE, Level3, BT, Virgin Media, TeleData
• Cabling	Copper or fibre: To client requirements
• Backhaul	TeleData fibre: Owned, operated and lit direct fibre links to Central Manchester and London provides connectivity to national and international major carriers

Security and fire protection

• Monitoring	Manned security on-site and CCTV surveillance throughout, via an independent ARC (Alarm Receiving Centre) provides physical security and monitoring - BS 5979 CATii
• ARC	24 hrs Manned Security Control Room (ARC). ARC infrastructure has no dependencies on the data centre. BS5979 CATii accredited, separate data centre for Security Control infrastructure and operations
• Access	24 hrs - Biometric (Iris) scanners and swipe card access 24hr CCTV monitoring, visual verification 24/7. Racks are anonymous and have individual security codes.
• Perimeter	Anti-climb fence, Infra-Red, remote voice challenge, automated gates, 24/7 CCTV monitoring to BS8418
• Fire detection	VESDA smoke detection FM200 and Argonite suppression in data halls and critical plant rooms
• PCI DSS	Caged area or single racks to PCI DSS

Accreditations and compliance

Security & Operations Centre (ARC)

- BS7858 security clearance for security staff
- BS5979 CATii intruder alarms systems signalling to alarm receiving centres
- BS8418 installation, commissioning, operation and remote monitoring of CCTV systems
- ISO9001 Quality management
- NSI Gold Approved monitoring RVRC Remote Video Response Centres
- NSI Gold Approved monitoring surveillance and remotely monitored detector activated electronic security
- ACPO Security Systems Policy
- SIA approved and licensed security
- Police approved secure facility
- ISO27001 Information security management systems
- Compliance to PCI DSS



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