



TECHNICAL SPECIFICATIONS

M1MELBOURNE

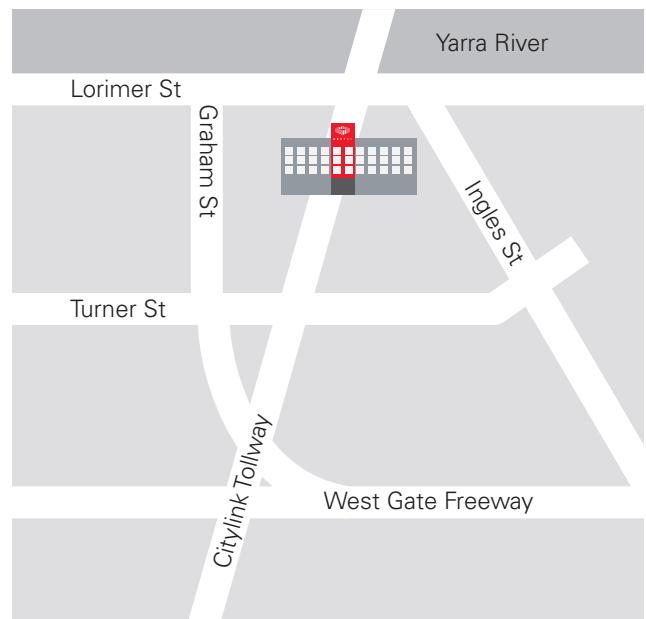
About **M1**MELBOURNE

Redefining industry standards for security, performance, reliability and energy-efficiency; M1 showcases the latest innovations in data centre design and is the first data centre in Asia-Pacific to employ solar power as a renewable energy source.

Tier III certified and located less than 3km from Melbourne's CBD, M1 is the largest independent data centre in the city, with 6,000m² of high-density technical space. Through AXONVX, M1 offers on-demand connectivity to a myriad of local and global cloud platforms such as AWS, IBM SoftLayer, Microsoft Azure and Office 365.

BUILDING OVERVIEW

- Two storey 17,500m² building.
- Total technical space approximately 6,000m².
- 3,000 rack capacity.
- Average 1,000m² per data hall.
- Office and common areas approximately 1,200m².
- 100% concrete construction for walls and roof of all data halls.
- 900mm raised floors in data halls and service corridors.
- Floor is reinforced concrete with 14.4kPa floor live load capacity.



POWER

- Available power of 22.5MVA.
- Minimum server heat load is 2,000W/m².
- IT load capacity of approximately 15MW.
- Minimum N+1 redundancy on power supply.
- Multiple power distribution units with minimum N+N redundancy.
- Harmonic distortion controlled and monitored by UPS systems.
- Full N+1 main electrical infrastructure extending to N+N at power rail level.
- Ultimate 12+1 Pillar 1670kVA Diesel Rotary UPS [DRUPS] units on an Isolated Parallel bus for 100% no break IT and mechanical power.
- Three 7.5MVA main feeders delivered at 11kV.
- Minimum 24 hours' onsite fuel supply.

COOLING

- N+1 high efficiency water-cooled chillers, cooling towers and pumps.
- Dual primary pipework header and distribution system.
- Secondary pipework distribution serving data hall equipment valved and looped providing dual path.
- Multiple redundant water pump and compressor configuration.
- Leak detection system for critical plant areas.
- Server heat load approximately 2000W/m².
- N+2 Computer Room Air Conditioning (CRAC) units per data suite.
- CRAC units fitted with supply temperature control and floor pressure control.
- All CRAC units are located in secured plant corridors outside the data suites.
- Hot and cold aisle containment systems: halls 4, 5 and 6 cold aisle; halls 1, 2 and 3 hot aisle.
- Average cold aisle temperature of 22 +/-2 degrees.
- Average cold aisle relative humidity of 50% +/- 15%.

FIRE SUPPRESSION AND MONITORING

- Inert gas fire suppression system.
- Leak detection systems.
- Emergency warning systems throughout the building.
- Water mist suppression system in DRUPS enclosures.
- Distributed fire alarm controls equipment to avoid single point of failure.
- Full addressable analogue fire alarm system comprising Fire Indicator Panel (FIP), mimic panels, heat detection and MASDs systems.

SECURITY

- Individual credential checks prior to authorisation.
- 24/7 onsite security personnel.
- Biometric fingerprint security for data centre access.
- Anti-cloning access card encryption.
- Secure lifts between floors.
- Intruder-resistant glass, steel mesh and solid concrete walls.
- Secure loading dock for deliveries.
- Extensive coverage by motion sensitive CCTV cameras.
- Remote monitoring and control of rack access via ONEDC®.
- Monitoring of news and weather for external security risks.
- Designed with advice from ASIO T4 accredited consultants and in consideration of ASIO levels of security and the future requirements of the Protective Security Policy framework (PSPF).

SUSTAINABILITY

- Water-cooled chiller technology with variable speed compressors.
- Indirect water-side free cooling.
- Rain water is available for cooling towers.
- Australia's largest privately owned rooftop PV solar array.
- Dedicated area for potential future installation of onsite generation plant (such as tri-gen or other technologies) to significantly reduce CO₂ emissions.
- Energy efficient lighting (fluoro or LED) meeting AS1680.2.2 standard.
- External walls insulated to reduce heat transmission.
- Low volatile organic compound (VOC) materials and paint.
- Target PUE for full final design IT load is 1.35.

TELECOMMUNICATIONS

- Diverse connectivity and underground cable pathways to the building.
- Dedicated interconnect rooms for cable connections.
- Access to choice of 50+ carrier networks.

CUSTOMER SERVICES

- Dedicated office space for long-term private use.
- Sound-proof boardroom.
- Chill-out room equipped with kitchen facilities and Nespresso machine, TV, lounge, massage chairs and Foxtel.
- Equipment staging room.
- 2 four tonne lifts.
- Customer carpark.
- Spare parts vending machine.
- Guest Wi-Fi.

CERTIFICATIONS



Quality
ISO 9001

ISO 9001:2015
Quality
Management
System.



Information
Security
ISO 27001

ISO 27001:2013
Information Security
Management
System (ISMS).



UTI Tier III
Design
Documents.