| | OCP Ready v2 for Hyperscale Data Center Site Assessment | JH1 (DC3) | | |
|---|---|---|---|---|
| | Self Assessment Status: | COMPLETE-MEETS REQUIREMENTS | | |
| | Data Center Location Name | JH1, Johor Malaysia | | |
| | Data Center Location Address | Sedenak Tech Park, Kulai, Johor, Malaysia | | |
| | Site Development Category: | 1. Core and Shell - Forecasted - (shell complete by XX/XX/XXXX) | 12/31/2027 | |
| | Site Description: IT Technical Space (White Space) Area | ~1,350 m2 | | |
| | Site Description: Critical IT Power | 50 - 60 MW | | |
| | Site Description: Network Provider Availability | Carrier Neutral and Available | | |
| | Site Description: Facility Features | Hyperscale and AI Ready DC Space | | |
| | Site Description: Other Services | | | |
| | Date Original Assessment is Completed | 12/11/2024 | | |
| | Re-Assessment Date: | | | |
| **Ref:** | **REQUIREMENTS - Attribute (Must have an Optimum or Acceptable result)** | **Parameter** | **Result** | **Notes** |
| 1 | CAMPUS SITE ACCESS & LOGISTICS | | | |
| 1.0 | SITE ACCESS | | | |
| 1.0-A | Vehicular Access inc. truck circulation | 1. Roadway access to loading dock to allow for a trailer 12.2m (40') Wheelbase | Optimum | |
| 1.0-B | Building Access | 1. Covered loading dock with leveler | Optimum | |
| 1.0-C | Delivery pathway, Loading dock to storage room | 1. ≥ 2.75m (108in) H x ≥ 1.6m (63in) W unobstructed access and threshold free | Optimum | |
| 1.0-D | Delivery pathway, Goods in to IT Technical Space | 1. ≥ 2.75m (108in) H x ≥ 1.6m (63in) W unobstructed access and threshold free | Optimum | |
| 1.0-E | Corridor floor rolling load | 2. ≥680 kg (1500 lb) (6.67 kN) access floor (no spreader plates required) | Acceptable | |
| 1.0-F | Unboxing/pre-staging/storage area floor uniform load | 1. ≥1221 kg/m2 (250 lb/ft2) (11.97 kN/m2) slab on grade | Optimum | |
| 1.0-G | Unboxing/pre-staging/storage area floor concentrated load | 1. ≥680 kg (1500 lb/ft2) (6.67 kN) slab on grade | Optimum | |
| 1.1 | ACCESS CONTROLS & MONITORING | | | |
| 1.1-A | Site perimeter fence | 1. ≥2.43m (96in) H with perimeter intrusion detection system (PIDS) | Optimum | |
| 1.1-B | Site security lighting | 1. Site lighting with backup power | Optimum | |
| 1.1-C | Main Security Checkpoint (or check in location) | 1. Staffed 24/7 | Optimum | |
| 1.1-D | Levels of security to gain access to IT Technical Space | 1. >3 (site perimeter, building perimeter, secure corridor and IT Technical Space) | Optimum | |
| 1.1-E | Video surveillance data record archive | 1. >30 days | Optimum | |
| 1.1-F | Visitor access requirements | 1. Pre-approved with valid government issued ID and escorted | Optimum | |
| 1.1-G | Entrance and exit door monitoring | 1. All entrance and exit doors are electronically monitored and recorded | Optimum | |
| 1.2 | RAMPS | | | |
| 1.2-A | Gradient | 1. Not Applicable - No Ramps Required | Optimum | |
| 1.2-B | Length | 1. Not Applicable - No Ramps Required | Optimum | |
| 1.2-C | Width | 1. Not Applicable - No Ramps Required | Optimum | |
| 1.2-D | Landing area | 1. Not Applicable - No Ramps Required | Optimum | |
| 1.2-E | Railings | 1. Not Applicable - No Railings Required | Optimum | |
| 1.3 | FREIGHT LIFTS / ELEVATORS | | | |
| 1.3-A | Weight loading | 1. ≥3000kg (6600lbs) | Optimum | |
| 1.3-B | Door height | 1. ≥2.75m (108in) Lift /Elevator door opening height (internal cabin) | Optimum | |
| 1.3-C | Width | 1. ≥1.8m (71in) Unobstructed door opening width | Optimum | |
| 1.3-D | Depth | 2. ≥1.5m (60in) Unobstructed cabin depth | Acceptable | |
| 2 | IT TECHNICAL SPACE (WHITE SPACE) | | | |
| 2.0 | STRUCTURAL | | | |
| 2.0-A | Floor rolling load | 1. ≥680kg (1500lb) (6.67kN) slab on grade | Optimum | |
| 2.0-B | Floor uniform load | 1. ≥1221 kg/m2 (250 lb/ft2) (11.97 kN/m2) slab on grade | Optimum | |
| 2.0-C | Floor concentrated load | 1. ≥680kg (1500lb) (6.67kN) slab on grade | Optimum | |
| 2.0-D | Finished floor to ceiling height | 2. ≥3.65m (144in) clear space (no obstructions) | Acceptable | |
| 2.0-E | Access floor | 1. Not Applicable - No Access floor | Optimum | |
| 2.1 | ELECTRICAL | | | |
| 2.1-A | Class Rating | 1. 3 (e.g. Bicsi F3 or UTI Tier 3 Notes Required) | Optimum | Redundant UPS with batteries, Generators and Power Distribution units with 2 source power supplies within IT space |

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|---|---|---|---|---|
| 2.1-B | Row level diverse power feeds | 1. 2N (A+B) | Optimum | |
| 2.1-C | Nominal circuit capacity | 1. 1ϕ 16A/230V | Optimum | 3Phase 32A/400V also available |
| 2.1-D | Circuit voltage | 1. 400/230 VAC nominal | Optimum | |
| 2.1-E | Circuit frequency | 1. 47-63 Hz | Optimum | |
| 2.1-F | Power receptacle / WIP Type | 1. All power receptacle types supported | Optimum | |
| 2.1-G | Circuit receptacle location | 1. All circuit receptacle locations supported | Optimum | |
| 2.1-H | Upstream UPS options | 1. N+N UPS feed | Optimum | Distribution redundant 4M3 also available |
| 2.1-I | Rack-based batteries permitted | 1. Allowed | Optimum | |
| 2.1-J | Generator load acceptance time | 1. <20 seconds | Optimum | |
| 2.2 | **COOLING** | | | |
| 2.2-A | Class Rating | 1. 3 (e.g. Bicsi F3 or UTI Tier 3 Notes Required) | Optimum | UTI Tier 3 equivalent with Mechanical concurrent maintainable |
| 2.2-B | Rack airflow direction | 1. Front to Back | Optimum | |
| 2.2-C | Air containment methods | 1. Hot aisle containment | Optimum | |
| 2.2-D | Maximum rack density | 1. ≥12kW | Optimum | |
| 2.2-E | Minimum cold aisle width | 1. ≥1400mm (56in) | Optimum | |
| 2.2-F | Minimum free width cold aisle (Inside cage) | 1.≥1400mm (56in) | Optimum | |
| 2.2-G | Minimum hot aisle width | 1. ≥1200mm (48in) | Optimum | |
| 2.2-H | Inlet air conditions | 1. ASHRAE Recommended | Optimum | |
| 2.2-I | Air quality | 1. MERV 8 filters on outside air | Optimum | |
| 2.2-J | Temperature rise | 1. ≥12 Deg C DeltaT | Optimum | |
| 2.2-K | Cabinet blanking of open space | 1. Mandatory | Optimum | |
| 3 | **TELECOMMUNICATIONS** | | | |
| 3.1 | **ACCESS PROVIDERS AND OUTSIDE PLANT (OSP) Fiber** | | | |
| 3.1-A | OSP fiber to data center campus | 1. 3 diverse OSP entrances to the data center campus | Optimum | |
| 3.1-B | Carriers and backbone providers | 2. Carrier neutral | Acceptable | |
| 3.2 | **MEET-ME ROOMS (MMRS)** | | | |
| 3.2-A | Number and Location | 1. N+N Isolated MMRs with dedicated OSP fiber entrance from service providers | Optimum | |
| 3.3 | **MMR CABLING** | | | |
| 3.3-A | MMR to IT Technical Space Pathways | 1. 2 dedicated diverse pathways from 2 MMRs | Optimum | |
| 3.3-B | MMR to IT Technical Space Conduit Pathway sizing | 1. ≥100mm (4in) conduit pathways | Optimum | |
| 3.4 | **MMR ELECTRICAL** | | | |
| 3.4-A | Class Rating | 1. 3 (e.g. Bicsi F3 or UTI Tier 3 Notes Required) | Optimum | Redundant UPS with batteries, Generators and Power Distribution units with 2 source power supplies within IT space |
| 3.4-B | Row level diverse power feeds | 1. 2N (A+B) | Optimum | |
| 3.4-C | Nominal circuit capacity | 1. 1ϕ 16A/230V | Optimum | 3Phase 32A/400V also available |
| 3.4-D | Circuit voltage | 1. 400/230VAC Nominal | Optimum | |
| 3.4-E | Circuit frequency | 1. 47-63 Hz | Optimum | |
| 3.4-F | Upstream UPS options | 1. N+1 UPS systems derived from an isolated house lineup | Optimum | |
| 3.4-G | Generator load acceptance time | 1. <20 seconds | Optimum | |
| 3.5 | **MMR COOLING** | | | |
| 3.5-A | MMR cooling redundancy per room | 2. N+1 | Acceptable | |
| 3.5-B | MMR cooling system type | 1. DX | Optimum | |
| 3.5-C | MMR cooling isolation | 1. Isolated from IT technical space cooling system | Optimum | |
| 3.6 | **MMR ACCESS CONTROLS** | | | |
| 3.6-A | Customer access to MMR(s) | 1. Controlled by the colocation data center and escorted | Optimum | |
| 3.6-B | Service Provider access to MMR(s) | 1. Controlled by the colocation data center and escorted | Optimum | |
| 3.6-C | Biometric readers, badge readers, and video surveillance installed for the MMR(s)? | 1. Yes | Optimum | |
| 4 | **SERVICE** | | | |
| 4.1 | **OPERATIONS AND SPARE PARTS** | | | |
| 4.1-A | Critical spares program | 1. On hand spares available on campus | Optimum | |
| 4.1-B | Critical Response SLA | 1. Yes | Optimum | |

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|---|---|---|---|---|
| 4.1-C | Remote hands program | 1. Yes | Optimum | |
| 4.1-D | Office Space | 1. Dedicated space available for fitout | Optimum | |
| 5 | **EFFICIENCY** | | | |
| | | | | |
| 5.0-A | Site Operations Standards | 1. Other (Notes required) | Optimum | TIMS Level 4 |
| 5.0-B | Operational Sourcing Standard | 1. Hybrid | Optimum | |
| 5.0-C | Work Note Communication and Coordination | 1. Yes (e.g. Dedicated portal, Teams, Sharepoint) | Optimum | |
| 5.0-D | Site PUE Monitoring | 1. Continuously monitored | Optimum | |
| 5.0-E | Site Design PUE at Full Load | 2. >1.3 @ 80% Max Utilization (e.g. due to location in Ashrae Climate zone OA, notes required for PUE calculation) | Acceptable | PDG JH1 site is located at Johor, N=20 years ambient temperature is 36.5°C and the cooling design with Water cooled. Thus, the annualized design PUE is >1.30 |
| 5.0-F | Site Annualized PUE Current Achievement | 1. Data Center in operation for <1 year | Optimum | |
| 5.0-G | Site WUE Monitoring | 1. Continuously monitored | Optimum | |
| 5.0-H | Site CUE Monitoring | 1. Continuously monitored | Optimum | |
| 6 | **OPENNESS** | | | |
| | | | | |
| 6.0-A | PUE Published | 1. Real-time available online | Optimum | |
| 6.0-B | Facility Design Drawings & Files | 1. Available to view upon request | Optimum | |
| 6.0-C | BMS / PMS Customer Access | 1. External access provided through a MQTT Broker or other air gapped connection for telemetry purposes. (e.g. power monitoring) | Optimum | |
| 7 | **CERTIFICATIONS** | | | |
| | | | | |
| 7.0-A | ISO/IEC 27001 | 1. Certification available on request | Optimum | |
| 7.0-B | SOC 1 Type II | 1. Certification available on request | Optimum | |
| 7.0-C | SOC 2 Type II | 1. Certification available on request | Optimum | |
| 7.0-D | PCI-DSS | 1. Certification available on request | Optimum | |
| 7.0-E | Sustainability Assessment | 2. Other Regional Equivalent (Notes Required) | Acceptable | Local Malaysia Standard GBI in process |
| 7.0-F | Data Center Certification | 2. Other Regional Equivalent (Notes Required) | Acceptable | Local Malaysia Standard GBI in process |