



DATA WORLD
The Data Center

Full Technical Specification: KTM-M-DC-01

Address: Data World Pvt. Ltd, Mathatirtha,
Chandragiri Municipality, Kathmandu, Nepal

Website: www.dataworld.com.np

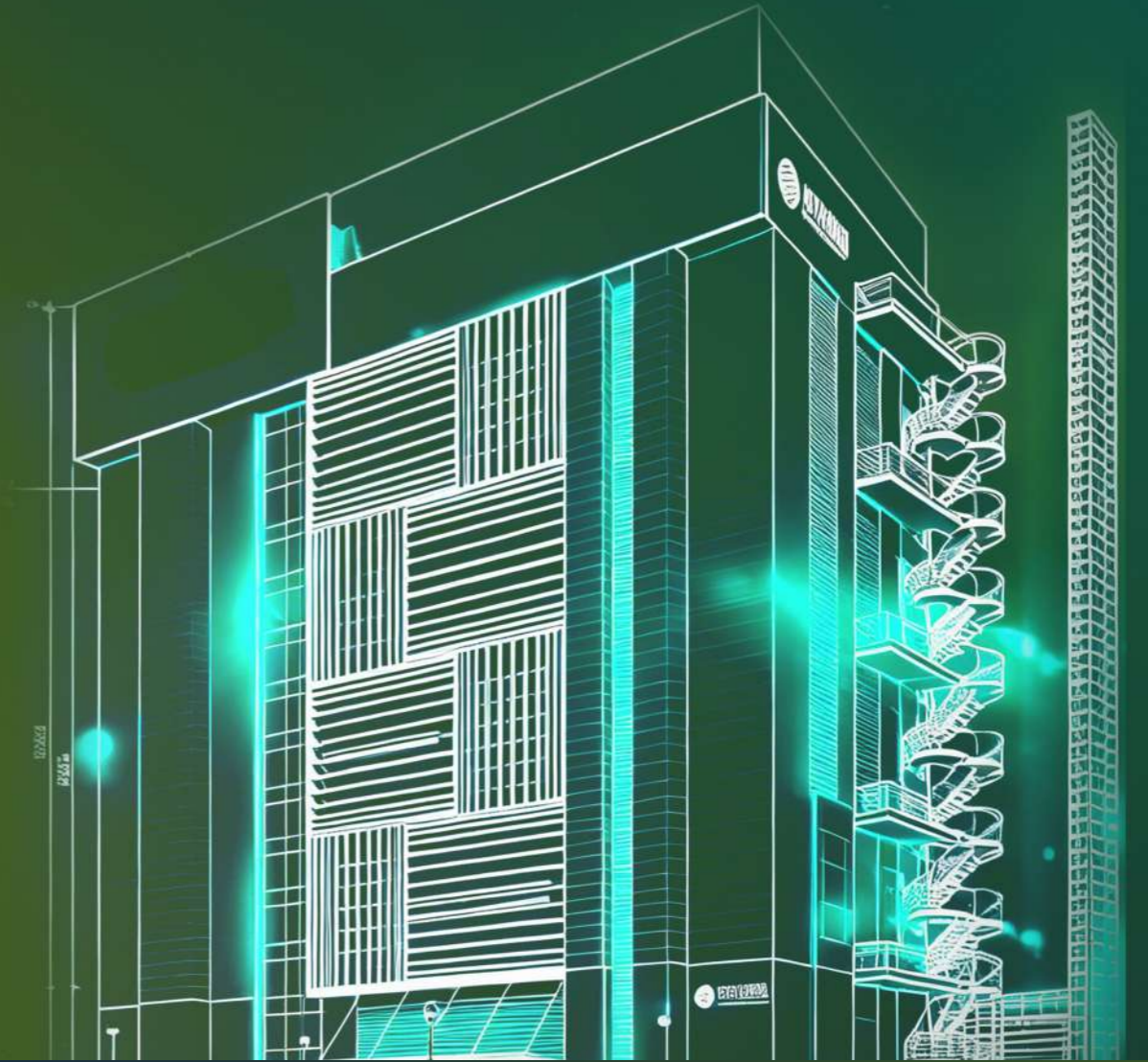


FACILITY OVERVIEW

Data World Mathatirtha (KTM-M-DC-01) is Nepal's first and largest purpose built, hyperscale-ready data center, designed to support enterprise, cloud, high density computing, and mission critical workloads.

The facility is powered by clean energy sources and is strategically located adjacent to the largest power substation in the Kathmandu Valley, ensuring high power reliability and operational resilience.

IT Power Capacity	~3.5MW
Rack Capacity	~510
Design Standard	ANSI/TIA-842 Rated-3 Design Certified Fully Uptime Tier III Compliant
Built Standard	Exceeding Rated-3 and Tier III
Efficiency	EDGE Energy Efficiency Certified
ISO Compliance	9001, 27001 (in process)
Ownership	Operator owned Land and Facility



STRUCTURAL DESIGN & ARCHITECTURE

- **Seismic Resilience:** Structural design compliant with Seismic Zone-5, IMP Factor 1.5; includes specialized seismic isolations, anchoring, and bracing for all equipment.
- **Layout:** Purpose-built campus with high floor-to-ceiling heights suitable for airflow and overhead utility services.
- **Logistics:** Dedicated loading bay, staging area, and storage room; dedicated cargo and passenger lifts.
- **Redundancy:** Dedicated and redundant utility shafts for all critical services.
- **Safety:** Multiple emergency evacuation exits and shaft pressurization smoke and air exhaust systems.

POWER INFRASTRUCTURE & ARCHITECTURE

UTILITY FEEDERS

Dedicated 11KV and redundant utility underground power feeders from redundant substation transformers managed by RMU.

TRANSFORMATION

N+1 Transformers redundancy for reliable and isolated power supply to critical infrastructure

GENERATION

N+1 DCC-Rated low emission diesel generators with 50KL on-site fuel storage on a dedicated HSD yard enough for 24hr operation at full load.

UPS SYSTEM

2N UPS architecture with 10-minute backup at full load

DISTRIBUTION

Dual A+B trackway power paths to racks guarded by Isolation transformers;

EQUIPMENT

Type-tested electrical panels , bus bar trunking and UL certified utility components.

SUPPORT

Dedicated UPS and PAC infrastructure supporting IT, mechanical, and building loads for total continuity.



COOLING & THERMAL MANAGEMENT

ARCHITECTURE:

Air-cooled chilled water-based and free-cooling architecture.

AIRFLOW

Efficient airflow management with Hot Aisle Containment

CONTINUOUS COOLING

Supported by a Thermal Energy Storage Tank for seamless thermal stability during power transitions.

POWER RESILIENCE

UPS supply to PAHU and Pumps to prevent thermal spikes during outages.

NETWORK & SECURITY ARCHITECTURE

CONNECTIVITY:

Carrier-neutral; upto 7 diverse domestic fiber routes via 4 physical point of entries.

BACKBONE

Direct termination of OPGW national/international backbone fiber connectivity from 4 diverse locations.

INTER CONNECTION

Dual diversified Meet-Me-Room MMR with N+1 In-Row Cooling and N+1 UPS

INTERNET EXCHANGE

On-site presence of Nepal Internet Exchange (NPIX).

SECURITY

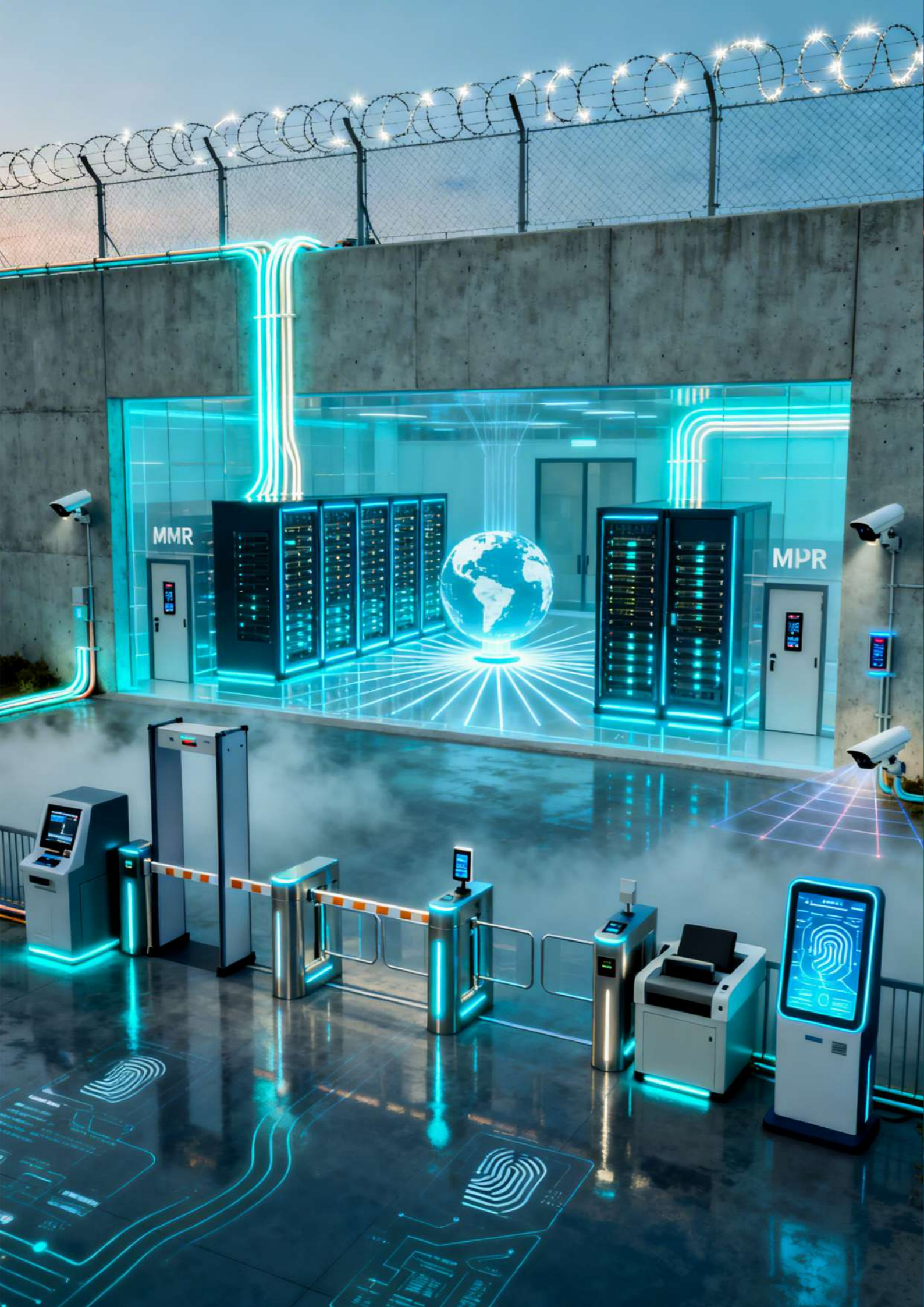
Multi-layer physical security; high concrete boundary walls with electronic wire and razor fencing; boom barriers and speed gate access control.

SCREENING

Walk-through metal detectors and baggage scanners; Visitor Management System.

SURVEILLANCE

24x7 CCTV monitoring with zero blind spots and biometric door access.



FIRE PROTECTION & SAFETY

DETECTION

Very Early Smoke Detection System

SUPPRESSION

Gas-based fire suppression for protection of critical IT equipment.

WATER RESERVES

200 KL on-site water storage dedicated for hydrants + 20 KL gravity-fed emergency storage.

MATERIALS

Fire-resistant paints, finishes, and interior materials compliant with international life & safety standards.

OPERATIONS, MONITORING & COMMISSIONING

SECURITY

EPI Data Center
Operations Standard
(DCOS)

SUPPORT

24x7 Data Center
Operations team; Remote
Hands support.

COMMISSIONING

Integrated System
Acceptance Testing (ISAT) on
Full load.

AMENITIES

On-site co-working
space and meeting
rooms for tenants.

MONITORING

Building Management System, Electrical Power Monitoring System, Chiller Plant Management System and Data Center Infrastructure Management.



STRATEGIC PARTNERS & OEM

Design Consultant: AECOM and Nextra Data

Build Contractor: Tundi Construction (Civil) and Prasa Infocom (MEP)

Major OEMs: Schneider Electric, SGB, Caterpillar, Siemens, Trane, Xtralis, Johnson Controls, R&M, Motwane.



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