

# DATA CENTER

## Guatemala 1

### (GTM1)

KIO is an international company, founded in 2002, a provider of mission-critical Information Technology services that operates state-of-the-art Data Centers with the highest security, availability and density in Mexico, Colombia and Central America. KIO hosts a robust and wide ecosystem of different industry sectors in the region within its Data Centers ensuring a professional, redundant, scalable and secure environment.

KIO GTM1 started up operations in 2013 and has a technology complex with an area of 2,500 m<sup>2</sup>, and boasts the country's most modern, robust and high-capacity Data Center. It has TIER IV characteristics and design certification.

KIO GTM1 located at: 8a Avenue 19-54, Condado el Naranjo, Zone 4 of Mixco, Guatemala, Guatemala.

Coordinates 14°39'21.9"N 90°32'40.1"W

## CHARACTERISTICS

### Design

One computer rooms with an area of 174 m<sup>2</sup>, it has a false floor of a height of 0.90 m reinforced with earthquake-proof pedestals.

### Electrical capacity

It has two 250 kVA UPS that are redundant and have sufficient capacity to provide uninterrupted and filtered power to all of the equipment installed in the accommodation area for the phase. They also have an advanced battery monitoring system.

### Redundancy

2N in the electrical equipment, with two 450 kVA emergency power generators, with two diesel storage tanks, providing 7-day autonomy. The cooling equipment has a 2N configuration.

### Power supply / Service drop

Medium-voltage 13.2 kV power supply / service drop.

### Energy efficiency

KIO has indirect Free Cooling, which allows it to save power in the cooling system when the humidity and temperature conditions are ideal, helping it achieve a design PUE of 1.6.

### Monitoring

It has a Building Monitoring System (BMS), which monitors the efficiency and proper functioning of the entire electromechanical infrastructure of the Data Center.

### Carrier neutral

Open invitation to all Carriers.

The current Carriers are:

- Blue Net
- Broadcom
- BT
- Cable & Wireless
- Cablecolor
- Claro
- Comnet
- EdgeUno
- Giganet
- Innova
- Optel
- Rocknets
- Señal Nacional
- Telconect
- Telefónica
- Tigo
- Ufinet

KIO also has a high-speed interconnection network among its Data Centers.

### Fire protection

It has smoke detectors, manual stations and audiovisual alerts in all areas, in compliance with the standards of the National Fire Protection Association (NFPA), as well as a Very Early Smoke Detection Apparatus (VESDA) and a double interlock preaction system.

### NOC

Advanced operations and network monitoring center.

### Qualified personnel

There are trained and qualified operating personnel 7x24x365 days a year.

### Security

There are 5 two-factor authentication (proximity and facial recognition biometrics) controls, with a 7x24x365 Video Surveillance system with a 90-day storage capacity. The center has received Payment Card Industry Data Security Standard (PCI) certification.

## PHYSICAL CHARACTERISTICS

Type of walls	Reinforced concrete
Wall thickness	9 cm (3.45 inches)
Perimeter wall	Yes
Construction of perimeter wall	Reinforced concrete
Wheelchair access	Yes
Dedicated Data Center building	Yes
Distance to a police station	2.8 km (1.73 miles)
Distance to a fire station	20 m (65.61 ft)
Data Hall No1 technical floor area	174 m <sup>2</sup> (1,872.92 ft <sup>2</sup> )
MDA technical floor area	6 m <sup>2</sup> (64.58 ft <sup>2</sup> )
MDB technical floor area	8 m <sup>2</sup> (86.11 ft <sup>2</sup> )
Raised floor - Concentrated load	567 kg (1,250 lb)
Raised floor - Uniform load	1,952.97 kg/m <sup>2</sup> (400 lb/ft <sup>2</sup> )
Raised floor - Impact load	65 kg (150 lb)
Raised floor - Last load	2,222 kg (4,900 lb)
Separate room for UPS	Yes
UPS room with redundant air conditioning	Yes
Maximum cabinet capacity	108 approximately
Space availability with perimeter cage	Yes
Height above sea level (meters)	1,560 m (5,118.11 ft)
Distance to the ocean (kilometers)	120 km (74.56 miles)

## POWER CHARACTERISTICS

Redundancy	2N
Availability	Uptime Institute Tier IV Design
Design capacity in m2	1.2 kW / IT
UPS capacity	250 kVA
Constant battery monitoring	Yes
Transformer capacity	500 kVA
Number of power connections	1
UPS autonomy time	11 minutes
Diesel autonomy time	7 days
Total diesel tank capacity	11,356 liters (2,999.93 gal)
Number of generators	2
Total generator capacity	450 kW

## ELECTROMECHANICAL CHARACTERISTICS (COOLING)

Number of total units	4
Number of redundant units	2
Tons of cooling for the Data Center	160

## SECURITY

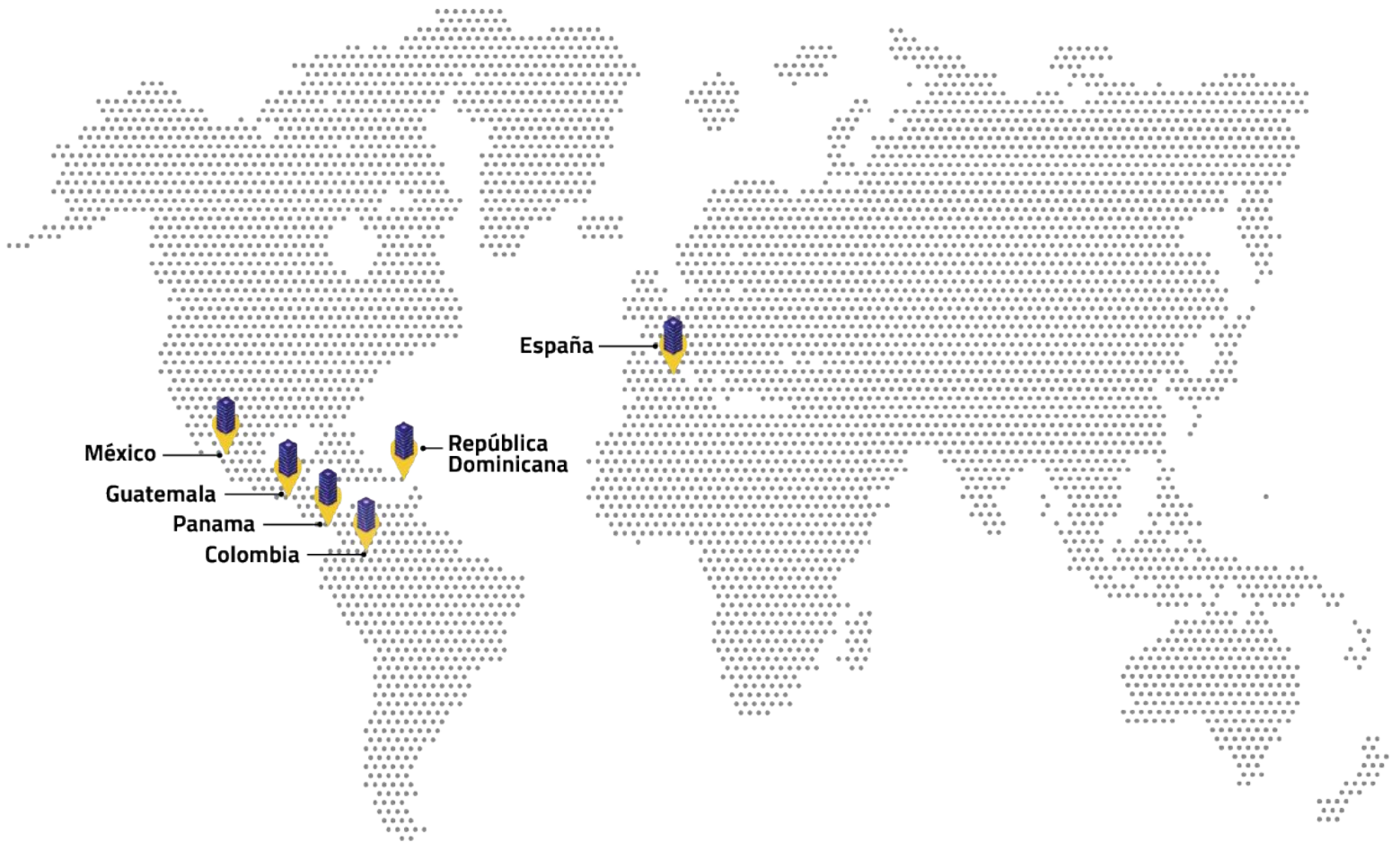
Access control	Mantrap
Authentication factors	Two (Facial biometrics and proximity card)
Visitor log	Yes
7x24 Security personnel	Yes
Security cameras	Yes
Minimum DVR recording time	90 days
Fire detection	VESDA
Automatic fire extinguishing	Double interlock preaction

## COMMUNICATIONS

Copper wiring	Category 6A or higher
Fiber wiring	Single mode and multimode
Wire covering	Plenum and/or LSOH
Space for Carriers	Yes
Site Entry	Yes

## CERTIFICATIONS

Uptime Institute Tier IV Design	CEEDA SILVER
PCI DSS	ISO/IEC27001:2013
SSAE18	ISO/IEC 37001:2016



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