



# A True TIER – 4 Data Centre Building

## TECHNICAL OVERVIEW

PT FAASRI UTAMA SAKTI  
[www.faasri-net.co.id](http://www.faasri-net.co.id)

Data Centre Location :  
Jl. Padjadjaran - 17  
Bogor 16143  
West Java  
Indonesia

Faari Data Centre , we named it SANGGAR KESATRIA LIEMA , is the 1<sup>st</sup> Tier-4 Standard (currently running on Tier-3) Data Center ever built in Indonesia with best possible quality, ultra reliable and scalable data center solution, designed to meet all business segment specification.

With access to all major Network Provider, SANGGAR KESATRIA LIEMA is proud to be a Telco Friendly Facilities, that's translate into an interconnection for your mission critical application between your Head Office and Branch Offices is no more just a patch away.

Located just 45 minute south from Jakarta's Central Business District, the facility is best suitable for Disaster Recovery Center (DRC) & Co-location & Cloud Computing Platform that need a 99.9998% Uptime Facilities.

# Technical Overview

## Building

- Gross Area: 5000m<sup>2</sup> (50,000 ft<sup>2</sup>)
- Building Management System
- Concurrently Maintainable Building
- Multiple Separated M&E Rooms with redundant AHU units
- Duel Redundancy Chill Water Chillers System
- Duel Redundancy Cooling Tower System
- Duel Redundancy Pump System
- Special Design Diesel Generators Room
- 216.000 Liters Diesel Tanks
- 100,000 Liters makeup Water Tanks
- 100,000 Liters Hydrant Water Tanks
- 100,000 Liters Ground Water Tanks
- Structure:
  - Re-enforce Concrete Structure building with Fire resistance walls
  - Earth-Quake Resistance Building up to 8.5 RS
  - 5.0 m slab to slab height
  - Column spacing primarily based on 7 & 8.5m grid
  - Bomb, Bullet & Quake resistance windows
  - Duel Separated & compartmented Risers
  - Passenger/Cargo Lift 1 x 1.6 tones (2x2 meters internal dimension)
  - Positive Air Intake Building

## Data Center Floor

- Gross Area: 1,320m<sup>2</sup> (13,200 ft<sup>2</sup>)
- Gross Rise Floor: 1,140m<sup>2</sup> (11,400 ft<sup>2</sup>)
- Specification:
  - Data Center floor loading of 1 tone

- Reinforced Concrete Floor with Fire & Water Resistance applied Floor
- 5 meters slabs to slabs Height Flooring
- 0.8 meter high 1 ton Raised floor with anti static tiles
- Dual Feed Chilled water pipe on ring topology Under Raised Floor
- Dual Feed Zonings Power Distribution System Under Raised Floor
- Pre Action FM 200 Above & Under Raised Floor
- Smoke, Heat & water Detection system above & Under Raised
- Trap man Door applied
- Redundant Dual Coil CRAC Parameter Cooling
- Separated Utility from Datacenter Floor
- State of the art Access Door System
- State of the art CCTV & Surveillance System

### **Power**

- 2 Separated Power Feeds to 2 Dry Transformer
- Form 3B Power Panels System
- Bus Bar Panel Interconnection
- N +2 centralized redundant UPS system
- Battery reserve 15-30 minutes depends on load
- Individual Rack power outlet (Form 2B)
- 100% Full backup generating
- On-site diesel tank support up to 4 days (216.000 liters)

### **Environmental System**

- N+1 Total Redundancies Water Cool Chiller System
- N+1 Total Redundancies Chilled Water Piping System
- N+1 Dual Coil Precision Air Conditioning System
- Up to 15-30 Minets CWT depends on Load
- Temperature maintained at 22oC (+/- 2oC)
- Humidity range of 45% (+/- 10%)

**Fire Detection and Suppression**

- Fire and smoke detection sensors above and below raised floor
- Pre trigger fire fighting system (FM 200, Hydrant)

**Telecommunications**

- 2 Separated FO Feeders
- 2 Separated Telco Racks
- Separate tray
- Telecommunications Providers Friendly Facilities
- Meet Me Room

# Tiering Classification

Tier classifications provide a basis for comparing or describing the functionality, capacity, and cost of a data center's overall architecture. Tier classifications focus on the availability of the entire facility including power, connectivity and cooling components.

Tier classifications also describe the degree to which the facility is resilient to failures of mechanical, electrical and plumbing (MEP) systems. Resilience to failures is provided by redundancy and architecture of the overall facility design. A Tier-1 facility is the least resilient and a Tier-4 is the most resilient.

## **Tier-1 - Basic Data Center**

Tier-1 facilities have no redundant capacity components. This type of facility provides basic power and cooling with no excess capacity for backup or failover. There is no redundancy in the MEP distribution paths.

In a Tier-1 facility, unplanned outage or failure of a capacity component or distribution element will impact systems and customers. Maintenance needed for the MEP infrastructure to replace components or do utility work impacts the facility just as if there were an unplanned outage.

Tier-1 sites typically experience two separate 12-hour site-wide shutdowns per year for repair work. Additionally, Tier-1 sites typically experience 1.2 equipment or distribution component failures on average each year. This equates to 28.8 hours of downtime per year, or 99.67% availability.

## **Tier-2 - Redundant Data Center**

A Tier-2 data center has redundant capacity components, but only a single non-redundant distribution path serving the data processing equipment. The benefit of this level is that any redundant capacity component can be removed from service on a planned basis without causing the data processing to be shut down.

Tier-2 sites average one unplanned outage per year, and schedule three maintenance activities over a two-year period. The annual impact to operations is 22 hours of downtime per year, or 99.75% availability.

### **Tier-3 - Redundant Data Center with Concurrent Maintenance**

A Tier-3 data center has redundant capacity components and multiple independent distribution paths serving the data processing footprint. There is sufficient MEP capacity to meet the needs of the data processing systems even when one of these redundant MEP components has been removed from the infrastructure. Tier-3 data center can support maintenance activities and some unplanned events without interruption to the computing systems.

Because of concurrent maintenance capability provided by Tier-3 facilities, no annual shutdowns for routine maintenance are required. Tier-3 data centers have unplanned events totaling only 1.6 hours per year. Tier-3 sites deliver 99.98% availability.

### **Tier-4 - Fault-Tolerant Data Center**

Tier-4 sites have multiple, independent, and physically separate systems that each have redundant capacity components and multiple, independent, diverse and active distribution paths supporting all data processing. In a Tier-4 data center, any single failure of an MEP component or distribution path has no negative impact to the data processing systems.

Facility-related failures that impact the data processing equipment are statistically reduced to 0.8 hours per year at Tier-4 sites which yields 99.99% availability.

### **A Note About Tier Classifications**

If any single system in a Tier-n data center does not meet the Tier-n requirements, then the facility, as a whole, is not Tier-n. With this in mind, fractional tier ratings such as 2+ or 3.5 have no meaning in a tiered classification context and should not exist.

## About PT Faasri Utama Sakti ( FUS ) :

[www.faasri-net.co.id](http://www.faasri-net.co.id)

PT Faasri Utama Sakti is an innovative technology company ( established in 1985) which utilizes our relationships and appropriate technologies to build continuous value for our clients and partners. Our business model and approach present a refreshing change to traditional approaches of technology based relationships.

Our line of businesses are :

### 1. IT SERVICES PROVIDER

We provide services from HW maintenance< PC Life Cycle Management , Printing Solution up to SEAT Management

### 2. BUSINESS APPLICATION SOFTWARE ( [www.redpillars.com](http://www.redpillars.com) )

Our experience and skillful R&D team develop ERP system, workflow & Collaboration and Mobile Application to assist our clients to increase productivity.

### 3. TIER IV DATA CENTRE

The only Tier 4 data center building ( running on Tier 3 operation) in Indonesia

### 4. WEBSITE BUILDER

We provide the facility to wipe off the burden to build your website