An Adaptive Data Center for Dynamic IT

Aligned Energy's Phoenix Data Center

2500 W Union Hills Drive
Phoenix, AZ 85027
800.232.2817
An adaptive data center

Business needs and IT loads are moving targets. At Aligned Energy’s colocation data centers, you can adapt on demand, keeping capacity, performance, and reliability in sync no matter how quickly your requirements change. Whether you’re a service provider or enterprise, with Aligned Energy you’ll have an experienced partner on your side.

Adaptive

We can deliver a scalable data center solution sized to your requirements today, and provision capacity on demand as your needs evolve. We’ll grow along with you both vertically (in terms of power density) and horizontally (in terms of square feet).

Efficient

Because our data centers are so much more efficient than traditional data centers, we don’t have to build as much infrastructure to support peak load. That means our customers get up to 60% more IT capacity out of the power utility.

Dynamic infrastructure

Our patented cooling technology not only lowers costs, but is also ultra-efficient and sustainable. It supports standard and high power densities (up to 50kW per rack) and offers a 1.15 PUE. Efficient and reliable in any climate, at any load, our cooling technology can grow and scale with you incrementally as needed.
Engineered for resiliency

Resilient

400 year

100% Uptime SLA & carrier-neutral connectivity to ensure your IT operations are always online.

Independently validated - via Fault Tree Analysis - with a reliability class of 0.25% (400 year MTBF).

“One of the most reliable cooling & power generation platforms ever studied.”
Steve Fairfax
President, MTechnology

Critical capacity

120MW

We built the Phoenix colocation data center to support 120 MW of critical capacity at full build.

Security

365

Our data centers protect your colocation environment behind multiple layers of physical access controls, including perimeter fences with intrusion laser detection, 24x7x365 on-site security, mantraps, dual authentication including biometrics and RFID tracking, event-driven IP video surveillance, visual light-based alerts, and more. We also provide round-the-clock engineering assistance and global monitoring via our Network Operations Center (NOC).

Rack density

50kW

Variable standard and high density power (up to 50 kW per rack) without additional infrastructure to support high performance computing demands.

Guarantee

1.15 PUE

We contractually guarantee a 1.15 PUE, regardless of client load or utilization.

Design & facility

Tier III

We built the Phoenix data center to Tier III facility and design standards to ensure our data center is consistent with your uptime objectives.

100% Uptime SLA & carrier-neutral connectivity to ensure your IT operations are always online.

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Services

Colocation

**Colocation footprints**
Fully enclosed colocation footprints trap and absorb hot air at its source. Footprints easily scale to thousands of racks, allowing you to expand your IT load horizontally and vertically, on demand.

- Variable and contiguous rack densities (up to 50 kW)
- Whip installations or overhead power busways – expandable on demand
- eSYNC absorption units remove heat at its source
- Cross connect services or direct carrier interconnection available
- Lockable walls for privacy and air containment supplied by you or Aligned Energy
- Standard Client Portal offers asset monitoring, help desk ticketing, business intelligence, and capacity forecasting from a single-entry point
- Implementation Liaison helps facilitate a smooth migration

**Remote hands support**
Get expert assistance with colocation equipment racking, reboots, disk changes, triage, cross connections, and more. Our engineers are available on-site whenever you need them.

Connectivity

**On-net data center carriers**
For simple and fast turn-up, choose from a variety of on-net network providers or connect to nearby carrier hotels via Aligned Energy pathways.

**Flexible entrance options**
- Clients can bypass the Aligned Energy MDF, if needed
- Aligned Energy offers direct carrier interconnection, including dedicated carrier facilities to client suites

Additional

**Dedicated office & storage space**
Strengthen your operational performance and ensure efficiency with dedicated office and storage space. Your space is on-net and connected to our UPS system for consistent and reliable functionality.

**Build to scale solutions**
If a multi-tenant solution doesn’t fit your needs, we’ll deliver standard or custom data center builds in new markets to your specifications.
Colocation footprints

Features

Colocation sold by the footprint – a fully contained enclosure that is tailored to client requirements and loads.

Hot aisle containment traps and contains heat at its source. Use our containment or your own.

Perimeter cooling features close-coupled flexible designs, micro-channel coils and highly efficient fans.

Whips or overhead power busways A/B-configured, flexible and expandable.

Variable & high density power Up to 50 kW/rack, in the same row, without additional infrastructure.

Slab floors Our technology eliminates the need for raised floors.

Dynamic results

- **Scalable.** We can provision 1.5 MW today with multiple MW of capacity delivered in less than 12 weeks
- **Future-proof.** Our technologies are here for you today and tomorrow, with power densities up to 50 kW per rack and guaranteed 1.15 PUE
- **Reliable.** We offer a 100% Uptime SLA in a Tier III certified center
- **Sustainable.** Our efficient platform saves up to 85% water and up to 80% energy
- **Easy to work with.** We strive to be flexible and easy to do business with - all while offering outstanding customer support
Phoenix, AZ Data Center
Colocation site specifications

2500 W Union Hills Drive
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- 55 acre fully fenced site
- 550,000 sq. ft.
- 120 MW critical substation capacity
- Diverse and dedicated substations
- 3 MW available today
- Ability to deliver additional MWs in <12 weeks
- 5 diverse network points of entry

With the lowest threats from natural disasters nationwide Phoenix is a top 10 U.S. multi-tenant data center market. The Arizona Commerce Authority incentivizes companies that collocate in Phoenix with a 20-year sales tax exemption that can mean millions of dollars in savings. This ~550,000 square foot building (full build) is situated on more than 55 acres, providing ample room to expand.

### General

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renovated</td>
<td>2016</td>
</tr>
<tr>
<td>Campus</td>
<td>55 Acres</td>
</tr>
<tr>
<td>Total Building SF</td>
<td>Full build: 550,000 sq. ft.</td>
</tr>
<tr>
<td>Total Data Hall SF</td>
<td>Full build: ~300,000 sq. ft.</td>
</tr>
<tr>
<td>Building Construction</td>
<td>Concrete slab-on-grade and structured steel</td>
</tr>
<tr>
<td>Structure</td>
<td>Three interconnected multi-tenant buildings</td>
</tr>
<tr>
<td></td>
<td>ASCE7 occupancy category IV. Data Hall FM-120 and Office FM-90 roof lift ratings</td>
</tr>
<tr>
<td></td>
<td>Wind importance factor of 1.15</td>
</tr>
<tr>
<td>Loading Dock</td>
<td>Three bays with delivery platform and equipment trap</td>
</tr>
<tr>
<td>Office Space</td>
<td>Dedicated office space for rent: on-net and UPS-backed</td>
</tr>
<tr>
<td></td>
<td>Shared: conference rooms and drop-in office pods</td>
</tr>
<tr>
<td>Storage</td>
<td>Space available for rent</td>
</tr>
<tr>
<td>Access</td>
<td>24/7/365</td>
</tr>
<tr>
<td>PUE</td>
<td>Guaranteed 1.15</td>
</tr>
<tr>
<td>Design</td>
<td>Built to Tier III facility and design standards</td>
</tr>
<tr>
<td>Reliability SLA</td>
<td>100% Uptime SLA</td>
</tr>
</tbody>
</table>

### Telecom

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Points of Entry</td>
<td>Five diverse conduit entrances</td>
</tr>
<tr>
<td>Carrier Neutral</td>
<td>Multiple carriers</td>
</tr>
<tr>
<td>Carriers</td>
<td>CenturyLink, Level(3), Cox, SRP, Zayo, Cyberverse</td>
</tr>
<tr>
<td>Meet-me-rooms</td>
<td>Three diverse MMRs</td>
</tr>
</tbody>
</table>

### Power

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
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</thead>
<tbody>
<tr>
<td>Utility Power</td>
<td>Diverse and dedicated substations: 62MW Phase 1 expandable to 120MW</td>
</tr>
<tr>
<td>UPS</td>
<td>2.25 MW concurrently maintainable UPS blocks</td>
</tr>
<tr>
<td>Generators</td>
<td>N+4 power generation using N+1 “4-engine” blocks</td>
</tr>
<tr>
<td>Distribution</td>
<td>Redundant A+B distribution</td>
</tr>
<tr>
<td>Power Metering</td>
<td>Revenue-grade, transparent/real-time metered at the PDU and rack level</td>
</tr>
</tbody>
</table>
### Security & compliance

<table>
<thead>
<tr>
<th>Facility Perimeter</th>
<th>Steel security fencing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrance</td>
<td>Five layer security design; Motorized gates</td>
</tr>
<tr>
<td>Access Gates</td>
<td>Card reader access</td>
</tr>
<tr>
<td>On-site Security</td>
<td>24x7x365 with security guards</td>
</tr>
<tr>
<td>Facility-wide Features</td>
<td>Multiple check-points, dual authentication, mantraps, and biometric scanners</td>
</tr>
<tr>
<td></td>
<td>Event driven IP video surveillance and visual light-based alerts</td>
</tr>
<tr>
<td>Compliance</td>
<td>Service Organization Controls (SOC) 2, Type 1 PCI DSS HIPAA and HITECH NIST 800-53 for Colocation Services</td>
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</table>

### Compliance

- Service Organization Controls (SOC) 2, Type 1
- PCI DSS
- HIPAA and HITECH
- NIST 800-53 for Colocation Services

### Cooling

- **System**: Our hot aisle containment strategy absorbs heat at its source - supporting standard and high power densities and allowing you to scale vertically and horizontally - without stranding capacity.

- **Reliability**: Configurable to client needs (i.e. N, N+1, 2N)

### Sustainability

- **Water**: Uses up to 85% less water
- **Power**: Uses up to 80% less power

### Fire protection

- **Zones**: Separately zoned data halls
- **Smoke Detection**: VESDA (Very Early Smoke Detection Apparatus)
- **Sprinkler System**: Dual interlock pre-action (data halls - MMR - critical equipment)

### Arizona data center sales tax exemption

Because Aligned Energy's Phoenix facility is a "sustainable redevelopment project" our colocation tenants receive a 20 year sales tax exemption on IT equipment so long as they contract for 500 kW (or more) per month for 2+ years.

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**About Aligned Energy**

Aligned Energy is an infrastructure technology company that offers colocation and build-to-scale data center solutions to cloud, enterprise, and service providers. Our intelligent infrastructure allows us to deliver data centers like a utility—accessible and consumable as needed. By reducing the energy, water, and space needed to operate, our technology innovations offer businesses a competitive advantage by improving reliability and their bottom-line, while helping secure the health of the planet.

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Contact us for more information or to schedule a data center tour.

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