SGI® ICE Cube® Air

The Expandable Modular Data Center

KEY FEATURES

Small, medium, and large
Configured to order
from low-power to HPC

Eco-logical™:
Air, Evaporative,
DX Cooling, PUE < 1.02

Customizable Third-Party
Hardware Support

Advanced Monitoring
and Controls

Installation and
Maintenance by SGI
Worldwide Support

The ICE Cube® Air expandable line of Modular Data Centers (MDCs) creates the most cost efficient solution on the market for the ever-expanding need for more data center space. As an alternative to brick-and-mortar or co-location sites, ICE Cube Air brings the latest data center technology to a location of your choosing. Designed to reduce data center costs, deployment times and maintenance, ICE Cube Air is ideal for either supplementing or replacing traditional data center facilities. Modular data centers are also compelling as disaster recovery sites, field deployed compute and storage assets, or even to address temporary spikes in IT demand. ICE Cube Air MDCs can be deployed to nearly any location in any environment.

Expandable Data Center

ICE Cube Air MDCs are available in small, medium and large configurations, targeted for data center needs below a megawatt, between one and four megawatts, and over four megawatts. ICE Cube Air MDCs offer expansion capabilities that allow you to start small and expand over time as your business grows. The entry level ICE Cube Air available contains of a single unit which houses up to four racks. This single unit can become a "head unit" and expand out to as many as three additional units for a total of 16 racks.

The largest ICE Cube Air consists of a single unit with 20 racks under cover, expandable out to three units and a total of 60 racks.

Eco-Logical™ Cooling Efficiency

Highly efficient fans, along with an innovative three-stage evaporative cooling system, allow the ICE Cube Air to run with outside air and evaporative cooling in most climates, achieving a Power Usage Effectiveness (PUE) ratio of 1.02 or less. Supplemental direct expansion (DX), or chilled water cooling coils, provide an optional backup cooling system for customers deploying in extreme environments. ICE Cube Air uses one percent of the water needed by standard water-chilled containers and needs only standard potable water from a garden hose at a rate of no greater than two gallons per minute.

Highly Customizable Third-Party Hardware Support

ICE Cube Air can house fixed or roll-in racks, and can accommodate all SGI as well as third-party server and storage solutions. Up to fifty-four rack units of space are available for four-post fixed racks and up to 98 inches of height for roll-in racks can be accommodated. Power per rack is up to 35 KW.

Most customers will enjoy the benefits of the off-the-shelf designs ICE Cube Air provides such as low-cost, ease of ordering and rapid deployment. However, custom designs are available as well, created by SGI's design-to-order engineering group, professional services and customer service teams.

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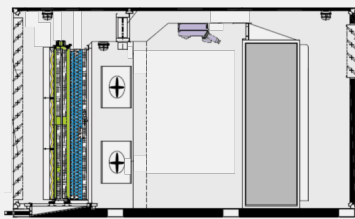
www.sgi.com/icecubeair

A Complete Modular Data Center Solution

SGI offers a complete modular data center solution and can assess, design, build, integrate, and support new modular data centers at any scale worldwide.
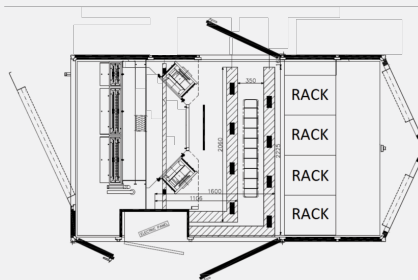
SGI also offers advanced electrical and mechanical monitoring and controls in a single system that integrates seamlessly into existing facilities. Rich features, including API support via a web server within the system, allow ICE Cube Air integration into future versions of SGI® Management Suite software management applications.

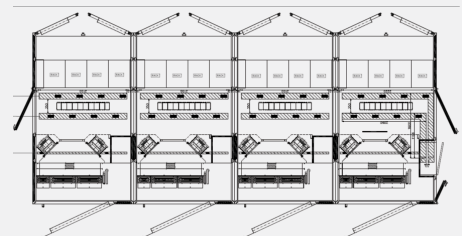## ICE Cube Air Models and Specifications

Configuration	Small (<1 MWatt)	Medium (1 to 4 MWatts)	Large (>4 MWatts)
MDC Unit Size (ft)	8'6"L x 16'W x 9'6"H 2.6m x 4.9m x 2.9m	20'L x 14'9"W x 9'6"H 6.1m x 4.5m x 2.9m	19'L x 27'W x 10'10"H 5.8m x 8.2m x 3.3m
Total Possible MDC Units	4	4	3
Racks per MDC	4	10	20
Total Possible Racks	16	40	60
Max IT Load per Rack (KW)	35	22	35
Input Power Per MDC (KW)	148	233	742
Four-Post Rack Units per MDC	51	51	54
Roll-In Rack Max Height	89.25"	89.25"	98"
PUE	1.02 to 1.057	1.02 to 1.06	1.02 to 1.06
4-Post Rack Units per MDC	204	510	1080
Total Possible 4-Post Rack Units	816	2040	3280
Maximum Cores per MDC	4,896	12,240	24,480
Maximum Storage per MDC (PB)	7.168	17.92	35.84
Total Possible Cores	19,584	48,960	73,440
Total Possible Storage (PB)	28.672	71.68	107.52

Small 4 Rack Head Unit basis of design for the entire line of ICE Cube Air Units (Side View)

Small Head Unit (Top View)

Small Head Unit with 3 Expansion Modules (32')

Powerful. Intelligent.