

**vantage S2**  
enclosure system



**wright · line**  
outfitting technology-intensive environments

# The Lean Data Center

The days when the data center was a static environment performing batch processing have turned into a 24/7 virtual operation focused on real time processing – anywhere, anytime.

On a daily basis, new equipment is deployed in the data center, resulting in rapidly increasing power consumption and escalating heat output. Data center managers are constantly moving, adding and changing IT equipment and electrical circuits – all while trying to reduce or maintain costs. This rate of change, combined with the pressure to control costs, forces data center managers to do more with less.

So how do you achieve a lean operation? Choose a business partner that can truly consolidate your enclosure, airflow and power management, security and service needs under one umbrella. Work with Wright Line, a data center infrastructure partner you can trust.

The benefits are three-fold:

- Vendor consolidation reduces procurement costs.
- Complete, pre-configured solutions increase speed of deployment.
- Working direct with the manufacturer increases quality control.

Our single-order flow, just-in-time manufacturing process and focused efforts result in an unprecedented low defect and corrective action rate.

At Wright Line we've served a very loyal customer base for more than 75 years. And, the benefits we reap in our operation, we pass on to our clients.



## STORE

- Enclosure platform is cost effective and versatile to keep pace with the rapidly evolving server market
- Exact 24" (610mm) enclosure width is designed to complement the North American standard 2' x 2' (610mm x 610mm) tile – preventing end-of-row creep
- Guaranteed compatibility with TIA/EIA-310-D\* standard size equipment
- Fully welded frame rated for 2,000 lbs. (909kg) static and dynamic load capacity handles even the heaviest server equipment
- Customizable to address our individual customer needs
- Rolls through a 7' (2.13m) doorway to ease deployment
- Offers top access for adjustment of leveling feet, increasing speed of deployment



## COOL

- Provides superior airflow with its fully perforated front and rear door system
- Exceeds most server manufacturers requirements for open perforation airflow with 940 sq. in. (6065cm<sup>2</sup>) of open perforation
- Wright Line's Patented Heat Containment System (HCS) cools up to 25kW or more per enclosure without the expense of adding supplemental CRAC units to your data center
- HCS separates hot exhaust air and cold supply air; dramatically increasing the reliability of the data center
- Extends existing cooling capacity throughout the data center; freeing up stranded assets and lowering operational costs

## POWER

- Basic, metered and managed power solutions to fit individual monitoring and management requirement at the enclosure level
- Wide variety of custom and standard options for power densities that are increasing and unpredictable
- Uninterruptible Power Supply (UPS) solutions address the growing need for power availability

## MANAGE

- Easily accommodates up to 800 CAT5e/6 cables without bends or breaks
- Broad offering of cable management accessories for proper cable distribution and management
- Overhead cable management system offers flexibility and ease of deployment
- Comprehensive environmental monitoring devices provide advanced detection of emerging problems
- Devices provide predictive failure analysis – allowing you to act, rather than react

## SECURE

- Our 125 different lock core options provide customized access to individual areas or applications in the data center
- An array of electronic locks are offered for remotely managed access
- A wide variety of security devices minimize damage and unauthorized access
- Security devices provide protection rather than detection

\*TIA (Telecommunications Industry Association) • EIA (Electronic Industries Alliance)

# Frequent technology refreshes – one enclosure platform

The data center has undergone major changes over the past decade. Data centers built 10-15 years ago have infrastructure that is far outdated in terms of the technology it must support. The rapid rate of technological innovation combined with the immense amounts of data being created and the growing need for instantaneous access to that data have created a highly evolving IT environment.



The Vantage S2 enclosure platform has been designed with change in mind, which is why so many Fortune 500 companies have standardized on it. Wright Line's forward-thinking design engineers continue to develop scalable enclosure solutions to help customers store their latest technology without having to change enclosure platforms, allowing them to maximize their original investment. Wright Line is so confident that the Vantage S2 enclosure will suit your needs that we offer a "Compatibility Guaranteed" policy. It guarantees that we can offer a solution to store your server and network equipment in the Vantage S2 or we will give you a full refund.\*

Vantage S2				
Depths (over doors)	12U	25U	42U	45U
39" (991mm)	X	X	X	X
42" (1069mm)		X	X	X
48" (1219mm)			X	X
Widths (w/o sides)				
24" (610mm)	X	X	X	X
30" (762mm)			X	X

**COMPATIBILITY  
GUARANTEED**

AVAYA

CISCO SYSTEMS

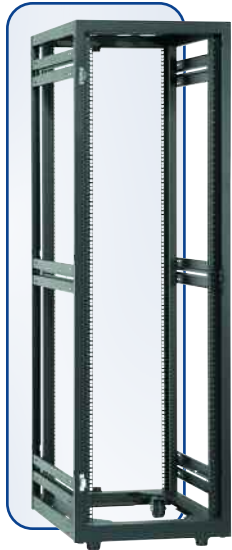
DELL

FUJITSU COMPUTERS  
SIEMENS

We guarantee that all 19" TIA/EIA-310-D compliant equipment will physically fit into the Vantage S2 enclosure.\*

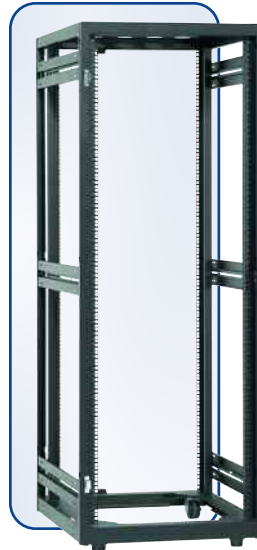
\*This guarantee includes all equipment that complies with the TIA/EIA-310-D standard with the mounting hardware provided by the original equipment manufacturer (OEM). OEM server rails may be required. Wright Line LLC will not be responsible for equipment that physically fits into the enclosure, but does not comply with TIA/EIA-310-D.

# STORE



### 24" (610mm) Wide Enclosure

Standard server enclosure optimizes the footprint in the data center with its exact 24" (610mm) width that eliminates end-of-row creep.



### 30" (762mm) Wide Enclosure

The wider Vantage S2 comfortably accommodates network equipment as well as hybrid environments where large amounts of cables are required.



### 39" (991mm) Deep Enclosure\*

Cost effective solution for shallow servers and tower (non-rack-mount) technology.



### 42" & 48" (1069mm & 1219mm) Deep Enclosure\* – 42" shown above

Accommodates deeper server technologies while providing ample cable and power management provisions in the rear integrated channel.



\* Depth includes front and rear door  
All products and company names are trademarks or registered trademarks of their respective holders.

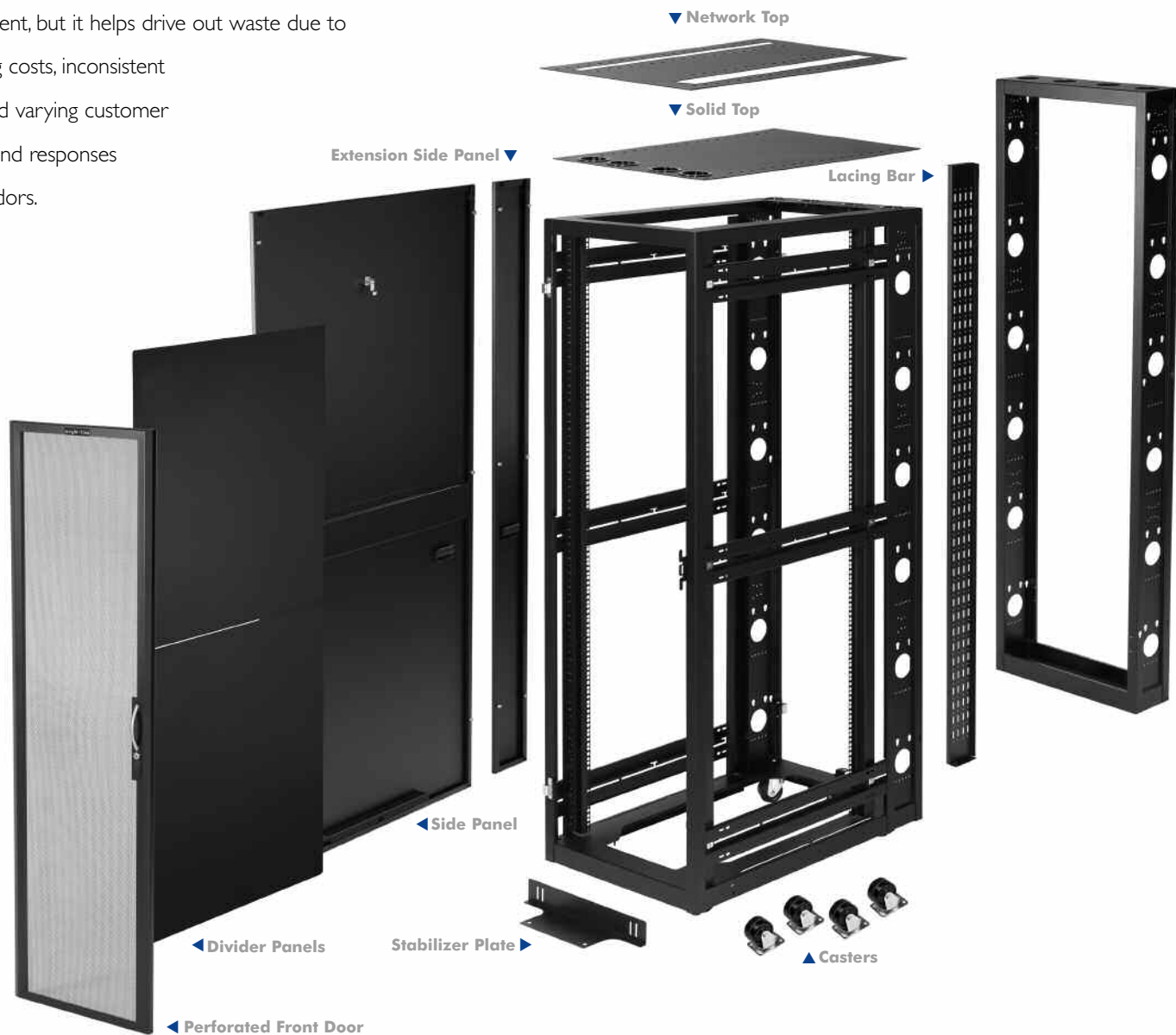
# Frequent technology refreshes – one enclosure platform

## Standardization

Many of our customers have chosen to standardize on the Vantage S2 because of Wright Line's superior rack technology, first-class customer service and convenient local representation to respond to your changing requirements.

Standardization not only eases procurement and vendor management, but it helps drive out waste due to fluctuating costs, inconsistent quality and varying customer support and responses from vendors.

Vantage S2 lends itself to standardization with an open platform that can accommodate everything from SUN's proprietary dimensions and mounting methods to HP's high-density blade technology that requires a high weight load capacity.



# STORE



◀ Heat Containment System (HCS)

◀ Perforated Door

◀ Split Perforated Door

◀ 6" (152mm) Extension Frame

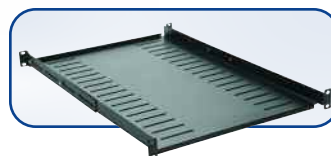
## Vantage S2 Features:

- Top panel provisions for Overhead Cable Management System for flexibility and ease of deployment
- Reversible and tool-less doors to ease in-field changes
- Reversible top panel for flexible cable management access
- Half-height divider panels for ease of deployment
- Baying hardware included
- 0.375" (9.52mm) square holes, #10-32 and #12-24 threaded hole vertical rail options
- 510 sq. in. (3,290cm<sup>2</sup>) of open space in the base for bottom cable entry
- Split rear doors that require less clearance in the service aisle
- Top access leveling guides to increase speed of deployment



### Roll-Out Shelves

Our 1U (100 lbs./45kg) or 2U (200 lbs./91kg) roll-out shelves support non-rack-mount equipment that requires easy, all-around access.



### Fixed Shelves

Our less than 1U (200 lbs./91kg) and 1U (400 lbs./182kg) fixed shelves support even the heaviest non-rack-mount equipment.



### Utility Drawer/Worksurface

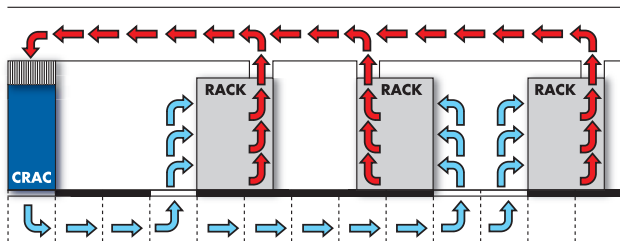
Our 3U or 4U storage drawer keeps peripheral equipment like CDs, DVDs, mice and manuals handy and doubles as a worksurface that can support a laptop.

# Innovative airflow management solutions

At Wright Line, we understand how air works in the data center. Unlike other approaches that simply insert more fans in the enclosure or utilize spot cooling devices in the row, our Vantage S2 Enclosure System features a modular design that addresses air volume, air direction and heat exhaust within the enclosure. As your applications grow or you consolidate servers, cooling capacity can be increased simply by modifying the doors, side panels and tops of your enclosure system. The base enclosure remains the same, lowering your Total Cost of Ownership (TCO).

## Heat Containment System® (HCS)

Wright Line's patented HCS is a simple, scalable and low cost solution to cool up to 25kW or more per enclosure without the expense of adding supplemental CRAC units to your data center. The HCS contains and directs the heat exhaust of your IT equipment through the chimney that is attached to the top rear of the enclosure. The hot air is then ducted to your existing CRAC units through the plenum ceiling or high air returns.



## HCS Cooling Methodology

Vantage S2 has been designed to fit seamlessly into a flooded supply with fully ducted return layout\*.

## Vantage S2 Cooling Scalability with Solid Side & Top Panels

Load (kW)	Rear Door
Up to 3.5kW	Perforated Door
Up to 4.5kW	Solid Door with 2 fan trays – 440 cfm (748m³/h)
Up to 8.5kW	Solid Door with 4 fan trays – 880 cfm (1495m³/h)
Up to 26kW	Solid Door with Active HCS – 2500 cfm (4240m³/h)
Up to 30kW	Solid Door with Passive HCS

### HCS Features and Benefits:

- Scalable heat containment
- Increased rack capacity
- Save white space
- Increase CRAC cooling efficiency
- Create a predictable environment



## HCS

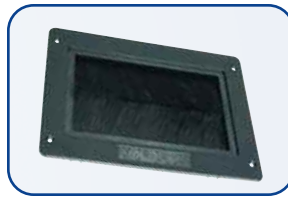
Easily adapt the HCS to your existing Vantage S2 or third-party enclosures.

**COOL**



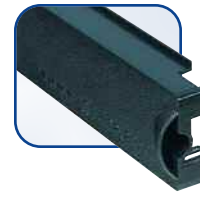
**Flexible Return Duct System**

For data centers unable to accommodate steel chimneys, an alternative solution is the Flexible Return Duct. A simple interface easily connects to the top of the HCS chimney. Flexible 10" ducts are clamped to the interface and a 2' x 2' ceiling tile, which is mounted to the plenum ceiling to create a closed loop system.



**Koldlok™**

Offers a permanent airflow sealing solution in the raised floor, accepting perpetual cabling changes.



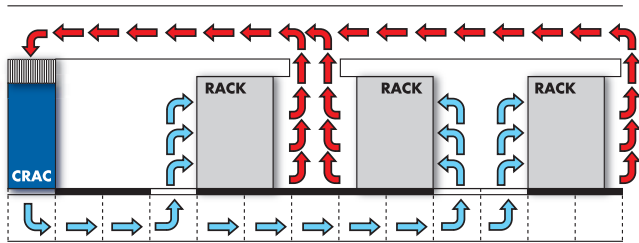
**Tool-less Blanking Panels**

Significantly reduce re-circulation of hot exhaust air to the equipment inlet. Available in 1U, 2U and 8U sizes.



**Total Aisle Containment**

Gain total control of your airflow dynamics by utilizing Wright Line's Aisle Containment Ceiling, Aisle Containment Duct and End of Row Doors which complete the total aisle containment solution.



**Aisle Containment Methodology**

Control the airflow in your aisle regardless of your containment strategy. Flooded supply with locally ducted return (shown above)\*.



\*As outlined in "Thermal Guidelines for Data Processing Environments" by ASHRAE (American Society of Heating, Refrigeration and Air Conditioning Engineers, Inc.)

# Powering increasingly unpredictable equipment densities

Vantage S2 provides superior power and power management capabilities through a basic, metered and managed rack power product offering. What was once a simple task has evolved into a calculated strategy to manage power-intensive servers in densely-packed enclosures.

By working closely with the IT community, server manufacturers and power suppliers, our product engineers continually develop new products and enhancements for a wide range of enclosure applications. Vantage S2 is designed to support the most demanding mission-critical power applications, while remaining scalable to accommodate future requirements. An ever expanding power offering includes the most basic 120V, 15 Amp strip up to a remotely monitored 208V (three-phase), 60 Amp solution specifically for blade technology.

## Three-Phase Power Distribution

An increasing need for more power within the enclosure has prompted a push to three-phase power strips. Running three-phase power directly to the rack reduces the required number of feeds / whips / drops, resulting in lower installation costs. In addition, three-phase power offers the flexibility of providing 120V and 208V receptacles on a single strip.



### Three-Phase

Easily handle today's increasing power requirements and server densities with three-phase PDUs from Wright Line.



### Single-Phase

Single-phase power solutions offer reliable power distribution.

# POWER



## Basic / Metered / Managed Power

Wright Line offers a full range of PDU solutions for your data center. From basic and metered to managed power strips, you can customize your solution to fit your needs. Rack-optimized power strip solutions enable simple power distribution up to monitoring power draw and remotely managing power for your mission-critical equipment.



### Vertical Mounting

Maximize server storage while using space more productively.



### Zero U Mounting

Hole pattern allows multi-vendor mounting of power strips.

## Uninterruptible Power Supply

High quality power solutions that increase power availability and system uptime to enterprise-wide networks in tower or rack-optimized form factors.



### BladeUPS

The scalable and modular BladeUPS expands power protection from 12 to 60kW in a single 19" rack.



### 9130 Tower

The 9130 UPS delivers premium performance with a 0.9 power factor and with greater than 95% efficiency.

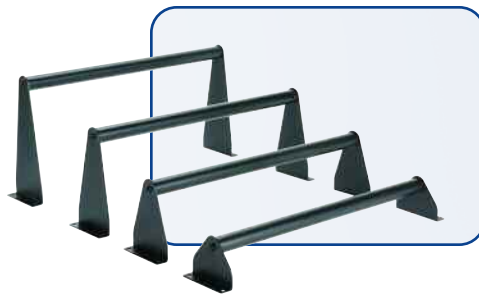


### 5130 Tower/Rack-mount

The line-interactive 5130 UPS delivers high performance within a smaller form factor.

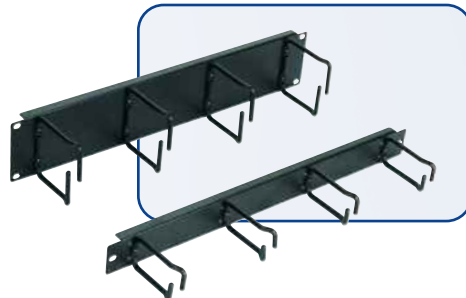
# Cable Management made simple

Vantage S2's unique platform addresses cable and access management concurrently. From a structural standpoint, Vantage S2's frame design efficiently accommodates large quantities of cables and provides unmatched enclosure-to-enclosure, raised floor and overhead cable access. This approach is not only crucial to safeguarding cabling, but it is required to maximize airflow and provide clear, easy access to equipment.



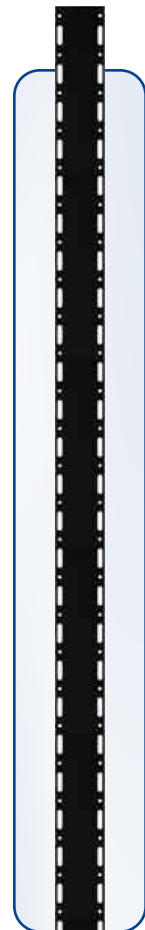
## Cable Strain Relief

Avoid unnecessary cable bends and breaks with strain relief bars that gradually transition cables from a horizontal to a vertical position.



## 1U/2U Cable Ring Organizer

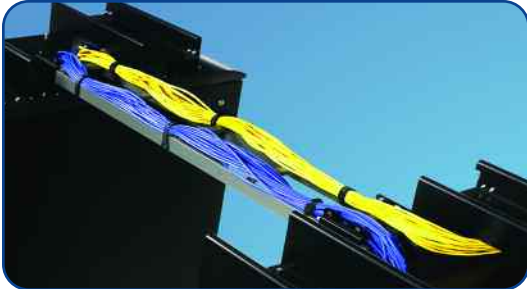
Effective horizontal cable management. Also available as a kit of four individual rings.



## Lacing Bar

Flexible management bar for attaching / mounting cables and power strips.

## MANAGE



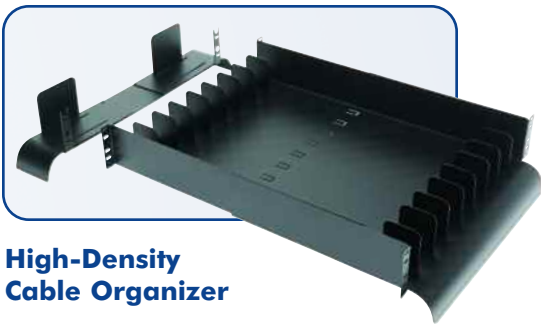
### Overhead Cable Management System

Allows users to route cables on top of the enclosure and offers separate rows for power and data cables.



### Top Panel

This panel features four cable management holes that can be positioned on either end of the enclosure based on cable entry points.



### High-Density Cable Organizer

Organize and manage large amounts of cables front-to-rear in compliance with TIA/EIA-568-A bend radiuses.



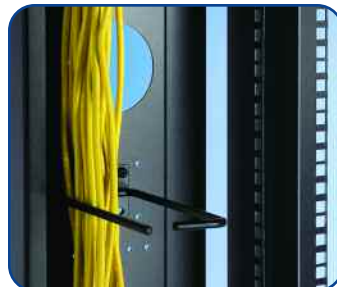
### Transition Tray

Enclosure to enclosure, horizontal cable management with TIA/EIA-568-A compliant bend radiuses.



### Take-up Spools

Efficient and TIA/EIA-568-A compliant organization of excess cabling within the enclosure.



### Rear Channel

The integrated rear channel provides an efficient space to properly manage cables using cable rings or Velcro® straps.



### Velcro® Buckle Straps

Offering superior strength, our reusable Velcro® buckle straps are available in 9" (229mm) and 12" (305mm) lengths to manage cable loads.



## MANAGE

# Network Management

A broad range of products provide streamlined solutions for management of the network. By combining keyboard, video and mouse (KVM) switching, LCD displays and environmental monitoring products, we offer flexible connectivity, efficient switching and convergence of technologies.



### IP or Analog CAT5 KVM

Wright Line offers a large selection of the industry's best performing KVM switches, including single, dual and multi-user models. Port densities range from 8 to 32 (for both IP and analog models).



### IP Gateways

IP Gateways enable customers to upgrade virtually any analog KVM switch, regardless of manufacturer, to an IP KVM switch. Additionally, the family has a single port IP KVM (PX) with virtual media, perfect for remote offices and MSPs.



### Extenders

Wright Line offers an extensive line of KVM, Serial, USB, Audio, Audio/Video and Video CAT5 Extension products.



### Data Center Management

Wright Line offers a Remote Access Management Platform that allows customers to quickly and efficiently access, troubleshoot and fix servers and devices in the data center, server room or locations around the world from a single web-based interface.



### Rack-mount LCD Monitors & KVM

Our Rack-mount LCDs are available with an integrated 16 port IP or analog KVM switch and in a two-user model that supports up to 32 ports. All models come in a seamless 1U from factor.



# Protecting your investment

Security remains a growing concern in today's data center environments. After all, the lifeblood of your business is running on the equipment that is stored and monitored within your enclosures. In addition to the storage, thermal and cooling issues Vantage S2 solves, it also offers a wide selection of safeguard and security devices that protect the mission-critical equipment behind your enclosure doors.

With security appliances and accessories ranging from standard key locks to electronic access control and graphical management tools, you can rest assured that we're completely focused on the deployment and reliability of your systems.



### Cage

Provide the ultimate level of security for your valuable information systems. The cage system is the perfect solution for data center environments requiring subdivision or a higher level of security.



### Standard Locks

High quality standard locks feature 125 key options with master override.



### Swing Handle

Cost effective locking handle that will hold in position with and without the use of keys.



### Combination Lock

Mechanical handle with combination lock and override key. Cost effective multi-layer security.



### Friction Lock

Kaba Mas self-powered friction lock offers advanced yet traditional access keypad.

# wright · line

*Wright Line is a leading designer and manufacturer of products and solutions for data centers, command/control environments, technical labs and government office settings. Incorporating expertise in airflow management and data center containment, modular workstation design and green standards, Wright Line helps customers conserve capital, adhere to technology requirements and address sustainable energy needs.*

Also see our full line of products for high-performance workplaces.



**Airflow Management Solutions Brochure**



**Profile® Advanced Console System Brochure**

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