

# DATA CENTER SOLUTIONS



## Nobody Makes Better Data Center Equipment

*Maximize availability, manageability and efficiency with cost-effective solutions from a dependable partner.*

- Provide reliable, efficient power with battery backup
- Cool, organize, secure and connect critical systems
- Manage power and equipment from any location



Use our free  
**Data Center Audit**  
to reduce costs while  
improving efficiency  
and availability!

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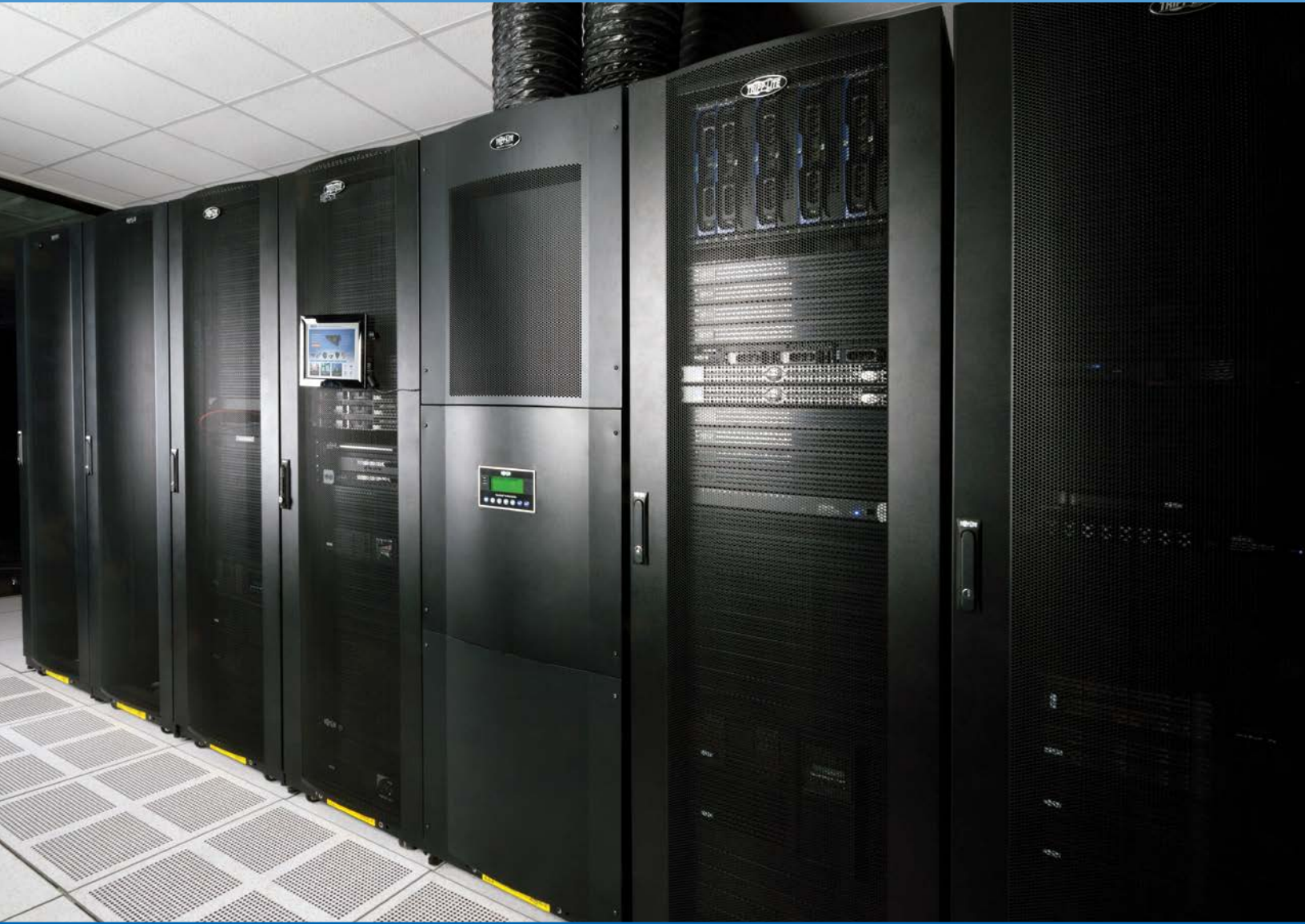
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## Nobody Makes Better Data Center Equipment

### They Just Make It More Expensive

At Tripp Lite, we build data center solutions to the most demanding specifications in the industry. In fact, 80% of Fortune 500 companies rely on us. From racks to PDUs, UPS systems, KVM switches and network cabling, you'll find everything you need to get the job done. And with Tripp Lite, you'll get more for your money.

Our data center specialists will help you design an integrated solution customized to fit your unique requirements. Through our free **Data Center Audit**, we assess your situation and provide actionable recommendations to ensure that your solution will provide the availability, manageability, efficiency and affordability you need to meet your goals.



## A Free Tripp Lite Data Center Audit Helps You:

- **DEFINE** objectives and technical requirements
- **EVALUATE** existing systems and infrastructure
- **EXAMINE** systems to ensure they're correctly powered, protected and configured
- **PLAN** airflow management and cooling
- **PREPARE** for growth and evolving IT requirements
- **MANAGE** servers and other devices from any location
- **REDUCE** operating costs
- **IMPROVE** efficiency and availability
- **CUSTOMIZE** a solution—and even individual products—to fit your application
- **INTEGRATE** components with existing systems

We'll provide a road map with detailed project requirements, bills of material, specifications, installation considerations and ongoing support options, including preventive maintenance, extended warranties, on-site service and rapid repair and replacement. We'll also provide clear alternatives that allow you to strike a balance between technical and budgetary considerations.

## How to Begin

- Learn what Tripp Lite can do for your data center by reviewing this brochure and visiting **[www.tripplite.com](http://www.tripplite.com)**.
- When you're ready to take the next step, contact Tripp Lite at **[solutions@tripplite.com](mailto:solutions@tripplite.com)** or **888.447.6227**.





## UPS SYSTEMS & BATTERIES

### EFFICIENT, RELIABLE POWER FOR HIGH-AVAILABILITY APPLICATIONS

- Protect critical servers and network equipment with conditioned power and reliable, scalable battery backup.
- Tripp Lite makes more than 250 highly efficient on-line and line-interactive UPS systems, all designed for high-availability applications.
- Options include 3-phase input, network management, pure sine wave output, hot-swappable power modules and built-in redundancy.

## RACK & COOLING SOLUTIONS

### CONVENIENT, CONFIGURABLE SECURITY AND ORGANIZATION

- Quickly configure racks and cooling to maximize the performance, security and energy efficiency of servers and network hardware.
- Tripp Lite makes more than 200 EIA-compliant rack enclosures, open frame racks, wall-mount cabinets, close-coupled cooling solutions, cable managers and rack accessories.
- Tripp Lite solutions enhance hot-aisle/cold-aisle configurations for more efficient data center cooling.



## POWER DISTRIBUTION UNITS (PDUs)

### NETWORK-GRADE POWER DISTRIBUTION

- Distribute power to servers and network equipment in high-density, high-availability environments.
- Tripp Lite makes more than 200 basic, metered, monitored and switched rack PDUs in horizontal and vertical form factors.
- Options include current monitoring, network interface, centralized management, automated alerts, remote outlet control, 3-phase input and automatic transfer switching.

## KVM, CONSOLE & MANAGEMENT SOLUTIONS

### LOCAL AND REMOTE DEVICE AND POWER MANAGEMENT

- Access and control hundreds of servers and other devices from any location through a single console.
- Tripp Lite makes more than 100 rack consoles, KVM switches, IP console servers and accessories. Options include remote access (KVM over IP), built-in LCD, multiple users and Cat5/UTP cabling.
- Tripp Lite also offers a full range of cost-effective remote management tools, environmental sensors and alarm detection systems.



## CABLES & CONNECTIVITY

### DEPENDABLE NETWORK AND POWER CONNECTIONS

- Connect high-speed data networks and power outlets to switches, routers and servers in high-density environments.
- Tripp Lite makes hundreds of cables, adapters and patch panels, all fully tested to meet or exceed the latest standards and available in a wide variety of lengths and colors.
- Solutions include copper and fiber patch cables, modular patch panels and space-saving power cords.



## CUSTOM PRODUCTS

### RACKS, CABLES, POWER DISTRIBUTION UNITS AND UPS SYSTEMS BUILT TO YOUR SPECIFICATIONS

- With more than 4,000 products, Tripp Lite may already make exactly what you need, but we know off-the-shelf products aren't always ideal for every application.
- Our in-house engineering team can deliver custom products quickly and affordably, without delaying your project or straining your budget.
- Contact Tripp Lite for custom products tailored to match your technical specifications, cost requirements, facility, personnel and policies.

## Data Center / MDF (Main Distribution Frame)

### Typical Environment and Challenges

- 6 to 100+ rack enclosures hold servers, storage and network hardware. MDF racks organize network cabling.
- Supply reliable, efficient power and battery backup.
- Supplement perimeter cooling with close-coupled air conditioning to target hot spots.
- Organize high-density connections to high-speed networks.
- Centralize management of power, devices and infrastructure.
- Support enterprise security standards.
- Support hot-aisle/cold-aisle configurations.

### RECOMMENDED TRIPP LITE SOLUTIONS

#### UPS SYSTEMS

- In-Rack Power: SmartOnline® and SmartPro® Single-Phase UPS Systems** provide up to 20kVA of reliable, efficient power with expandable battery backup to keep equipment operating through blackouts and other power problems.
- Centralized Power: SmartOnline 3-Phase UPS Systems** provide up to 210kVA of reliable, efficient power with expandable battery backup and built-in N+1 redundancy.

#### RACKS & COOLING

- SmartRack® Enclosures** come in 12U, 18U, 24U, 25U, 42U, 45U and 48U sizes, with a variety of depths and widths available.
- SmartRack Open Frame Racks** are available in 12U, 13U, 25U, 42U, 45U, 48U, 50U, 52U and 58U sizes. We stock 2-post, 4-post and heavy-duty models, with many custom options.
- High-Capacity Cable Managers** organize and secure large quantities of network patch cables.
- Cable Troughs and Cable Ladders** route cables between racks and across aisles, separating power and data cables.
- Portable Air Conditioning Units** provide up to 24,000 BTU (7 kW) of supplemental plug-and-play cooling with remote management support.

#### POWER DISTRIBUTION UNITS (PDUs)

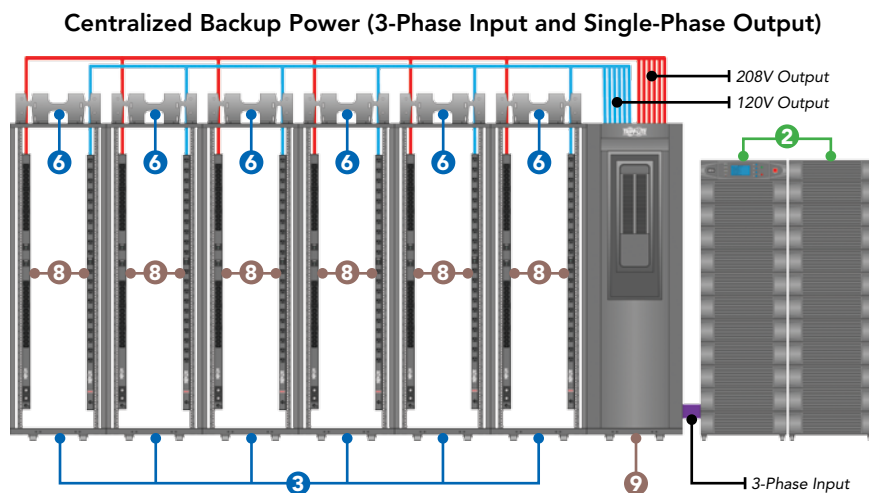
- Network-Grade Rack PDUs** are available with or without current monitoring, remote monitoring/alerts, remote individual outlet control, 3-phase input and built-in ATS.
- Power Distribution Centers** distribute single-phase and/or 3-phase power from 3-phase power sources to racks through add-on breakers and output cord sets (whips).

#### KVMs, CONSOLES & MANAGEMENT TOOLS

- KVM Switches** control multiple servers from a single console. Available features include IP remote access, Cat5 cabling, multiuser access and LCD consoles that fold to store in 1U.
- IP Console Servers** provide secure in-band and out-of-band remote access to serial- and network-connected devices.
- UPS Network Management Cards** enable standalone remote UPS monitoring and control via SNMP, Web, SSH or telnet, including centralized management via free PowerAlert® software. Also support optional **Environmental Sensors**.

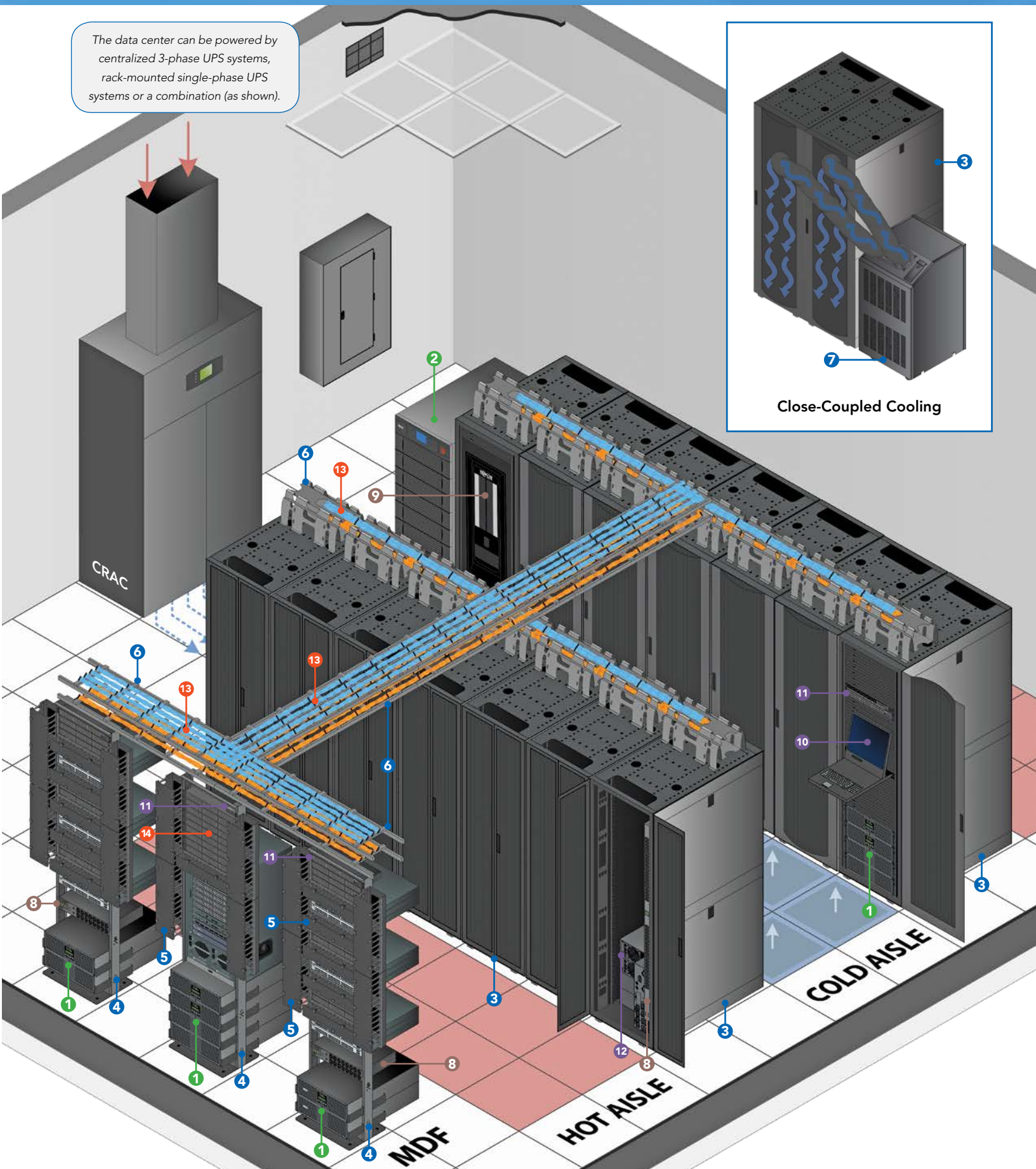
#### CABLES & CONNECTIVITY

- Network Cables (Copper and Fiber)**
- Patch Panels (Copper and Fiber)**





The data center can be powered by centralized 3-phase UPS systems, rack-mounted single-phase UPS systems or a combination (as shown).



Close-Coupled Cooling

## Computer / Server Room

### Typical Environment and Challenges

- **1 to 6 racks hold servers, storage and network hardware.**
- Supply reliable, efficient power and battery backup.
- Secure equipment and maximize system uptime.
- Supplement or replace facility HVAC with close-coupled cooling to target hot spots and increase efficiency.
- Organize rack equipment and high-density cabling.
- Simplify and centralize power and device management.
- Allow IT staff to manage equipment from any location to reduce labor and travel costs while improving uptime.
- Support enterprise security standards.
- Connect equipment to high-speed networks.
- Enable self-service to reduce repair costs and delays.

### RECOMMENDED TRIPP LITE SOLUTIONS

#### UPS SYSTEMS

- 1 In-Rack Power: SmartOnline and SmartPro Single-Phase UPS Systems** provide up to 20kVA of reliable, efficient power with expandable battery backup to keep equipment operating through blackouts and other power problems. **SmartOnline Hot-Swappable UPS Systems** prevent downtime during maintenance and repair by routing all power connections through a detachable PDU with a bypass switch.
- 2 External Battery Packs** provide extended runtime for compatible UPS systems.
- 3 Centralized Power: SmartOnline 3-Phase UPS Systems** provide up to 210kVA of reliable, efficient power with expandable battery backup and built-in N+1 redundancy.

#### RACKS & COOLING

- 4 SmartRack Enclosures** come in 12U, 18U, 24U, 25U, 42U, 45U and 48U sizes, with a variety of depths and widths available.
- 5 SmartRack Open Frame Racks** are available in 12U, 13U, 25U, 42U, 45U, 48U, 50U, 52U and 58U sizes. We stock 2-post, 4-post and heavy-duty models, with many custom options.
- 6 High-Capacity Cable Managers** organize and secure large quantities of network patch cables.
- 7 Cable Troughs and Cable Ladders** route cables between racks and across aisles, separating power and data cables to limit electromagnetic interference.
- 8 Portable Air Conditioning Units** provide up to 24,000 BTU (7 kW) of close-coupled, plug-and-play cooling. Fully installable by IT staff, these self-contained units can cool a small room or focus cool air on an overheating rack or device through a flexible output duct. An included or optional network accessory enables remote management.
- 9 Rack-Mounted Air Conditioning Units** provide up to 7,000 BTU (2kW) of close-coupled, plug-and-play cooling. They are self-contained and can be installed by IT staff like other rack equipment.

#### POWER DISTRIBUTION UNITS (PDUs)

- 10 Network-Grade Rack PDUs** are available with or without current monitoring, remote monitoring/alerts, remote individual outlet control, 3-phase input and built-in ATS.
- 11 Hot-Swap PDUs** provide dual power inputs and a manual transfer switch to allow any compatible UPS to be hot-swapped for maintenance, repair or replacement without requiring connected equipment downtime.
- 12 Power Distribution Centers** distribute single-phase and/or 3-phase power from 3-phase power sources to racks through add-on breakers and output cord sets (whips). They are available with or without a built-in bypass panel.

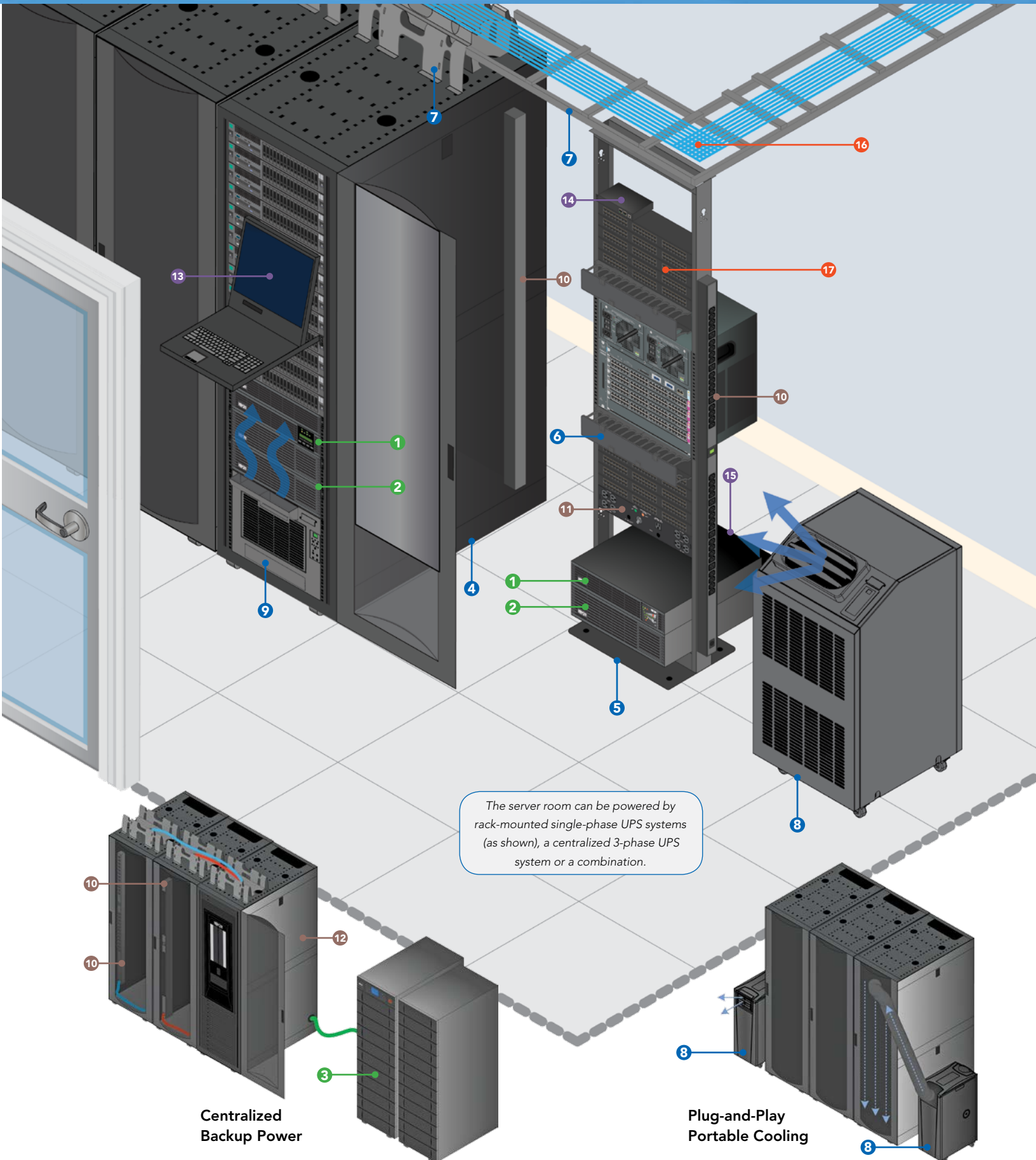
#### KVMs, CONSOLES & MANAGEMENT TOOLS

- 13 KVM Switches** control multiple servers from a single console (keyboard, mouse and monitor). Available features include IP remote access, Cat5 cabling, multiuser access and built-in LCD consoles that fold to store in 1U.
- 14 IP Console Servers** provide highly secure in-band (primary network) and out-of-band (fail-safe) remote access to serial- and network-connected devices, including servers, routers and network switches. Compact models do not require rack space.
- 15 UPS Network Management Cards** enable standalone remote UPS monitoring and control via SNMP, Web, SSH or telnet, including centralized management via free PowerAlert software. Connect optional **Environmental Sensors** to monitor temperature, humidity and dry contact devices.

#### CABLES & CONNECTIVITY

- 16 Network Cables (Copper and Fiber)** connect high-speed data networks to switches, routers and servers.
- 17 Patch Panels (Copper and Fiber)** provide reliable network interconnections in minimal rack space. Using patch panels as part of a structured cabling system lowers maintenance costs and reduces installer errors.





The server room can be powered by rack-mounted single-phase UPS systems (as shown), a centralized 3-phase UPS system or a combination.

Centralized Backup Power

Plug-and-Play Portable Cooling

## Network Closet / IDF (Intermediate Distribution Frame)

### Typical Environment and Challenges

- 1 to 3 open frame racks hold network/telecommunications equipment and cabling for a branch office or part of a large building or campus. Also known as a wiring closet or intermediate distribution frame (IDF).
- Supply reliable, efficient power and battery backup.
- Organize high-density connections to high-speed networks.
- Simplify and centralize power and device management.
- Allow IT staff to manage equipment from any location to reduce labor and travel costs while improving uptime.
- Maintain consistent temperature regardless of facility HVAC operation.
- Target hot spots with close-coupled cooling.

### RECOMMENDED TRIPP LITE SOLUTIONS

#### UPS SYSTEMS

- 1 **SmartOnline and SmartPro Single-Phase UPS Systems** provide up to 20kVA of reliable, efficient power with expandable battery backup to keep equipment operating through blackouts and other power problems.
- 2 **External Battery Packs** provide extended runtime for compatible UPS systems.

#### RACKS & COOLING

- 3 **SmartRack Open Frame Racks** are available in 12U, 13U, 25U, 42U, 45U, 48U, 50U, 52U and 58U sizes. We stock 2-post, 4-post and heavy-duty models, with many custom options.
- 4 **High-Capacity Cable Managers** organize and secure large quantities of network patch cables. Horizontal models and vertical models with toolless mounting are available.
- 5 **Cable Ladders** route cables between racks and across aisles, separating power and data cables to limit electromagnetic interference that can increase errors and reduce performance.
- 6 **Portable Air Conditioning Units** provide up to 24,000 BTU (7 kW) of close-coupled, plug-and-play cooling. Fully installable by IT staff, these self-contained units can cool a small room or focus cool air on an overheating rack or device through a flexible output duct. An included or optional network accessory enables remote management.

#### POWER DISTRIBUTION UNITS (PDUs)

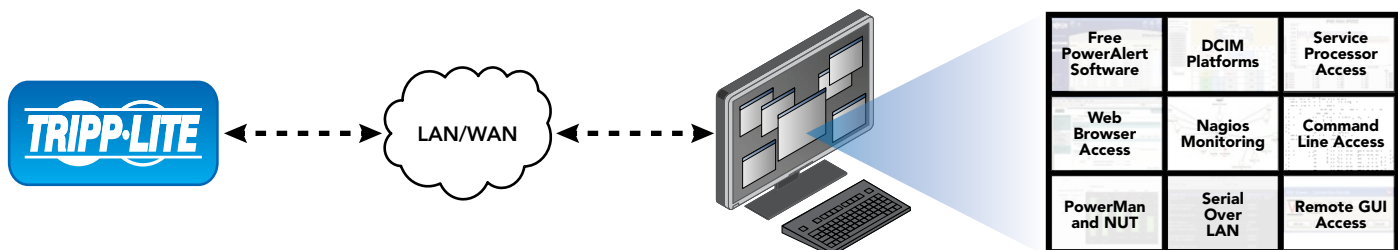
- 7 **Network-Grade Rack PDUs** are available with or without current monitoring, remote monitoring/alerts, remote individual outlet control, 3-phase input and built-in ATS. **Hot-Swap PDUs** provide dual power inputs and a manual transfer switch to allow any compatible UPS to be hot-swapped for maintenance, repair or replacement without requiring connected equipment downtime.

#### KVMs, CONSOLES & MANAGEMENT TOOLS

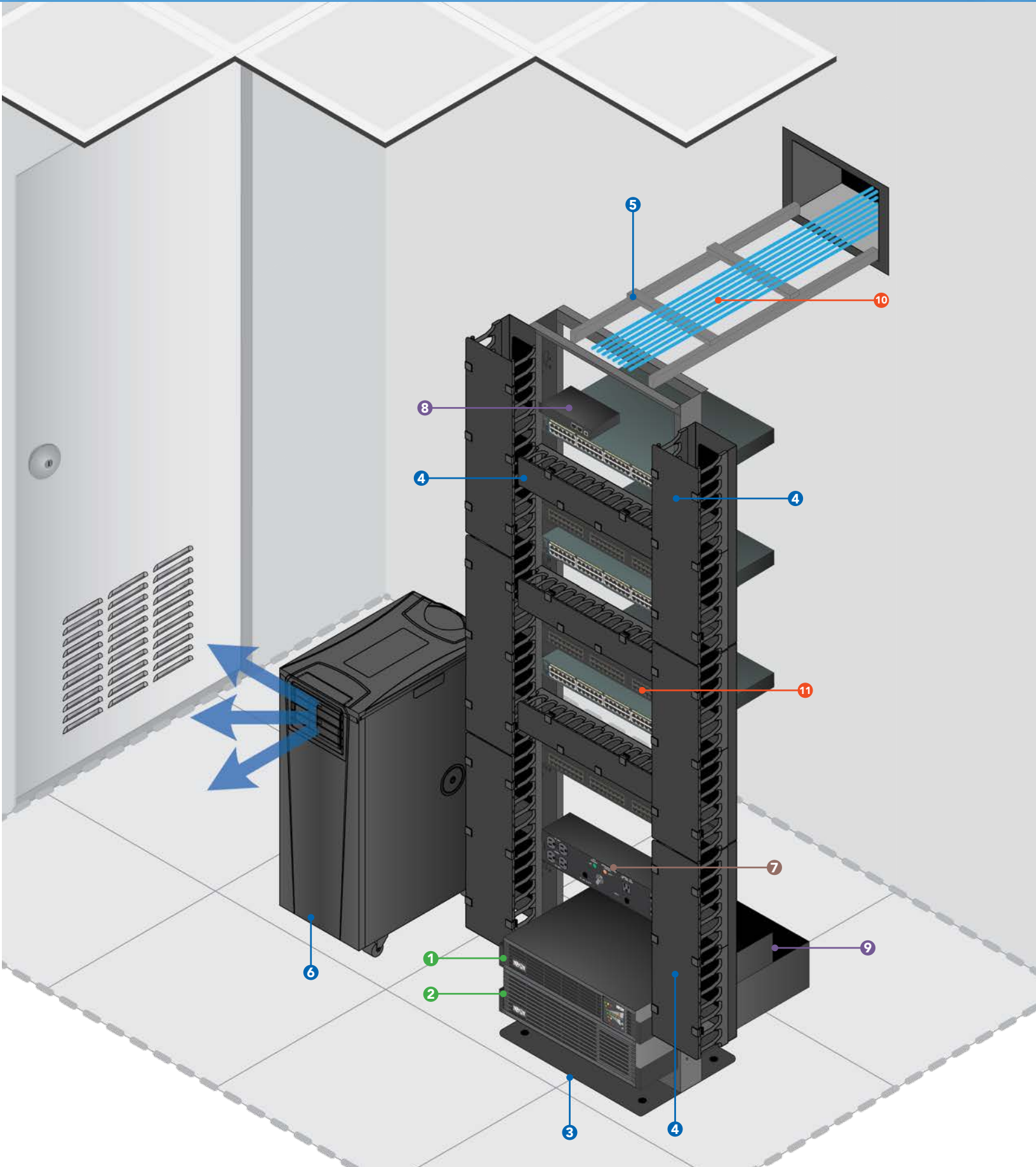
- 8 **IP Console Servers** provide highly secure in-band (primary network) and out-of-band (fail-safe) remote access to serial- and network-connected devices, including servers, routers and network switches. Real-time alerts, service processor access and convenient management tools correct problems before they impair productivity.
- 9 **UPS Network Management Cards** enable standalone remote UPS monitoring and control via SNMP, Web, SSH or telnet, including centralized management via free PowerAlert software. Connect optional **Environmental Sensors** to monitor temperature, humidity and dry contact devices.

#### CABLES & CONNECTIVITY

- 10 **Network Cables (Copper and Fiber)**
- 11 **Network Patch Panels (Copper and Fiber)**



Tripp Lite provides a wide range of remote management options for installations of all sizes.





## Remote Network Cabinet

### Typical Environment and Challenges

- Wall-mount cabinet houses network hardware in a location not designed for IT installations.
- Organize equipment and cabling in limited space.
- Provide reliable power and battery backup.
- Protect equipment from unauthorized access.
- Comply with PCI-DSS security requirements.

### RECOMMENDED TRIPP LITE SOLUTIONS

#### UPS SYSTEMS

- 1 Network/Server UPS Systems** provide reliable, efficient power to keep equipment operating through outages. A variety of models fit in wall-mount rack cabinets.

#### RACKS & COOLING

- 2 Wall-Mount Rack Enclosure Cabinets** protect rack equipment from theft and tampering in remote locations. Locking, ventilated steel cabinets are available in depths optimized for patch panels, network switches, UPS systems and servers. Options include sizes from 2U to 26U, clear acrylic window, black or white powder-coated finish, NEMA cabinets for harsh environments, cooling fans and casters.

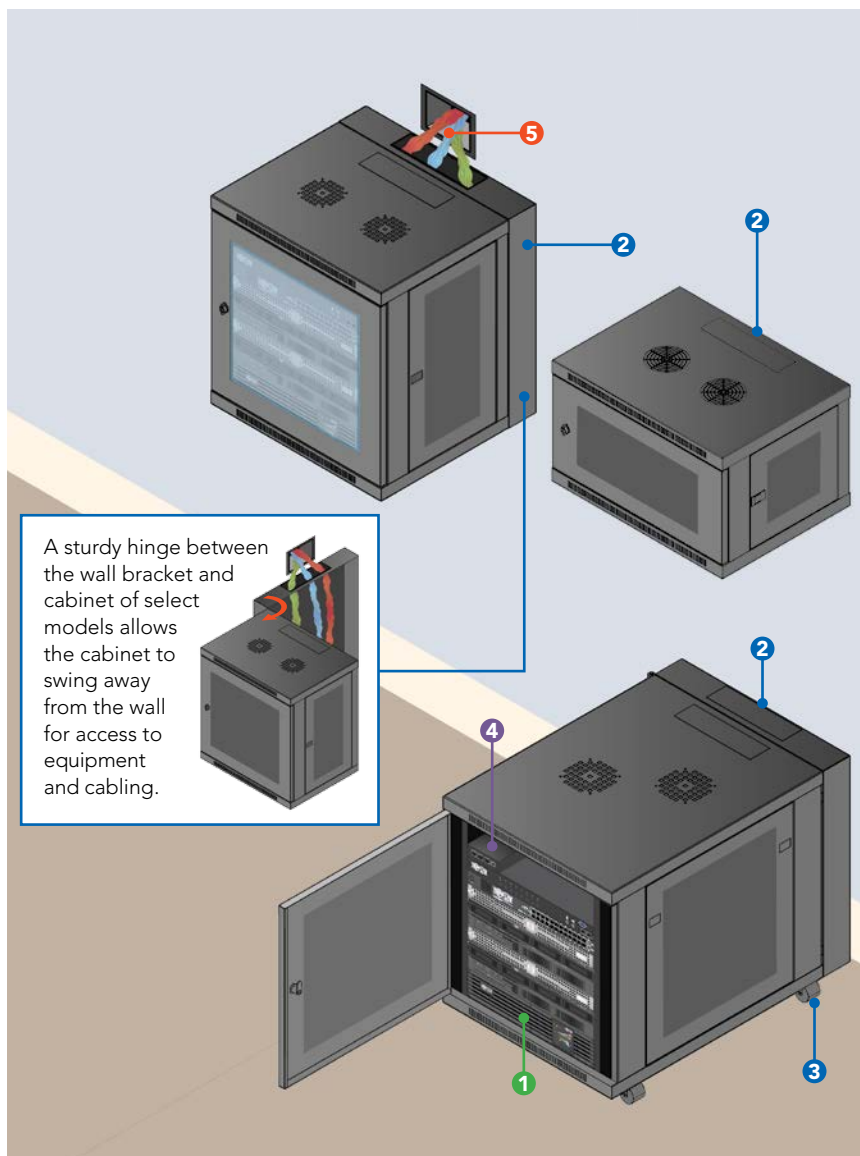
- 3 Caster Kits** enable floor-standing applications.

#### KVMs, CONSOLES & MANAGEMENT TOOLS

- 4 IP Console Servers** provide highly secure in-band (primary network) and out-of-band (fail-safe) remote access to serial- and network-connected devices, including servers, routers and network switches. Compact models do not require rack space.

#### CABLES & CONNECTIVITY

- 5 Copper and Fiber Network Cables**



Distributed By:



Pulse Supply  
 909 Ridgebrook Road., Sparks, Maryland 21152, USA  
 TEL : +1-410-583-1701 FAX : +1-410-583-1704  
 E-mail: sales@pulsesupply.com  
<https://www.pulsesupply.com/tripp-lite>

