

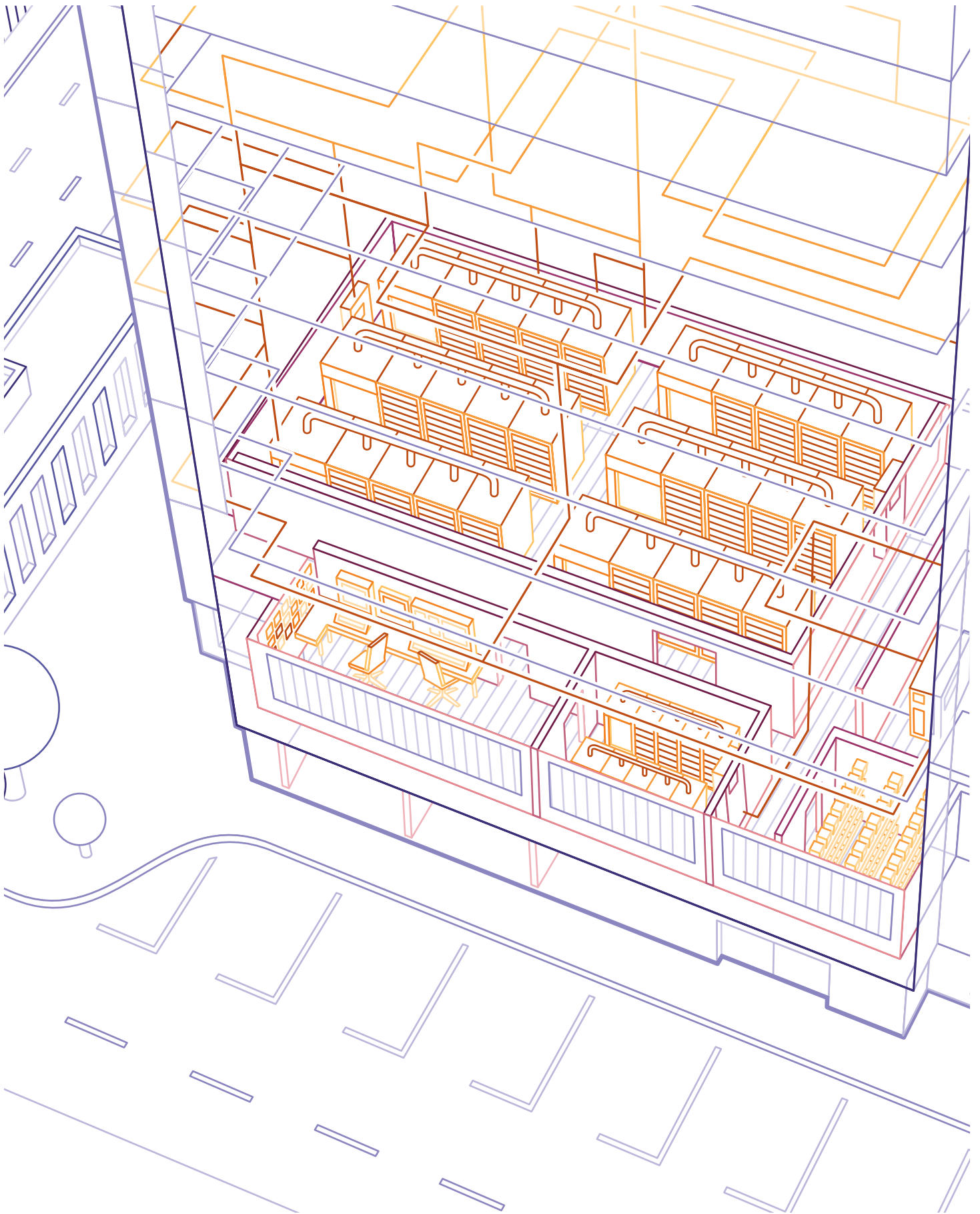
Product catalog

Cyberex data center products

Overview catalog

Power and productivity
for a better world™





World class leader in mission critical power quality products and services



About us

For more than a quarter century, the people of Cyberex® have been providing innovative, timely, power solutions in response to customer needs. Our commitment to excellence has been demonstrated thousands of times on every continent – by providing the security that only comes from having truly uninterruptible power.

Our mission is to satisfy our customers with fast, flexible and customer-focused solutions that exceed their expectations.

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SuperSwitch[®]3 technology

Available ratings from 200 – 4000A



SuperSwitch3 redefines reliability

Forty years ago, Cyberex revolutionized power distribution with its invention of the static transfer switch. Since then, Cyberex has installed more units than any other manufacturer. It is from this experience and our customers' requirements that the SuperSwitch3 has evolved.

Designed foremost with fault-tolerant architecture, SuperSwitch3 ensures there is no single point of failure to interrupt your critical loads. Our innovative digital signal processing coupled with our patented transfer algorithm is key to keeping your most viable power source connected to the load at all times. Robust electrical components provide unmatched reliability with a MTBDE estimated at 1.5 million hours. SuperSwitch3 redefines power distribution reliability with its exceptional design, ease of use and serviceability.

Expert power management

With ever-increasing power requirements and the need to ensure uptime, SuperSwitch3 provides exceptional tools and features for power management.

Dynamic inrush restraint

The application of static transfer switches on the primary side of large transformers can present a design challenge because of possible large inrush currents during emergency transfers. The optional “dynamic inrush restraint” (DIR) feature of the SuperSwitch3 eliminates this concern. Based on initial conditions at the time of transfer, the SuperSwitch3 can dynamically modify its standard transfer algorithm to limit inrush current, minimize stress on the distribution system and ensure continuity of power to the load.

Waveform capture

SuperSwitch3 is available with waveform capture. Cyberex waveform capture feature uses digital signal processing techniques to simultaneously sample both source voltage and current waveforms. The waveform data is collected every 0.1 Milliseconds as 12 bit samples to provide an extremely high level of detail.

The waveform capture feature stores up to 25 waveforms for both transfer and non-transfer events. Each capture contains a total of 6 cycles; 3 cycles prior to the event and 3 cycles after the event.

The waveforms can be imported into a PC based spreadsheet tool for additional viewing and analysis.

Software-guided breaker bypass

Human error is one of the main causes of dropped loads during routine breaker bypass operations. Cyberex software guided breaker bypass feature prompts the operator through the breaker bypass procedure with simple graphical and written instructions and indicator lights to ensure each operation is completed and performed error-free in the correct sequence.

Data and alarm management

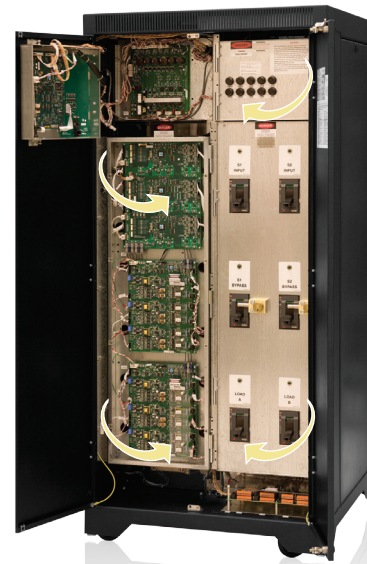
The SuperSwitch3 maintains an event log of the 2,500 precision time and date-stamped events that can be viewed locally or exported for further analysis.

Remote access

The current status of the SuperSwitch3 is available remotely via modbus RTU or TCP/IP. Additionally all operational parameters including the event log can be viewed from a network using the SuperSwitch3's web server. Several levels of password protection provide complete security within your network environment.

Breakthrough technology

- Fault-tolerant architecture eliminates single point of failure
- Patented SuperSwitch algorithm delivers unmatched transfer characteristics
- Dynamic inrush restraint increases system reliability by minimizing inrush to downstream transformers
- Software-guided breaker operation eliminates potential for operator error
- Graphical user-interface and mimic panel for local system monitoring and configuration
- Waveform capture capable of storing 25 waveforms for both transfer and non-transfer events
- Comprehensive monitoring provides ultimate flexibility for collecting and managing power data
- Ultra-dense footprint reduces valuable floor space
- Three tiered user-defined thresholds for power quality management
- Remote access capability for system, event and alarm monitoring
- Flexible access for ease of cabling, operation and maintenance
- Unparalleled alarms, metering & diagnostics
- Advanced communications allow access at any time from any location
- Reduced number of internal components maximizes reliability
- Configurable DIR transfer timing



Innovative arrangement provides optional access for operation, installation and maintenance



Rear view of SuperSwitch3 showing top or bottom entry and exit for power cables

Cyberex offers the SuperSwitch3 in the broadest range of ampacities and special configurations in the market.

- Ampere ratings from 200A to 4000A
- Voltage ratings include 208, 380, 400, 415, 480 and 600V, 3-phase
- Short circuit withstand to 100kAIC
- 2 or 3 source
- 3-pole or 4-pole
- 50 or 60Hz

Power distribution – PDU



Data centers are the essential ingredients that enable individual businesses to have an electronic presence on the internet. Reliable, clean and efficient uninterrupted power is critical to the mission of any organization's data center. At Cyberex we have embraced the challenge to develop solutions to meet individual needs of the modern data center while maintaining our heritage of offering the highest reliability and efficiency on the market today.

The PDU offers the most reliable and flexible power distribution product with almost unlimited configurations of panelboards, sub-feed breakers to meet every load requirement. Three cabinet designs support kVA ratings up to 500kVA.

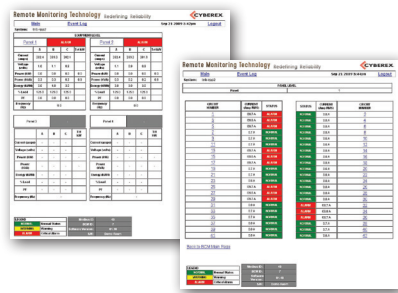
Our circuit management of products provides solutions to monitor and manage any combination of individual branch circuits or sub-feeds from a single hardware platform.

The flexibility of the PDU benefits the system designer, the installer and the owner. If one of our PDU standard configurations doesn't meet your application's needs Cyberex is a master at customization. Our engineering capability will provide a solution that meets your needs.

Designed for performance and flexibility

- Multiple panelboard and breaker configurations offer the highest level of customization for diverse loads
- Optional comprehensive system monitoring provides ultimate flexibility for collecting and managing power data
- Safety barrier to separate primary and secondary voltages
- Branch circuit and sub-feed management (optional) provides enhanced power data collection for branch circuits and sub-feeds
- Monitoring interfaces RTU or TCP/IP to building management system using modbus, web server, and SNMP traps
- PDU display with 320 x 240 resolution capable of monitoring and storing data from up to 16 local or remote circuit management devices – each with up to 252 circuits
- Efficient high isolation, copper wound transformers increases performance and significantly reduce EMI and RFI noise
- Spacious cable management and landing area simplifies frequent wiring changes and ease of installation and access
- Compact footprint maximizes valuable floor space
- ETL listed to both UL 60950 and UL 891. Suitable for installation inside or outside IT-designated spaces

Remote power distribution – RPP and HPP



The RPP is available with advanced branch circuit management that communicates valuable information to your building management system (bms) or to a remote webserver display unit.



HPP

Today's data centers require the highest level of reliability and performance. The Cyberex RPP provides two tiers of products providing the flexibility to expand your data center distribution capabilities. Fed from your existing PDU, the RPP readily provides up to (4) 42 pole panelboards, (4) main breakers all fed from up to (4) sources.

Our traditional RPP is sized to fit over a standard 2 foot square raised floor tile and serves loads at 208/120V.

Traditional design offers performance and flexibility

- Multiple input capability improves management of dual-corded loads
- Multiple panelboard and breaker configurations offer the highest level of customization
- Comprehensive system monitoring provides ultimate flexibility for collecting and managing power data
- Branch circuit management (optional) provides enhanced power data collection for branch circuits
- Remote monitoring interfaces to building management system
- Local high resolution display (optional) monitors up to 16 RPPs with 2,688 branch circuits
- Spacious cable management and landing area simplifies frequent wiring changes and ease of installation
- Compact footprint maximizes valuable floor space

Our high power RPP has a rack-depth form factor to blend into your standard rack line-ups and is offered in up to 480/277V and 400A configurations to provide almost 4 times the power density than is possible with traditional lower voltage feeders.

More kilowatts into the white space 415/240V – 400A – rack depth form factor

- Standard voltages: 480/277, 415/240, 400/230, 380/220
- Panelboard options up to 400A, 480V, 42 circuit – Square D, ABB, Cooper Bussman
- Input connections: 1,000A input bus for 1 to 2 sources; 600A input bus for 1 to 4 sources
- Entry/exit: top or bottom
- Traditional configurations up to 4 sources, 4 panelboards, 4 main breakers.
- Construction: welded frame, door-in-door hinged dead fronts
- Aesthetics to match server cabinets

Options

- Dual feed with main-tie-main, sync check, 3 or 4 pole
- Metal barrier between front and rear distribution
- See through doors
- Branch circuit management, modbus RTU, optional display with modbus TCP, web server and SNMP trap monitoring
- SPD
- Display

Mission critical power distribution – MC

Available ratings from 75 – 300kVA



The Mission Critical (MC) provides redundant operation using two sources feeding one common group of output distribution devices. By integrating a Cyberex SuperSwitch3 digital static transfer switch (DSTS) and Cyberex power distribution unit (PDU), the MC provides the

highest level of customization for diverse equipment loads and maximum growth. Coupled with advanced communications and branch circuit and sub-feed circuit management, the MC is the key design element for ensuring maximum uptime for your facility.



Proven components and performance

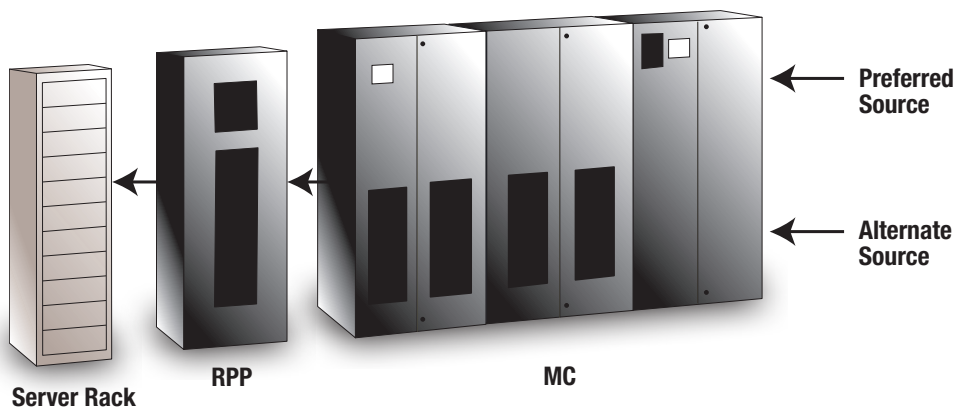
- Integrated SuperSwitch3 DSTS and PDU maximizes reliability and availability of the entire critical power system
- Fault-tolerant DSTS design eliminates single point of failure
- Dynamic inrush restraint (DIR) decreases transformer inrush and increases system reliability
- Primary DSTS design options with input-positioned DSTS offer maximum flexibility
- Software-guided breaker operation reduces possibility of operator error
- Multiple panelboard and breaker configurations provide maximum design flexibility
- Comprehensive system and circuit monitoring provides ultimate visibility of operating data
- Branch circuit and sub-feed monitoring (optional) collects, organizes and manages detailed information about each circuit
- Remote communications uses standard protocols to interface with a building management system (BMS)
- Compact footprint maximizes valuable floor space and reduces power cabling costs
- Easy maintenance access means low MTTR (mean time to repair)



SuperSwitch3 provides the highest level of reliability in the marketplace. Designed with a true fault tolerant architecture, SuperSwitch3 is installed user base of 7000 attests to its reliability.



Integrated *PDU* provides the highest level of customization for diverse equipment loads.



Mission critical power distribution – ZF



The Zero Footprint (ZF), similar to the MC, provides redundant operation using two sources feeding one common group of output distribution devices. The ZF has dual transformers at the input of a Cyberex SuperSwitch3 digital static transfer switch (DSTS). The output of the static switch feeds output distribution devices which may include sub-feed breakers and/or panelboards.

This integrated package offers a single, easy-to-install, factory-tested unit with a footprint that saves valuable floor space and avoids expensive inter-cabinet wiring.

A multitude of available distribution features and comprehensive circuit management with advanced communications provides the ultimate in design flexibility and reliability.



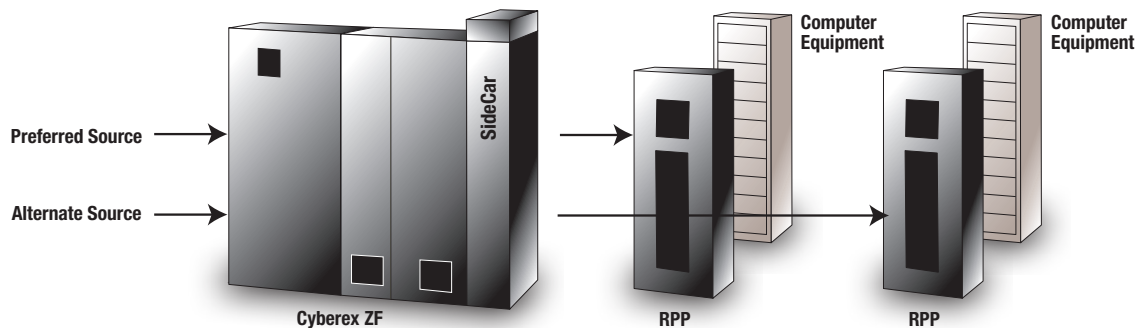
Proven components and performance

- Integrated SuperSwitch3 DSTS and special distribution ensures reliability and availability of the entire critical power system
- Operator interface is the same reliable, easy-to-use interface found in the Cyberex SuperSwitch3 digital static transfer switch
- Dual input-positioned transformers offer ultimate redundancy and reliability
- Output distribution in separate side car cabinet offered in a wide range of configurations including removable or fixed mounted breakers and panelboards
- Software-guided breaker operation reduces possibility of operator error
- Remote communications uses standard protocols to interface with a building management system (BMS)
- Compact footprint maximizes valuable floor space and reduces power cabling costs
- Easy maintenance access means low MTTR (mean time to repair)



Space-saving footprint combines dual input transformers and static switch into only two cabinets

Zero Footprint provides added reliability to any architecture



Circuit management

A flexible solution for data center power monitoring needs

Managing individual circuit loading is critical to the reliability of your data center. The circuit management system provides accurate load management information and alerts you of potential problems before they affect your operation. User configurable set points allow you to know when each circuit is approaching a load threshold that could interrupt power to that device. This notification allows your staff to proactively maintain your critical operation.

Designed for performance, flexibility and reliability

Factory integrated as an optional feature to your PDU or RPP; the circuit management system can be used for communicating valuable information to your central management system or to a local or remote display panel.

- The circuit management actively monitors the load current of each of your circuits and reports this information to you for cost allocation or load protection management.
- The circuit management system can be field maintained or upgraded to allow the addition or replacement of individual sensors. Others offer only a fixed component system carried on a PCB that must be abandoned within your panels and bypassed with a cumbersome hardware configuration when upgraded or repaired.

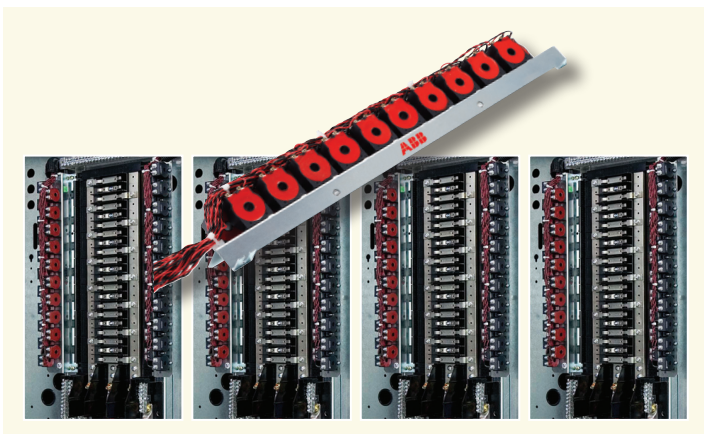


Flexible configurations

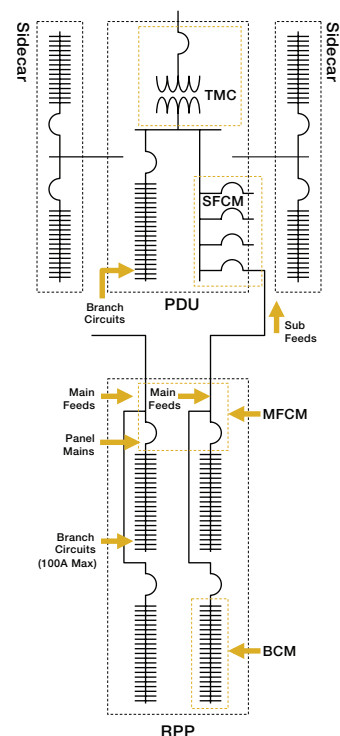
A single circuit management module can be configured to gather current, voltage*, power* and energy* data in the following distribution devices:

- **Branch circuit management** – up to four (4), 42 circuit panelboards (168 poles)
- **Sub-feed circuit management** – up to thirty-two (32), 3-wire or 4-wire sub-feed breakers
- **Combination circuit management** – panelboard branch breakers and sub-feed breakers can be combined in a single configuration
- **Main-feed circuit management** – up to four (4) sources in multi-fed RPPs can be monitored

*Requires energy option



Meter up to 4 panelboards per module



Best in class serviceability

- Plug with connectors for circuit sensors simplify maintenance, no power off needed
- Easily replace individual circuit sensors in the field, means only one circuit is effected, not the entire panel
- Only power down one individual branch, not the entire panel
- Minimize costs and downtime

Ease of configuration

- User-friendly, intuitive graphical user interface auto generated register map for IP
- Flexible configuration – by individual circuit or entire panelboard

Advanced connectivity

- Snap-on mounting for circuit sensors with integral protection resistor are field replaceable
- Enclosed electronics module protect delicate circuit boards
- Single system monitors up to 168 branch circuits – can be panelboards or a combination of panelboards and sub-feeds
- Monitor up to 2,688 circuits with one local display
- Both 2 and 4 wire modbus compatible
- Integrates with your building management system, no software needed

Panelboard compatibility

- Fits most panels: ABB, Square D, GE, standard and column width

Ethernet Gateway



Web server and SNMP

Web server features

- Provides instant snapshot of current or power levels on any circuit in your data center from a remote location.
- Provides online access to a maximum of 16 Cyberex circuit management devices interconnected via modbus or RTU.
- Allows up to 2,688 individual circuits to be monitored remotely online for current, voltage*, power*, energy*, alarm status and set-point configuration.
- Provides SNMP summary alarm traps for use with the customer's monitoring system.
- When integrated with your building management system the circuit data can be used to create a load profile over time to help you better plan capacity.
- Secure, multi-level password-protected environment.
- Up to 4 user defined building alarms.

*Requires energy option

Panel overview display web server

Individual circuit display web server

A single local display can concentrate data from 16 Cyberex circuit management systems and send it to remote monitoring systems via modbus TCP or the web server. Connects to your building management system or a standard web browser.

Services

Minimize downtime and ensure optimal performance!

Cyberex Power Protection Services

Power Protection Services can be purchased as a standalone service or in addition to any plan or packaged service.

Offerings include the menu of options detailed below:

- 24x7 telephone support
- Annual pm visit
- Start-up
- Response times
 - 24-hour on-site response – guaranteed within continental US
 - 8-hour on-site response – available in select areas
 - 4-hour on-site response – available in select areas

Signature services

- Preventive maintenance plans
- Extended warranty & upgrade options
- Break/fix plans

Professional services

- Project management
- Site coordination
- Pre-installation consultant service
- Commissioning service
- Power quality survey
- Infrared/thermo scan service
- Battery analysis & battery refresh (VRLA)
- Load bank test
- Network systems integration service
- On-site training
- Power academy program
- Branch circuit management field retrofit
- Software enhancement/waveform capture

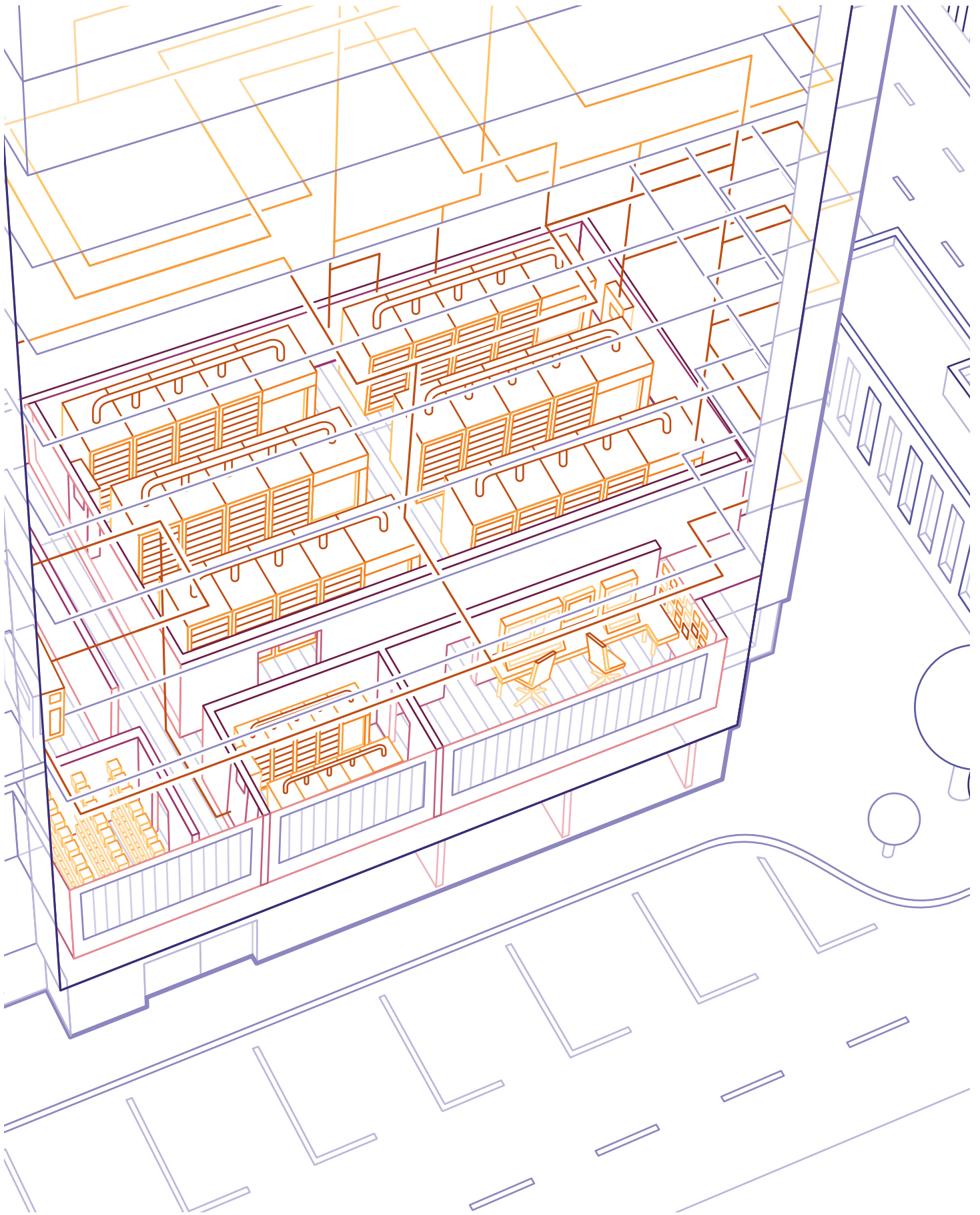


Time and material services

Our solutions offer time and material (T&M) billable services for non-contracted customers. T&M services include field upgrades, standby services, preventive maintenance checks, repairs and emergency visits. Services are billed on an hourly service rate basis plus applicable zone charges.

Spare parts and reliability enhancement programs

- Spare parts
- 5-year service plan STS and UPS reliability enhancement programs



Contact us

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