

If you manage a datacenter,
we have a solution for you.

How do I...

Monitor current, voltage, power (kW), apparent power, crest factor and power factor per device?

Monitor kW and kW-h power information per outlet, device, application (groups of devices), cabinet, or location?

Provide kW-h billing reports and trends per outlet, device, application (groups of devices), cabinet or location?

Measure IT Load for "green" efficiency metrics such as PUE and DCiE from The Green Grid and SI-POM and H-POM from The Uptime Institute?

Monitor input current using accurate Digital True RMS current monitoring?



POPS™ Smart CDU®

Provides reliable power monitoring per individual outlet/device to monitor current, voltage, power (kW), apparent power, crest factor and power factor. This CDU also includes branch circuit protection, as well as network power and environmental monitoring.

POPS™ Switched CDU®

Provides power monitoring per individual outlet/device to monitor current, voltage, power (kW), apparent power, crest factor and power factor. This CDU also includes branch circuit protection, network power and environmental monitoring plus Remote Management, including Reboot Commands to connected servers and network equipment.

Sentry Power Manager (SPM)

SPM is a powerful tool which allows monitoring, control capabilities, and management of multiple CDUs in single or multiple locations. Features include alarm management, reporting and trending of kW & kW-h information that can be used for energy efficiency calculations, device monitoring and billing.

POPS CDU Product Family

Power Distribution Solutions for the Data Center Equipment Cabinet



The World Leader in Power Management Products & Solutions

Cabinet power distribution units and power monitoring and measurement solutions for data centers and telecommunications.



Server Technology's experts produce the highest quality rack mount power distribution and monitoring solutions that help manage power capacity, reduce downtime and improve energy efficiency. The leading innovator since 1984, Server Technology created the intelligent cabinet PDU market and

holds the largest number of patents in that industry. Serving the Data Center and Carrier markets, Server Technology offers the most extensive selection of Sentry CDUs to manage power usage for servers, storage and network equipment. Based on the innovative Server Tech Quality Power Architecture (QPA), Sentry CDUs and Sentry Power Manager provide the industry's most accurate information to maximize rack density, reduce overloading and monitor energy efficiency.

All Sentry CDUs are engineered and manufactured to meet the highest quality standards and are 100% performance tested for reliability and accuracy. Server Tech QPA eliminates single points of failure, reducing downtime and costs. The modular architecture is flexible and enables quick delivery of solutions that meet customer-specific requirements. Server Technology gives IT and Infrastructure Professionals the control to make accurate capacity planning decisions, reduce risks, and meet energy efficiency goals.

Certifications, Compliance & Warranty

All products contained within this brochure carry one or more of the certifications below. Additional agency certifications are available based on specific market requirements.

- > US & Canada (cTUVus Mark) to UL 60950-1: 2007 and CAN/CSA 22.2 No. 60950-1-07
- > US & Canada (cULus Mark) to UL 60950-1: 2007 and CAN/CSA 22.2 No. 60950-1-07
- > EMC to EN 55022 Class A, EN 55024, CISPR 22 Class A
- > European Union (TUVGS Mark) to EN 60950-1: 2006 + A11
- > FCC Class A, Part 15
- > CE Mark
- > 2 Year Warranty

Feature Key

Sentry CDU product lines feature two or more of the following assets:



Flexible Mounting Options

Zero-U button or bracket mounting for mounting vertical CDUs in the back or on the side of the cabinet to avoid consuming valuable "U" space.



Branch Circuit Protection

All Sentry CDUs meet the UL 60950-1 requirement for branch circuit protection and use either fuses or circuit breakers to protect each branch of outlets.



Input Current Monitoring

The CDUs exclusive True RMS Current Monitoring is critical to preventing overloads in high-density computing environments. Digital LED displays on the CDU enclosure report the input current of each phase or branch circuit.



Environmental Monitoring

External probes, with 3-meter cable, capable of measuring temperature & humidity. Receive SNMP-based or email alerts when conditions exceed defined thresholds.



Expansion Module

Our exclusive method for linking additional outlets, on separate CDUs, together under a single IP address, and provides support for A & B power in-feeds.



IP Access, Security & Communications

Web interface, SSL, SSH, Telnet, SNMP & RS-232 access, 10/100 Base T-Ethernet, SSLv3/TLSv1, SNMPv2, TACACS+, LDAP, LDAPS, RADIUS, DHCP, SMTP/Email, & Syslog.



Individual Outlet Control

Control individual outlets or groups of outlets with ON, OFF, and Reboot functionality to remotely reboot unresponsive servers and network equipment.



POPS™ (Per Outlet Power Sensing)

Monitor Current Load (A), Voltage (V), Power (W), Apparent Power (VA), Crest Factor and Power Factor per outlet.



PIPS™ (Per Inlet Power Sensing)

Monitor Current Load (A), Voltage (V), Power (W), Apparent Power (VA), Crest Factor, Reactance, Accumulated Energy (kWh), and Power Factor per inlet.



Cable Retention Clip

Ensures power cords to the connected devices are not accidentally unplugged or disconnected.

POPS Smart & Switched CDU

Features and Anatomy



The complexity of IT equipment in today's data centers and remote branch office locations requires new solutions for building a solid infrastructure. It must support 24/7 operations and reduce the instance of locked-up or failing equipment leading to network downtime with the ability to measure and monitor the power of the IT equipment throughout the Data Center. Five nines availability — 99.999% uptime — demands it.

Blade servers and high density computing power requirements continue to increase, creating heat proliferation and more challenges for managing the IT environment. To maintain their competitive advantage, data center managers need solutions that monitor, track and manage servers and IT equipment and the equipment cabinet infrastructure that houses them.



POPS™ Smart CDU®

Smart Cabinet Power Distribution Unit plus Per Outlet Power Sensing (POPS)

The Smart POPS CDU products provide reliable power distribution coupled with remote power and environmental monitoring. Use the network interface to view power, temperature and humidity levels via Web browser, or SNMP-based and email alerts when conditions exceed defined thresholds. POPS (Per Outlet Power Sensing) provides power monitoring per an individual outlet/device. Power information per individual outlet /device includes current, voltage, power (kW), apparent power, crest factor, and power factor.

Add an Expansion Module CDU to Smart and Switched CDUs. Link a master and expansion unit using a single IP address.



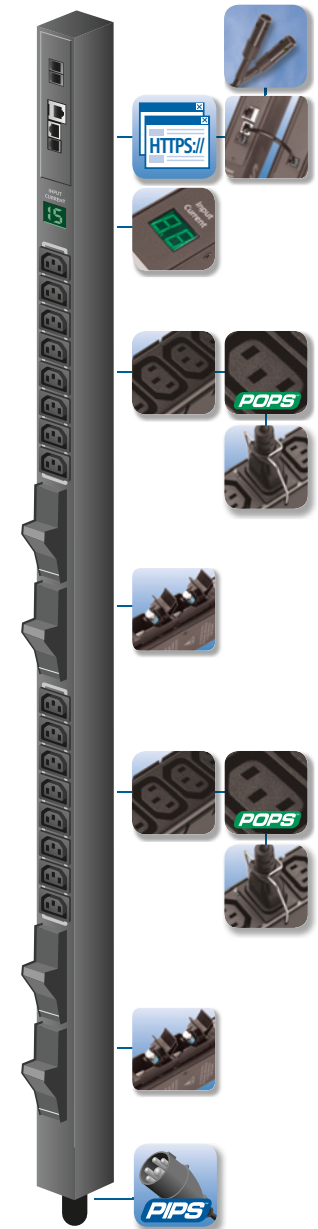
POPS™ Switched CDU®

Switched Cabinet Power Distribution Unit plus Per Outlet Power Sensing (POPS)

The POPS Switched CDU products provide the capability to securely monitor power per individual outlet/ device. Power information per individual outlet /device includes current, voltage, power (kW), apparent power, crest factor, accumulated energy, and power factor. Using our grouping technology through Sentry Power Manager (SPM), power information is available per device, groups of devices (application), individual CDU or cabinet.

POPS Switched CDUs combine networked configuration and management with power distribution and power and environmental monitoring. The POPS Switched CDU enables you to: control cabinet power via a network; reboot a single or dual power server with one command; receive SNMP-based or email alerts when power or environmental conditions exceed thresholds; and assign access rights to user groups or individuals.

POPS Switched CDU products provide the flexibility needed for all data centers and remote sites, including power requirements for high-amperage and high-voltage, EN 60950-1:2001 Branch Circuit Protection, and SNMP traps and email alerts including current monitoring.



Smart & Switched CDU with PIPS

Per Inlet Power Sensing CDUs

PIPS Smart & Switched CDU

Introducing the best infeed power measurement technology on the market for data center rack-level power monitoring. PIPS technology replaces power monitoring at the RPP (Remote Power Panel) in data centers with higher accuracy and lower cost monitoring of each power circuit attached to a CDU. This new product feature also replaces the already accurate Digital True RMS feature currently available on intelligent Smart, Switched and POPS CDUs by bringing more types of power measurements from the power infeed to the built in graphic user interface (GUI). Expect the same quality and functionality on current intelligent CDUs, but with an increased level of information to help you make the critical decisions regarding your facility.

PIPS Features

Sentry PIPS works in conjunction with all of the features of a Smart, Switched or POPS CDU with the ability to provide power monitoring per inlet/infeed. Power information per infeed includes current, voltage, power, apparent power, crest factor, reactance, power factor and accumulated energy. The PIPS CDU is capable of being accessed through either a secure network or serial connection. The secure integral web interface provides a simple and easy way to monitor the CDU. Configuration choices include: SNMP traps, email alerts, grouping, and all security and communication settings. Research shows that measuring at the infeed level is the most accurate place to measure power and is recommended by the Green Grid.

Communication Tools

- > Web Interface
- > SNMP & RS-232 access
- > 10/100 Base T-Ethernet
- > SMTP/Email
- > Telnet
- > SSL & SSH
- > SSLv3/TLSv1
- > SNMPv2 & v3
- > TACACS+
- > LDAP
- > LDAPS
- > RADIUS
- > DHCP
- > Syslog
- > IPv6

Power Information & Management Internal Web Interface



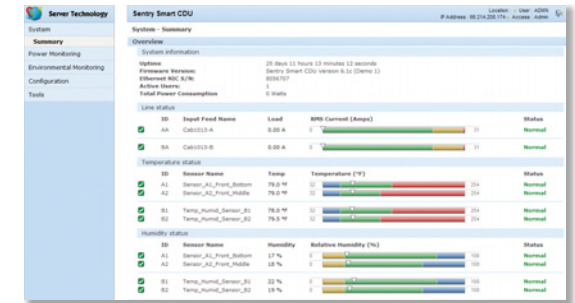
System Configuration

Intelligent CDUs enable network access to remotely configure access, outlets, alarms, thresholds, and more.



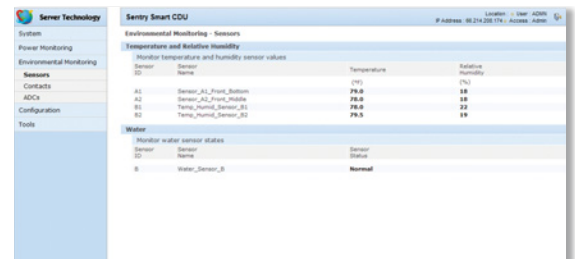
Sentry PIPS (Per Inlet/Infeed Power Information)

- > Current (Amps)
- > Power (Watts)
- > Power Factor
- > Neutral Current: Measures neutral current
- > Voltage (Volts)
- > Apparent Power (VA)
- > Accumulated Energy (kWh)



Easy to Read Summary Screen

The new summary screen allows users to quickly confirm the status of the rack power & environmental conditions.



Environmental Monitoring

No additional IP address needed to obtain temperature and humidity readings. A pair of probes (EMTH-1-1) can be added to any intelligent master CDU (Smart or Switched). Additional probes can be added using an EMCU-1-1B (page 9).

POPS Switched CDU

Per Outlet Power Sensing CDUs



POPS Switched CDU Integral Web Interface

Blade servers and high density computing power requirements continue to increase and POPS is the right CDU for that environment. With device-level output control, you can monitor, track and manage servers, IT equipment and the equipment cabinet infrastructure. With the ability to measure, monitor, and report power down to the rack or outlet level, this solution follows the Green Grid's recommendations for acquiring the most accurate power monitoring data.

POPS Features

- > Simple, secure, integral web interface GUI configuration tool
- > Temperature and Humidity Support
- > Authentication logging, configuration changes and system events
- > Secure Syslog protocol support
- > Email notifications of log, event, authorization, power and configuration messages
- > Automatic Firmware Updates via FTP server
- > Strong Password Support and Pre-Login Banner
- > Ability to Ping an IP address to see if the device is responding
- > Grouping of outlets across Master & Expansion CDUs
- > SNMP: Traps based on Status, Changes, Load, Temperature and Humidity
- > Supports 104 user accounts and 18 simultaneous logins with a dedicated SNMP connection

Communication Tools

- > Web Interface
- > SNMP & RS-232 access
- > 10/100 Base T-Ethernet
- > SMTP/Email
- > Telnet
- > SSL & SSH
- > SSLv3/TLSv1
- > SNMPv2 & v3
- > TACACS+
- > LDAP
- > LDAPS
- > RADIUS
- > DHCP
- > Syslog
- > IPv6

*Requires Sentry Power Manager (SPM)

Power Information & Management Internal Web Interface

Outlet ID	Name	Status	Current Load (A)	Power (W)	Control Status	Control Action
A01	Server_1_Outlet	On	0.00	0	Details	On
A02	Server_2_Outlet	On	0.00	0	Details	On
A03	Customer_A_Server_A_P1	On	0.00	0	Details	None
A04	Server_3_Outlet	On	0.00	0	Details	On
A05	Server_4_Outlet	On	0.00	0	Details	On
A06	Customer_B_Server_B_P1	On	0.00	0	Details	None
A07	Server_5_Outlet	On	0.00	0	Details	On
A08	Server_6_Outlet	On	0.00	0	Details	On
A09	Server_7_Outlet	On	0.00	0	Details	On
A10	Customer_C_Server_C_P1	On	0.00	0	Details	None
A11	Server_8_Outlet	On	0.00	0	Details	On
A12	Customer_D_Server_D_P1	On	0.00	0	Details	None
A13	Server_9_Outlet	On	0.00	0	Details	On
A14	Server_10_Outlet	On	0.00	0	Details	On
A15	Customer_E_Server_E_P1	On	0.00	0	Details	None
A16	Server_11_Outlet	On	0.00	0	Details	On
A17	Server_12_Outlet	On	0.00	0	Details	On
A18	Server_13_Outlet	On	0.00	0	Details	On
A19	Server_14_Outlet	On	0.00	0	Details	On
A20	Server_15_Outlet	On	0.00	0	Details	On
A21	Server_16_Outlet	On	0.00	0	Details	On
A22	Server_17_Outlet	On	0.00	0	Details	On
A23	Server_18_Outlet	On	0.00	0	Details	On
A24	Server_19_Outlet	On	0.00	0	Details	On
A25	Server_20_Outlet	On	0.00	0	Details	On
A26	Server_21_Outlet	On	0.00	0	Details	On
A27	Server_22_Outlet	On	0.00	0	Details	On
A28	Server_23_Outlet	On	0.00	0	Details	On
A29	Server_24_Outlet	On	0.00	0	Details	On
A30	Server_25_Outlet	On	0.00	0	Details	On
A31	Server_26_Outlet	On	0.00	0	Details	On
A32	Server_27_Outlet	On	0.00	0	Details	On
A33	Server_28_Outlet	On	0.00	0	Details	On
A34	Server_29_Outlet	On	0.00	0	Details	On
A35	Server_30_Outlet	On	0.00	0	Details	On
A36	Server_31_Outlet	On	0.00	0	Details	On
A37	Server_32_Outlet	On	0.00	0	Details	On
A38	Server_33_Outlet	On	0.00	0	Details	On
A39	Server_34_Outlet	On	0.00	0	Details	On
A40	Server_35_Outlet	On	0.00	0	Details	On
A41	Server_36_Outlet	On	0.00	0	Details	On
A42	Server_37_Outlet	On	0.00	0	Details	On
A43	Server_38_Outlet	On	0.00	0	Details	On
A44	Server_39_Outlet	On	0.00	0	Details	On
A45	Server_40_Outlet	On	0.00	0	Details	On
A46	Server_41_Outlet	On	0.00	0	Details	On
A47	Server_42_Outlet	On	0.00	0	Details	On
A48	Server_43_Outlet	On	0.00	0	Details	On
A49	Server_44_Outlet	On	0.00	0	Details	On
A50	Server_45_Outlet	On	0.00	0	Details	On
A51	Server_46_Outlet	On	0.00	0	Details	On
A52	Server_47_Outlet	On	0.00	0	Details	On
A53	Server_48_Outlet	On	0.00	0	Details	On
A54	Server_49_Outlet	On	0.00	0	Details	On
A55	Server_50_Outlet	On	0.00	0	Details	On
A56	Server_51_Outlet	On	0.00	0	Details	On
A57	Server_52_Outlet	On	0.00	0	Details	On
A58	Server_53_Outlet	On	0.00	0	Details	On
A59	Server_54_Outlet	On	0.00	0	Details	On
A60	Server_55_Outlet	On	0.00	0	Details	On
A61	Server_56_Outlet	On	0.00	0	Details	On
A62	Server_57_Outlet	On	0.00	0	Details	On
A63	Server_58_Outlet	On	0.00	0	Details	On
A64	Server_59_Outlet	On	0.00	0	Details	On
A65	Server_60_Outlet	On	0.00	0	Details	On
A66	Server_61_Outlet	On	0.00	0	Details	On
A67	Server_62_Outlet	On	0.00	0	Details	On
A68	Server_63_Outlet	On	0.00	0	Details	On
A69	Server_64_Outlet	On	0.00	0	Details	On
A70	Server_65_Outlet	On	0.00	0	Details	On
A71	Server_66_Outlet	On	0.00	0	Details	On
A72	Server_67_Outlet	On	0.00	0	Details	On
A73	Server_68_Outlet	On	0.00	0	Details	On
A74	Server_69_Outlet	On	0.00	0	Details	On
A75	Server_70_Outlet	On	0.00	0	Details	On
A76	Server_71_Outlet	On	0.00	0	Details	On
A77	Server_72_Outlet	On	0.00	0	Details	On
A78	Server_73_Outlet	On	0.00	0	Details	On
A79	Server_74_Outlet	On	0.00	0	Details	On
A80	Server_75_Outlet	On	0.00	0	Details	On
A81	Server_76_Outlet	On	0.00	0	Details	On
A82	Server_77_Outlet	On	0.00	0	Details	On
A83	Server_78_Outlet	On	0.00	0	Details	On
A84	Server_79_Outlet	On	0.00	0	Details	On
A85	Server_80_Outlet	On	0.00	0	Details	On
A86	Server_81_Outlet	On	0.00	0	Details	On
A87	Server_82_Outlet	On	0.00	0	Details	On
A88	Server_83_Outlet	On	0.00	0	Details	On
A89	Server_84_Outlet	On	0.00	0	Details	On
A90	Server_85_Outlet	On	0.00	0	Details	On
A91	Server_86_Outlet	On	0.00	0	Details	On
A92	Server_87_Outlet	On	0.00	0	Details	On
A93	Server_88_Outlet	On	0.00	0	Details	On
A94	Server_89_Outlet	On	0.00	0	Details	On
A95	Server_90_Outlet	On	0.00	0	Details	On
A96	Server_91_Outlet	On	0.00	0	Details	On
A97	Server_92_Outlet	On	0.00	0	Details	On
A98	Server_93_Outlet	On	0.00	0	Details	On
A99	Server_94_Outlet	On	0.00	0	Details	On
A100	Server_95_Outlet	On	0.00	0	Details	On
A101	Server_96_Outlet	On	0.00	0	Details	On
A102	Server_97_Outlet	On	0.00	0	Details	On
A103	Server_98_Outlet	On	0.00	0	Details	On
A104	Server_99_Outlet	On	0.00	0	Details	On
A105	Server_100_Outlet	On	0.00	0	Details	On

Outlet Control Power Monitoring

- > Individual Outlet Control
- > Current Load Monitoring
- > Power Monitoring
- > Additional Details

Outlet ID	Name	Status	Current Load (A)	Power (W)	Control Status	Control Action
A01	Server_1_Outlet	On	0.00	0	Details	On
A02	Server_2_Outlet	On	0.00	0	Details	On
A03	Customer_A_Server_A_P1	On	0.00	0	Details	None
A04	Server_3_Outlet	On	0.00	0	Details	On
A05	Server_4_Outlet	On	0.00	0	Details	On
A06	Customer_B_Server_B_P1	On	0.00	0	Details	None
A07	Server_5_Outlet	On	0.00	0	Details	On
A08	Server_6_Outlet	On	0.00	0	Details	On
A09	Server_7_Outlet	On	0.00	0	Details	On
A10	Customer_C_Server_C_P1	On	0.00	0	Details	None
A11	Server_8_Outlet	On	0.00	0	Details	On
A12	Customer_D_Server_D_P1	On	0.00	0	Details	None
A13	Server_9_Outlet	On	0.00	0	Details	On
A14	Server_10_Outlet	On	0.00	0	Details	On
A15	Server_11_Outlet	On	0.00	0	Details	On
A16	Server_12_Outlet	On	0.00	0	Details	On
A17	Server_13_Outlet	On	0.00	0	Details	On
A18	Server_14_Outlet	On	0.00	0	Details	On
A19	Server_15_Outlet	On	0.00	0	Details	On
A20	Server_16_Outlet	On	0.00	0	Details	On
A21	Server_17_Outlet	On	0.00	0	Details	On
A22	Server_18_Outlet	On	0.00	0	Details	On
A23	Server_19_Outlet	On	0.00	0	Details	On
A24	Server_20_Outlet	On	0.00	0	Details	On
A25	Server_21_Outlet	On	0.00	0	Details	On
A26	Server_22_Outlet	On	0.00	0	Details	On
A27	Server_23_Outlet	On	0.00	0	Details	On
A28	Server_24_Outlet	On	0.00	0	Details	On
A29	Server_25_Outlet	On	0.00	0	Details	On
A30	Server_26_Outlet	On	0.00	0	Details	On
A31	Server_27_Outlet	On	0.00	0	Details	On
A32	Server_28_Outlet	On	0.00	0	Details	On
A33	Server_29_Outlet	On	0.00	0	Details	On
A34	Server_30_Outlet	On	0.00	0	Details	On
A35	Server_31_Outlet	On	0.00	0	Details	On
A36	Server_32_Outlet	On	0.00	0	Details	On
A37	Server_33_Outlet	On	0.00	0	Details	On
A38	Server_34_Outlet	On	0.00	0	Details	On
A39	Server_35_Outlet	On	0.00	0	Details	On
A40	Server_36_Outlet	On	0.00	0	Details	On
A41	Server_37_Outlet	On	0.00	0	Details	On
A42	Server_38_Outlet	On	0.00	0	Details	On
A43	Server_39_Outlet	On	0.00	0	Details	On
A44	Server_40_Outlet	On	0.00	0	Details	On
A45	Server_41_Outlet	On	0.00	0	Details	On
A46	Server_42_Outlet	On	0.00	0	Details	On
A47	Server_43_Outlet	On	0.00	0	Details	On
A48	Server_44_Outlet	On	0.00	0	Details	On
A49	Server_45_Outlet	On	0.00	0	Details	On
A50	Server_46_Outlet	On	0.00	0	Details	On
A51	Server_47_Outlet	On	0.00	0	Details	On
A52	Server_48_Outlet	On	0.00	0	Details	On
A53	Server_49_Outlet	On	0.00	0	Details	On
A54	Server_50_Outlet	On	0.00	0	Details	On
A55	Server_51_Outlet	On	0.00	0	Details	On
A56	Server_52_Outlet	On	0.00	0	Details	On
A57	Server_53_Outlet	On	0.00	0	Details	On
A58	Server_54_Outlet	On	0.00	0	Details	On
A59	Server_55_Outlet	On	0.00	0	Details	On
A60	Server_56_Outlet	On	0.00	0	Details	On
A61	Server_57_Outlet	On	0.00	0	Details	On
A62	Server_58_Outlet	On	0.00	0	Details	On
A63	Server_59_Outlet	On	0.00	0	Details	On
A64	Server_60_Outlet	On	0.00	0	Details	On
A65	Server_61_Outlet	On	0.00	0	Details	On
A66	Server_62_Outlet	On	0.00	0	Details	On
A67	Server_63_Outlet	On	0.00	0	Details	On
A68	Server_64_Outlet	On	0.00	0	Details	On
A69	Server_65_Outlet	On	0.00	0	Details	On
A70	Server_66_Outlet	On	0.00	0	Details	On
A71	Server_67_Outlet	On	0.00	0	Details	On
A72	Server_68_Outlet	On	0.00	0	Details	On
A73	Server_69_Outlet	On	0.00	0	Details	On
A74	Server_70_Outlet	On	0.00	0	Details	On
A75	Server_71_Outlet	On	0.00	0	Details	On
A76	Server_72_Outlet	On	0.00	0	Details	On
A77	Server_73_Outlet	On	0.00	0	Details	On
A78	Server_74_Outlet	On	0.00	0	Details	On
A79	Server_75_Outlet	On	0.00	0	Details	On
A80	Server_76_Outlet	On	0.00	0	Details	On
A81	Server_77_Outlet	On	0.00	0	Details	On
A82	Server_78_Outlet	On	0.00	0	Details	On
A83	Server_79_Outlet	On	0.00	0	Details	On
A84	Server_80_Outlet	On	0.00	0	Details	On
A85	Server_81_Outlet	On	0.00	0	Details	On
A86	Server_82_Outlet	On	0.00	0	Details	On
A87	Server_83_Outlet	On	0.00	0	Details	On
A88	Server_84_Outlet	On	0.00	0	Details	On
A89	Server_85_Outlet	On	0.00	0	Details	On
A90	Server_86_Outlet	On	0.00	0	Details	On
A91	Server_87_Outlet	On	0.00	0	Details	On</

Sentry Power Manager

Power Management Architecture



Linkable Expansion Module

The Expansion Module CDU, Smart CLG or Switched CXG, is our exclusive method for linking together outlets on different power circuits.

The Expansion Module CDU, CLG or CXG, increases the number of managed outlets on a single IP address. Each expansion module links to its parent Smart CSG or Switched CWG, which contains both network and serial interfaces. When linked to a Smart or Switched CDU, the CLG's or CXG's outlets are auto-discovered by the Smart or Switched CDUs firmware, and all available outlets are viewable through the firmware.

On the Switched CWG, outlets are individually controllable, or groups of outlets can be controlled between the Switched CWG & CXG with one command. Each Expansion Module CDU can be a single or dual-power feed and a Zero-U or horizontal enclosure.

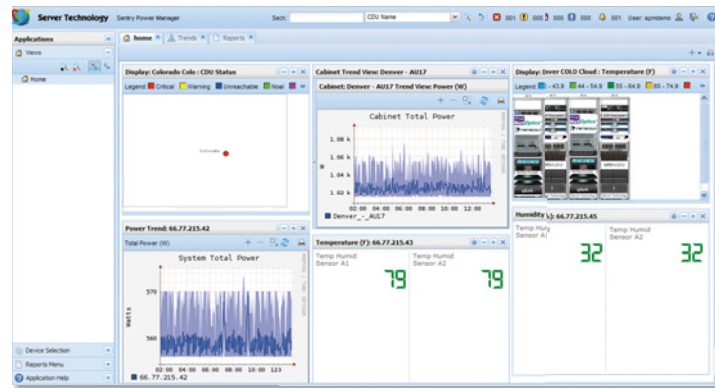
A-Feed (CSG/CWG) B-Feed (CLG/CXG)



Sentry Power Manager

Manage Multiple CDUs Across Multiple Locations

Do you have multiple Sentry CDUs in one or more locations that you would like to access from one central point? Would you like one central location where all alarms can be viewed and logged for reporting, e-mail or SNMP trap notifications? No problem! Our Sentry Power Manager (SPM) product is capable of monitoring and managing multiple Sentry devices in IP-based enterprise networks. SPM provides a global view of all Sentry CDUs with the ability to view devices based on their temperature, humidity, current and device status. Besides managing and monitoring all alarm conditions, this information can also be used to provide reporting and trending information for display within SPM or integrated with your existing Building Management System (BMS).



Web Based GUI: Quickly drill down from a global view to the rack level. Users can setup custom network operation center (NOC) views for whatever they want to display — from global dashboard views down to each CDU, cabinet or location.

Event Notification

- > Email notification via the CDU to multiple recipients when an event occurs
- > SNMP traps via the CDU when an event occurs
- > Auto-discovers each CDU for easy configuration
- > Easily create a user interface that mirrors the physical deployment of the data center
- > Quickly drill down from a global perspective to the rack's actual physical location if there is a problem (quickly identify the alarm and the physical location of the CDU)
- > Create outlet clusters to group outlets within a CDU, across linked CDUs or across enterprise locations

Multiple Reporting Options

- > Reporting capabilities to produce reports on critical management parameters such as temperature, humidity and current load
- > Reports on Current and Power providing the power consumption of each input, total for the rack and/or per square foot of the rack

On-Demand Accessibility

- > Real-time view of all active system alarms
- > Anytime, anywhere web-based views
- > Manage thousands of CDUs from a single console

Compatibility

- > Server Technology Sentry CDUs with firmware 5.3+

Web Browsers Supported

- > Microsoft Internet Explorer 7.0+
- > Mozilla Firefox 2.0+

Sentry Power Manager

Power Management Architecture

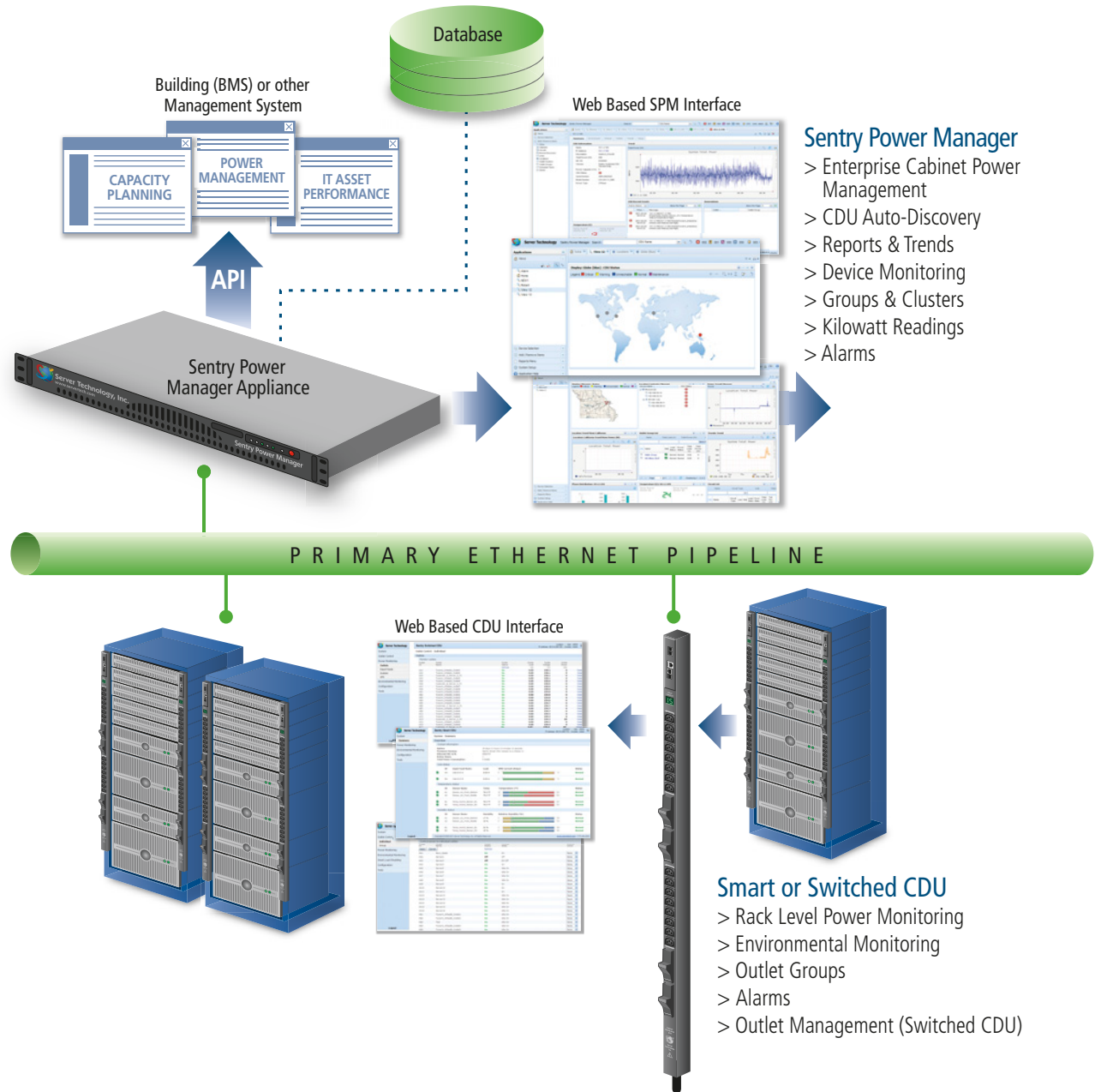
Power Information & Management

Sentry Power Manager

The Sentry Smart and Switched CDUs are capable of being monitored through the SPM (Sentry Power Manager) tool. Sentry intelligent CDUs, in conjunction with SPM, provide additional power information for consumption purposes and power monitoring as well as trending and power reports. An API allows power and other information to be communicated to a Building Management System (BMS) or other systems.

Sentry Power Manager (SPM) Solutions

- > SPM provides a global view of all Sentry CDUs with the ability to view devices based on their temperature, humidity, current and device status. Quickly drill down from global view to your facility maps to an individual CDU.
- > Manage and monitor all user-defined alarm conditions on your entire network.
- > Group and cluster outlets for remote reboot, power measurement information across a single CDU, a linked CDU, or across the entire network.
- > Allows measurement of power consumption and capacity planning.
- > Auto-discover all your CDUs connected to your IP network.
- > View Logs for user access, discovery, user actions, and alarms.
- > Multiple user levels and permissions including support for LDAP.
- > Control individual outlets on Switched CDUs.



CDU Product Family

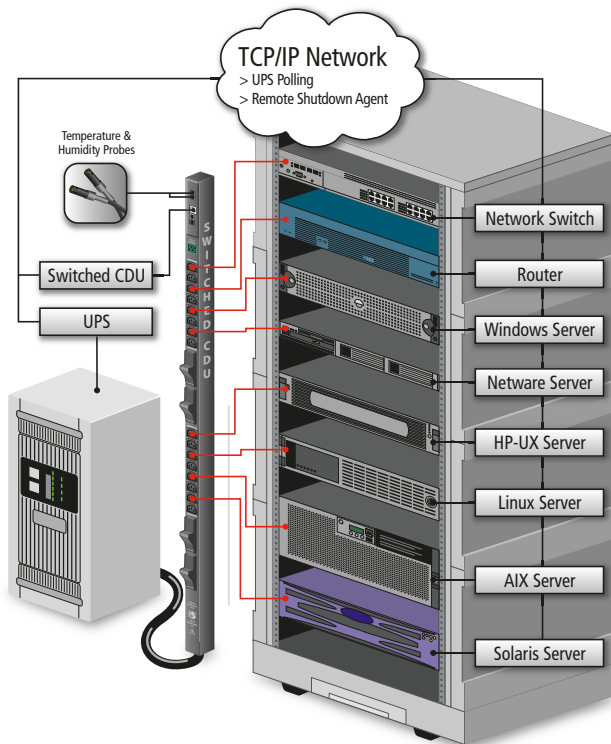
Secure Remote Administration Interface and Smart Load Shedding



Sentry Smart Load Shedding

Load Management based on Temperature, In-feed Load, and UPS Status

Server Technology is the first to offer datacenter managers the ability to automatically manage Switched CDU power outlets based on key operating parameters, including temperature, in-feed load, and UPS power status. Each outlet may be controlled by one or more of these parameters. Should the temperature or load current exceed defined thresholds or the UPS lose power and go onto battery, all or a portion of the loads may be automatically shed to ensure longer operational life of your critical devices.

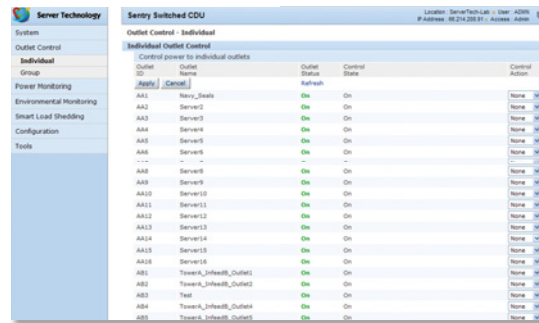


Features

- > Easy to use, integral, web based GUI configuration tool
- > "Auto-recovery" with a reboot delay time when conditions return to normal
- > Each CDU outlet is assigned the IP address of the connected device for shut down notification
- > Remote shutdown agent for server shut down
- > SNMP trap notifications
- > Load shedding event notifications via SNMP traps or Email alerts

Sentry Access, Security & Communication

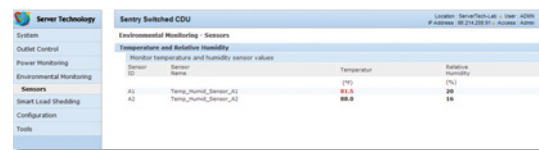
Secure Remote Administration Interface



Web Based GUI: Individual Outlet Control Screen



Web Based GUI: System Configuration Screen



Web Based GUI: Environmental Monitoring Screen

Features

- > Secure, web based GUI configuration tool
- > Temperature Support (Celsius/Fahrenheit) and Humidity (%)
- > Logs authentications, configuration changes and system events
- > SNMP and email notifications for multiple users of log, event, power, and authorization, configuration messages
- > SYSLOG logging protocol support
- > Automatic Firmware Updates via FTP
- > Strong Password Support and Pre-Login Banner

Power Information

- > Input Feed Voltage (VAC)
- > Input Feed Watts (W)
- > System Total Watts (W)
- > System Footprint (SqFt / SqM)
- > System Watts/Area (W/SqFt / W/SqM)

Communication Tools

- > Web interface, SSL, SSH, Telnet, SNMP & RS-232 access, 10/100 Base T-Ethernet, SSLv3/TLSv1, SNMPv2, TACACS+, LDAP, LDAPS, RADIUS, DHCP, SMTP/Email, and Syslog.

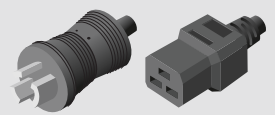


CDU Plugs & Cords

Plug & Cord Options for Sentry CDUs

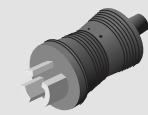





Server Technology provides 20A, 30A, and 60A products with a variety of input cord options available. Please refer to the Power Cords and cordset options below for different configurations. Shown below are standard power cord and cordset options.^{1,2}



20A Plugs & Cords

Model	PTCORD-1	Hard-Wired	Hard-Wired
Outlets	NEMA L6-20P to IEC 60320/C19	NEMA L15-20P	NEMA L21-20P
Voltage (V)	208-240V	3-Phase 208V, Delta	3-Phase 208V, Wye
Amps (A)	20A	20A	20A
Length	10' 3m	10' 3m	10' 3m
			



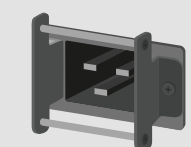
30A Plugs & Cords

Model	Hard-Wired	Hard-Wired	Hard-Wired	Hard-Wired
Outlets	NEMA L6-30P	NEMA L15-30P	NEMA L21-30P	NEMA L22-30P
Voltage (V)	208-240V	3-Phase 208V, Delta	3-Phase 208V, Wye	277/480V, Wye
Amps (A)	30A	30A	30A	30A
Length	10' 3m	10' 3m	10' 3m	10' 3m
				

50A & 60A Plugs & Cords

Model	Hard-Wired	Hard-Wired	Hard-Wired
Outlets	CS8365C	IEC 60309 (4pin, 9hr)	IEC 60309 (5pin, 9hr)
Voltage (V)	3-Phase 208-240V, Delta	3-Phase 208-240V, Delta	3-Phase 208V, Wye
Amps (A)	50A	60A	60A
Length	10' 3m	10' 3m	10' 3m
			

Accessory Options

Model	EMTH-1-1	EMCU-1-1B	C20 Inlet Bracket
Description	Temperature & Humidity Probes	Environmental Monitoring Control Unit	C20 Inlet Retention Bracket
Function	Measures cabinet temperature & humidity	Supports 2 additional EMTH-1-1, water & 4 dry contact closure door sensors	Securely fastens C20 cord to chassis
Length	3m	—	—
			

¹Server Technology offers a wide range of products for North America and global markets. For more information on global products visit our website at www.servertech.com ²Custom cable lengths available; contact a Server Technology Power Expert to determine the correct solution.

POPS Smart CDU

Zero-U Vertical Enclosures

Model	CSG-24V2	CSG-24VD/Y
Outlets	(18) C13 + (6) C19	(18) C13 + (6) C19
Input Voltage (V)	208-240V	3-Phase 208-240V
Amps (A)	20A or 30A	20A or 30A
Cabinet kW	4.2kW or 6.2kW	7.2kW or 10.8kW
Output Voltage (V)	208-240V	208-240V
Dimensions	35U 61" 1550mm	40U 69" 1753mm



POPS Smart CDU

Zero-U Vertical Enclosures



CSG-24V5
 (12) C13 + (12) C19
 3-Phase 240/415V
 20A or 30A
 14.4kW or 21.6 kW
 240V
 41U | 70.6" | 1794mm

CSG-24VD/Y-A9
 (12) C13 + (12) C19
 3-Phase 208-240V
 50A or 60A
 18kW or 21.6kW
 208-240V
 43U | 74.8" | 1899mm

CSG-48V5
 (36) C13 + (12) C19
 3-Phase 208-240V
 60A
 21.6kW
 208-240V
 42U | 72.0" | 1829mm



POPS Switched CDU

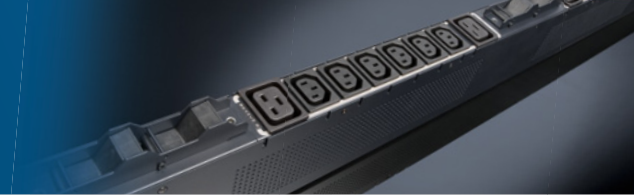
Zero-U Vertical Enclosures

Model	CWG-16V2	CWG-16V2-A1	CWG-24V2	CWG-24V2-C1	CWG-24VD/Y	CWG-24VD/Y-A1	CWG-24V5
Outlets	(12) C13 + (4) C19	(12) C13 + (4) C19	(18) C13 + (6) C19	(18) C13 + (6) C19	(18) C13 + (6) C19	(18) C13 + (6) C19	(18) C13 + (6) C19
Input Voltage (V)	208-240V	208-240V	208-240V	208-240V	3-Phase 208-240V	3-Phase 208-240V	3-Phase 240/415V
Amps (A)	20A or 30A	20A or 30A	20A or 30A	20A or 30A	20A or 30A	20A or 30A	20A or 30A
Cabinet kW	4.2kW or 6.2kW	4.2kW or 6.2kW	4.2kW or 6.2kW	4.2kW or 6.2kW	7.2kW or 10.8kW	7.2kW or 10.8kW	14.4kW or 21.6 kW
Output Voltage (V)	208-240V	208-240V	208-240V	208-240V	208-240V	208-240V	240V
Dimensions	29U 49.4" 1256mm	29U 49.4" 1256mm	40U 69" 1753mm	37U 64" 1625mm	40U 69" 1753mm	40U 69" 1753mm	40U 69" 1753mm



POPS Switched CDU

Zero-U Vertical Enclosures



CWG-24V5-8A1	CWG-24V5-8A9	CWG-24VD/Y-A9	CWG-24VD/Y	CWG-30VD/Y-C2	CWG-30VD/Y	CWG-48VD/Y
(18) C13 + (6) C19	(12) C13 + (12) C19	(12) C13 + (12) C19	(18) C13 + (6) C19	(24) C13 + (6) C19	(30) C13	(48) C13
3-Phase 240/415V	3-Phase 240/415V	3-Phase, 240V	3-Phase 208-240V	208-240V	208-240V	3-Phase 208-240V
20A or 30A	20A or 30A	50A or 60A	50A or 60A	20A or 30A	20A or 30A	20A or 30A
14.4kW or 21.6 kW	14.4kW or 21.6 kW	18kW or 21.6kW	18kW or 21.6kW	7.2kW or 10.8kW	7.2kW or 10.8kW	7.2kW or 10.8kW
240V	240V	208-240V	208-240V	208-240V	208-240V	208-240V
40U 69" 1753mm	40U 69" 1753mm	46U 79.7" 2025mm	40U 70" 1778mm	42U 73.5" 1867mm	42U 73.5" 1867mm	40U 69" 1753mm



POPS Switched CDU

Horizontal Rack Mounted Enclosures

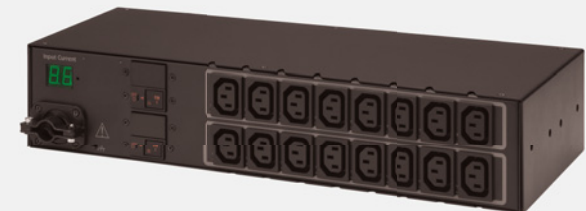
Model	CWG-8H1	CWG-8H2
Outlets	(8) 5-20R	(8) C13
Input Voltage (V)	100-120V	208-240V
Amps (A)	20A or 30A	20A or 30A
Cabinet kW	2.4kW or 3.6kW	4.2kW or 6.2kW
Output Voltage (V)	100-120V	208-240V
Dimensions	1U 7.1" 181mm Depth	1U 7.1" 181mm Depth



POPS Switched CDU

Horizontal Rack Mounted Enclosures

Model	CWG-16H1	CWG-16H2
Outlets	(16) 5-20R	(16) C13
Input Voltage (V)	100-120V	208-240V
Amps (A)	20A or 30A	20A or 30A
Cabinet kW	2.4kW or 3.6kW	4.2kW or 6.2kW
Output Voltage (V)	100-120V	208-240V
Dimensions	2U 7.1" 181mm Depth	2U 7" 178mm Depth





HEADQUARTERS - NORTH AMERICA

Server Technology, Inc.
1040 Sandhill Drive
Reno, NV 89521
United States
+00 (1) 775 284 2000 Tel
+00 (1) 775 284 2065 Fax
sales@servertech.com
www.servertech.com
www.servertechblog.com

EMEA

Server Technology Intl.
Sienna Court
The Broadway
Maidenhead
Berkshire
SL6 1NJ
United Kingdom
+44 (0) 1628 509053 Tel
+44 (0) 1628 509100 Fax
salesint@servertech.com

APAC

Server Technology, Inc.
37th Floor, Singapore Land Tower
50 Raffles Place
Singapore 048623
+65 (0) 6829 7008 Tel
+65 (0) 6234 4574 Fax
salesint@servertech.com