POWERLOK Advantage - rPDU Competitive Comparison

Advanced PDU technology

- Slimmest profiles
- Reliable locking using your cords
- 0.5% monitoring accuracy
- Scalable switching technology
- Advanced temp/humidity sensors
- Colors at no additional cost

Automated build-to-order PDUs made in the USA

GATEVIEW
TECHNOLOGIES

rPDU Comparisons Overview

POWERLOK

| POWERLOK ADVANTAGE	Advanced Technology Delivered with a Fast-Response			
	PowerLOK	**APC**	**Servertech**	**Vertiv**
RELIABILITY	X			
DELIVERY	X	X		X
PDU SIZE	X		X	
PDU COLOR	X			X
CORD LOCKING	X		X	

POWERLOK ADVANTAGE

3X less likely to fail due to 100% crimped & robotically soldered connections (matches NASA standards) - critical for high power application.

RELIABILITY

PowerLOK	APC	Servertech	Vertiv
< 100% robotically soldered* < Made in USA	< 70+ push-on, IDC and rivets < Made in India	< Uses push on connections < Some models made off-shore	< Uses push on connections < Made in the USA

* Independently evaluated by mtechnology to be 270% less likely to experience power connection failure over models with push-on and insulation displacement connectors.

PowerLOK Secure   vs.   Overheat and fail
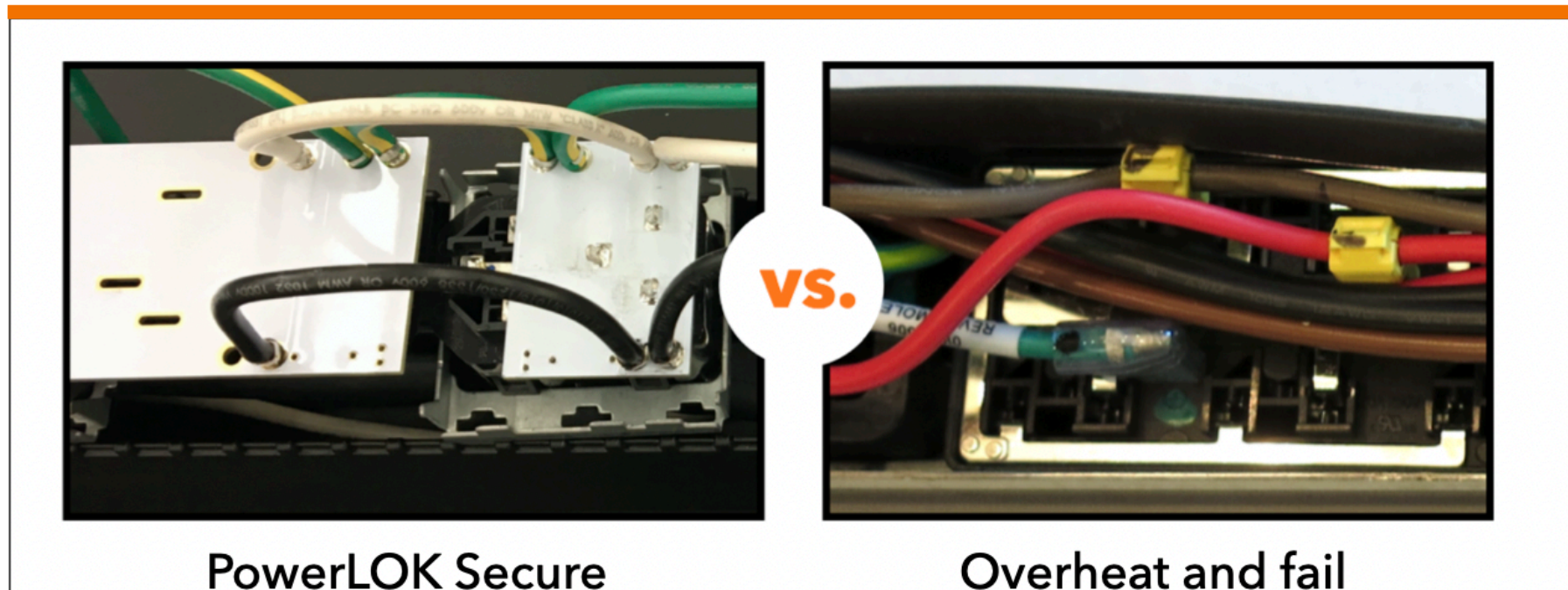
OBJECTIONS

> **Don't other rPDU suppliers use soldered connections?** Typically only on switched PDUs due to switching electronics. The cost to solder Basic and Monitored PDUs would be significantly higher for PDUs that are not designed for automation using the latest technology and processes. Vertiv hand solders many of their PDUs.

POWERLOK ADVANTAGE

3X less likely to fail due to 100% robotically soldered connections - critical for high power application. 1-2 week delivery on over 70 models.

DELIVERY

PowerLOK	APC	Servertech	Vertiv
< 70+ Models in 1-2 weeks < 1400+ Models in 3-5 weeks	< Limited models in distribution	< Varies often	< Varies often

PowerLok PDUs are built to order. Chose a category based on your delivery and feature requirements. For additional details refer to a product data sheet.

○ **Fast Response Models (1-2 weeks)**   ● **Select Models (3-5 weeks)**   ○ **Build Models (8-10 weeks)**
                                              12 Minimum PDU Order   48 Minimum PDU Order

PDU Type

BASIC	MONITORED	SWITCHED READY

Voltage Series

208/240V 1PH	120/208V 3PH	208/240V 3PH	240/415V 3PH

OBJECTIONS

> **Don't other rPDU suppliers offer build-to-order?** Yes, some do. However they are limited to designs and processes that favor standardization rather than customization. PowerLOK is designed for maximum configurability offering over 1400 models within a 3-5 week window.

PDU Size

POWERLOK ADVANTAGE

PowerLOK uses automated robotic soldering & technology to provide a slim profile.

PDU SIZE

PowerLOK	APC	Servertech	Vertiv
< 2.18" wide x 2.7" deep to 80A* < 2.90" wide x 2.9" deep (120A)	< 2.2" wide x 1.75" deep low power < 2.2" wide x 3.74" deep high power	< 1.75" wide x 2.25" deep low power < 2.2" wide x 3.0" deep high power	< 2.1" wide x 2.0" deep low power < 2.1" wide x 3.0" deep high power

* 2.0" deep without Cord LOK.

OBJECTIONS

> **Why does PowerLOK have such a slim profile?** PowerLOK is designed from the inside out and uses the latest technology and automated processes.

> **Do other rPDU suppliers offer slim PDUs?** Some are slimmer than others but PowerLOK is the slimmest in the industry due to patented design and construction.
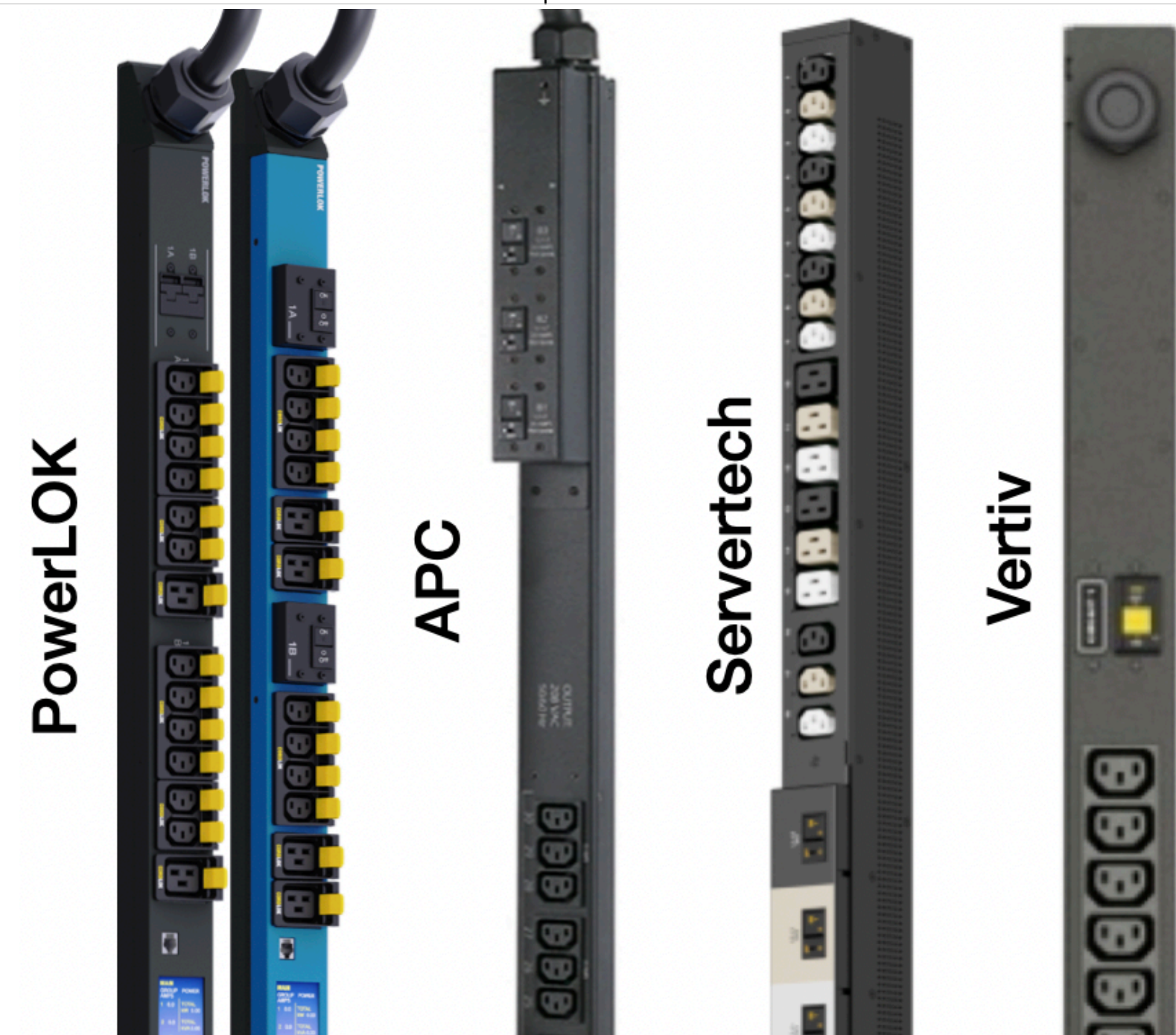
PDU Color

POWERLOK ADVANTAGE

PDU assembly is automated and built-to-order to allow colors fast at no additional cost.

PDU COLOR

PowerLOK	APC	Servertech	Vertiv
< Colors at no additional charge* < 3-5 week delivery	< Increased costs < Long lead times	< Colors at increased cost < Long lead times	< Incomplete details at this time

* Minimum order quantity of 12 units.

OBJECTIONS

> **How can PowerLOK do colors at no additional cost?** PowerLOK design and manufacturing uses latest technology and highly automated processes.

> **I have seen PDUs from many suppliers at conferences and they have many colors displayed. Are you telling me that I can't get these?** Suppliers show many colors but to obtain them you need to have large orders or pay a premium, sometimes both.

PowerLOK   APC   Servertech   Vertiv
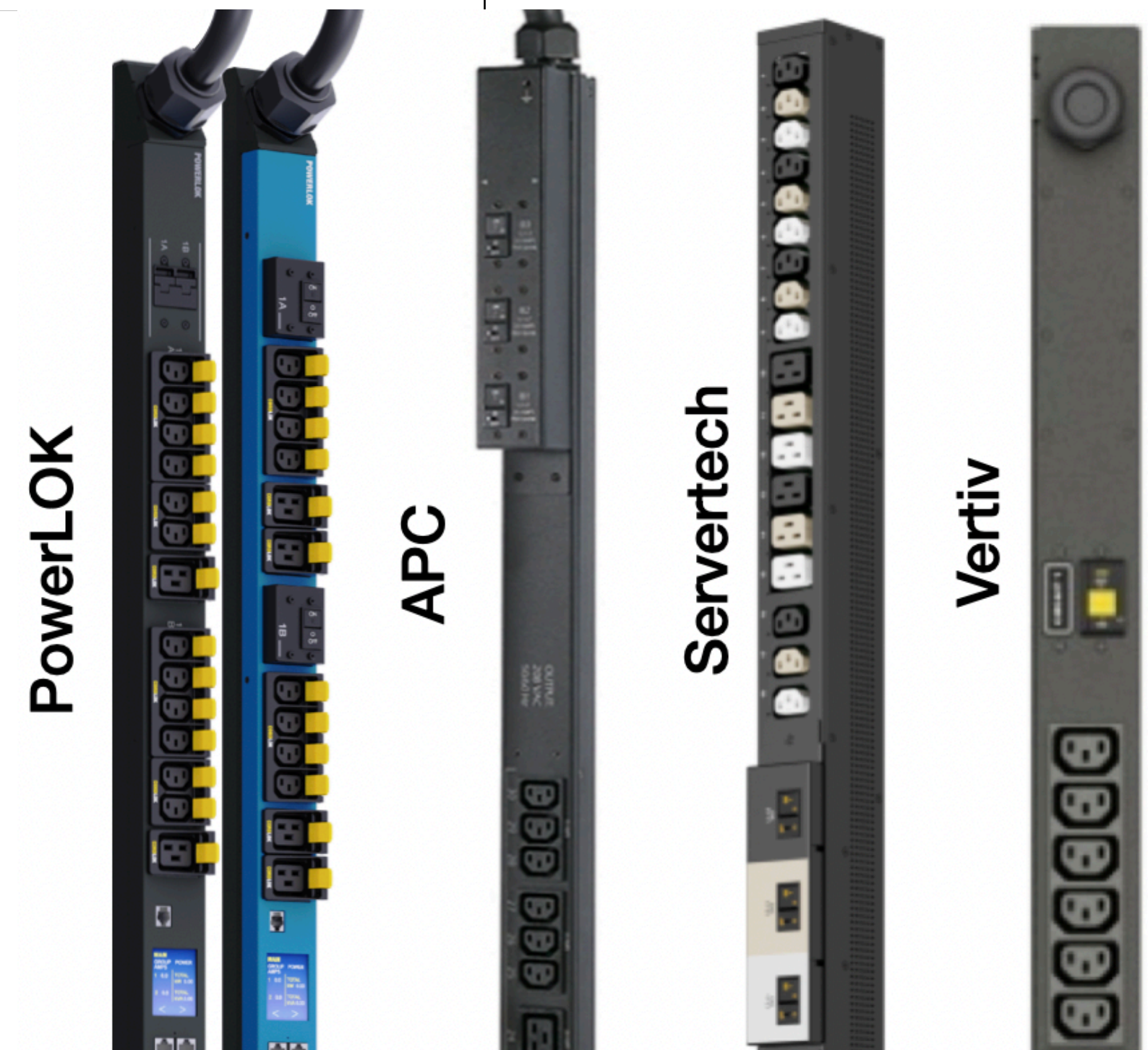
Cord Locking

POWERLOK ADVANTAGE

CordLok does not sacrifice any receptacle density, uses standard cords and clicks when it is locked in place.

CORD LOCKING

PowerLOK	APC	Servertech	Vertiv
< Using your cords < $1 per receptacle	< Using APC cords < $20/$35 per cord (C13/C19)	< Using your cords on some models < Moderate cost	< Using your cords < Moderate cost

OBJECTIONS

> **Doesn't Vertiv's rPDUs allow locking using your cords with no loss in receptacles?** No. A new higher retention (not locking) design from Vertiv allows use of your own cords.

> **What about the receptacle density of Servertech's HDOT, doesn't this provide more receptacles?** Removing the barrier between receptacles does provide a marginal increase in receptacle density. However, this is a custom receptacle that has a much higher price.

> **Does Servertech's combination C13-C19 solve the problem of knowing what receptacles you need?** Yes, but only for the C19s because C19s are almost 50% longer in length along the PDU and you will have fewer receptacles on your PDU if C13/C19 combo outlets are used everywhere.

PowerLok (CordLok)   **APC (Cord Kit)**   **SeverTech (SecureLock)**   **Vertiv (U-Lock)**

POWERLOK

POWERLOK ADVANTAGE

PowerLok monitored PDU's have industry leading accuracy and internal temperature reading.

	PowerLOK	APC	Servertech	Vertiv
MONITORING ACCURACY	< Voltage: 0.5% < Current: 0.5% above 1A 1.0% below 1A	< Voltage & Current: +/- 1%	< Voltage & Current: +/- 0.5%	< Voltage & Current: +/- 1%
FEATURES	< Touchscreen display < PDU internal temp. monitoring < Not replaceable	< LCD and push-buttons < Poor visibility < Not replaceable	< LED and push-buttons < Poor visibility, lacks information < Replaceable on limited models	< LED and push-buttons < Poor visibility, lacks information < Replaceable
NETWORK CAPABILITY	< Daisy chain capability < Ethernet 10/100 Mbps.	< Daisy chain capability < Ethernet 10/100 Mbps.	< Daisy chain capability < Ethernet 10/100/1000 Mbps.	< Daisy chain capability < Ethernet 10/100 Mbps.

OBJECTIONS

> **Do I need 0.5% versus 1.0% accuracy?** This depends on how you use power data and the amount of power being used. Poor accuracy on high powered PDUs will add up quickly.

> **Are push-buttons on PDUs really failure prone?** Mechanical devices have much greater failure rates and this is why you see buttons being removed from many other devices you interact with today.

> **Do I need 1000 Mbps speed?** No, this is not needed for the following reasons; 1) compatibility with the network switch - all 100 Mbps devices are compatible with 1000 Mbps network switches, and 2) the data transfer at 100 Mbps is more than sufficient to transfer the small amount of PDU power data needed.

PowerLok   APC   SeverTech   Vertiv
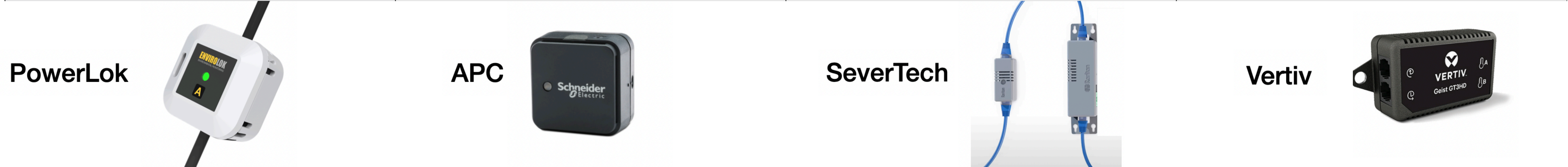
Environmental Monitoring

POWERLOK ADVANTAGE

EnviroLok has industry leading monitoring accuracy and battery-less sensors that are daisy chained.

	PowerLOK	APC	Servertech	Vertiv
MONITORING ACCURACY	< 0.2C temperature accuracy < 2% Rh accuracy	< 1.0C temperature accuracy < 3% Rh accuracy	< 1.0C temperature accuracy < 5% Rh accuracy	< 1.1C temperature accuracy < 3.5% Rh accuracy
CAPABILITY	< Daisy 4 sensors per PDU < Calculate temperature deltas	< Sensors do not daisy chain < No temperature deltas	< Daisy 32 sensors per PDU < No temperature deltas	< Daisy 3 sensors per PDU < No temperature deltas
POWER	< Battery-less sensors < Low power through cable	< Wireless sensor with battery < Wired battery-less sensors avail.	< Battery-less sensors < Low power through cable	< Battery-less sensors < Low power through cable

PowerLok   APC   SeverTech   Vertiv

OBJECTIONS

> **How does PowerLOK have greater environmental accuracy and is still less expensive?** PowerLOK is designed using the latest technology for environmental monitoring.

> **Why not use wireless sensors to get rid of the cables?** Wireless sensors are easier to place but the downside are the batteries which present more maintenance. Because of the uncertainty of battery life, many are moving away from wireless.

> **Why does PowerLOK have 4 sensors per PDU?** ASHRAE recommends 3 sensors placed at the air intake (rack front door). There are other reasons for more sensors per rack. 1) for leakage areas such as rack mounting rails where hot air circulates to the front and into the server, and 2) for placement at the rear of the rack so you can see the change in temperature (intake to exhaust) of the servers.

POWERLOK ADVANTAGE

Slimmer PDUs with more receptacles. Add switching cords when and if needed, saving thousands of dollars.

	PowerLOK Switched Ready PDU	APC	Servertech	Vertiv
PDU SIZE	< Utilize the slimmest PDU profile < Same size as a monitored PDU	< PDU is over 3" deep < Some double wide	< PDU is over 2.5" deep	< PDU is over 2.6" deep < Some double wide
RECEPTACLE QUANTITY	< Maintain the greatest quantity < Same quantity as a monitored PDU	< Reduced receptacles, varies by power type		
RELIABILITY*	< No service downtime < Easily replace failed switching cords	< Service downtime to replace PDU, or tape over failed outlets		
START-UP/ COST	< Future proof your PDU < Start with standard cords < About $1 per receptacle	< Paying for switched outlet you may never use < About $20 per receptacle		
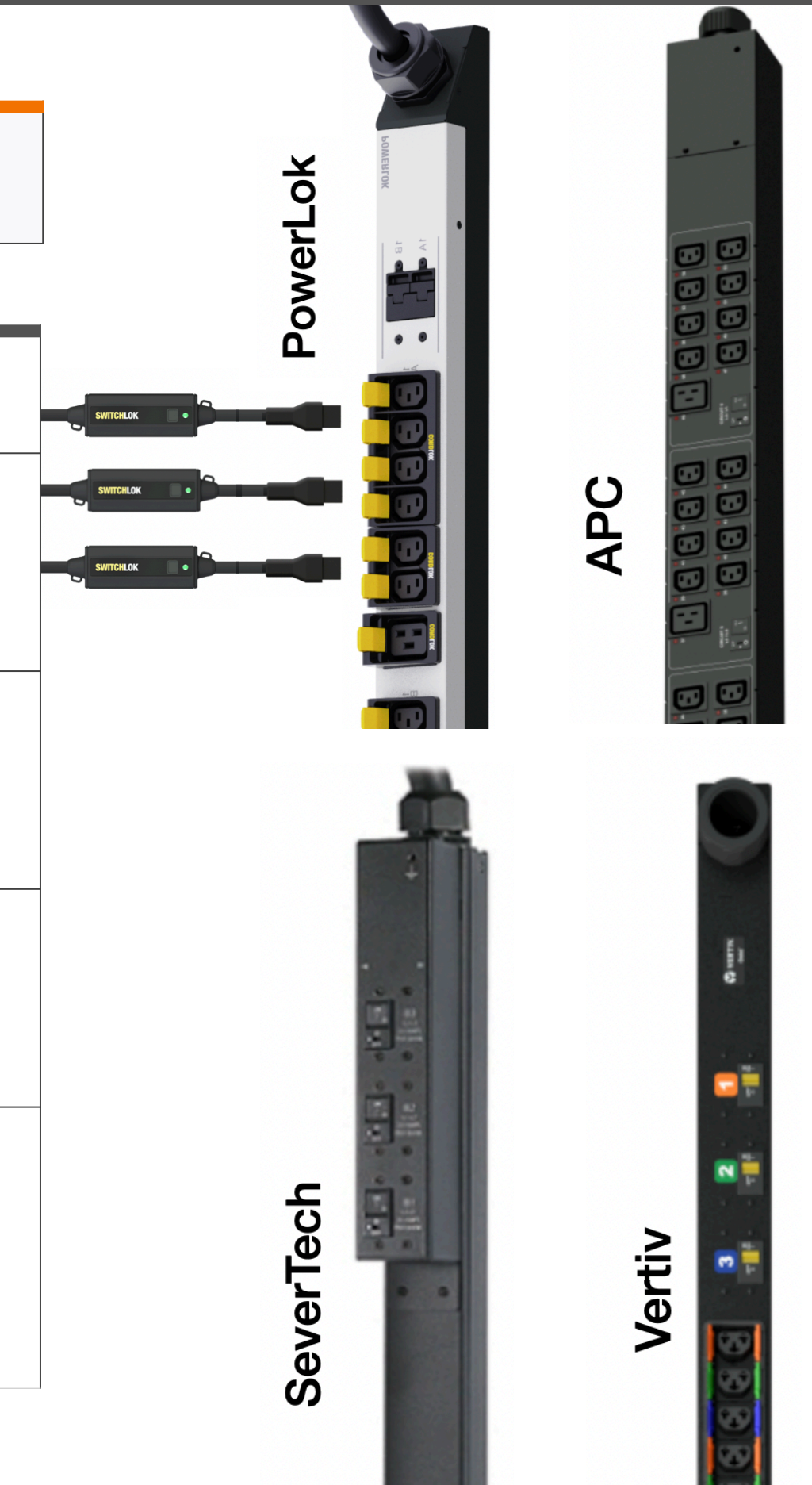
OBJECTIONS

> **Is set up the same between Switched Ready and switched PDUs?** Basically an identical setup, however there are benefits to Switched Ready PDUs. 1) Software has advanced user interfaces and functionality over other PDUs, and 2) a switching cord can be moved to any outlet and still have the same original assignment it was given.

> **How many servers typically require switching cords?** This varies greatly depending on the customer's application. It is not always the case, but often customers are buying switched PDUs in case they might require switching later. Often they never use all of the switched PDU receptacles.

> **Will the total cost be higher when I use switching cords on all PowerLOK outlets versus the PDUs with internal relays?** Yes, there is a cost associated with maintaining slim PDU profiles, maximizing receptacle quantity and improving reliability.

PowerLok

APC

SeverTech

Vertiv