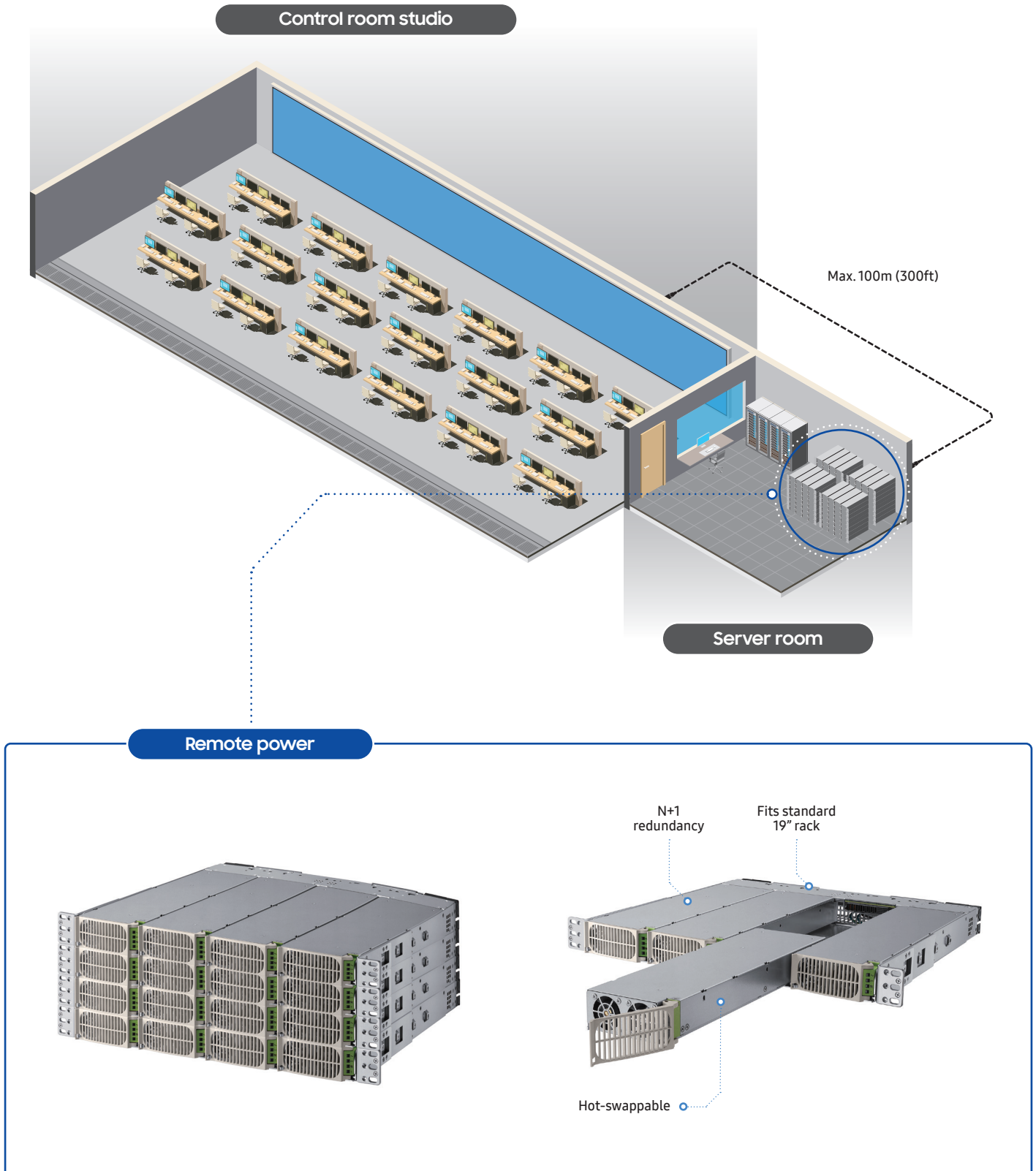# The Wall

Remote power supply solution

Built for mission-critical environments.

What is remote power?

Remote power, otherwise known as off-board power, is an external power source that can be installed separately from a screen. Due to The Wall's redundant system design, it is not impacted in the event of an unexpected power module failure. The main objective of remote power is to supply power consistently, ensuring zero downtime even in worst case scenarios, especially for mission-critical environments such as control rooms or broadcasting studios.

Control room studio

Max. 100m (300ft)

Server room

Remote power

N+1 redundancy

Fits standard 19" rack

Hot-swappable

* The number of power supply shelves and cables vary depending on screen size and installation distance.

Why remote power?

Remote power capabilities protect screens from turning off due to an unexpected power outage. N+1 redundancy secures one additional power module per each N module, protecting against any downtime. In addition, hot swappable functionality enables users to replace broken power modules without turning off the screens, allowing them to continue running for maximum efficiency while the issue is repaired.

High availability

Protect from screen-off by securing one additional power module per each N modules.
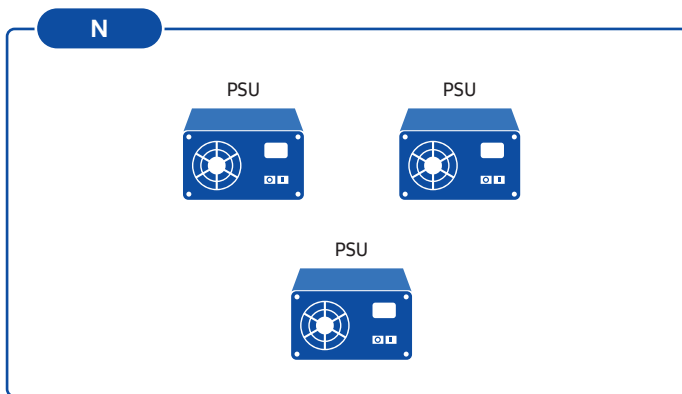
Stable operation

Disperse heat by taking power supply unit out of the screen, reducing surface temperature.

Easy maintenance

Standard 19" size allows optimal space utilization and hot swappable modules eliminate unnecessary tasks.

What is N+1 redundancy?

N

PSU   PSU

PSU

A design assigned as N means the display was designed only to account for any failure at full load, with zero redundancy added.

Any mission critical applications will suffer as a result of unexpected outages.

* What N refers to varies dependent on situation in which the term is used.
** PSU : Power Supply Unit

N+1

PSU   PSU   PSU

PSU
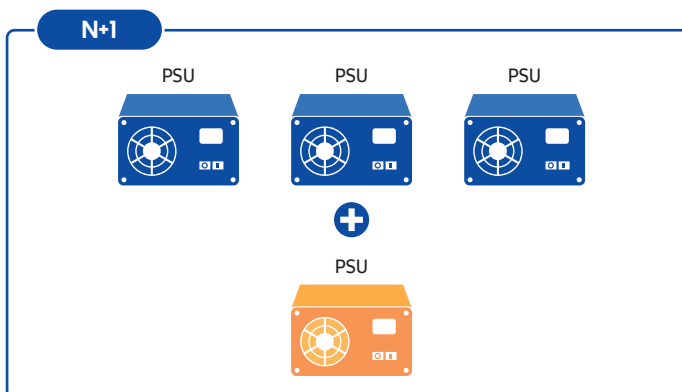
A design assigned N+1 indicates an additional component has been added to support a single failure. The typical design provides one extra unit for every three needed.

Benefitting mission critical applications overall for an optimized solution.

Comparative advantages of remote power

Remote power is the ideal solution when you need an effective and hot swappable source of power redundancy. When compared with a single PSU, it provides more effective back-up of PSU, along with more secure redundancy. In comparison to a dual PSU, remote power can rely on the power of all other PSU, not just one, with the added capability of being able to replace modules while still running, unlike both single and dual PSU solutions.

Single PSU	Dual PSU	Remote power

Remote power
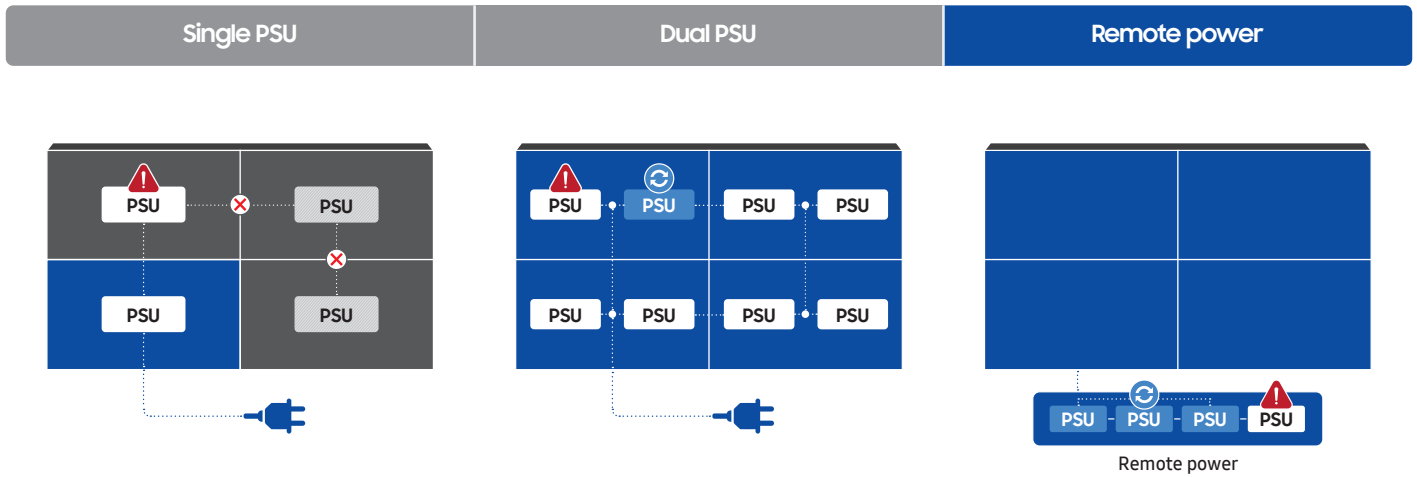
When one PSU fails...

When you repair...

Remote power
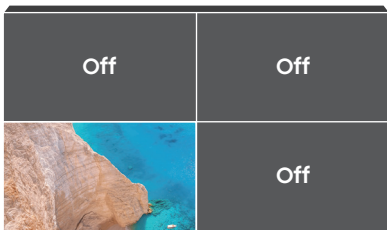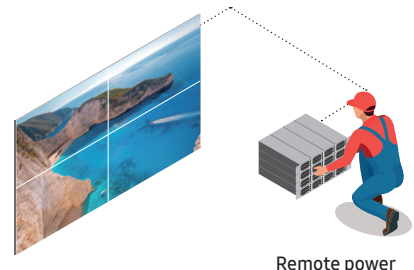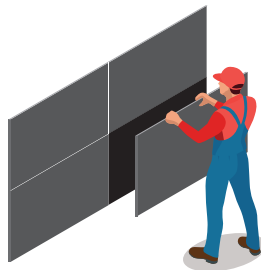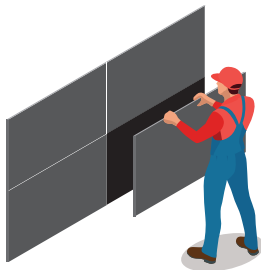
👎 When one PSU fails, all the PSU connected with it turn off.	👍 When one PSU fails, another PSU backs it up.	👍 When one PSU fails, other PSU back it up together.
👎 Power redundancy is not secured.	👆 For power redundancy, additional PSU should be secured as much as existing PSU (nx2, nx3, ...)	👍 For power redundancy, additional PSU should be secured as much as you want (n+1, n+2, ...)
👎 Screen off is needed when replacing the power module.	👎 Screen off is needed when replacing the power module.	👍 Enabling to replace the power module while running.

Optimal solution for mission-critical applications

Samsung's The Wall is an optimal solution for mission-critical environments and applications. Control rooms for example, require 24/7 monitoring and analytics capabilities for every minor detail, with downtime not being an option at any time. When considering broadcasting studios, there can be no errors during a live broadcast, with power redundancy being a must-have for total peace of mind and maximum audience engagement.
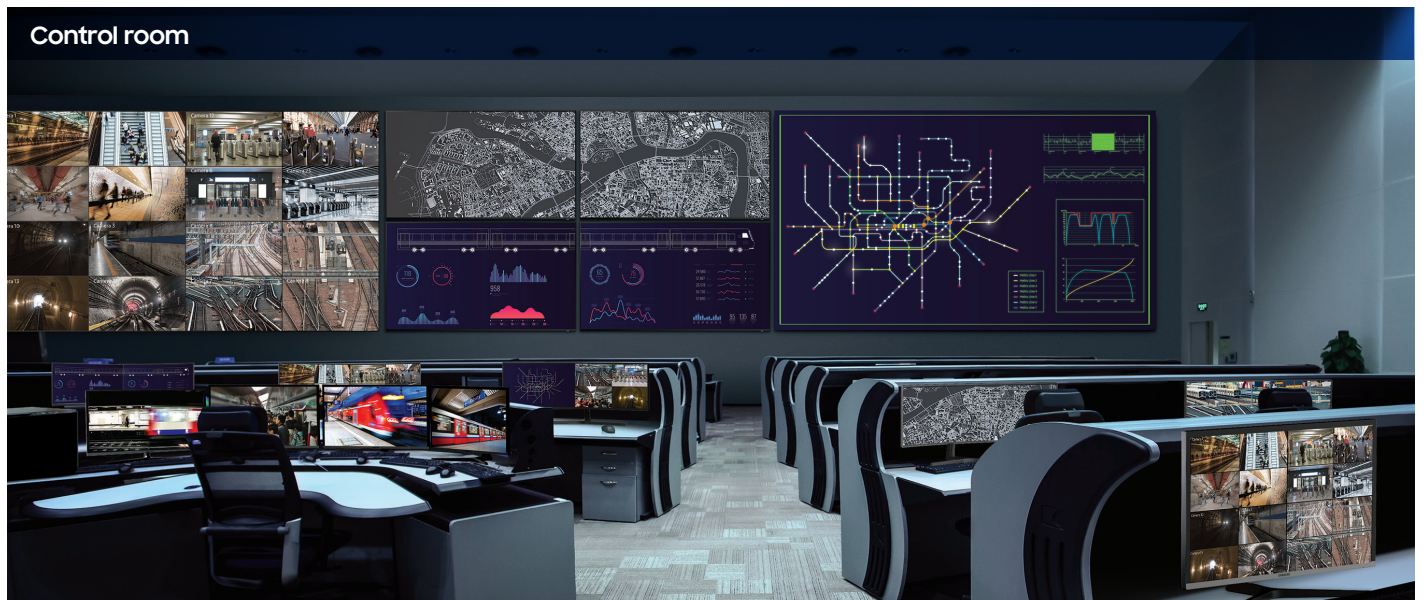
Control room

Keep control room operating 24/7 without any downtime

In control rooms, any downtime is critical because every minor detail needs to be monitored in case of an emergency. Remote power options enables your control room to operate 24/7 at maximum performance.

Broadcasting studio

Don't worry about screen-off during live broadcast

All the components in a broadcasting studio should be working like a dream, especially when broadcasting live. With remote power options, you have complete peace of mind for a smooth broadcast, every time.

Specifications

Model		IWA-R		
		IW008A-R (Remote Power)	IW012A-R (Remote Power)	IW016A-R (Remote Power)
Physical Parameter	Pixel Pitch	0.84 mm	1.26 mm	1.68 mm
	Pixel Configuration	1 red, 1 green, 1 blue	1 red, 1 green, 1 blue	1 red, 1 green, 1 blue
	Configuration (LxH, per cabinet)	960 x 540 pixels	640 x 360 pixels	480 x 270 pixels
	Diode Type	Flip-chip RGB LED	Flip-chip RGB LED	Flip-chip RGB LED
	Dimensions (LxHxD, per cabinet)	806.4 x 453.6 x 36.5 mm / 31.75 x 17.86 x 3.01 in	806.4 x 453.6 x 36.5 mm / 31.75 x 17.86 x 3.01 in	806.4 x 453.6 x 36.5 mm / 31.75 x 17.86 x 3.01 in
	No. of Modules (WxH, per cabinet)	4 x 3	4 x 3	4 x 3
	Weight (per cabinet/per m²)	10.5 kg / 28.7 kg / 23.15 lbs / 63.27 lbs	10.5 kg / 28.7 kg / 23.15 lbs / 63.27 lbs	10.5 kg / 28.7 kg / 23.15 lbs / 63.27 lbs
Optical Parameter	Brightness (Peak/Max) (1)	1,600 nit / 500 nit	1,600 nit / 800 nit	1,400 nit / 1,000 nit
	Contrast Ratio (2)	24,000 :1	24,000 :1	21,000 :1
	HDR Compatibility	LED HDR / HDR10+ support / AI Picture	LED HDR / HDR10+ support / AI Picture	LED HDR / HDR10+ support / AI Picture
	Viewing Angle - Horizontal	170°	170°	170°
	Viewing Angle - Vertical	155°	155°	155°
	Bit Depth	16 bit (Internal processing 20bit)	16 bit (Internal processing 20bit)	16 bit (Internal processing 20bit)
	Color Temperature - Default	6,500K ± 500K (Floating bin)	6,500K ± 500K (Floating bin)	6,500K ± 500K (Floating bin)
	Color Temperature - Adjustable	2,800K ~ 10,000K (using S-Box)	2,800K ~ 10,000K (using S-Box)	2,800K ~ 10,000K (using S-Box)
Electrical Parameter	Video Rate	100/120 Hz	100/120 Hz	100/120 Hz
	Input Power Range	48Vdc	48Vdc	48Vdc
	Power Consumption - Max	465 (W/m²) / 170 (W/Cabinet) (TBD)	348 (W/m²) / 127 (W/Cabinet)	361 (W/m²) / 132 (W/Cabinet)
	Power Consumption - Typ	306 (W/m²) / 112 (W/Cabinet) (TBD)	241 (W/m²) / 88 (W/Cabinet)	244 (W/m²) / 89 (W/Cabinet)
	Heat Generation - Max	1,586 (BTU/m²) / 580 (BTU/Cabinet) (TBD)	1,185 (BTU/m²) / 434 (BTU/Cabinet)	1,232 (BTU/m²) / 451 (BTU/Cabinet)
	Heat Generation - Typ	1,045 (BTU/m²) / 383 (BTU/Cabinet) (TBD)	822 (BTU/m²) / 301 (BTU/Cabinet)	830 (BTU/m²) / 304 (BTU/Cabinet)
	Refresh Rate (3)	11,520 Hz	11,520 Hz	15,360 Hz
Operational Parameter	Power Redundancy	Yes	Yes	Yes
	Working Temperature / Humidity	0℃~+40℃ / 10%~80%RH	0℃~+40℃ / 10%~80%RH	0℃~+40℃ / 10%~80%RH
	Storage Temperature / Humidity	-20℃~+45℃ / 5%~95%RH	-20℃~+45℃ / 5%~95%RH	-20℃~+45℃ / 5%~95%RH
	IP Rating	IP20	IP20	IP20
	LED Lifetime	150,000 hours	150,000 hours	150,000 hours
Connectivity	Controller	SNOW-AAE	SNOW-AAE	SNOW-AAE
	Connectivity	Optical ※ HDBT is used for connecting only BT/Wifi module	Optical ※ HDBT is used for connecting only BT/Wifi module	Optical ※ HDBT is used for connecting only BT/Wifi module
Certification	Safety	62368-1, 60950-1	62368-1, 60950-1	62368-1, 60950-1
	EMC	Class A	Class A	Class A
	Eye-protection	TUV Eye Comfort	TUV Eye Comfort	TUV Eye Comfort
	Fire-protection	N/A	N/A	N/A
Service	Service	Front	Front	Front
Features	Operating System	Tizen 6.0	Tizen 6.0	Tizen 6.0
	MagicINFO	Yes	Yes	Yes
	Sensor	Temperature	Temperature	Temperature
	Other	Eco Image Enhancer, 3D mode	Eco Image Enhancer, 3D mode	Eco Image Enhancer, 3D mode
	Smart Function	Multiview, Screen-mirroring	Multiview, Screen-mirroring	Multiview, Screen-mirroring
Accessories	Accessories	Décor Frame (Standard), Frame Kit	Décor Frame (Standard), Frame Kit	Décor Frame (Standard), Frame Kit
Package	Box Dimension (mm, WxHxD)	927 x 161 x 592 mm	927 x 161 x 592 mm	927 x 161 x 592 mm
	Package Weight (per cabinet)	14.2 kg	14.2 kg	14.2 kg
Special Installation	Curve	Concave(6000R), Convex(6000R), L-type	Concave(6000R), Convex(6000R), L-type	Concave(6000R), Convex(6000R), L-type
	Inclination	Forward, Ceiling	Forward, Ceiling	Forward, Ceiling
	Rotation	N/A	N/A	N/A
	Other (4)	Hanging, Stacking, Dual-sided, Movable	Hanging, Stacking, Dual-sided, Movable	Hanging, Stacking, Dual-sided, Movable

(1) Peak value according to IDMS (Information Display Measurement Standard)
(2) Measured under 10lux light. Contrast in darkroom exceeds 1000000:1
(3) Referring to visual refresh rate
(4) Optional structure required

Model Name		VG-RPW (Remote Power Supply Kit)
Physical Parameter	Type	1RU rack mount; 19" rack
	Configuration	4 power modules per shelf
	Dimensions (mm, WxLxH)	482.6 x 429.5 x 43.4 mm
	Weight	14.25 kg
Electrical Parameter	Input Voltage	100~120Vac / 200~277Vac
	Output Voltage	48Vdc
	Output Power	6000W / 100~120Vac 14000W / 200~277Vac
	Efficiency	90% Min. (240Vac@25℃)
	Heat Dissipation	760W/2592BTU @ 80% load 1000W/3412BTU @ 100% load
Operational Parameter	Power Redundancy	3+1 redundancy per shelf
	Hot Swap	Supported for each power module
	Working Temperature / Humidity	-40℃~+50℃ / 5%~95%RH
	Storage Temperature / Humidity	-40℃~+85℃ / 5%~95%RH
	Operating Altitude	1500m max
	Audible Noise	55dbA typ, full load
	Air Flow Direction	Front to rear
	Lifetime	10 years (Full load, excluding fans)
Certification	Safety	60950-1, UL, CE, CB
	EMC	Class A
	Earthquake Requirements	Zone 4

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