GEIST

NETWORK SWITCH COOLING

A cost-effective product platform providing superior reliability.

In order to reduce energy consumption by data centers and provide greater flexibility in facility operations, in 2008 ASHRAE increased the acceptable intake temperature for Datacom Equipment to 80.6°F (27°C). While this operational shift has provided significant efficiency gains, it has also increased the number of network operation failures caused by insufficient switch cooling.

Geist's Network Switch Cooling units eliminate these heat related failures by strategically targeting this problem area.

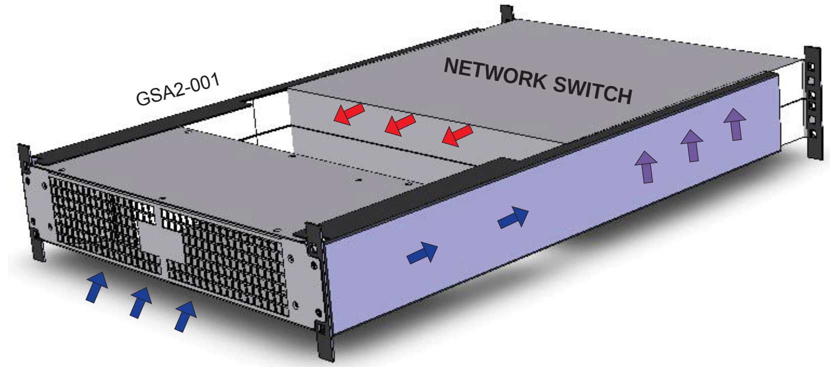
Placing network switch ports facing the rear of rack where server port density resides is convenient and simplifies network cabling. Therefore switches commonly utilize side air intake which is different than the rest of the equipment in the rack. These devices allow cool air from the cabinet front to be delivered to the rear mounted switches. The cooling for the rest of the rack isn't ideal for rear mounted network switches.

the GEIST advantage

- ✓ Maintain a perfectly controlled environment for your network switches
- ✓ Achieve the greatest degree of data center cooling efficiency for network switches and routers with effective cool air delivery for network switches with varying air flow patterns
- ✓ Resolves a critical issue plaguing data centers while reducing operating costs
- ✓ Installs quickly without disrupting network operations
- ✓ Rapid return on investment; typically less than 3 months
- ✓ Stabilizes switch intake temperature within a few degrees of the rack front intake air temperature
- ✓ Continually delivers required cool air
- ✓ Delivers cool air from outside the rack front to rear mounted switches without hot air contamination
- ✓ Enables placing switch inside the rack, even with high-heat loads generated by energy efficient servers

GSA2-001

NETWORK SWITCH COOLING



SPECIFICATION

Item Number	GSA1-001	GSA2-001
Configuration	1U	2U
Rear rack mount switch compatibility:	Cisco 4948	Most 1U and 2U, including: Side intake-rear exhaust Side intake-front exhaust Rear intake-front exhaust Combination of above
Air Flow	N/A - passive	48 CFM
Input Power	N/A - passive	90-264 VAC 50/60 Hz / 15 Watts
Input Connector	N/A - passive	C-14 (cord not included)
Conformance	N/A	UL & c-UL 60950, FCC Class A
Mounting Rail Depth Range:	27 5/8” to 29 5/8”	26 5/8” to 29 5/8”
Warranty	Lifetime	2 Year
Installation	1U space between switches required Use blanking panels to block heat	Can be stacked in consecutive U spaces

GSA1-001:
- ✓ passively delivers cool air to the switch via enclosed channels
- ✓ case study evidence documented 15°F (8°C) discharge temperature decreases

GSA2-001:
- ✓ actively pushes cool air to rear mounted network switches
- ✓ works in either 120 or 208V installations
- ✓ consumes only 15 watts
- ✓ can be stacked and accommodate switches with varying air flow patterns in single installation