



## Integrated Front Access Switchgear, UPS Static Switch, and Distribution Panel Assembly

**Products:** LV Switchgear, UPS Static Switch, LV Distribution Panel

**Issue:** The designers of a new Tier 5 data center needed to idealize the power distribution system in order to minimize both the overall footprint and the total installation time. Prior projects of this type utilized a large 1 MW static switch in a free-standing installation, switchgear requiring both front and rear access due to the draw-out requirements for the circuit breakers, and separate plug-in style distribution panels that fed downstream loads which were supported by the UPS modules.

**Solution:** SAI worked with a UPS manufacturer to develop a front access design that incorporated the static switch into the switchgear assembly, to eliminating separate mounting and cabling to the switchgear. SAI also integrated a switchboard interior for the plug in circuit breaker distribution panel into the switchgear, eliminating the cable connection on the output of the switchgear. Additionally, SAI designed a unique walk-in section that allowed front access to the rear portion of all the cabinets and all cable and bus connection points. As a result, all installation and maintenance could be performed without the need for rear access. The combination of these design achievements dramatically reduced the footprint of the power distribution system and greatly reduced the total installation time. It also eliminated numerous cabled connections between components, thereby increasing overall reliability.

**Result:** The data center was designed and built using one idealized and integrated piece of power distribution equipment. This SAI developed solution dramatically increased the amount of space available for revenue generating equipment, reduced the installed cost of the system, and met all of the reliability, safety, and functionality requirements of this extremely critical application.

