# Which Product is Right for Me?

6Sigma***Room*** and 6Sigma***RoomLite*** are two products in the 6SigmaDCX suite, designed for data center modeling applications. Room is intended for detailed data center design, while RoomLite is more suited to concept design using simplified modeling objects. This feature comparison will help you decide which is best for you.

### *Choose Your Level of Detail*

***RoomLite*** *treats cabinets as part of the room-level grid; it can capture modeling detail at the room level, but does not support external building airflow modeling.*

***Room*** *allows you to model external flows, model evaporative cooling pads and room humidity, calculate solar intensity, and more.*

### *Solve Faster, in Higher Resolution*

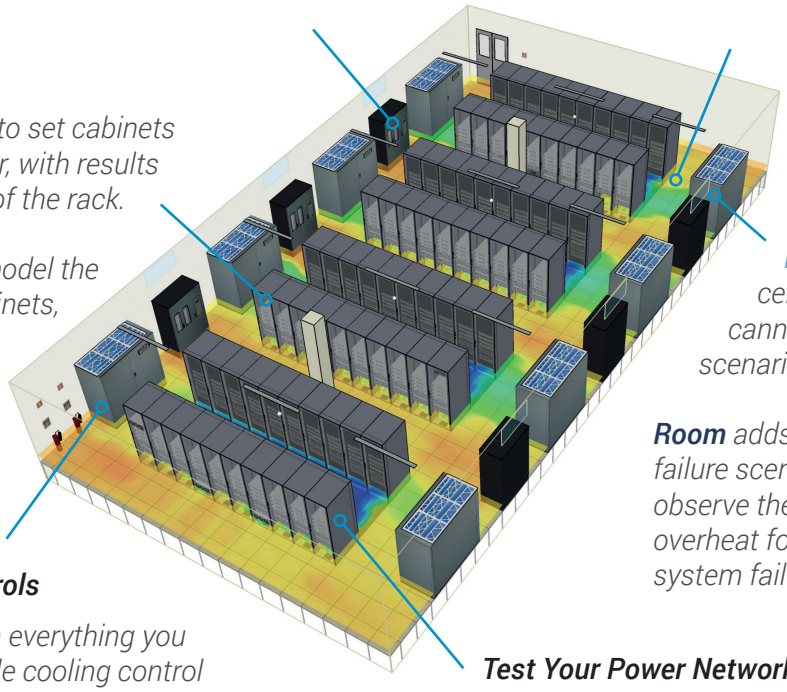
***RoomLite****'s optimal grid structure gives you fast solve times, but lower-resolution results. Use RoomLite for speedy concept design.*

***Room****'s advanced grid control gives you more flexibility, which provides high-resolution results of your data center model.*

### *Model Your IT*

***RoomLite*** *allows you to set cabinets to a specified IT power, with results predicted at the face of the rack.*

***Room*** *can explicitly model the internal details of cabinets, predicting airflow and temperature at the IT level.*



### *Model Failure Scenarios*

***RoomLite*** *models the data center whitespace quickly, but cannot provide analysis of transient scenarios.*

***Room*** *adds the ability to model transient failure scenarios. This allows you to observe the time taken for a facility to overheat following an ACU or chilled water system failure.*

### *Model Complex Controls*

***RoomLite*** *comes with everything you need to model a simple cooling control strategy.*

***Room*** *allows you to add additional controllers to objects such as fans, vents and ACUs, and model the internals of cooling units. It gives you full control over velocity, pressure, temperature, and humidity.*

### *Test Your Power Network*

***RoomLite*** *allows you to explore what-if failure scenarios, so you can see the worst-case scenario and test your facility's redundancy.*

***Room*** *can model full power connectivity, test failures, and visualize phase balance, breaker loads and panel schedules.*

# Details

| *Applications* | 6Sigma*Room* | 6Sigma*RoomLite* |
|---|---|---|
| Standard raised floor & non-raised floor data center | ✓ | ✓ |
| Direct & indirect fresh air cooling systems | ✓ | ✓ |
| Water spray & wetted media cooling systems | ✓ | |
| External/Outdoor analysis | ✓ | |
| General HVAC analysis (clean rooms, ducting, etc.) | ✓ | |
| Contamination | ✓ | |
| Human comfort | ✓ | |
| Power network & weight analysis | ✓ | |
| ***Model Construction*** | | |
| Drag & drop data center objects for quick model building | ✓ | ✓ |
| Access to extensive libraries of vendor equipment (4000+ items) | ✓ | ✓ |
| Room layout import from CAD files | ✓ | ✓ |
| IT asset import | ✓ | ✓ |
| Cabling, ducting, and piping layout modeling | ✓ | ✓ |
| Individual & group control of cooling units | ✓ | ✓ |
| Extended controllable objects (fans, dampers, etc.) | ✓ | ✓ |
| Detailed control logic (gains, staging, sensor networks, etc.) | ✓ | |
| ***Solving*** | | |
| Room level airflow and thermal simulation | ✓ | ✓ |
| IT level airflow and thermal simulation | ✓ | |
| Detailed modeling of flow inside cabinets | ✓ | |
| Automated mesh generation | ✓ | ✓ |
| Customizable mesh generation | ✓ | |
| Full RANS CFD solution of the whole domain | ✓ | ✓ |
| Unlimited multi-core solving (price based on number of cores) | ✓ | ✓ |
| Transient simulation | ✓ | |
| ***Results & Analysis Tools*** | | |
| Temperature, pressure & velocity planes | ✓ | ✓ |
| Animated air stream traces | ✓ | ✓ |
| Automated report generation | ✓ | ✓ |
| Model walkthrough & animation export | ✓ | ✓ |
| Data center result plots (ASHRAE & SLA compliance) | ✓ | ✓ |
| Transient data center cooling failure analysis | ✓ | |
| Parametric analysis | ✓ | |
| Version tree | ✓ | |