Vertiv™ SmartMod™
Modular Data Center Infrastructure
Vertiv™ SmartMod™

Imagine the advantages of a rapidly deployable, standalone data center with all the capabilities you need to achieve your IT objectives.

Building a new data center in a short timeframe is nearly impossible. The Vertiv™ SmartMod™ provides enhanced levels of availability, efficiency, and control in self-contained enclosures that can be deployed securely, virtually anywhere. For IT deployments between 2 and 14 racks with 100 kW or less, SmartMod offers a simple way to install capacity in a fraction of the time.

You don't have to overspend, or overbuild based on uncertain future needs – with right-sized systems designed to work together and optimized for constructability; you can build just what you need today, better aligning your capital plans to your business challenges.

SmartMod leverages core Vertiv Critical Power, Thermal Management, and Monitoring & Control technologies.

**SmartMod incorporates:**
- Modular and scalable Vertiv™ Liebert® UPS power protection
- Close-coupled in-row Liebert® CRD thermal management units with intelligent iCOM™ Edge controls
- Classic and cost-effective Vertiv racks
- Vertiv rack PDUs
- Thermal containment to isolate hot aisle and cold aisle airflows for optimum thermal performance
- Automatic Transfer Switch (ATS) to reliably select normal or emergency power sources
- Overhead infrastructure, including piping, electrical distribution, and fiber ducts
- Clean agent fire suppression and aspiration smoke detection (as optional items)
- Vertiv™ Critical Insight real-time monitoring and visualization for critical infrastructure (as optional item)

All subsystems are factory installed into a secure, weatherproof and transportable enclosure – simplifying and drastically shortening the on-site time required to install and startup, and reducing the potential for risk, quality, or schedule delays.

SmartMod is not a one size fits all system. It is designed to be configurable to right-size to your rack footprint, IT load, desired redundancy, location, and other additional options so you can achieve the optimal solution based on a specific need.

When deploying multiple units or at numerous locations, having a standard look and feel, layout and equipment kit simplify maintenance and operations activities.

Vertiv backs it all up with the service and support network you have come to expect from us.
Component Overview of Vertiv™ SmartMod™

- Dual Busbar System
- Low Voltage Distribution
- Fiber Optics and Cable Management
- Hot/Cold Aisle Separation
- Condensers
- Enclosure
- UPS
- IT Racks
- Cooling Units

Cutaway view of Vertiv™ SmartMod™

Top view of Vertiv™ SmartMod™
Vertiv™ SmartMod™

Interior view of Vertiv™ SmartMod™
## Vertiv™ SmartMod Reference Designs

<table>
<thead>
<tr>
<th>Nominal System Capacity (kW)</th>
<th>40kW</th>
<th>60kW</th>
<th>80kW</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model Number</strong></td>
<td>ES2040134002 (B)</td>
<td>ES3060166001 (B)</td>
<td>ES4080168001 (B)</td>
</tr>
<tr>
<td></td>
<td>ES2040234001 (E)</td>
<td>ES3060266001 (E)</td>
<td>ES4080268002 (E)</td>
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<tr>
<td></td>
<td>ES3040344001 (P)</td>
<td>ES4060366001 (P)</td>
<td>ES6060368000 (P)</td>
</tr>
<tr>
<td><strong>Rack Size</strong></td>
<td>42U x 1100 mm x 600 mm</td>
<td>42U x 1100 mm x 600 mm</td>
<td>42U x 1100 mm x 600 mm</td>
</tr>
<tr>
<td><strong>Rack SKU Number</strong></td>
<td>VR3100S</td>
<td>VR3100S</td>
<td>VR3100S</td>
</tr>
<tr>
<td><strong>Rack Qty</strong></td>
<td>4</td>
<td>6</td>
<td>8</td>
</tr>
</tbody>
</table>

### Electrical

| **Full Load Amps (FLA)**     | 270   | 390   | 555   |
| **UPS**                     | Liebert® EXM | Liebert® EXM | Liebert® EXM |
| **UPS type (SKU)**          | 47SA040 | 47SA060 | 47SA080 |
| **BDC Type**                | 47MBE36 | 47MBG36 | 47MBH36 |
| **Battery Type**            | N     | N     | N     |
| **UPS Battery Runtime @ Full Load (min)** | 5 | 5 | 5 |
| **Rack PDU Type**           | Basic Unit Level | Basic Unit Level | Basic Unit Level |
| **PDU Model Number**        | I10483 | I10483 | I10483 |

### Cooling

| **CRV type**                | 019/020 | 019/020 | 019/020 |
| **CRV SKU Number**          | CR019RA177XSM3 / CR020RA1C7XSM7 | CR019RA177XSM3 / CR020RA1C7XSM7 | CR019RA177XSM3 / CR020RA1C7XSM7 |
| **Cooling Redundancy**      | N+1    | N+1    | N+1    |
| **Air Conditioning Units**  | 3      | 4      | 6      |
| **Service**                 | Startup only | Startup only | Startup only |
| **Monitoring**              | Prepared for monitoring | Prepared for monitoring | Prepared for monitoring |

### ENHANCED

| **Full Load Amps (FLA)**     | 320   | 440   | 555   |
| **UPS**                     | Liebert® EXM | Liebert® EXM | Liebert® EXM |
| **UPS type (SKU)**          | 47SA040 | 47SA060 | 47SA080 |
| **BDC Type**                | 47MBE36 | 47MBG36 | 47MBH36 |
| **Battery Type**            | N     | N     | N     |
| **UPS Battery Runtime @ Full Load (min)** | 5 | 5 | 5 |
| **Rack PDU Type**           | Switched, Unit Level | Switched, Unit Level | Switched, Unit Level |
| **PDU Model Number**        | NS30049L | NS30049L | NS30049L |

### PREMIERE

| **Full Load Amps (FLA)**     | 320   | 440   | 555   |
| **UPS**                     | Liebert® EXM | Liebert® EXM | Liebert® EXM |
| **UPS type (SKU)**          | 47SA040 | 47SA060 | 47SA080 |
| **BDC Type**                | 47MBE36 | 47MBG36 | 47MBH36 |
| **Battery Type**            | N     | N     | N     |
| **UPS Battery Runtime @ Full Load (min)** | 5 | 5 | 5 |
| **Rack PDU Type**           | Switched, Unit Level | Switched, Unit Level | Switched, Unit Level |
| **PDU Model Number**        | NS30049L | NS30049L | NS30049L |

### Cooling

| **CRV type**                | 019/020 | 019/020 | 019/020 |
| **CRV SKU Number**          | CR019RA177XSM3 / CR020RA1C7XSM7 | CR019RA177XSM3 / CR020RA1C7XSM7 | CR019RA177XSM3 / CR020RA1C7XSM7 |
| **Cooling Redundancy**      | N+1    | N+1    | N+1    |
| **Air Conditioning Units**  | 4      | 5      | 6      |
| **Service**                 | Startup & 5-year Essential Service with LIFE | Startup & 5-year Essential Service with LIFE | Startup & 5-year Essential Service with LIFE |
| **Monitoring**              | Environet Alert | Environet Alert | Environet Alert |

Minor configuration changes are possible (varying rack counts/dimensions, longer battery runtimes, etc.) – check with your Solutions Architects for details and support.