Sunverge Energy’s Solar Integration System (SIS) combines distributed generation inputs, utility-grade energy storage hardware and power electronics, and cloud-based software controls and analytics to enable utilities and consumers to reserve renewable power and deploy it when and where it’s needed most.

### Solving the Problems of Today and Tomorrow

Specifically, Sunverge offers utilities the ability to:

- Enhance grid efficiency and resiliency, reducing grid management and energy delivery costs
- Effectively manage higher penetrations of renewables for environmental, economic and PR benefit
- Make smarter, faster decisions through deeper analytical insight
- Capture new revenues by enabling new, value-added services and improving customer acquisition, retention and lifetime value

### Sunverge Integration Energy Storage Platform

- Customer-sited SIS units optimize local control of solar + storage resources to lower electricity bills, interface with other smart systems, and install intelligence at the edges of the grid.
- Cloud-based SaaS applications enable individual SIS units to be aggregated and orchestrated as a fleet, with energy stored, reserved and dispatched dynamically, creating a Virtual Power Plant.
- API, web and monitoring applications support user-friendly dashboards and customer interfaces for granular, real-time control and reporting.

### Built to utility grade standards, the Sunverge Solar Integration System is an innovative platform which benefits consumers and utilities by maximizing the value of distributed energy resources.

#### Value Streams

<table>
<thead>
<tr>
<th>For Utilities</th>
<th>For Consumers</th>
<th>For the Grid</th>
</tr>
</thead>
<tbody>
<tr>
<td>and grid operators, reduced cost and complexity of managing the grid, enhanced customer acquisition and retention, and enabling value added services such as demand response, voltage support, and peak shifting.</td>
<td>a more reliable and cost-effective energy supply, greater choice and control over where and when stored energy is used, and satisfaction from bill savings and backup power peace of mind.</td>
<td>improved safety, reliability and performance of the grid, resulting in increased grid resiliency and benefits to the entire energy supply chain. Proven through 400+ installations and over 4.5MWh of storage capacity under management.</td>
</tr>
</tbody>
</table>

### Built for Reliability and Safety

- UL certified for indoor & outdoor use
- Safeguarded by multiple layers of hardware and software controls
- Active and passive cooling for operations in high temperatures
- 24/7 remote monitoring and management
- Protected by a 10-year warranty
## Model Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>XW+ 6848</th>
<th>XW+ 5548</th>
<th>XW+ 8548</th>
<th>XW+ 7048</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AC Input/Output</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuous Output Power at 40°C</td>
<td>6,000 W</td>
<td>4,500 W</td>
<td>6,000 W</td>
<td>4,500 W</td>
</tr>
<tr>
<td>Surge Rating (Overload for 1 minute) at 25°C</td>
<td>12,000 W</td>
<td>9,500 W</td>
<td>12,000 W</td>
<td>9,500 W</td>
</tr>
<tr>
<td>Surge Rating (Overload for 30 minutes) at 25°C</td>
<td>8,500 W</td>
<td>7,000 W</td>
<td>8,500 W</td>
<td>7,000 W</td>
</tr>
<tr>
<td>Continuous Output Power at 40°C</td>
<td>25 A (240V), 50 A (120V)</td>
<td>18.75 A (240V), 37.5 A (120V)</td>
<td>26 A</td>
<td>19.5 A</td>
</tr>
<tr>
<td>AC Voltage</td>
<td>120/240 Vac Split Phase</td>
<td>230 Vac Single Phase</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surge Current 60 s (RMS)</td>
<td>102 A (120 V), 52 A (240 V)</td>
<td>82 A (120 V), 41 A (240 V)</td>
<td>53 A</td>
<td>40 A</td>
</tr>
<tr>
<td>AC Voltage</td>
<td>2-60 A 2-Pole: IEEE 62.41, 62.45 &amp; 1.2x50ms, C37.90.1</td>
<td>60 A 2-Pole</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequency Range</td>
<td>58.5 to 60.5 Hz</td>
<td>49.9 to 50.1 Hz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output Waveform</td>
<td>True Sine Wave</td>
<td>True Sine Wave</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AC Output Voltage</td>
<td>L-N: 120 Vac +/-3%; L-L: 240 Vac +/-3%</td>
<td>230 Vac +/-3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Harmonic Distortion</td>
<td>&lt; 5% at rated power</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Automatic Transfer Relay Rating / Typical Transfer Time</td>
<td>60 A / 8 ms</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peak Efficiency</td>
<td>95.7%</td>
<td>95.8%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CEC Weighted Efficiency</td>
<td>92.5%</td>
<td>93.0%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Certifications
- **Battery**: UL:EN 62133:2003, UL, 1642.
- **Enclosure**: NEMA 3R, UL 50E.
- **Integrated System**: UL 1741, UL 1778.

### DC Input (Input from PV Array)
- **Maximum PV Array Operating Voltage**: 550 V
- **DC Output (Nominal)**: 48 V
- **SCC Operating Range**: 195-510 V
- **Maximum PV Open Circuit Volts**: 600 V
- **Maximum PV Short Circuit Amps**: 35 A
- **Ground Fault Protection**: GFDI Rated: 1 A
- **Electronic Overcurrent Protection**: Yes, > 0.5 A
- **SCC Inputs**: Three
- **DC Bus Ground**: Enclosure Ground

### Communications
- **System Network**: CAN BUS
- **External APIs**: HTTPS Web Services
- **Remote Communications**: HTTPS Over TCP/IP
- **Local Communications**: Ethernet or Cellular (additional option)
- **Control Frequency**: 500 ms
- **Reporting Frequency**: 4000-12000 ms (configurable)

### Battery
- **Battery Type**: Li-Ion: NiMnCo, 3.7 V, 75 Ah
- **Battery Voltage**: 48 Vdc Nominal 42 to 58 Vdc Op. Range
- **Battery Capacity**: Modular, 3.9 kWh to 19.4 kWh
- **Max. Charge Rate from SCC**: 80 A
- **Max. Charge Rate from Grid**: 110 A/140 A
- **Cycle Life (80% DOD)**: 4000-7000 Cycles

### Mechanical
- **Size**: 73” (186 cm) x 34” (86 cm) x 14” (36 cm)
- **Weight**: 673 lb (305 kg) w/11.7 kWh Battery
- **Outdoor / Rainproof**: NEMA 3R: IEEE C57.12.52 Section 6, C57.28 Section 4
- **Ambient Air Temperature Operating Range**: -13 to 122°F (-25 to 50°C)
- **Cooling**: Forced Air
- **Paint**: IEEE C57.12.28 Section 5, Powder Coating
- **Mounting**: Anchor/Polycrete Pad
- **Grounding**: Utility Ground
- **Nameplate**: Comm. Diag. Rating ETC IEEE C57.12.00