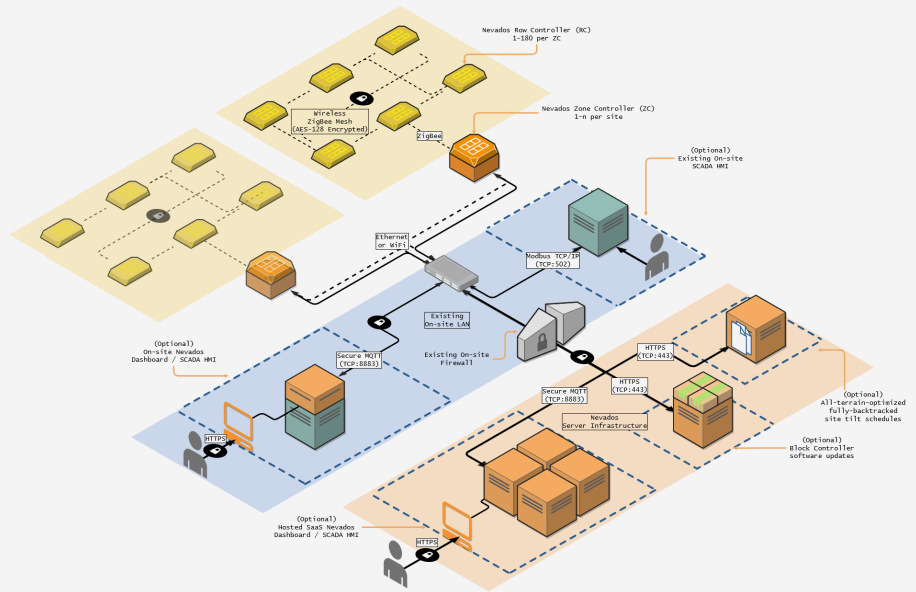




## SOLAR TRACKER CONTROLS

# FOR ALL TERRAIN ENVIRONMENTS



The Nevados control system is designed to optimize power generation from your project site and account for variable shadow fall on flat, sloped, and rolling terrain. Each row of up to 96 modules is monitored by a single row controller. Row controllers are connected and optimized through zone controllers, each of which can manage up to 180 row controllers. The system provides detailed operational information from each row, which can be utilized to increase row-to-row efficiency and maximize output. String-level current sensing can be added to identify any inter-row shadowing, blown fuses, poor performing strings, and bad electrical connectors.

### 1 CURRENT SENSOR

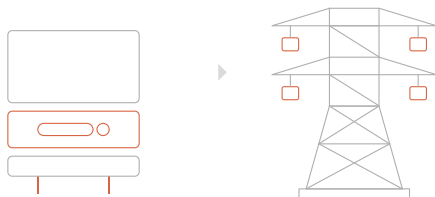
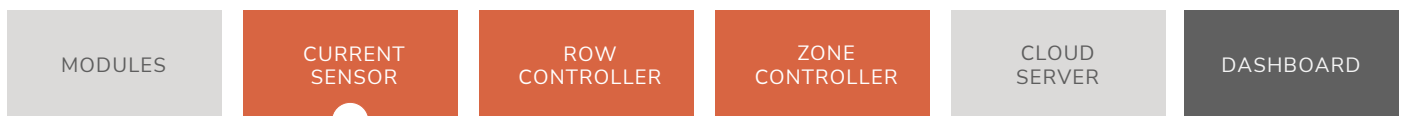
- Enables continuous commissioning
- Identifies poor performing strings
- Assembled with the wiring harness at the factory, or installs in minutes in the field
- IP65

### 2 ROW CONTROLLER

- Configurable for most environments
- Retrofits to existing install
- Wireless and self-powered
- IP65

### 3 ZONE CONTROLLER

- Active optimization
- Choose either cloud-hosted or fully on-premises monitoring and control
- Failure prediction
- O&M reporting
- IP65



COMMUNICATIONS	ROW CONTROLLER	ZONE CONTROLLER
WIRELESS	<ul style="list-style-type: none"> <li>ZigBee (with external antenna) between RC and ZC</li> </ul>	<ul style="list-style-type: none"> <li>ZigBee communication to manage RC</li> </ul>
WIRED	<ul style="list-style-type: none"> <li>Cat5/6 between ZC and SCADA</li> <li>RS485 between RC and string current sensor</li> </ul>	<ul style="list-style-type: none"> <li>Manage with SCADA over Modbus</li> <li>Reporting to on-premises or cloud-hosted monitoring and control dashboard</li> <li>Integrated web portal for simple management</li> </ul>
ENCLOSURE		
SIZE (LxWxD)	<ul style="list-style-type: none"> <li>10" x 12" x 3.5" – max external dimension of enclosure (not including mounting tabs)</li> </ul>	<ul style="list-style-type: none"> <li>13" x 15" x 5"</li> </ul>
DESIGN	<ul style="list-style-type: none"> <li>IP67, Plastic (injection molded), Membrane vent (Amphenol BJ001, Gore Vent, or similar)</li> </ul>	<ul style="list-style-type: none"> <li>Compression molded fiberglass reinforced polyester</li> </ul>
SERVICE/ACCESS	<ul style="list-style-type: none"> <li>Access panel for battery only</li> </ul>	
MOUNTING	<ul style="list-style-type: none"> <li>Direct mount RC to auxiliary solar module</li> <li>Mount aux module to torque tube using standard module clips</li> </ul>	<ul style="list-style-type: none"> <li>IP65 rated</li> <li>Mounted near or on inverter skid, or other ethernet and power access point.</li> <li>Integrated web portal for simple management</li> </ul>
POWER	<ul style="list-style-type: none"> <li>Auxiliary solar module, 40W and 36V, approx 645mm x 345mm x 25mm</li> </ul>	<ul style="list-style-type: none"> <li>120V AC wired to enclosure</li> </ul>
BATTERY	<ul style="list-style-type: none"> <li>3-6Ah LiFEPO4 battery with optional cold weather package</li> </ul>	
INPUTS	<ul style="list-style-type: none"> <li>RS485 port w. Weather cap</li> <li>E-Stop</li> <li>Status LED (optional)</li> <li>Auxiliary module power cables</li> </ul>	<ul style="list-style-type: none"> <li>120V AC</li> <li>Ethernet</li> </ul>
OUTPUTS	<ul style="list-style-type: none"> <li>Motor Cable with screw-on connector to motor</li> <li>External ZigBee Co-ax connector for antenna wire</li> </ul>	<ul style="list-style-type: none"> <li>External ZigBee co-ax connector for antenna wire</li> </ul>
BOARD COMPONENTS	<ul style="list-style-type: none"> <li>XBee X2C or XBee3</li> <li>PTC (resettable fuse)</li> <li>Motor over-current monitoring and protection</li> <li>16bit Microcontroller @ &gt;8MHz</li> <li>Accelerometer</li> </ul>	<ul style="list-style-type: none"> <li>Xbee S2C, S2C Pro or 3</li> <li>Optional wind sensor</li> </ul>