

**SolarEdge**

Distributed Solar  
Power Harvesting  
Systems

**Company Introduction**  
2014

**solar**edge

# SolarEdge Vision



- To be the leading provider of module-level electronics for the PV industry
- To accelerate the pace toward grid parity and make clean energy affordable and widespread



Established the DC power optimizer segment and leads it with a market share of over 70%

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Over 2,700,000 power optimizers shipped to over 50 countries

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More than 100,000 inverters shipped

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Quarterly run rate above 140MW

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Utility, commercial and residential solutions

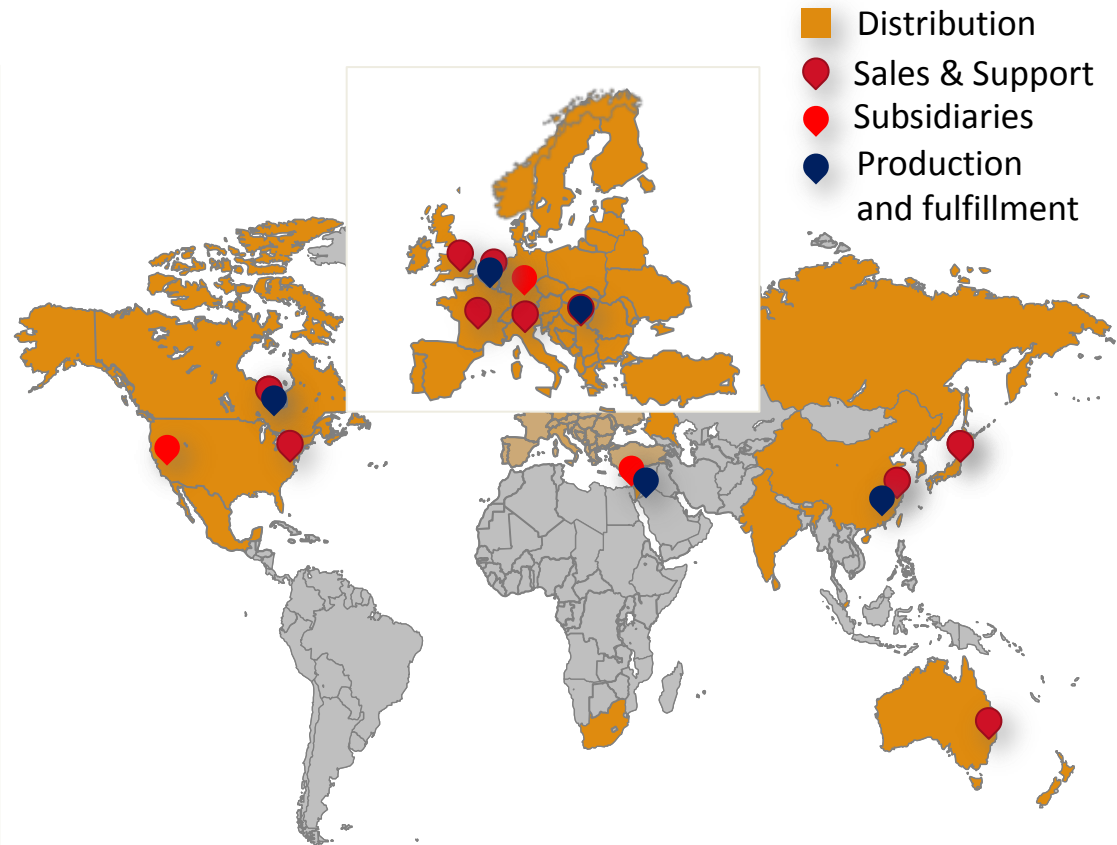
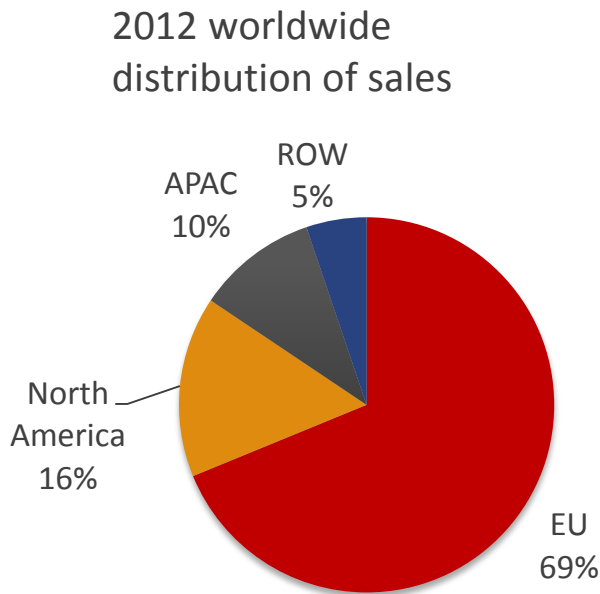
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Strategic partnerships across the PV value-chain from module manufacturers to integrators

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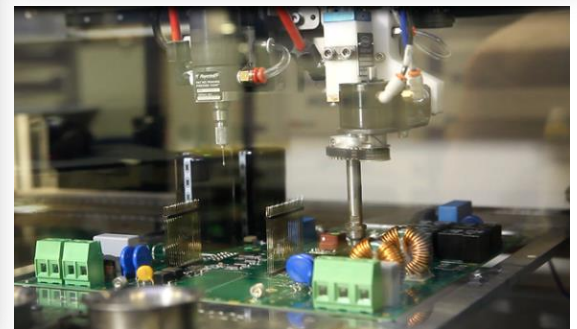
# Global Sales & Distribution

- Sales through leading integrators and distributors in over 50 countries
- Local SolarEdge presence in 11 countries



# High Quality Production

- To date over 2.7 million units shipped
- Automated production lines
  - Close partnerships with leading manufacturers Jabil & Flextronics
  - Scalability to support 3 times year over year production volume increase





# The Problem

## Energy Loss

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- Module mismatch (3-5% loss)
  - Partial shading (2-25% loss)
  - Dynamic MPPT loss (3-10% loss)
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- **SolarEdge solution overcomes all energy losses providing up to 25% more energy**
  - **SolarEdge solves other system drawbacks at a price comparable to traditional inverters**

## System Drawbacks

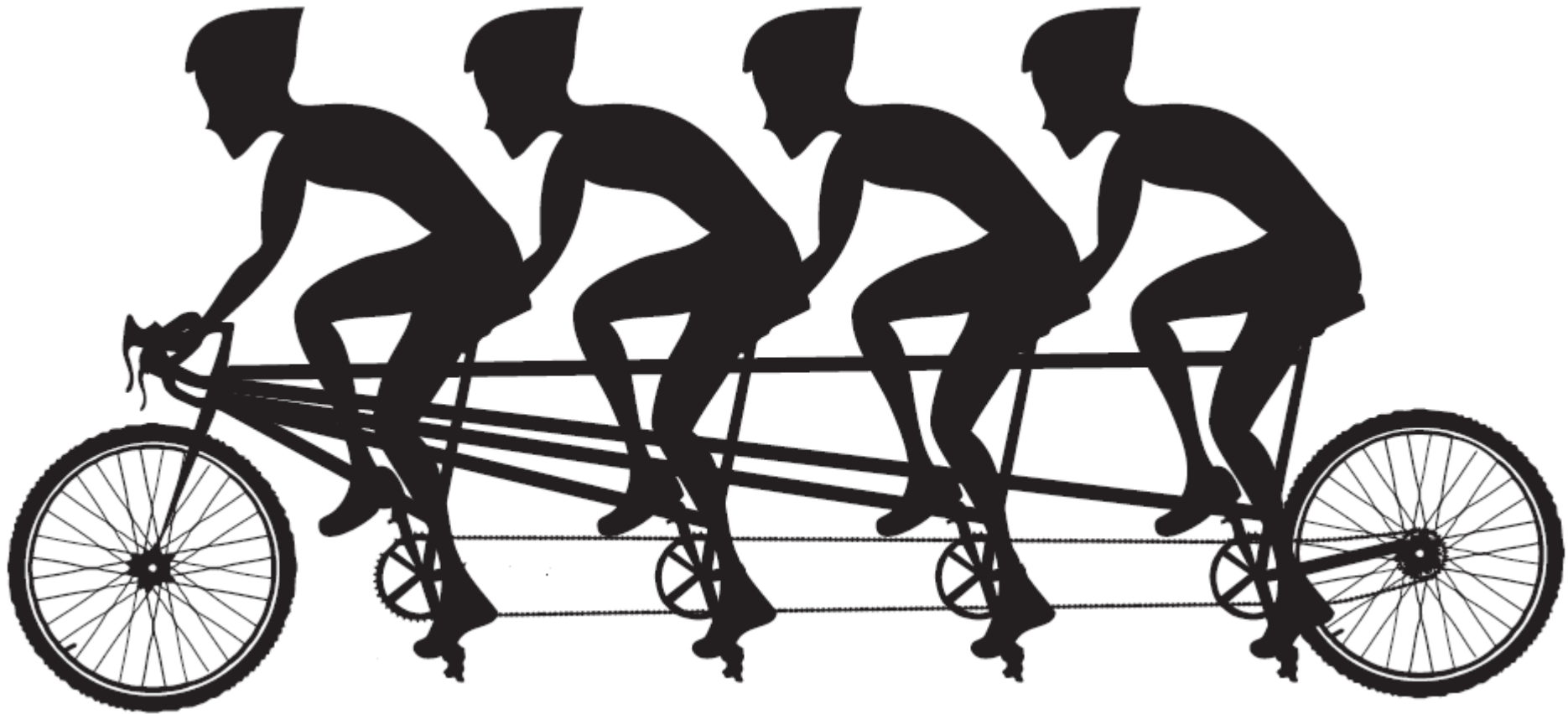
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- No module level monitoring
- Limited roof utilization
- Safety hazards



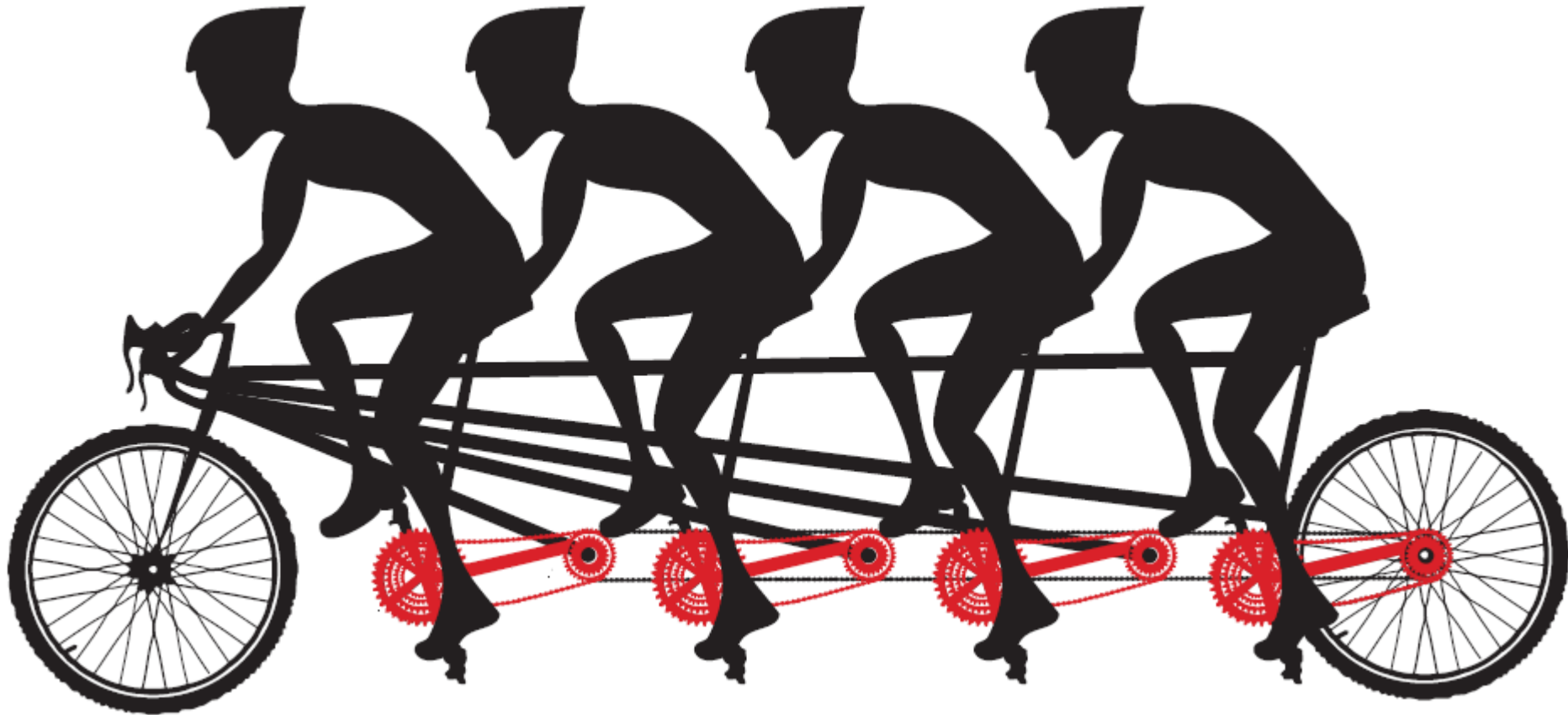
# String-Level MPPT

- The speed is limited by the performance of the weakest rider...





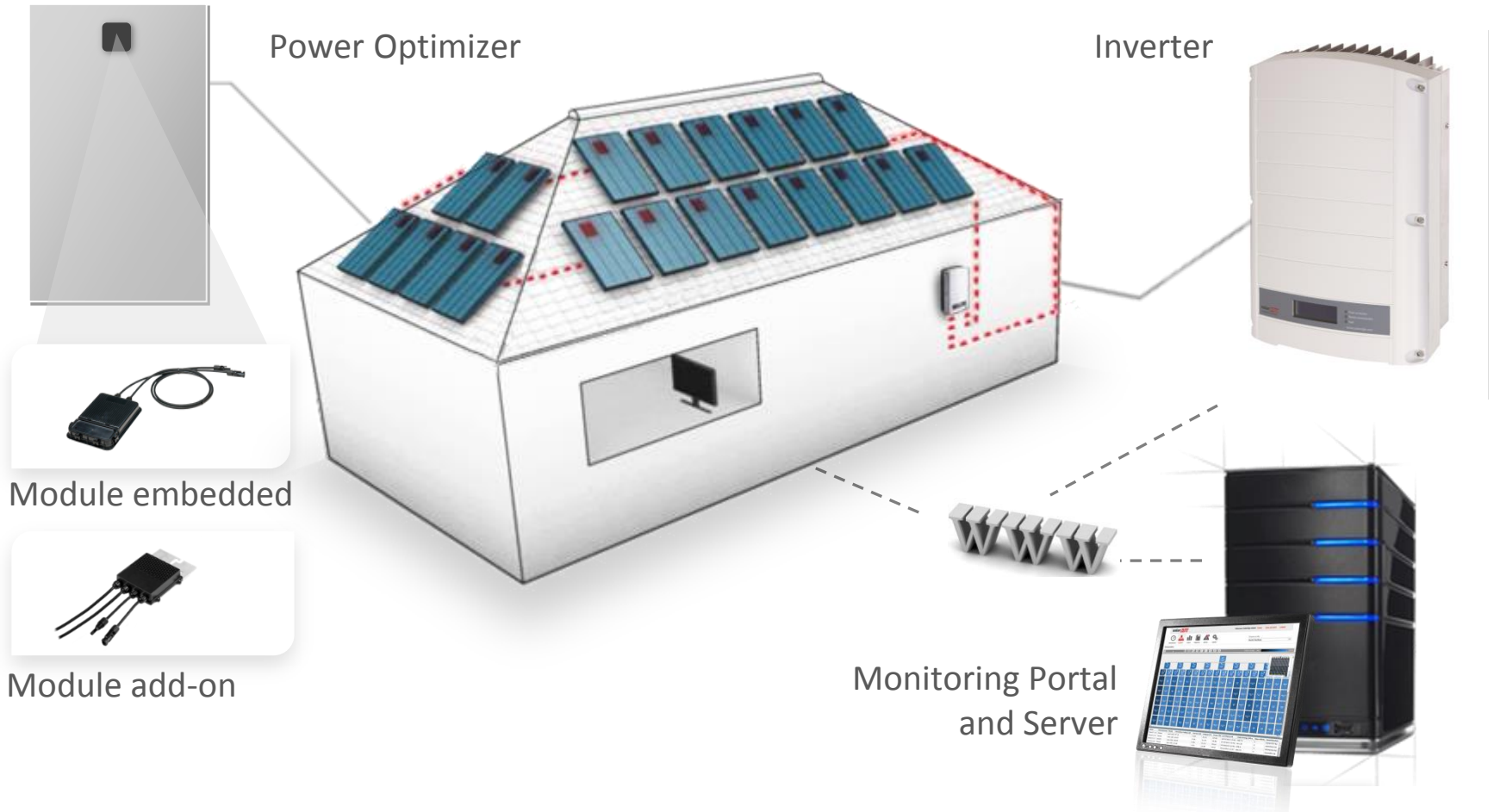
- With personal transmission gear, each rider can maximize individual potential, so the bicycle travels faster!



# Solution Overview & Benefits

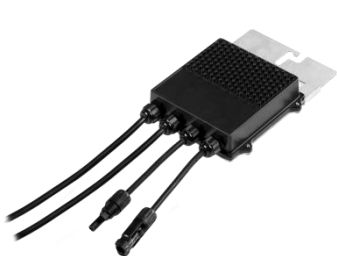
# SolarEdge System Overview

- Module level optimization
- Fixed voltage – flexible design
- Module level monitoring
- Enhanced safety solution



# SolarEdge Power Optimizers

- Per-module Maximum Power Point Tracking (MPPT)
- 99.5% maximum efficiency, 98.8% weighted efficiency
- Advanced, real-time performance measurement
- Automatic module shut-down for installer and firefighter safety
- Embedded by module manufacturers, or connected by installers to c-Si and thin-film modules



300W-500W  
Module add-on



\* Available H1 2014

600W-700W Module Add-On  
for Commercial Installations



300W  
Module embedded

- String voltage is always fixed, regardless of temperature and of string length
- Constraint free design
- Longer strings: reduces wiring & BoS components
- Flexible design for maximum roof utilization:
  - Parallel strings of unequal lengths
  - Modules on multiple roof facets
  - Modules with different power ratings
- String voltage is always optimal for DC/AC conversion



# Unique Safety Solution

- Electrocutation prevention & fire safety
  - SafeDC™: automatic module DC shutdown when inverter is not operating
  - Module and inverter thermal shutdown
  - Electric arcs are prevented
  
- The result:
  - Higher security for installers, maintenance teams & firefighters
  - Improved asset protection - roof, solar system
  - Better suited to future insurance requirements



- Inverters specifically designed for power optimizers fixed string voltage
- 98% maximum efficiency
- Fixed string voltage
- Single stage inverter (no need to boost DC voltage)
- Simpler design → Highest reliability at minimal cost
- Built-in communication hardware



Single phase inverters  
2.2kW – 6kW



Three phase inverters  
5kW – 17kW

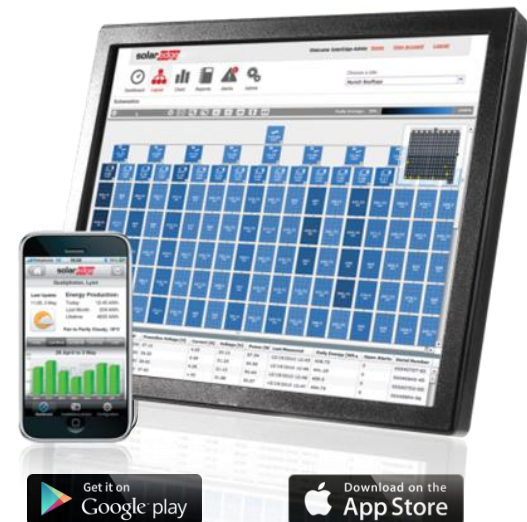


Commercial inverters  
35kW – 50kW

\* Coming soon
















# Module- Level Monitoring

- Module-level monitoring allows to monitor the performance of modules, strings and inverters
  - In traditional systems only inverter level can be monitored
  - Pinpointing of the exact location of a module, allowing time-effective maintenance
  - Installers can use module-monitoring to offer proactive customer service
- Fleet management: monitor entire install-base through a single portal
- Installers control the level of system performance visibility for their customers





# SolarEdge Product Overview

	<b>Power Optimizers</b>	<p>300W-500W Module Add-On</p>  <p>* Available H1 2014</p>	<p>600W-700W Module Add-On for Commercial Installations</p> 	<p>300W Module Embedded</p> 
	<b>Single &amp; Three Phase Inverters</b>	<p>1-phase</p>  <ul style="list-style-type: none"> <li>2.2kW</li> <li>3kW</li> <li>3.5kW</li> <li>4kW</li> <li>5kW</li> <li>6kW</li> </ul>	<p>3-phase</p>  <ul style="list-style-type: none"> <li>5kW</li> <li>7kW</li> <li>8kW</li> <li>9kW</li> <li>10kW</li> <li>12.5kW</li> <li>15kW</li> <li>16kW</li> <li>17kW</li> </ul>	
	<b>Commercial &amp; Utility-Scale Inverters</b>	<p>Commercial</p>  <ul style="list-style-type: none"> <li>35kW</li> <li>40kW</li> <li>45kW</li> <li>50kW</li> </ul> <p>* Available H1 2014</p>		
	<b>Monitoring</b>	<p>Monitoring Portal</p> 	<p>Monitoring Apps</p>  <p>App Store   Google Play</p>	<p>Safety &amp; Monitoring Interface</p> 
	<b>Communication &amp; Safety Accessories</b>	<p>Control &amp; Communication Gateway</p> 	<p>ZigBee wireless connectivity</p> 	<p>Firefighter Gateway</p> 
	<b>Installer Tools</b>	<p>Site Designer</p> 	<p>Site Mapper</p> 	<p>SolarEdge key</p> 

**The only commercially available solution to deliver all following benefits, while reducing the cost of energy**



Maximum energy gain

Ground mounted system: 2-5%, commercial 2-10%, residential 2-25%



Constraint-free site design

Optimal site space utilization at reduced cost



Real-time module-level web monitoring

Increased uptime and remote maintenance



Automatic module shut-down

Unique electrocution prevention and fire safety

# Thank you

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