SolarEdge TerraMax™ Inverter

Groundbreaking versatility. Greater yields

Agri-PV

Floating PV

Ground Mount

Community Solar

The flexibility to optimize anywhere

SolarEdge has launched the first DC-optimized utility-scale PV solution — the high-power SolarEdge TerraMax™ Inverter combined with H1300 Power Optimizers. This highly versatile solution, suitable for almost any topology and site conditions, is ideal for ground mounts and other dual use PV installations such as Agri-PV, floating PV and community solar. It opens new business opportunities in challenging terrains, where their potential could not have been maximized using existing PV systems.

Built for maximum performance and cost savings

The SolarEdge TerraMax Inverter delivers up to 330kW of power with high efficiency and module-level visibility, setting new standards for energy yields, while lowering O&M costs.

Versatile

Facilitates installations on special ground mounted sites, with the designed flexibility to address different challenges, while potentially reducing balance of system (eBoS) costs.

- Enables PV deployment on sloped, uneven, or irregular shaped terrain
- Ideal for placement above crops or on bodies of water
- Ideal for both centralized and distributed topologies
- Supports up to 80-module string lengths, requiring less cabling and overall equipment

Granular Visibility

The granular visibility is enhanced through the SolarEdge ONE for C&I, its integrated optimization system, offering comprehensive monitoring capabilities for on-site performance.

- Enables high-precision monitoring and smart PV fleet management, together with SolarEdge ONE for C&I
- Easy identification of potential faults and remote troubleshooting
- Minimizes service visits, increases system uptime and lowers O&M costs

Powerful

Increases energy yields over the system's lifetime for lower LCOE and better bottom lines.

- MLPE-based solution with 99% inverter efficiency
- Offsets module energy losses
- 200% DC-oversizing
- Integrated night-time PID rectifiers

Safe and Secure

Complies with global safety and cybersecurity standards.

- Multilayered protection from inverter to cloud
- Addresses various safety requirements, from installation and throughout the system lifetime
- Designed to automatically reduce high DC voltage to touch-safe levels, upon grid/inverter shutdown, with built-in SafeDC™

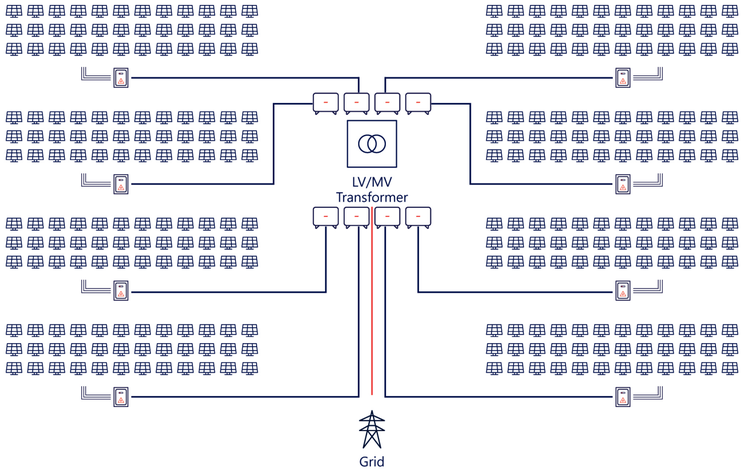
Enhance project design for maximum efficiency

System topology that best fits the project's need can be selected

Centralized Topology

In a centralized topology, the inverters are installed in a central location with distributed MPPTs (Maximum Power Point Trackers) across the array.

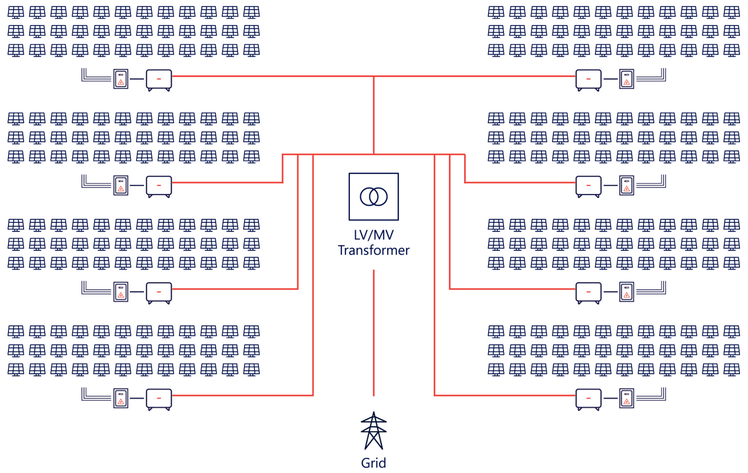
- Higher energy yield – no voltage drops between the inverter and MV/LV transformer
- Easier serviceability for O&M, providing AC cabling cost savings



Distributed Topology

In a distributed topology, the inverters are located close to the modules.

- No need for a dedicated inverter structure



Inverter

Single DC Conductor

Multiple DC String from Modules

DC Combiner Box

AC Conductor

Progressive Commissioning

The SolarEdge TerraMax Inverter introduces innovative capabilities designed to overcome numerous installation challenges typical of large-scale PV projects, significantly streamlining and improving the overall installation experience.

Pre-commissioning

Can be performed once DC-side wiring is completed, shortening the site's overall connection time.

- System pre-commissioning is possible as long as the DC array is connected
- Grid connection or power bank is not required
- The inverter system can be commissioned prior to AC being available, speeding up site connection

Central Commissioning

- The SolarEdge TerraMax Inverter can be connected in a leader-follower topology
- Enables applying settings only to the leader inverter, meaning commissioning of all inverters supported by the leader is not required
- Commissioning time is significantly shortened, reducing the potential for configuration errors onsite

High Frequency Power Line Communication (HFPLC)

Enhanced communications based on HFPLC that reduce overall installation time and costs through:

- Fast Inverter-Power Optimizer pairing, where pairing takes only few minutes
- Fast remote firmware upgrades

Product features

Leveraging innovative technologies for enhanced efficiency and optimized performance

SiC technology

The SolarEdge TerraMax Inverter features the latest Silicon Carbide (SiC) technology, resulting in higher efficiency during conversion process

VAR at Night

Enables production of reactive power at night, for utility's compensation requirements, removing the need for "capacitors banks"

Cyber Secure

Setting the standard for solar cybersecurity

Just like solar safety, solar cybersecurity is non-negotiable. By partnering with SolarEdge you get extra protection, throughout the entire PV system lifetime. Our tiered approach to cybersecurity is aimed at protecting data integrity, communications, and business operations from site commissioning through to production.

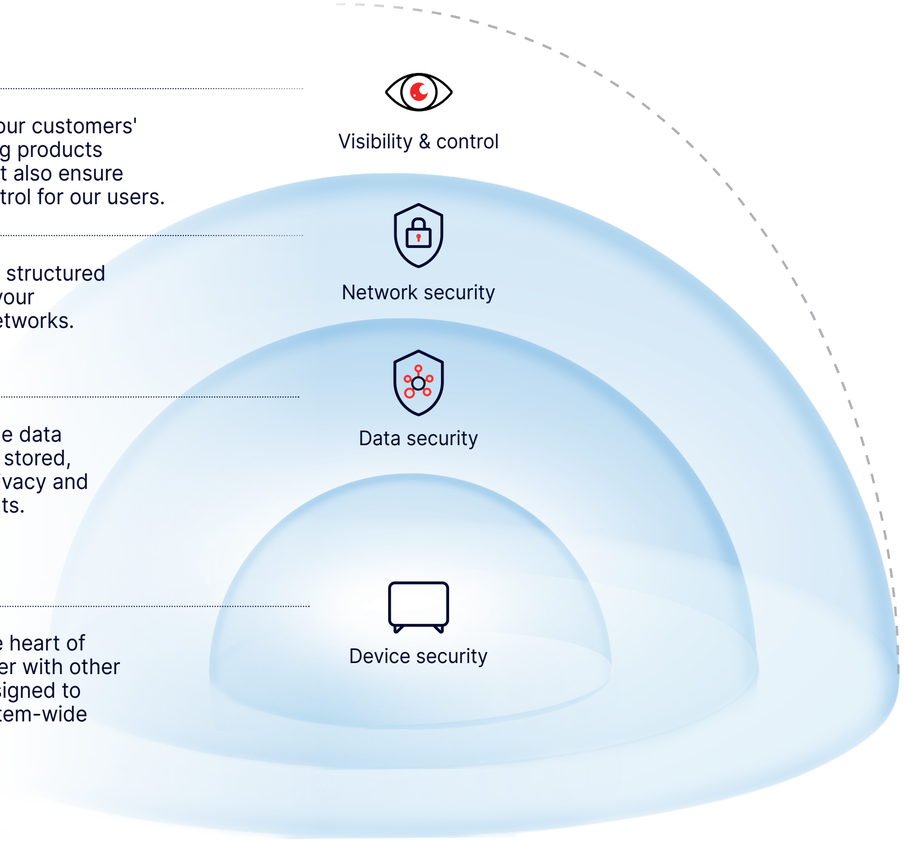
To safeguard system connectivity, functionality, and customer data, SolarEdge follows the Cyber Informed Engineering (CIE) principle, embedding information security mechanisms into our products from the initial design stages. We continuously adapt and enhance our solutions to align with evolving demands and regulatory standards.

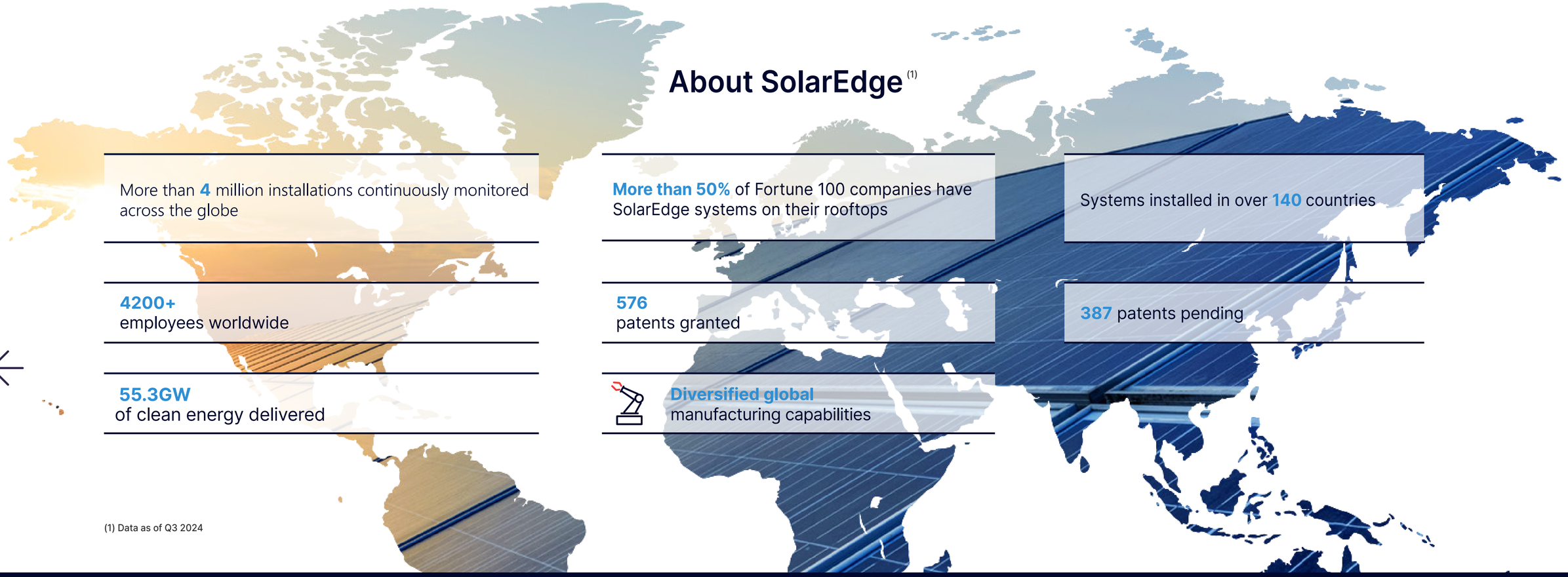
We prioritize the needs of our customers' security teams by designing products that are not only secure but also ensure maximum visibility and control for our users.

The energy sub-network is structured to securely integrate with your organizations' IT and OT networks.

User data and energy usage data is securely transferred and stored, ensuring maximum data privacy and protection from cyberthreats.

SolarEdge inverters are the heart of the PV system, and together with other SolarEdge devices, are designed to prevent and detect PV system-wide cyberattacks.





About SolarEdge [1]

More than **4** million installations continuously monitored across the globe

4200+
employees worldwide

55.3GW
of clean energy delivered

More than 50% of Fortune 100 companies have SolarEdge systems on their rooftops

576
patents granted

Diversified global
manufacturing capabilities

Systems installed in over **140** countries

387 patents pending

(1) Data as of Q3 2024

About SolarEdge

SolarEdge Technologies is a global leader in renewable energy technology that applies world-class engineering and innovation to provide solar PV solutions for the residential, commercial and utility segments. SolarEdge brings an optimized approach to generating, storing, managing and consuming energy. The company develops and produces PV inverters and Power Optimizers, energy management and optimization solutions, energy storage and grid services. SolarEdge's DC-optimized technology is installed in millions of homes in over 140 countries, and more than 50% of Fortune 100 companies have SolarEdge technology on their rooftops. SolarEdge is accelerating the transition towards distributed, sustainable energy networks which will optimize energy everywhere.

solaredge.com