



Brilliantly simple. Simply brilliant.

PowerSet Industrial from Solar Frontier.
The first complete modular system for commercial rooftops.



Completely modular, completely revolutionary.

PowerSet Industrial for commercial rooftops.

Unpack, install and profit: PowerSet Industrial from Solar Frontier is an entirely new and standardised, complete modular solution for commercial and industrial customers.

Brilliantly simple. Simply brilliant.

The principle is as simple as it is sophisticated. The PowerSets are based on standardised, self-contained units, which include all necessary components. Each of these is of outstanding quality - perfectly matched, pre-configured and extremely simple to install.

The decisive factor: You can combine the individual units according to your requirements. So you can offer the perfect solution for every commercial rooftop and for every customer's need.

Revolutionise your PV business.

One system, one solution – for all your customers' demands. PowerSet Industrial gives you a revolutionarily simple product: easy to plan, install, calculate and sell.

The most important advantages at a glance:

- Complete solution for all commercial rooftops (flat and trapezoidal roofs)
- Flexible modular system design
- Perfectly matched, high-quality components
- Major cost and time savings, from planning to installation
- Very simple and safe calculation based on all-in prices
- 10-year system guarantee
- User-friendly PowerMonitoring – 10 years for free
- Reliable delivery, no waiting for single components
- Highest possible yields
- Innovation – perfect for the acquiring of new customers

Increase quality, decrease time and costs.

The future of rooftop installation systems.

The new standard.

High-profit CIS modules, inverters, cables with time-saving labelling and substructures. Every single component meets the highest quality requirements and is perfectly integrated into the overall system. This new quality standard is reproduced within every unit and is therefore available for every commercial rooftop.

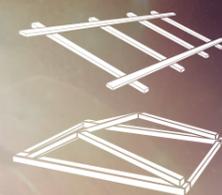
Minimal effort – maximum results.

The units simultaneously reduce time and effort to an absolute minimum. Very simple planning, no complex configuring, fast and simple installation, no error sources. Never has it been so easy and cost-efficient to inspire customers with tailor-made top-quality.

A few examples of the enormous savings through PowerSet Industrial:

- Simple and time-saving installation of the inverter with integrated distribution box including string fuses and DC and AC surge protection.
- Fast, simple and cost-efficient Click&Ready cabling (e.g. no connector crimping necessary)
- Fast and correct installation thanks to comprehensively labelled string cabling all the way to the inverter
- Material savings thanks to defined cable lengths
- About 40% time saving thanks to tool-free installation of substructure
- Additional time saving thanks to pre-mounted rooftop protection on substructure
- Cost savings thanks to integrated cable ducts

Complete modular system with perfectly matched components



Substructures



Modules



Cables



Inverter



Datalogger/
Monitoring

MODULAR SYSTEM

COMPLETE SOLUTION

SIMPLE AND QUICK
HANDLING

TIME AND
COST SAVING

MODULAR
COMPLETE SYSTEM:
MORE THAN
THE SUM
OF ITS PARTS

Two units for all rooftops.

The modular principle at a glance.*



* Example for east/west-system

Three steps towards a profitable complete system

Why make things complicated, when a simple solution is at hand?

- 1 Assemble suitable units**
- 2 Easy and convenient order via E-Shop**
- 3 Quick and smooth installation**

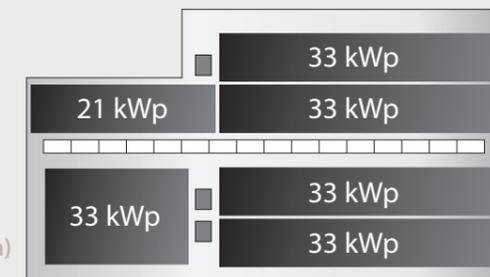
The simple modular system of the PowerSet Industrial from Solar Frontier is based on two standardised units (21 and 33 kWp), each corresponding to two different surfaces. With full modular flexibility, the installation can be adapted to different powers and different rooftop surfaces.

Just a few steps to a complete system: Choose between flat or sloped roof, add the substructure if required, and indicate the needed number of units. Just indicate your requested delivery date and make your payment. Done!

Ready to install. All of each unit's components are standardised with identical qualities. The system is preconfigured and consistent labelling leaves no room for error. Prefabricated connectors save you time and manpower.

Example 1 Production hall or supermarket (Germany)

Available rooftop surface Typical structures	ca. 2,450 m² strip light
Units for roof layout	
5 x units 33 kWp	165 kWp
1 x units 21 kWp	21 kWp
Total power	186 kWp



Example for PV electricity generation (location Munich)

Specific annual yields (east-west alignment):	1,022 kWh/kWp
Term:	25 years
PV electricity generation (incl. degradation):	4,475,000 kWh

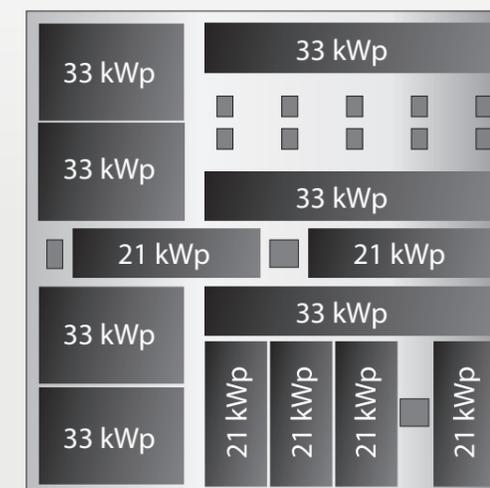
Example for PV electricity generation price

- Investment for turnkey installation: 1,100 €/kWp
- + taking into account taxation and levies (depending on country)
- + costs for grid connection
- Price: 0.09 €/kWh**



Example 2 Wholesale market or refrigerated warehouse (Germany)

Available rooftop surface Typical structures	ca. 4,300 m² elevator shaft, dome lights
Units for roof layout	
7 x units 33 kWp	231 kWp
6 x units 21 kWp	126 kWp
Total power	357 kWp



Example for PV electricity (location Koblenz)

Specific annual yields (east-west alignment):	973 kWh/kWp
Term:	25 years
PV electricity generation (incl. degradation):	8,180,000 kWh

Example for PV electricity generation price

- Investment for turnkey installation: 1,100 €/kWp
- + taking into account taxation and levies (depending on country)
- + costs for grid connection
- Price: 0.09 €/kWh**



PowerSet Industrial: More yields. More efficiency. More profit.

Solar Frontier customers profit from outstanding technologies and services.



CIS technology for highest standards

The unique features of Solar Frontier CIS technology allow for higher energy yields and greater efficiency. The CIS technology meets high standards in production: they don't use lead or cadmium and require less raw materials than other technologies overall. This makes CIS technology particularly sustainable, profitable and efficient.



10-year system guarantee

We don't promise anything. We guarantee it. That's why each Solar Frontier PowerSet Industrial comes with a 10-year guarantee as standard.



Integrated monitoring

All Solar Frontier PowerSets Industrial can be connected to the Solar Frontier monitoring portal via the integrated interface. Track your energy yield, calculate your CO₂ reductions and compare your profits to other systems. This service is free for 10 years.



Superior in every way.

CIS technology for highest yields – even under extreme conditions.

The PowerSet modules from Solar Frontier are based on the innovative CIS technology. The name derives from the elements copper (C), indium (I) and selenium (S).

Its distinct advantage over modules based on conventional crystalline silicon: increased yields for higher profits – even under the most difficult conditions. In other words: Your PowerSet supplies reliably more electricity, even when in the shade or on cloudy days.



Excellent low-light behavior

High energy yield even in the early morning, late at night, during fog or in case of east-west alignment.



High shadow tolerance

High yields even when modules are partially shaded by trees, chimneys etc.



High temperature stability

High energy yield even at high temperatures



Light soaking effect

Up to 5% performance increase with the beginning of solar exposure

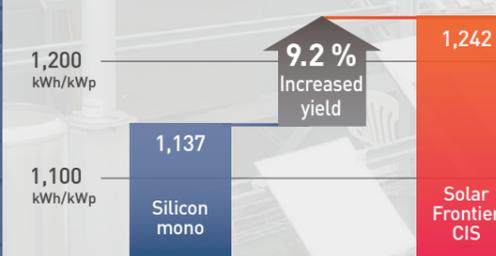
Proof beats claim.

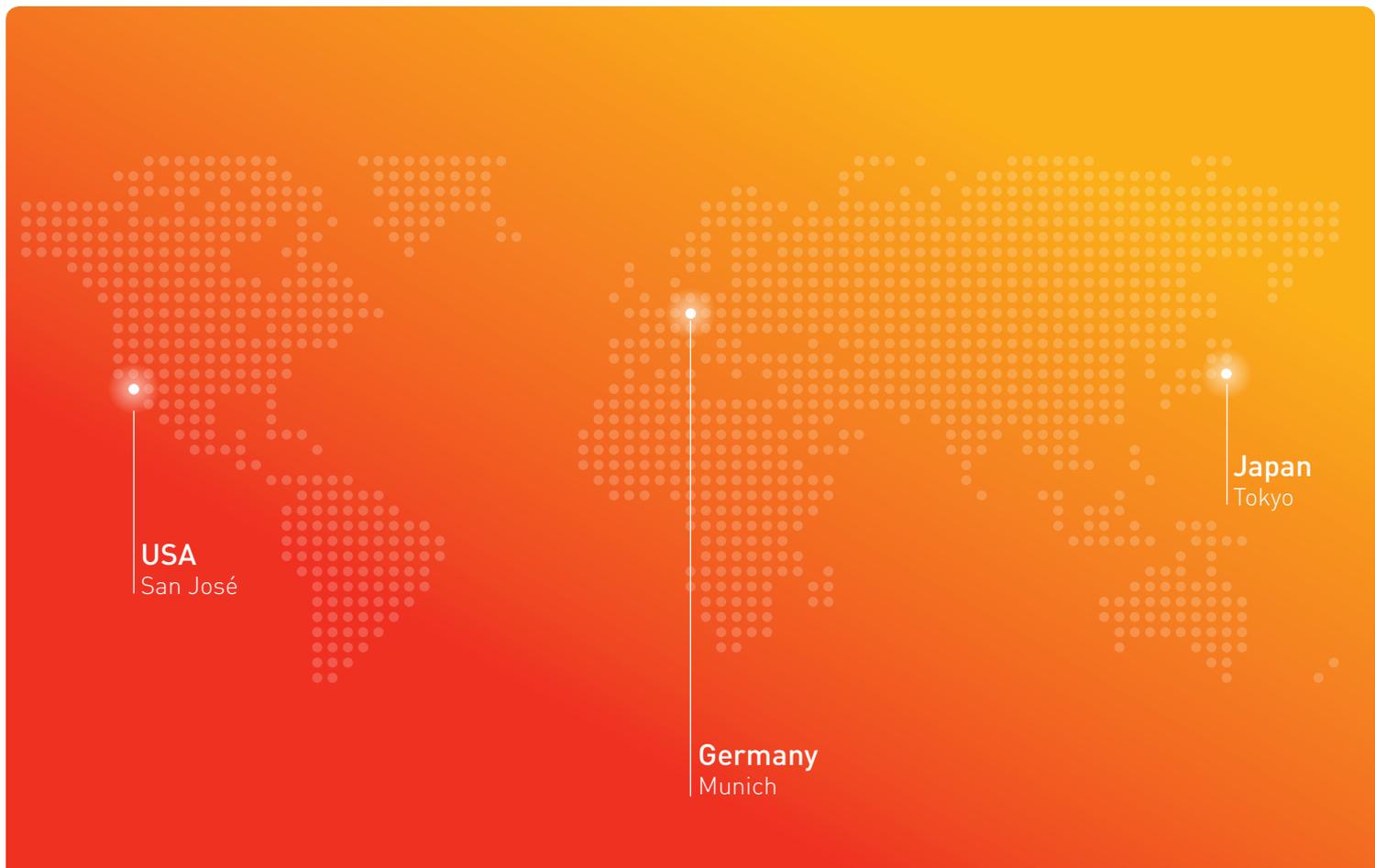
In various comparative tests, independent authorities like the Fraunhofer Institute proved the outstanding efficiency of the CIS modules:

- + Specific annual yields of Solar Frontier, measured in kWh/kWp are almost 10% higher compared to the competition.
- + This results in greater savings and a faster return on the installation.
- + Solar Frontier scores better even in case of a competitor friendly southern orientation of the roof.



Specific Yield/Year (Kassel)





Solar Frontier – at a glance

Company

- Solar Frontier operates worldwide in the area of solar power solutions
- Our origins are in Japan, our business is global.

Experience

- We have more than 35 years of experience in photovoltaics
- Development of solar technologies in cooperation with the government of Japan and scientists

Research & Development

- We run our own R&D department with more than 200 employees within the Atsugi Research Center (Japan)
- Our CIS modules already set numerous world records in module efficiency

CIS technology

- Market leader in CIS technology (copper (C), indium (I) and selenium (S))
- World's largest manufacturer in the gigawatt range

Financial strength

- Financially strong shareholders Shell and Saudi Aramco
- Comprehensive track record of major debt-financed projects

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