The Enphase system advantage

Microinverters harvest more power from solar panels and are easier to install, monitor and maintain. Another big advantage with Enphase microinverters: they combine ultra-reliable components with a distributed architecture that makes for a more resilient system. That's something string inverters can't do.

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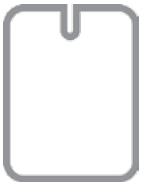
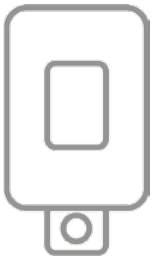
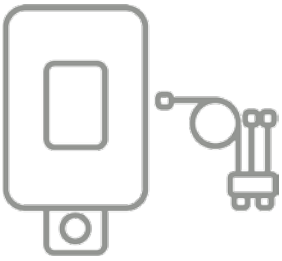
Microinverters vs. DC optimizers: Know the difference

There are microinverter systems and string inverter systems. DC optimizers are a more complicated string inverter system. A system is only as reliable as its weakest link and the string inverter is the weakest link in any DC optimizer system. Microinverters reduce system complexity and are easier to design and install.

	Enphase microinverter	String inverter	String inverter with DC optimizers
			
Flexible design	✓ - No string sizing - No minimum string length - Multiple configurations - All-AC design - Single phase & 3 phase options	✗ - String sizing - Typical minimum string length of 6 or 8 panels - DC and AC design required	✗ - String sizing - Typical minimum string length of 6 or 8 panels - DC and AC design required
Easier Installation	✓ - Simple all-AC installation - No DC electrical work - No mounting a string inverter	✗ - Added complexity with DC and AC electrical work - Design changes in field are difficult	✗ - Added complexity with DC and AC electrical work - Design changes in field are difficult
Greater Productivity	✓ - In independent studies, Enphase produced up to 3.1% more energy	✗ - Productivity varies by string length	✗ - Productivity varies by string length
Higher Reliability	✓ - No single point of failure	✗ - Inverter is a single point of system failure	✗ - Inverter is a single point of system failure
Greater Durability	✓ - IP67 for outdoor installation - Cooling by convection only	✗ - Inverter has IP65 enclosure - Inverters often have internal cooling fans	✗ - Inverter has IP65 enclosure - Inverters often have internal cooling fans
Longer Warranty	✓ - 20 years	✗ - Inverter is covered for 10-12 years	✗ - Inverter is covered for 10-12 years
Increased Safety	✓ - Low voltage DC never exceeds 60 volts	✗ - Up to 600-1000 volts DC on roof	✗ - Up to 600-1000 volts DC on roof

Learn more at: **enphase.com/uk**

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Microinverters: The smarter choice

More cost-effective

On the surface, string inverters seem like a good deal. Add up the costs and you get a different story. Typically at residential sites there is limited space so inverters are fitted in the loft where both installation and servicing can be awkward and perhaps dangerous. At commercial sites they often take up valuable space in plant rooms or storage areas. These environments can also get hot, particularly at times when you want an inverter to be working at its best, so you may want to add ventilation.

String inverters also require:

- 2 cable runs (AC + high voltage DC).
- Mounting a string inverter (and DC optimizers).
- Internal cable runs to the distribution board.

Higher production

Third-party studies have shown that Enphase Microinverters produce more energy than the leading string and DC-optimized string inverters.

- In independent studies, Enphase produced up to 3.1% more energy than a DC optimized string inverter, and even more than normal string inverter systems.
- Enphase Microinverters are proven to produce more at dawn, dusk and in low light conditions.

More reliable

Compared with string inverters, microinverters are the least failure-prone choice by a mile. When string inverters fail, the entire system goes down, necessitating emergency maintenance. This costs money and diverts installers from doing what they do best: installing systems.

Safer

String inverter systems have high voltage DC, which presents risks for customers and installers. Enphase Microinverters, by contrast, are low voltage DC by design. This approach is considered by many fire services and public organisations as the safest way to install solar.

- String inverters require potentially dangerously high voltage DC on customer's roof.
- String inverter may remain charged even after rapid shutdown is activated.