

## The AC PV Module

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The AC PV Module is a module that combines the PV module and the micro inverter during the manufacturing process. In traditional micro inverter applications, the micro inverter is attached to the junction box on the back of the panel. With this solution, the micro inverter replaces the junction box on the PV module completely. This means you have all the advantages of micro inverters, and none of the disadvantages.

## No Inverter Required

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With this AC Module, you never have to purchase or supply an inverter. This means no sizing calculations, no separate shipments or costs - everything is already included in the AC Module. Can add more panels at any time.

## Better Performance

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Since PV modules naturally vary in voltage, current, and wattage. In traditional PV systems, modules are wired together in series and then connected to a central inverter. This inverter optimizes the performance of the entire group of PV modules, but the modules individually will not be at their optimal performance due to shading and other issues. With the Solar Panels Plus AC module, the inverter is built into the module itself. This means that each module individually operates at it's optimal power output, maximizing it's power output and eliminating the losses previously mentioned.

## Completely Safe

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A new technology employed in this system is one that makes handling the modules safer than ever before. Using smart-grid programming, the integrated micro inverters produce no power until they are connected to the grid with a stable electrical connection for 5 minutes.

This means that while handling the modules, making electrical connections from module to module, and during the bulk of the installation process, you are completely safe from electrical shock.

## Streamlined & Simple

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The new AC module makes installation simpler than ever before. These systems come prepackaged with racking, wiring, and the AC module itself, allowing for a fast, clean, simple installation.

There are now only two basic installation steps – anchor the modules to the roof, and run a dedicated circuit to the roof. This makes design easy, installation simple, and keeps the system costs down, making it even more affordable for your home or business.

## Reliable, Durable, Long Lasting

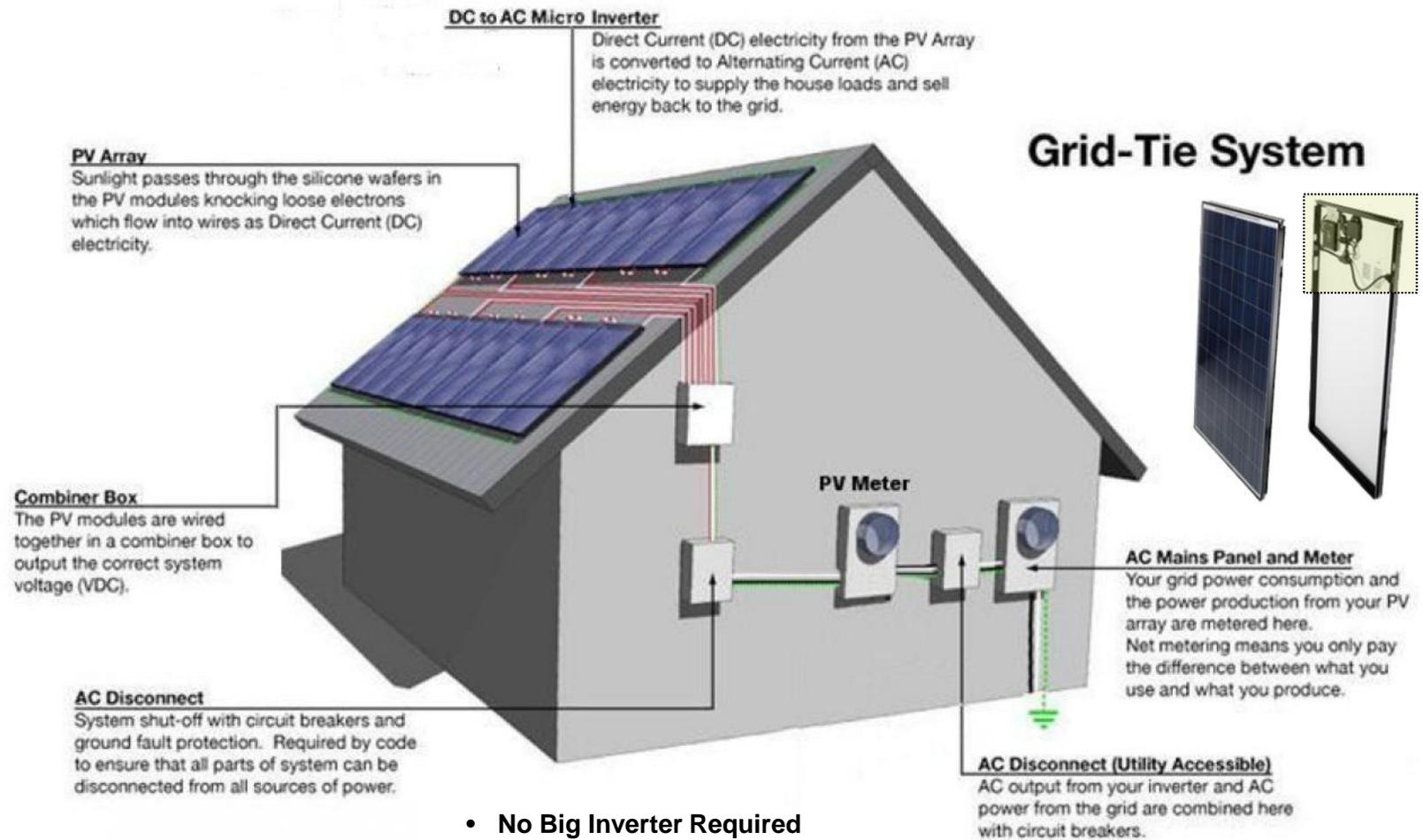
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Lifespan, durability, and reliability of a PV system is one of most important attributes to consider. Traditional central inverters have a life expectancy of 12 to 15 years. Because micro-inverters are less accessible than a central inverter, and are subject to more extreme thermal conditions, they are held to a much higher standard of reliability and durability. Micro-inverters that are built into PV modules will often last just as long as the module itself – 25 to 30 years, or longer. Warranty of both micro-inverters and panels are 25 years by the manufacturers.

In a typical PV system, if a module – or the central inverter – encounters a problem or is damaged, the entire system suffers power losses, or is shut down completely. With the AC module, this is no longer an issue. If one module is damaged or encounters an issue, the remainder of the system continues to operate at peak performance. This greatly improves the reliability of the PV system.



# Grid Tied AC PV System Outline – Facing South @ 30 degree Tilt in Central Texas



- No Big Inverter Required
- Better Performance
- Much Safer
- Eliminate String Shading
- Add More Panels at Anytime to Increase Solar System
- 25 Years Warranty on both Panels and Inverters Instead 10 Years on String Inverter
- Monitor Each Individual Panel Production from Smart Device
- Reliable, Durable and Long Lasting

