

SUNSPEC MODBUS INTERFACE



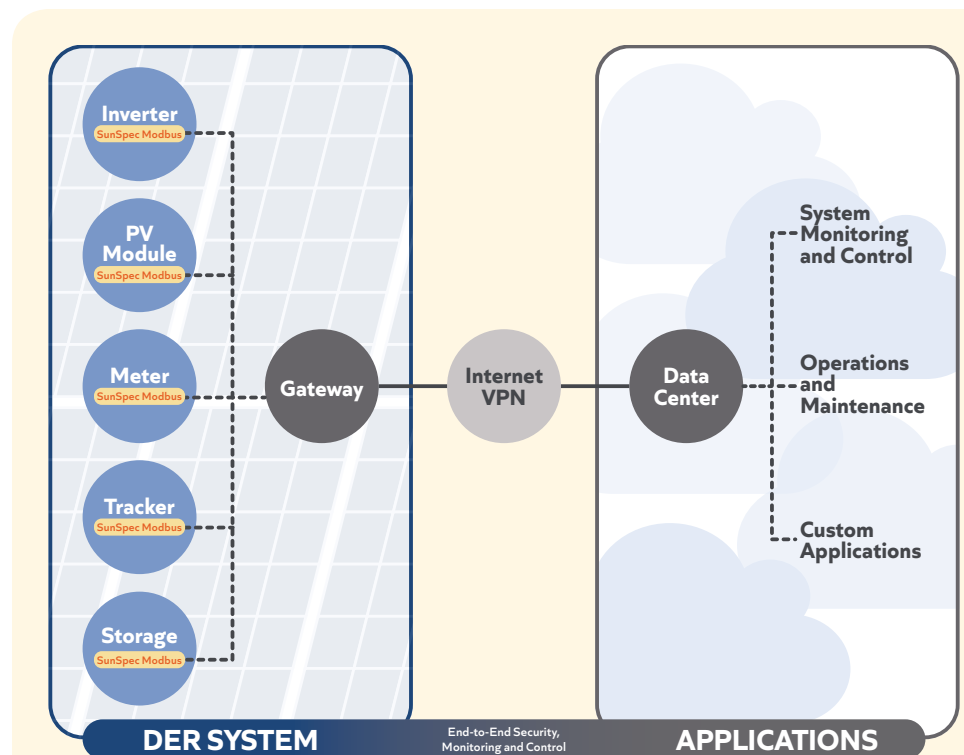
FACT SHEET

OPEN COMMUNICATIONS FOR DISTRIBUTED ENERGY RESOURCES

In April 2018, the Institute of Electrical and Electronic Engineers (IEEE) revised the standard for interconnecting Distributed Energy Resource (DER) systems. The updated standard, IEEE 1547-2018, introduces a communications requirement for SunSpec Modbus or another standard interface. Once state and local jurisdictions adopt the IEEE 1547 revision, all DERs are required to provide a standard communications interface as a condition of grid interconnection.

SunSpec Modbus defines common parameters and settings for monitoring and controlling DERs and their capabilities, such as voltage regulation, setting power factor, and power export limiting. It also structures data to increase interoperability. Leveraging the Modbus¹ protocol, widely adopted for industrial electronic devices since the 1980s, SunSpec Alliance created the SunSpec Modbus interface in 2009 and has continually extended it to cover all solar inverters and many other commercially available DERs.

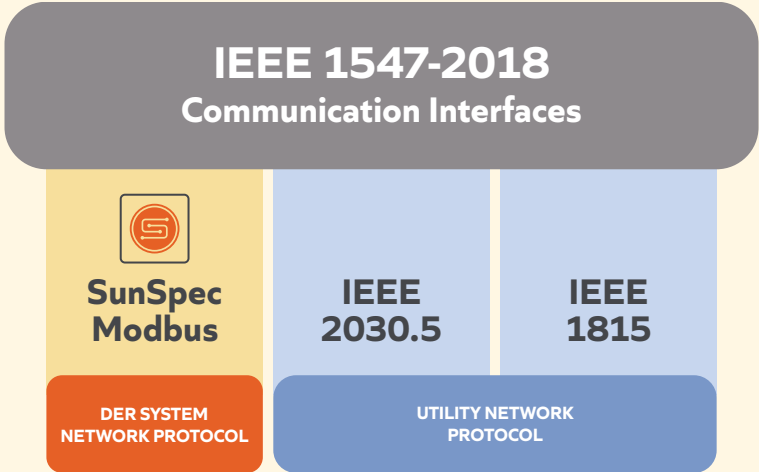
The Modbus physical interface, built into approximately 80 percent of installed DER devices. Adding the SunSpec Modbus support to the basic Modbus interface is straightforward, making SunSpec Modbus the easiest way to comply with IEEE 1547 interconnection and interoperability requirements.



SunSpec Modbus is an open standard, referenced in IEEE 1547-2018, that enables interoperability amongst DER system components. SunSpec specifications reduce the cost of system implementation. They enable applications to be written using a single, standard view of the components comprising a solar plant, independent of manufacturer and model; and enable devices to maximize their potential deployment possibilities by interoperating with applications and other protocols such as IEEE 2030.5 and IEEE 1815.

¹ Modbus Protocol (www.modbus.org/specs.php).

A Clear Path to Compliance with the New IEEE Communications Mandate



**Efficient Migration for
DER Device Manufacturers
Supporting the Modbus
Specification**

SunSpec Modbus is one of the three specified communication interfaces compliant with IEEE 1547-2018.

Market Benefits of the SunSpec Modbus Interface

Cost Effective

The cost of supporting SunSpec Modbus is low because the physical network interface exists in most DER devices.

Simple Integration

Because many DER device manufacturers have in-house experience with Modbus, the step to IEEE 1547-2018 compliance using SunSpec Modbus is a short one.

Easy Path to IEEE 1547 Compliance

SunSpec provides royalty-free specifications, reference software, and development tools to help you get your product to market.



SunSpec Modbus Certification

Contact SunSpec Alliance and visit sunspec.org/sunspec-modbus to learn about SunSpec Modbus product testing and certification, the core requirements of IEEE 1547-2018 for DER device manufacturers, information that equipment buyers should request from vendors, and a listing of SunSpec Certified™ products.