



Ampt StringView®

High-accuracy synchronous data
from Ampt DC optimizers

- Compatible with 3rd party monitoring services
- String-level data via Modbus protocol
- Easy to integrate with other on-site devices
- Up to 10x lower cost than smart combiners

Benefits:

- Visibility – remotely track system output; identify and locate problems quickly
- Faster commissioning – access data to verify electrical connections and perform troubleshooting
- Synchronicity – view point-in-time measurements aligned across all optimizers to correlate data with events
- Accuracy – measure output to +/- 0.25% accuracy
- Compatibility – link seamlessly via Modbus to 3rd party SCADA gateways
- Maximum output – avoid hidden losses from soiling, degradation, loose connections and other issues
- Easy mapping – match data to your site layout

Features:

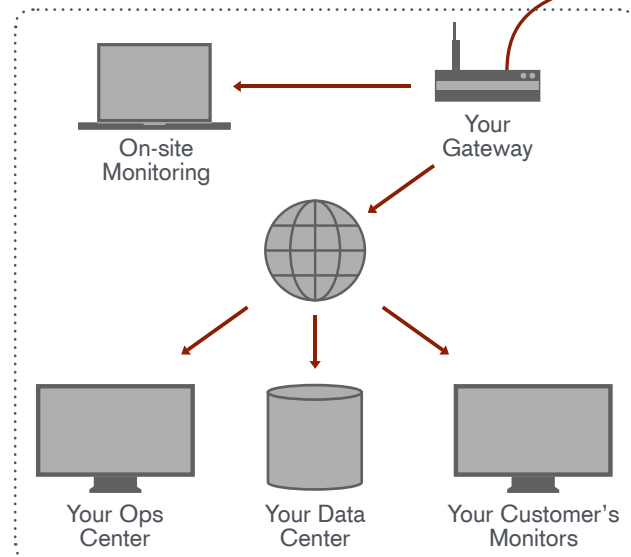
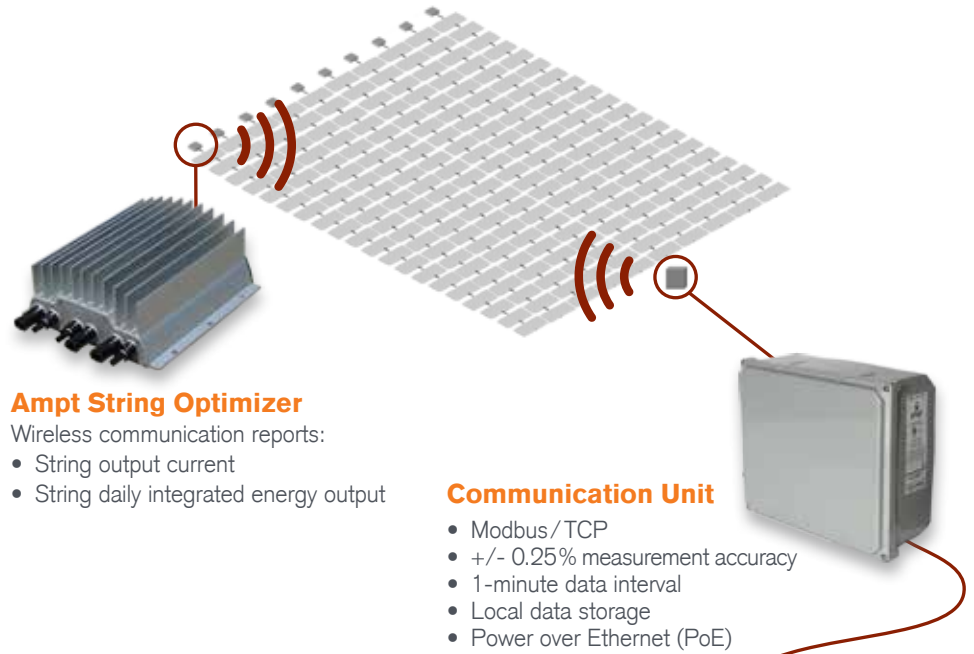
- Modbus-ready – provides data in SunSpec format
- Installation wizard – easily matches Ampt optimizers to their respective strings and defines number of data points
- Configurable – individual string data can be summarized at levels defined by the end user
- Commissioning tool – provides data to quickly troubleshoot electrical connections in the PV field

Results:

- Reduced O&M costs
- Faster system commissioning
- More precise and reliable measurement
- Greater predictability with lower risk
- More informed decisions

Ampt String Optimizers are used to lower the total cost of PV systems by eliminating half of the electrical balance of system components and enabling lower cost per watt inverters. String Optimizers also put dual MPP trackers on each string to improve the lifetime performance of PV systems. These benefits are realized without communications.

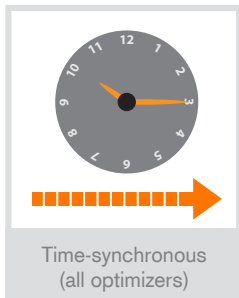
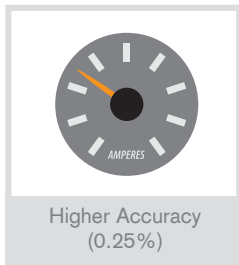
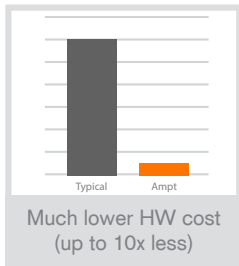
StringView® is an optional feature that provides string-level data for enhanced commissioning and O&M capabilities. String Optimizers transmit string output current and daily integrated energy data via two-way wireless communications to an Ampt communication unit (CU). The Ampt CU uses Modbus/TCP to pass records to your SCADA or data monitoring system – making the information available in the field, at your remote operations center, or through a third-party monitoring service.



Communication Unit



StringView® Advantages



Ampt CU Specifications	
Data Communications	
Interface with Ampt optimizers	Two-way wireless
Number of Communication Units per MW	1 - 2
Interface with data monitoring system	Modbus/TCP
Connection with data monitoring	Ethernet 10/100 Base T
Measurement accuracy	±0.25%
Data interval	1 minute
Local data storage	45 days rolling buffer
Electrical	
Power supply	Power over Ethernet (PoE), power consumption < 4.5W
Power over Ethernet (PoE)	Class 0, 802.3af Modes A and B, 802.3at Type 1 (RJ-45 connector)
Mechanical	
Enclosure	IP66
Dimensions	13.82" x 10.54" x 5.35" (35.10 cm x 26.77 cm x 13.59 cm)
Weight	5.6 lbs (2.5 kg)
Ambient temperature, operating	-40 °F to +185 °F (-40 °C to +85 °C)
General	
Compliance	FCC Part 15, class B ETL to UL 60950-1, 60950-22, CSA-C22.2 Nos. 60950-1, 60950-22

Ampt StringView® records use SunSpec protocol for device ID and variable record length to enable site-specific operation.

The SunSpec Common Model precedes the map to the right.

For more information about solar DC power optimizers and string-level data monitoring solutions, please contact Ampt.

Start offset	Size	Name	Type	R/W	Description
1	1	ID	Uint16	R	Ampt SunSpec Vendor Code 64050
2	1	L	Uint16	R	Variable number of 16 bit registers to follow: 12+N*16
3	1	DCA_SF	Int16	R	Current scale factor
4	2	Reserved	-	-	
6	1	DBWh_SF	Int16	R	Energy scale factor
7	1	Reserved	-	-	
8	1	N	Uint16	R	Number of strings
9	6	Reserved	-	-	
<i>Register blocks for string data follow. Repeat block for each string. Two strings are shown as an example.</i>					
15	1	String ID	Int16	R	The string number.
16	2	Reserved	-	-	
18	2	String data timestamp	Uint32	R	The UTC timestamp of the measurements.
20	1	OutDCA	Int16	R	String output current in mA
21	6	Reserved	-	-	
27	2	DCWh	Uint32	R	Daily integrated string output energy
29	2	Reserved	-	-	
31	1	String ID	Int16	R	The string number.
32	2	Reserved	-	-	
34	2	String data timestamp	Uint32	R	The UTC timestamp of the measurements.
36	1	OutDCA	Int16	R	String output current in mA
37	6	Reserved	-	-	
43	2	DCWh	Uint32	R	Daily integrated string output energy
45	2	Reserved	-	-	
<i>Repeat block for additional strings</i>					

