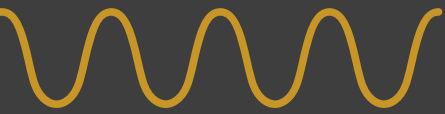


# QUAD 1000



Next Generation  
Microinverters

Model:  
**Q1000-4101**

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SPARQ



Most Advanced | Lowest Cost



SPARQ is pleased to introduce the Quad – a revolutionary, new microinverter that will reset industry standards. The Quad is not just the first 4-in-1, 1,000 Watt, microinverter on the market, it's the first microinverter to support smart grid functionality requirements.

The Quad enjoys all the benefits of a traditional microinverter – better energy harvest, improved safety, simplified design and installation, and increased reliability. However, unlike traditional microinverters that have one PV module inputting into one microinverter, the Quad allows for inputs from up to four PV modules and provides independent maximum peak power tracking (MPPT) for each.

The result is a microinverter that **installs fast** and has **the lowest cost** per Watt in the industry. Based on its per Watt rating, the Quad has the highest real power output, maximum power density, and lowest weight in the industry.

Like all SPARQ microinverters, the Quad is designed to last as long as the solar module – 25+ years, providing best-in-class returns on your investment. Our patented

design and software enables us to eliminate the use of short-life electrolytic capacitors and other unreliable components. The Quad is backed by a 25 year warranty and is designed to last much longer.

SPARQ is the first company to deliver a smart microinverter that is advanced grid ready. Unlike any competitors, the Quad can deliver full reactive power control and VAR compensation.

The Quad provides for individual module monitoring via wireless Zigbee communications. The optional data collection and communications gateway allows for high visibility monitoring, including remote access, cloud support, and a simple mobile device access.

We can afford to be **built in the USA**.

## Key Features

### Easy to Install

- + One Quad unit for every four panels
- + Fewer units to manage and install
- + Cabling has fewer drops
- + Industry standard cabling and Amphenol connectors

### Smartest

- + Reactive power control ready
- + High visibility, module level monitoring
- + Simplified web and mobile consumer apps

### Most Reliable

- + Electrolytic capacitor-free design for ultra long life
- + No single point of failure
- + Made at a leading manufacturer in the USA
- + 25-year warranty

### Maximum Financial Return

- + Lowest initial capital cost per Watt
- + Reduced install, design, and BoS costs
- + Long life
- + Maximum real power production

### High Energy Harvest

- + High system performance with per-module MPPT
- + Elimination of burst mode operation in low-light, which enhances real energy production
- + Highest real energy output

Key Specifications	Unit	S1000-G-LV4
Maximum Continuous AC Output Power	W	1000
Rated Continuous AC Output Power	W	960
Number of Input Channels		4
Rated Grid AC Voltage	V	208 / 240

#### Input (DC) Specifications

Recommended PV Power Class	W	215-300 per channel
Absolute Maximum Input DC Voltage	V	50 per channel
Maximum Input DC Current	A	14 per channel
Full Power MPPT Voltage Range	V	22-35 per channel
Extended MPPT Voltage Range	V	22-40 per channel
Start-up Voltage	V	19 on <i>one</i> channel

DC Connection Type MC4 compatible panel receptacles

#### Output (AC) Specifications

Grid Connection Type		208V L-to-L from 3 $\phi$	240V L-to-L from Split- $\phi$
Operational Voltage Range	V	183 - 229	211 - 264
Rated Output Current	A	4	
Nominal Output Frequency	Hz	60	
Operational Frequency Range	Hz	59.3 – 60.5	
Power Factor		> 0.99	
Output THD	%	< 2	
Inrush Current	A	< 8	

Output Wiring Type Branch cable: 18 AWG  
Trunk Cable: 10/12 AWG

Output Connection Type Amphenol SMC Receptacle SPS-04RFMC

#### Protection Devices

Input Reverse Polarity Protection		Yes, Polarized PV Connectors
Anti-Islanding Protection		per UL1741/IEEE1547
Output Over-Voltage Protection		Yes
Integrated GFDI		Yes

Efficiency and Operating Performance	Unit	S1000-G-LV4
Maximum Efficiency	%	96.5
CEC Efficiency	%	96
MPPT Efficiency	%	Static: 99.85 – Dynamic: 99.8
Stand-by Consumption	mW	< 30

#### Communication

Monitoring System Wireless, Web-based monitoring through SparqLinq & SparqVu

#### Environmental

Ambient Operating Temperature Range	°C (°F)	-40 to +65 (-40 to +149)
Relative Humidity	%RH	0 – 100 condensing

#### Mechanical

Enclosure Rating		NEMA 6 – outdoor
Cooling		Natural Convection
Dimensions (H x W x D)	mm (in)	53 x 196 x 374 (2.09 x 7.72 x 14.72)
Weight	kg (lb)	5 (12)
Recommended Mounting		Rack mount with two M8, 1/4", or 5/16" bolts

#### Safety

Isolation		Galvanic Isolation
Regulatory Certifications		UL1741, IEEE1547, CSA22.2 No. 107.1, FCC Part 15-Class B

#### Warranty

Standard Warranty		25 Years
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**Q1000-4101**

