



PV Module-Level Power Optimization, Shutdown & Monitoring Solutions



GNE New Energy

COMPANY PROFILE >>

Jiangsu GNE New Energy Technology Co., Ltd (GNE) was founded in 2013, It has been focusing on the R&D, production and sales of PV Module-Level Power Optimization Systems, Module-Level Rapid Shutdown Systems and Intelligent Monitoring Systems, and is committed to providing global customers with complete solutions for MLPE (Module-Level Power Electronics) applications.

GNE has obtained more than 40 domestic and foreign inventions and patents, and has rich technical accumulation and practical experience in the field of PV power optimization and intelligent management. Our products include, but are not limited to, PV power optimizers, rapid shutdown devices, module monitors, smart junction boxes, data processing equipment, and more. It has been widely used in China, Europe, Japan, the United States and other mainstream PV markets in the world, and has become a high-tech enterprise with international influence.

Mission

Bringing benefits to users, investors and employees, and contributing to the new energy business and energy-saving, environmental protection and low-carbon society.

Vision

To be a global leading provider of new energy intelligent power optimization and security monitoring solutions.

50+
Patents



300+
Employees



3GW+
Installed



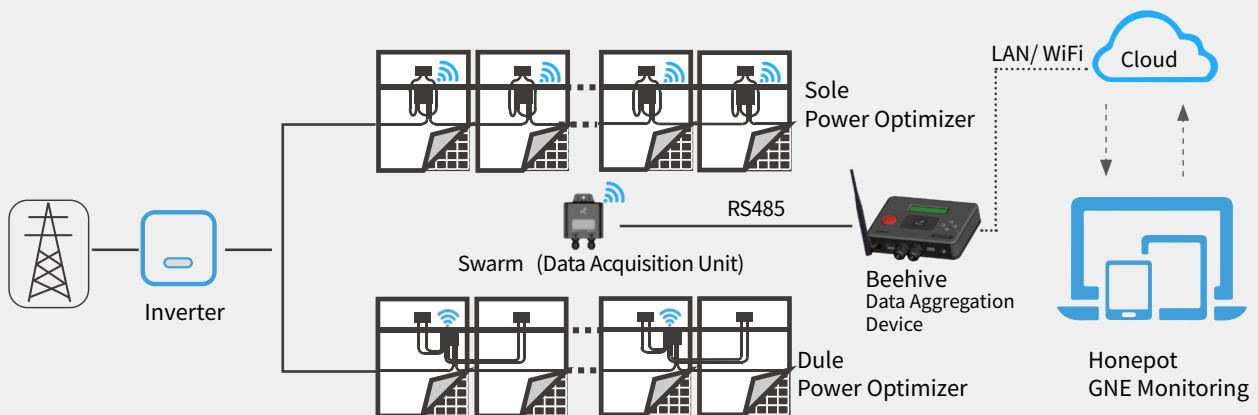
40+
Countries



GNE Power Optimization, Shutdown and Monitoring solutions

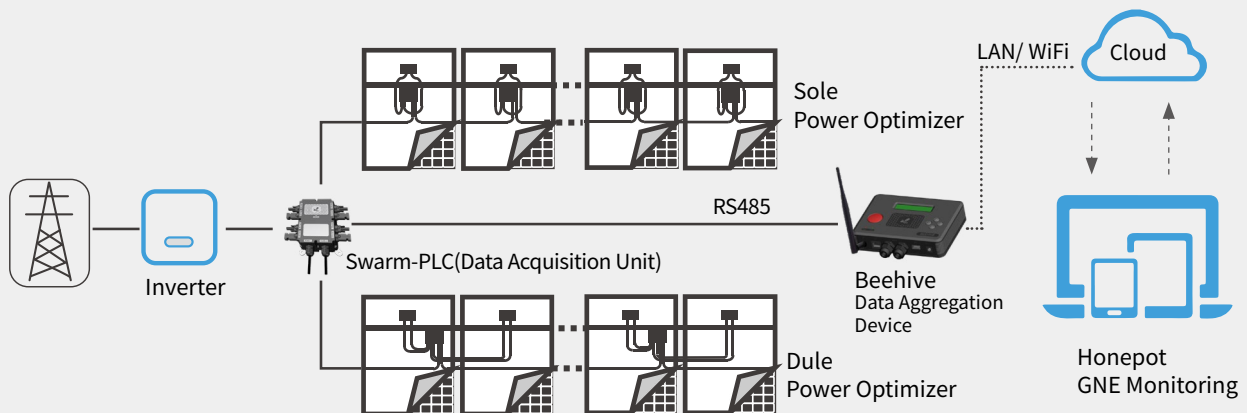
- ▶ Significantly improve the power generation of the entire PV power station, effectively track the maximum power of the module (MPPT), and perfectly solve the power generation loss caused by the shadow, mismatch, module difference, etc.
- ▶ Module-level monitoring of the entire PV power station, including power, voltage, current, temperature, and other real-time data.
- ▶ Through GNE APP or website monitoring platform, each module of the PV power station can be turned down and on remotely, effectively preventing the risk of electric shock and improving the convenience and safety of management.

Wireless Solutions



Flexible Networking Convenient Installation

PLC Solutions



Easy Wiring Stable Communication High Reliability



Sole Power Optimizer

Product features

- **Increase Efficiency:** Module-level MPPT tracking to increase system power generation by 5-25%
- **Safe and Reliable:** Functions with over-voltage, over-current, and over-temperature protection, module level shutdown with one click to eliminate the danger of high voltage
- **Precise Positioning:** Real-time monitoring of each module and the entire station, timely failure detection and accurate positioning
- **Convenient Installation:** It can be directly connected to the existing PV power system without changing the original line
- **Ultra-long Life:** 25-year lifespan, match PV modules

Model	Honeybee400	Honeybee650	Honeybee850
INPUT			
Max. Input Power	450W	650W	850W
Max. Input Voltage	75V	75V	60V
Operating Voltage Range	12 ~ 75V	12 ~ 75V	14 ~ 60V
MPPT Voltage Range	12 ~ 75V	12 ~ 75V	14 ~ 60V
Isc	15A	16A	23A
Max. Input Current	13A	15A	21A
OUTPUT			
Max. Output Power	450W	650W	850W
Voltage Range	0 ~75V	0 ~75V	0 ~60V
Max. Output Current	13A	15A	21A
Max. Efficiency	99.50%	99.50%	99.50%
OTHERS			
Max. System Voltage	1500V	1500V	1500V
Operating Temperature Range	-40 ~ +85 °C	-40 ~ +85 °C	-40 ~ +85 °C
Relative Humidity	0~100%	0~100%	0~100%
Ingress Protection	IP67	IP68	IP68
Protective Class	II	II	II
Communication	868M/915M/2.4G/PLC	868M/915M/2.4G/PLC	868M/915M/2.4G/PLC
INSTALLATION SPECIFICATION			
Size	130.3×109.6×25mm	130.3×109.6×25mm	130.3×109.6×25mm
Weight	520g	520g	520g
Connector (Input/Output)	Compatible with MC4	Compatible with MC4	Compatible with MC4
STANDARD / CERTIFICATION			
Safety	IEC/EN 62109-1:2010 the Low Voltage Directive(2014/35/EU)		
EMC	EN 61000-6-1:2007, EN 61000-6-3:2007/+A1:2011 EN 61000-6-2:2005, EN 61000-6-4:2007/+A1:2011 the EMC Directive(2014/30/EU)		
Certification	CE		
COMM	EN 50663:2017, EN 62479:2010 EN 301 489-1 V2.2.3, EN 301 489-3 V2.1.1, EN 300 220-2 V3.1.1		



Dule Power Optimizer

Product features

- **Increase Efficiency:** Module-level MPPT tracking to increase system power generation by 5-25%
- **Safe and Reliable:** Functions with over-voltage, over-current, and over-temperature protection, module level shutdown with one click to eliminate the danger of high voltage
- **Precise Positioning:** Real-time monitoring of each module and the entire station, timely failure detection and accurate positioning
- **Convenient Installation:** It can be directly connected to the existing PV power system without changing the original line
- **Ultra-long Life:** 25-year lifespan, match PV modules

Model	Honeybee800	Honeybee1300	Honeybee1600
INPUT			
Support Modules	2 pcs	2 pcs	2 pcs
Max. Input Power	450W / 450W	650W / 650W	800W / 800W
Max. Input Voltage	75V / 75V	60V / 60V	60V / 60V
Operating Voltage Range	13 ~ 75V / 13 ~ 75V	13 ~ 60V / 13 ~ 60V	13 ~ 60V / 13 ~ 60V
MPPT Voltage Range	13 ~ 70V / 13 ~ 70V	13 ~ 60V / 13 ~ 60V	13 ~ 60V / 13 ~ 60V
Isc	15A / 15A	16A / 16A	23A / 23A
Max. Input Current	13A / 13A	15A / 15A	20A / 20A
OUTPUT			
Max. Output Power	900W	1300W	1600W
Voltage Range	0 ~150V	0 ~120V	0 ~120V
Max. Output Current	13A	15A	20A
Max. Efficiency	99.60%	99.60%	99.50%
OTHERS			
Max. System Voltage	1500V	1500V	1500V
Operating Temperature Range	-40 ~ +85 °C	-40 ~ +85 °C	-40 ~ +85 °C
Relative Humidity	0~100%	0~100%	0~100%
Ingress Protection	IP67	IP67	IP68
Protective Class	II	II	II
Communication	868M/915M/2.4G	868/915M/2.4G	868/915M/2.4G/PLC
INSTALLATION SPECIFICATION			
Size	129×130×25mm	129×130×25mm	144×130×26.8mm
Weight	810g	810g	875g
Connector (Input/Output)	Compatible with MC4	Compatible with MC4	Compatible with MC4
STANDARD / CERTIFICATION			
Safety	IEC/EN 62109-1:2010 the Low Voltage Directive(2014/35/EU)		
EMC	EN 61000-6-1:2007, EN 61000-6-3:2007/+A1:2011 EN 61000-6-2:2005, EN 61000-6-4:2007/+A1:2011 the EMC Directive(2014/30/EU)		
Certification	CE		
COMM	EN 50663:2017, EN 62479:2010 EN 301 489-1 V2.2.3, EN 301 489-3 V2.1.1, EN 300 220-2 V3.1.1		



Monitoring

Product features

- **Diverse combination:** Intelligent dynamic networking and unnetworking, network self-healing
- **Multiple Internet Access:** Supports LAN/WiFi connection
- **One-click Remote Shutdown:** Intelligent monitoring management platform, remotely turn off the output of modules with one click
- **Strong Anti-interference:** Support data resumption, solve data packet loss problem

Model	Swarm
INPUT	
Working Voltage	12Vdc
Working Current	25mA
Power Consumption	≤0.3W
INSTALLATION SPECIFICATION	
Connector	RS485*2
Wireless Range	(Swarm to Honeybee) ≤30m
Wireless Band	868M/915M/2.4G Hz
Max No. of Bees	≤200pcs
Size	124×99×32mm
Weight	155g
Working Temperature	-40 ~ +85 °C
Ingress Protection	IP65
Safety Standards	EN 62368-1:2020+A11: 2020
Communication	EN 50663:2017, EN 62479:2010 EN 301489-1V2.2.3 EN 301 489-3V2.1.1 EN 300 220-2V3.1.1

Model	Beehive
INPUT	
Working Voltage	12Vdc
Working Current	250mA
Power Consumption	≤3W
INSTALLATION SPECIFICATION	
Connector	RS485*2、RJ45、USB2.0
No. of connectable Honeybees	≤1000 pcs
No. of connectable Swarms	≤5 pcs
Size	158×113×36.8mm
Weight	300g
Working Temperature	-20~ +60 °C
Ingress Protection	IP20
Safety Standards	EN 62368-1: 2020+A11: 2020

Model	Swarm-PLC
BASIC PARAMETERS	
Maximum input Current Per String	20A
Support Strings	4 Strings
Maximum System Voltage	1000V / 1500V
Extendibility	Support up to 10 Swarm-PLC in series
Voltage & Frequency	12Vdc
INSTALLATION SPECIFICATION	
Connector	Compatible with MC4
Size	140 x 99 x 50.4 mm
Weight	504 g
Working Temperature	-40 ~ +85 °C
Ingress Protection	IP65
FUNCTION	
Communication	RS485
Local Rapid Shutdown Function	YES
Remote Rapid Shutdown Function	YES
Open Circuit Voltage	YES
Automatic Shutdown After Power Failure	YES
Support Production Models	Honeybee400/650/850/1600 (PLC version)
STANDARD/ CERTIFICATION	
Regulations	NEC 2017/2020 690.12
Safety	IEC/EN 62109-1:2010 the Low Voltage Directive(2014/35/EU) UL1741, UL3741, CSA C22.2, UL1703
EMC	EN IEC 61000-6-2:2019 EN 61000-6-3:2007/+A1:2011 the EMC Directive(2014/30/EU)
Certification	CE

Cases



50KW PV Station in Ibaraki, Japan



5MW Water-Floating PV Station in Bangkok, Thailand



13.2kW Rooftop PV Station in Burlington, Canada



1MW Ground PV Station in Shanxi, China



10.08kW Rooftop PV Station in Poland



6KW Rooftop PV Station in California, USA



GNE Website



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