Enphase Energy IQ8A-72-2-US (IQ8A)



Dimensions	6.9″ W × 8.3″ H × 1.2″ D
Mounting	6.9 x 8.3 x 1.2 in; bolts to the racking rail under the panel
Weight	2.38 lb
Material	Class II double-insulated corrosion-resistant polymeric enclosure
Electrical	volts: 240 · amps: 1.45 · watts: 349 · plug: MC4 DC input; Enphase IQ Cable AC (240 V split-phase L-L) · breaker: 2-pole, max 20 A branch circuit (up to 11 units per 20 A branch)
Where it goes in UNIT5.xyz	On the roof rail under the panel
Warranty	Up to 25-year limited (Enphase IQ8+ store page)

The manufacturer's spec sheet follows on the next page.

IQ8 Series Microinverters

Our newest IQ8 Series Microinverters[1,2] are the industry's first microgrid-forming[3], software-defined microinverters with split-phase power conversion capability to convert DC power to AC power efficiently.



Key specifications	IQ8	IQ8+	IQ8M	IQ8A	IQ8H-240	IQ8H-208
Peak output power	245 VA	300 VA	330 VA	366 VA	384 VA	366 VA
Nominal grid voltage (L-L)	240 V split-phase (L-L), 180°					208 V single-phase (L-L), 120°
Nominal frequency	60 Hz					
CEC weighted efficiency	97%	97%	97.5%	97%	97%	97%
Maximum input DC voltage	50 V	60 V	60 V	60 V	60 V	60 V
MPPT voltage range	27–37 V	27–45 V	30–45 V	32–45 V	36–45 V	36–45 V
Maximum module I_{sc}	20 A					
Ambient temperature range	–40°F to 140°F (–40°C to 60°C)					

Simple

- Lightweight and compact with plug-and-play connectors[4]
- Power line communication (PLC) between components
- Faster installation with simple two-wire cabling

Reliable

- Produce power even when the grid is down[3]
- More than one million cumulative hours of testing
- Class II double-insulated enclosure
- Optimized for the latest high-powered PV modules

Microgrid-forming

- Complies with the latest advanced grid support[5]
- Remote automatic updates for the latest grid requirements
- Configurable to support a wide range of grid profiles
- Meets CA Rule 21 (UL 1741-SA) and IEEE 1547:2018 (UL 1741-SB 3rd Ed.)

[1] For details, see the "Compatibility with IQ7 Series Microinverters" section.
[2] IQ Microinverters ship with default settings that meet North America's IEEE 1547 interconnection standard requirements. Region-specific adjustments may be requested by an Authority Having Jurisdiction (AHJ) or utility representative, according to the IEEE 1547 interconnection standard. Use an IQ Gateway to make these changes during installation.
[3] Meets UL 1741 only when installed with IQ System Controller 2 or 3. IQ8H-208 V operates only in grid-tied mode.
[4] Compatible with existing IQ7 systems. Seamlessly expand your solar capacity as your energy requirements increase.
[5] IQ8 Series Microinverters support split-phase, 240 V. IQ8H-208 supports single-phase, 208 V only.

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Input data (DC)	Units	IQ8-60-2-US	IQ8PLUS-72-2-US	IQ8M-72-2-US	IQ8A-72-2-US	IQ8H-240-72-2-US	IQ8H-208-72-2-US[6]
Commonly used module pairings[7]	W	235–350	235–440	260–460	295–500	320–540	295–500
Module compatibility	–	To meet compatibility, PV modules must be within the maximum input DC voltage and maximum module I_{sc}. Module compatibility can be checked at https://enphase.com/installers/microinverters/calculator.					
MPPT voltage range	V	27–37	27–45	30–45	32–45	36–45	36–45
Operating range	V	16–48	16–58				
Min./Max. start voltage	V	22/48	22/58				
Max. input DC voltage	V	50	60				
Max. continuous input DC current	A	10	12				
Max. input DC short-circuit current	A	25					
Max. module I_{sc}	A	20					
Overvoltage class DC port	–	II					
DC port backfeed current	mA	0					
PV array configuration	–	Ungrounded array; no additional DC side protection required; AC side protection requires a maximum of 20 A per branch circuit.					

Output data (AC)	Units	IQ8-60-2-US	IQ8PLUS-72-2-US	IQ8M-72-2-US	IQ8A-72-2-US	IQ8H-240-72-2-US	IQ8H-208-72-2-US[6]
Peak output power	VA	245	300	330	366	384	366
Max. continuous output power	VA	240	295[8]	325	349	380	360
Nominal (L-L) grid voltage	V	240, split-phase (L-L), 180°					208, single-phase (L-L), 120°
Max. continuous output current	A	1.0	1.23	1.35	1.45	1.58	1.73
Min./Max. grid voltage[9]	V	211–264					183–229
Nominal frequency	Hz	60					
Extended frequency range	Hz	47–68					
AC short-circuit fault current over 3 cycles	Arms	2					4.4
Max. units per 20 A (L-L) branch circuit[10]	–	16	13	11	11	10	9
Total harmonic distortion	%	<5					
Overvoltage class AC port	–	III					
AC port backfeed current	mA	30					
Power factor setting	–	1.0					

[6] IQ8H-208 operates in grid-tied mode only at 208 VAC.
[7] No enforced DC/AC ratio.
[8] Microinverter labels may indicate either 290 VA or 295 VA depending on the production date. However, all units are certified for a maximum continuous output power of 295 VA.
[9] Nominal voltage range can be extended beyond nominal if required by the utility.
[10] Limits may vary. Refer to local requirements to define the number of microinverters per branch in your area.

Output data (AC)	Units	IQ8-60-2-US	IQ8PLUS-72-2-US	IQ8M-72-2-US	IQ8A-72-2-US	IQ8H-240-72-2-US	IQ8H-208-72-2-US[6]
Grid-tied power factor (adjustable)	–	0.85 leading … 0.85 lagging					
Peak efficiency	%	97.7	97.7	97.8	97.7	97.6	97.5
CEC weighted efficiency	%	97	97	97.5	97	97	97
Nighttime power consumption	mW	23	25	21	22	22	15

Mechanical data	Units	IQ8-60-2-US	IQ8PLUS-72-2-US	IQ8M-72-2-US	IQ8A-72-2-US	IQ8H-240-72-2-US	IQ8H-208-72-2-US[6]
Ambient temperature rangePeak output power	°F (°C)	–40 to 140 (–40 to 60)					
Relative humidity range	%	4 to 100 (condensing)					
DC connector type	–	MC4					
Dimensions (W × H × D)	in (mm)	6.9 × 8.3 × 1.2 (175 × 212 × 30.2)					
Weight	lb (kg)	2.38 (1.08)					
Cooling	–	Natural convection—no fans					
Approved for wet locations	–	Yes					
Pollution degree	–	PD3					
Enclosure	–	Class II double-insulated, corrosion-resistant polymeric enclosure					
Environmental category/UV exposure rating	–	NEMA Type 6/Outdoor					

Compliance	IQ8-60-2-US	IQ8PLUS-72-2-US	IQ8M-72-2-US	IQ8A-72-2-US	IQ8H-240-72-2-US	IQ8H-208-72-2-US[6]
Certifications	CA Rule 21 (UL 1741-SA), UL 62109-1, IEEE 1547:2018 (UL 1741-SB 3rd Ed.), FCC Part 15 Class B, ICES-0003 Class B, CAN/CSA-C22.2 NO. 107.1-01. This product is UL Listed as PV rapid shutdown equipment and conforms with NEC 2014, NEC 2017, NEC 2020, and NEC 2023 section 690.12 and C22.1-2018 Rule 64-218 rapid shutdown of PV systems, for AC and DC conductors, when installed according to the manufacturer's instructions.					

Compatibility with IQ7 Series Microinverters

- IQ8 Series Microinverters can be added to existing IQ7 systems on the same IQ Gateway/IQ Combiner/IQ System Controller only in the following configurations: (i) Solar Only or (ii) Solar Plus Battery (IQ Battery 3/10 or IQ Battery 5P) grid-tied or with backup with IQ System Controller 3/3G/3M and IQ Meter Collar.
- IQ7 Series Microinverters cannot be added to a site with existing IQ8 Series Microinverters on the same gateway.
- A mixed system with both IQ7 and IQ8 Series Microinverters does not support IQ8-specific features such as PCS or the Sunlight Jump Start feature.
- The rated continuous power output of the IQ7 and IQ8 Microinverter arrays must not exceed 150% of the IQ Battery's rated power output. If this ratio is exceeded, PV shedding must be implemented to reduce excess PV generation during transitions to off-grid mode.

Components of the Enphase Energy System



IQ Battery

All-in-one AC-coupled storage solution that integrates seamlessly with your solar energy system, providing reliable backup power and intelligent energy management for maximum performance and energy savings.



IQ System Controller

The IQ System Controller connects the home to the grid power, IQ Batteries, generator, and solar PV with microinverters.



IQ Combiner/IQ Gateway

The IQ Combiner/IQ Gateway is a device that performs energy management, provides internet connectivity, and integrates with the IQ Series Microinverters to provide complete control and insights into the Enphase Energy System.



IQ Cable

The IQ Cable is a continuous-length 12 AWG cable with pre-installed connectors for IQ Microinverters that support faster, simpler, and more reliable installations. The cable is handled like standard outdoor-rated electrical wire, allowing it to be cut, spliced, and extended as needed.

Revision history

Revision	Date	Description
DSH-00378-5.0	July 2026	Updated maximum continuous output power and current.
DSH-00378-4.0	May 2026	Editorial updates.
DSH-00378-3.0	August 2025	Updated information on backward compatibility with IQ8/IQ7 Series Microinverters.
DSH-00378-2.0	December 2024	Updated information on backward compatibility with IQ7 Series Microinverters.
DSH-00378-1.0	February 2024	• Updated the information about IEEE 1547 interconnection standard requirements. • Updated nighttime power consumption value. • Updated peak efficiency percentage. • Updated input DC data specifications.