

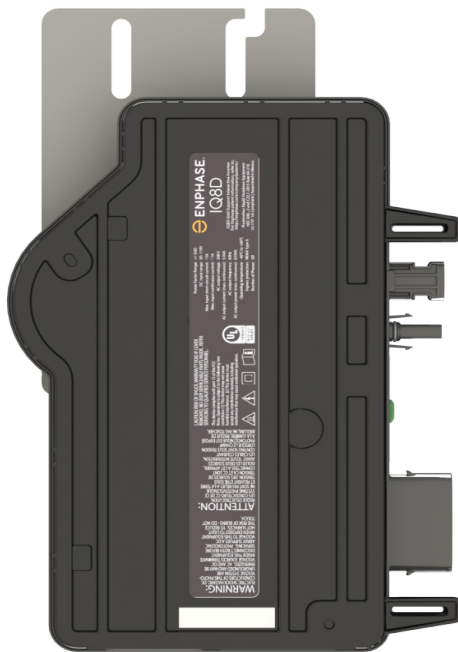
Enphase IQ8D Microinverter

Dual PV module support

The high-powered, smart-grid-ready **Enphase IQ8D™** Microinverter is the most reliable and intelligent component of the Enphase small commercial PV solution for 208V three phase interconnection.

Each IQ8D Microinverter supports two series-connected PV modules and integrates with the Enphase IQ8D Commercial Gateway and the Enphase Enlighten monitoring and analysis software.

With simplified design, improved energy harvest, and advanced monitoring, the IQ8D Microinverter offers true peace of mind during operation and maintenance.



Reliable

- World's only 8th generation inverter
- High power density with millions of hours of testing

Easy

- Plug and play cabling
- Dual module support per Microinverter
- Higher power with fewer balance of system components
- Flexible, modular design
- Best in class customer support

Advanced

- IQ8-based, technologically advanced, software-driven inverter architecture
- Highest powered Enphase Microinverter to date
- Circuitry designed for three-phase 208/120V interconnection
- CEC efficiency of 97.5%
- UL listed as PV Hazard Control Equipment as per requirements defined in UL 3741
- Additional value creation over life of system



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Enphase IQ8D Microinverter

INPUT DATA (DC)	IQ8D-72-E-US
Commonly used modules for pairing ¹	300 W - 450 W + (two modules per Microinverter)
Module compatibility ¹	54-cell/108 half-cell, 60-cell/120 half-cell, 66-cell/132 half-cell and 72-cell/144 half-cell
Maximum input DC voltage	119 V
Peak power tracking voltage	60 V - 95 V
Operating range	30 V - 119 V
Min/Max start voltage	35 V / 119 V
Max DC short circuit current (module Isc)	15 A
Overvoltage class DC ports	II
DC port backfeed current	0 A
PV array configuration	2 PV Modules 1 Microinverter ungrounded array; No additional DC side protection required; AC side protection requires max 20A per three-phase branch circuit

OUTPUT DATA (AC)	
Peak output power	640 VA
Maximum continuous output power	633 VA
Nominal (L-L) voltage/range ²	208 V / 183-229 V
Maximum continuous output current	3.04 A (208 V)
Nominal frequency	60 Hz
Extended frequency range	50 - 68 Hz
AC short circuit fault current over 3 cycles	5.8 Arms
Maximum Microinverters per 20A 3 Phase branch circuit ³	9
Overvoltage class AC port	III
AC port backfeed current	2.2mA
Power factor setting	1.0
Power factor (adjustable)	0.85 - 1.0, leading or lagging

EFFICIENCY @208 V	
MPPT efficiency	99.5 %
CEC weighted efficiency	97.5 %

MECHANICAL DATA	
Ambient temperature range	-40°C to +60°C (-40°F to +140°F) ⁴
Relative humidity range	4% to 100% (condensing)
DC connector type ⁸	Enphase EN4 bulkhead ECA-EN4-S22 : EN4 (TE PV4-S SOLARLOK) 150mm/5.9" to Staubli MC4 adapter cable pair (Default Supply) ⁵
DC Adapters (Optional) ⁸	1. ECA-EN4-S22-12: EN4 (TE PV4-S SOLARLOK) 150mm/5.9" to Staubli MC4 (Pack of 12 pairs - Optional) ⁵ 2. ECA-EN4-FW-12: EN4 (TE PV4-S SOLARLOK) to 150mm/5.9" non-terminated cable(Pack of 12 pairs - Optional) ⁶ 3. ECA-EN4-S22-10-12 : EN4 (TE PV4-S SOLARLOK) 1000mm/39.4" to Staubli MC4 (Pack of 12 pairs - Optional) ⁵ 4. ECA-EN4-S22-18-12 : EN4 (TE PV4-S SOLARLOK) 1800mm/70.9" to Staubli MC4 (Pack of 12 pairs - Optional) ⁵ 5. ECA-EN4-S22-27-12 : EN4 (TE PV4-S SOLARLOK) 2700mm/106.3" to Staubli MC4 (Pack of 12 pairs - Optional) ⁵
Dimensions (HxWxD)	265 mm x 200 mm x 35 mm (10.4" x 7.8" x 1.4") without bracket
Weight	1.56 kg (3.4 lbs)
Cooling	Natural convection
Approved for wet locations	Yes
Enclosure	Class II double-insulated, corrosion resistant polymeric enclosure
Environmental category / UV exposure rating	IP67 / Sunlight resistant

FEATURES	
Communication	Power Line Communication (PLC)
Monitoring	Enlighten Manager and MyEnlighten for monitoring. Both options require installation of an Enphase IQ8D Commercial Gateway.
Compliance	CA Rule 21 (UL 1741-SA) UL 62109-1, IEC 62109-2, UL1741/IEEE1547, FCC Part 15 Class B, ICES-0003 Class B, UL 3741 UL Standard for Safety, Photovoltaic Hazard Control, UL 1699B UL Standard for Safety, Photovoltaic (PV) Arc-Fault Circuit Protection, CAN/CSA-C22.2 NO. 107.1-01 This product is UL listed as PV Hazard Control Equipment as per requirements defined in UL 3741, when installed in accordance with the rapid shutdown PV array listing or field labeling instructions the resulting array complies with the requirements for rapid shutdown in accordance with NEC Section 690.12 (B) (2) (1).

1. No enforced DC/AC ratio. See the compatibility calculator at <https://enphase.com/en-us/support/module-compatibility>.

2. Nominal voltage range can be configured if required by the utility.

3. Limits may vary. Refer to local requirements to define the number of Microinverters per branch in your area.

4. Full power up to 50°C, derate after.

5. Qualified per UL subject 9703.

6. For field wiring of UL certified DC connectors.

7. Optional longer DC adapter cables, when DC cables from the PV modules are unable to reach to IQ8D Microinverter. Identify the correct adapter length required based on the PV module placement, PV module junction box location, PV module DC cable length and Microinverter mounting location.

8. Enphase IQ8D microinverter bulkhead and adapter cable male, female DC connectors must only be mated with the identical type and manufacturer brand of male/female connector.

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