



X-IQ-AM1-240-4  
X2-IQ-AM1-240-4  
(IEEE 1547:2018)  
X-IQ-AM1-240-4C  
X2-IQ-AM1-240-4C  
(IEEE 1547:2018)

## IQ Combiner 4/4C

The Enphase IQ Combiner 4/4C with IQ Gateway and integrated LTE-M1 cell modem (included only with IQ Combiner 4C) consolidates interconnection equipment into a single enclosure and streamlines IQ Microinverters and storage installations by providing a consistent, pre-wired solution for residential applications. It offers up to four 2-pole input circuits and an Eaton BR series busbar assembly.



### IQ Series Microinverters

The high-powered smart grid-ready IQ Series Microinverters (IQ6, IQ7, and IQ8 Series) dramatically simplify the installation process.



### IQ System Controller 2

Provides microgrid interconnection device (MID) functionality by automatically detecting grid failures and seamlessly transitioning the home energy system from grid power to backup power.



### IQ Battery

All-in-one AC coupled storage system that is reliable, smart, simple, and safe. It provides backup capability, and installers can quickly design the right system size to meet the needs of both new and retrofit solar customers.



### IQ Load Controller

Helps prioritize essential appliances during a grid outage to optimize energy consumption and prolong battery life.



5-year limited warranty



\*Refer to the <https://enphase.com/installers/resources/warranty> page for country-specific warranty information.

# IQ Combiner 4/4C

MODEL NUMBER	UNITS	DESCRIPTION	
IQ Combiner 4 (X-IQ-AM1-240-4, X2-IQ-AM1-240-4)	—	IQ Combiner 4 with an IQ Gateway printed circuit board for integrated revenue-grade PV production metering (ANSI C12.20 ±0.5%) and consumption monitoring (±2.5%). Includes a silver solar shield to match the IQ Battery and IQ System Controller 2 and to deflect heat.	
IQ Combiner 4C (X-IQ-AM1-240-4C, X2-IQ-AM1-240-4C)	—	IQ Combiner 4C with an IQ Gateway printed circuit board for integrated revenue-grade PV production metering (ANSI C12.20 ±0.5%) and consumption monitoring (±2.5%). Includes Enphase Mobile Connect cellular modem (CELLMODEM-M1-06-SP-05), a plug-and-play industrial-grade cell modem for systems up to 60 microinverters. (Available in the US, Canada, Mexico, Puerto Rico, and the US Virgin Islands, where there is adequate cellular service in the installation area). Includes a silver solar shield to match the IQ Battery and IQ System Controller 2 and to deflect heat.	
WHAT'S IN THE BOX	UNITS		
IQ Gateway printed circuit board	—	IQ Gateway is the platform for total energy management for comprehensive, remote maintenance, and management of the Enphase Energy System.	
Busbar	—	80 A busbar with support for one IQ Gateway breaker and four 20 A breakers for installing IQ Series Microinverters and IQ Battery	
IQ Gateway breaker	A	Circuit breaker, 2-pole, 10/15	
Production CT	—	Pre-wired revenue-grade solid-core CT, accurate up to ±0.5%	
Consumption CT	—	Two consumption metering split core or clamp-type CTs, shipped with the box, accurate up to ±2.5%	
Emphase Mobile Connect (only with IQ Combiner 4C)	—	4G-based LTE-M1 cellular modem (CELLMODEM-M1-06-SP-05) with a five-year T-Mobile data plan	
MICROINVERTERS, ACCESSORIES AND REPLACEMENT PARTS [not included; order separately]	UNITS		
Supported microinverters	—	IQ6, IQ7, and IQ8. Do not mix IQ6/IQ7 Microinverters with IQ8	
Enphase Communications Kit COMMS-CELLMODEM-M1-06	—	- Includes COMMS-KIT-01 and CELLMODEM-M1-06-SP-05 with a 5-year T-Mobile data plan for Enphase sites	
CELLMODEM-M1-06-SP-05 CELLMODEM-M1-06-AT-05	—	- 4G-based LTE-M1 cellular modem with a five-year T-Mobile data plan - 4G-based LTE-M1 cellular modem with a five-year AT&T data plan	
Circuit breakers (off-the-shelf)	—	Supports Eaton BR2xx, Siemens Q2xx and GE/ABB THQL21xx Series breakers (xx may be 10, 15, 20, 30, 40, 50, or 60). Supports Eaton BR220B, BR230B, and BR240B circuit breakers compatible with hold-down kit.	
Circuit breakers (provided by Enphase)	—	BRK-10A-2-240V, BRK-15A-2-240V, BRK-20A-2P-240V, BRK-15A-2P-240V-B, and BRK-20A-2P-240V-B	
XA-SOLARSHIELD-ES	—	Replacement solar shield for IQ Combiner 4/4C	
XA-ENV2-PCBA-4	—	IQ Gateway replacement printed circuit board (PCB) for IQ Combiner 4/4C	
XA-PLUG-120-3	—	Accessory receptacle for power line carrier in IQ Combiner 4/4C (required for EPLC-01)	
X-IQ-NA-HD-125A	—	Hold-down kit for Eaton circuit breaker with screws	
ELECTRICAL SPECIFICATIONS	UNITS		
Rating	A	80	
System voltage and frequency	—	120/240 VAC, 120/208 VAC, 60 Hz	
Busbar rating	A	125	
Fault current rating	kAIC	10	
Maximum continuous current rating (input from PV/storage)	A	64	
Maximum fuse/Circuit rating (output)	A	90	
Branch circuits (solar and storage)	—	Up to four 2-pole Eaton BR, Siemens Q, or GE/ABB THQL Series distributed generation (DG) breakers only (not included)	
Maximum total branch circuit breaker rating (input)	A	80 A of distributed generation/95 A with IQ Gateway breaker included	

To learn more about Enphase offerings, visit [enphase.com](http://enphase.com).

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ELECTRICAL SPECIFICATIONS		UNITS	
IQ Gateway breaker		A	10 A or 15 A rating GE/Siemens/Eaton included
Production metering CT		A	200 A solid core pre-installed and wired to IQ Gateway
Consumption monitoring CT (CT-200-SPLIT/CT-200-CLAMP)		A	A pair of 200 A split core or clamp-type current transformers
MECHANICAL DATA		UNITS	DESCRIPTION
Dimensions (W × H × D)		cm (in)	37.5 × 49.5 × 16.8 (14.75 × 19.5 × 6.63). Height is 53.5 (21.06) with mounting brackets
Weight		kg (lb)	7.5 (16.5)
Ambient temperature range		°C (°F)	-40 to 46 (-40 to 115)
Cooling		—	Natural convection plus a heat shield
Enclosure environmental rating		—	Outdoor, NRTL-certified, NEMA type 3R, polycarbonate construction
Wire sizes		—	<ul style="list-style-type: none"> <li>20 A to 50 A breaker inputs: 14 to 4 AWG copper conductors</li> <li>60 A breaker branch input: 4 to 1/0 AWG copper conductors</li> <li>Main lug combined output: 10 to 2/0 AWG copper conductors</li> <li>Neutral and ground: 14 to 1/0 copper conductors</li> </ul> <p>Always follow local code requirements for conductor sizing</p>
Altitude		m (ft)	Up to 2,600 (8,530)
COMMUNICATION INTERFACES		UNITS	DESCRIPTION
Integrated Wi-Fi		—	802.11b/g/n (dual band 2.4 GHz/5 GHz) for connecting the Enphase Cloud through the internet
Wi-Fi range (recommended)		m (ft)	10 (32.8)
Ethernet		—	Optional 802.3, Cat5E (or Cat 6) UTP Ethernet cable (not included) for connecting to the Enphase Cloud through the internet
Digital I/O		—	Digital input/output for grid operator control
USB 2.0		—	For Mobile Connect, Communications Kit 1 for IQ Battery 3/3T/10/10T, Communication Kit 2 for IQ Battery 5P
Access point (AP) mode		—	For connection between the IQ Gateway and a mobile device running the Enphase Installer App
Metering ports		—	Up to two Consumption CTs, one IQ Battery CT, and one Production CT
Power line communication		kHz	90–110
Web API		—	See <a href="https://developer-v4.enphase.com">https://developer-v4.enphase.com</a>
Local API		—	See <a href="#">Guide for local API</a>
Cellular/Mobile Connect		—	CELLMODEM-M1-06-SP-05, CELLMODEM-M1-06-AT-05 (4G-based LTE-M1 cellular modem). Note that an Enphase Mobile Connect cellular modem is required for all installations with Enphase IQ Batteries and/or IQ System Controllers
COMPLIANCE			
IQ Combiner with IQ Gateway		CA Rule 21 (UL 1741-SA) IEEE 1547:2018 - UL 1741-SB, 3rd Ed. (X2-IQ-AM1-240-4 and X2-IQ-AM1-240-4C) CAN/CSA C22.2 No. 107.1, 47 CFR, Part 15, Class B, ICES 003, NOM-208-SCFI-2016 Production metering: ANSI C12.20 accuracy class 0.5 (PV production), UL 61010-1, CAN/CSA 22.2 No. 61010-1, IEEE 2030.5/CSIP Compliant	
COMPATIBILITY			
PV	Microinverters	IQ6, IQ7, and IQ8 Series Microinverters	
COMMS-KIT-01	IQ System Controller	EP200G101-M240US00	
	IQ System Controller 2	EP200G101-M240US01	
	IQ Battery	ENCHARGE-3-1P-NA, ENCHARGE-10-1P-NA, ENCHARGE-3T-1P-NA, ENCHARGE-10T-1P-NA	
COMMS-KIT-02 <sup>1</sup>	IQ System Controller 3	SC200D111C240US01, SC200G111C240US01	
	IQ Battery	IQBATTERY-5P-1P-NA	

<sup>1</sup>For information about IQ Combiner 4/4C compatibility with the 3<sup>rd</sup>-generation batteries, refer to the [compatibility matrix](#).

## Revision history

REVISION	DATE	DESCRIPTION
DSH-00217-3.0	August 2024	Updated the system voltage value. Updated Sprint plan to T-Mobile data plan.
DSH-00217-2.0	April 2024	Updated the UL smart mark.
DSH-00217-1.0	February 2024	Initial release.
Previous releases.		