edō

EEI
ITALIAN
POWER
TECHNOLOGY

SOLAR
STORAGE
HYBRID

EDO ENERGY FOR HOME

OVER 40 YEARS OF EXPERIENCE FROM INDUSTRY TO RESIDENTIAL

www.eei.it

TECHNOLOGY, INNOVATION AND THE HISTORICAL INDUSTRIAL EXPERIENCE OF EEI FROM TODAY **AVAILABLE FOR EVERY HOME**

EEI'S MISSION BEGINS IN VICENZA IN 1978. DEVELOPMENT AND RESEARCH OF NEW PRODUCTS FOR SPECIAL APPLICATIONS.

Leader in the world power electronics market for over 40 years, EEI has developed consolidated experience in the production of inverters and power supplies in various sectors: renewable energy, heavy manufacturing industry, scientific research and clinical applications for cancer treatment.

Since it's foundation, EEI has aimed at innovative applications intended to become technical references in the market.

This is demonstrated by the frequent involvement in special industrial plants, but also by the applications made in the field of nuclear physics, such as the supply of power supplies for the large particle accelerator (27 km in circumference) LHC of CERN in Geneva.

Now EEI decide to transfers all the skills acquired over the years to the residential world, with EDO it puts at the service of energy that you produce and use every day, all its experience e professionalism.

AFFIDABILITÀ ITALIANA

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EDO IS THE NEW EEI HYBRID STORAGE SYSTEM DESIGNED FOR THE NEEDS OF MODERN HOUSES.

ALL-IN-ONE
INTEGRATED COMPONENTS AT BEST FOR A SIMPLE AND SMART SOLUTION

The EDO system includes all the components needed to transform the energy produced by photovoltaic panels into usable energy for household consumption or to store it in the integrated battery and use it in the moment of real need.

The system also includes the back-up function that guarantees availability of power even in the event of a blackout for all critical domestic loads.

With the SmartESS app the customer can remotely control the system anywhere and check the status, operation and even receive customized reports on the statistics of his plant.

TOP PERFORMANCES.
MAXIMUM EFFICIENCY
OF ENERGY CONVERSION.
STORAGE CAPACITY
UP TO 20 KWH.

E-CASA 3.6, E-CASA 5.0 HYBRID UNITS

E-CASA 3.6, E-CASA 5.0 HYBRID UNITS
EDO consists of 2 units: E-CASA 3.6 HU / E-CASA 5.0 HU which is the inverter unit and allows energy to be transformed generated by the photovoltaic system into useful energy for your home or store it in the E-CASA 5.1 BU unit and make it available when your habits require it.

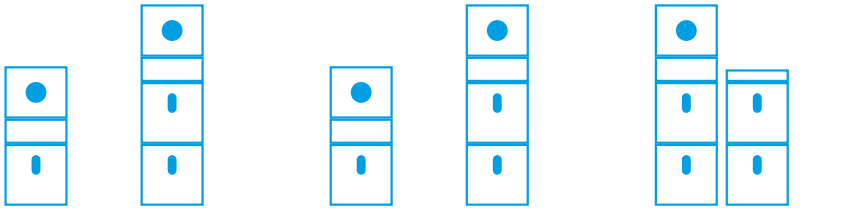
E-CASA 5.1 BATTERY UNIT

The **E-CASA 5.1 BU** battery unit is modular and can be connected up to 4 units for guarantee extreme autonomy of electricity consumption.

SOLID AND LASTING BATTERIES AT THE BASIS OF YOUR ENERGY INDEPENDENCE

The batteries used for EDO are state of the art and use the most safe and reliable chemistry, lithium iron phosphate (LiFePo4). This solution guarantees a long life of the batteries for domestic use and gives greater security than other technologies on the market. Lithium iron phosphate does not contain any toxic components or heavy metals all for guarantee a completely green supply chain.

SOLUTION	CONFIGURATION	
	Inverter	Battery pack
EDO 3.6	E-CASA 3.6 HU	E-CASA 5.1 BU
EDO 3.6 Plus	E-CASA 3.6 HU	2 x E-CASA 5.1 BU
EDO 5.0	E-CASA 5.0 HU	E-CASA 5.1 BU
EDO 5.0 Plus	E-CASA 5.0 HU	2 x E-CASA 5.1 BU
EDO 5.0 Extended	E-CASA 5.0 HU	4 x E-CASA 5.1 BU



EDO 3.6
3,68 kW
5,1 kWh

EDO 3.6 PLUS
3,68 kW
10,2 kWh

EDO 5.0
5,0 kW
5,1 kWh

EDO 5.0 PLUS
5,0 kW
10,2 kWh

EDO 5.0 EXTENDED
5,0 kW
20,4 kWh

EDO IS THE RIGHT SOLUTION
FOR YOU AND FOR YOUR PLANT

**IP65- RESISTANT AND SAFE,
ALLOWS OUTDOOR INSTALLATION**

**INTEGRATED SOLAR INVERTER
SAVINGS ON THE EXTERNAL INVERTER AND
ITS INSTALLATION**

**COMPATIBLE
WITH ALL PHOTOVOLTAIC PLANTS**

**SMART- AC OR DC PV INTEGRATION, ACCORDING TO
CUSTOMER NEEDS**

**HIGHER DC POWER FOR GREATER
INTEGRABILITY (UP TO 6.5 KWP)**

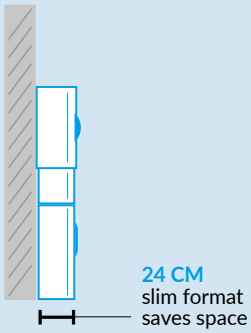
**ENERGY SUPPLY IN THE EVENT OF A BLACKOUT
UP TO 4.6 KW**

COMPACT AND ELEGANT DESIGN
COMPATIBLE WITH ANY TYPE OF ENVIRONMENT

EDO can be installed in any environment, both indoors and outdoors, thanks to its high degree of protection IP65.
The minimal and ultra slim design permits EDO to be positioned anywhere without creating installation difficulties and waste of space.

REDUCED DIMENSIONS THANKS TO THE ALL IN ONE SYSTEM

EDO can be installed in small spaces thanks to the all in one configuration that integrates battery and inverter in a column structure.
The reduced thickness of only 24 cm allows to have enough space available in any room EDO is installed.
The absence of external wiring between the inverter and the batteries considerably reduces the space occupied on the walls with considerably reduced installation times compared to other traditional storage systems.

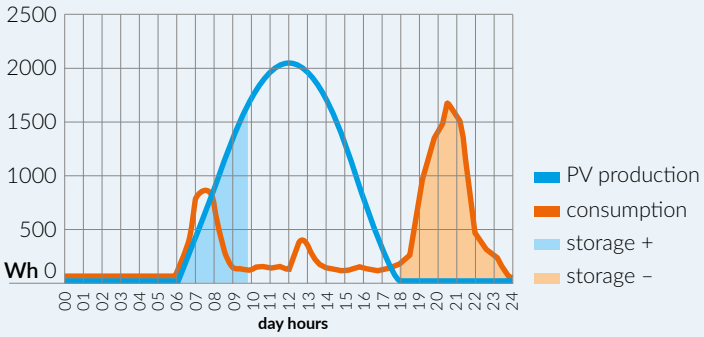


WITH EDO YOU CAN MANAGE YOUR ENERGY NEEDS ALL DAY

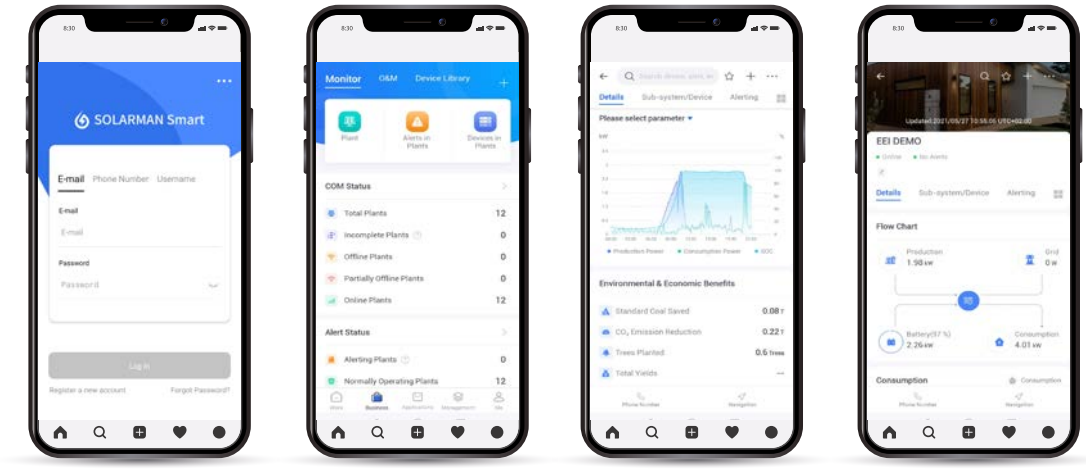
MORNING: peak consumption and low solar production. EDO supplies the missing energy with the residual energy accumulated the previous day.

DAYTIME: low and non-constant consumption with high solar production.
EDO accumulates excess energy produced by solar plant and makes it available for any immediate peaks or stores it for evening / night consumption.

EVENING: high consumption for several hours and no solar production.
EDO makes available the energy accumulated during the day, also supporting the peaks due to the use of all the utilities by the family and allows to reduce consumption from the grid even for the night.



MONITORING SYSTEM
INTELLIGENT ENERGY ON YOUR HANDS



APP
FOR USER

APP
AND REMOTE
FOR INSTALLER

SMARTESS HOME SYSTEM WITH APP AND REMOTE ACCESS TO THE SYSTEM

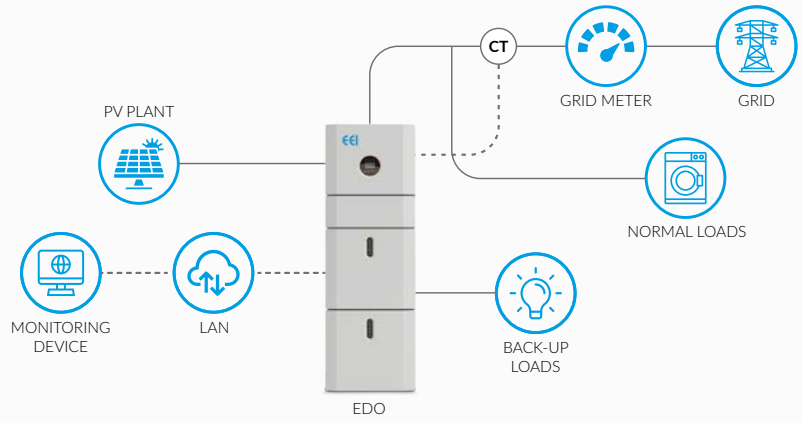
EDO connects to the home network via wifi , thanks to the SmartESS app you have the opportunity to quickly and immediately view the operating status and changes in the data from the storage system in real time.

Effective 24-hour monitoring of the following functions:

- Battery charge level
- Self-consumption capacity
- Production of the photovoltaic system
- Control on Sale / Purchase of electricit to the grid
- Energy consumption of loads
- Charging / discharging scenarios
- Alarms or faults

With the app you can monitor production and energy consumption of your home in real time. Set your preferences to optimize your energy independence, the protection against blackouts or energy savings. Thanks to instant alerts and access to distance, you can control your plant wherever you are.

MAXIMUM **INSTALLATION FLEXIBILITY** AND INTEGRATION ALSO ON EXISTING PLANTS

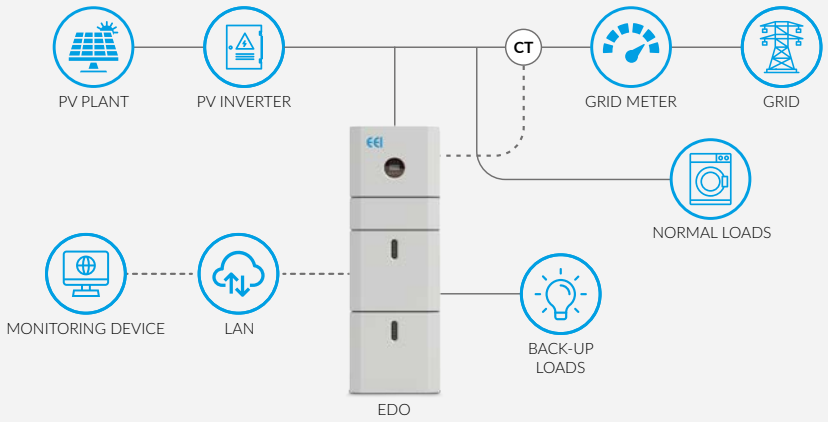


FOR NEW PV PLANT

The new EDO storage system can be used as integrated solar + battery system for new photovoltaic plants. The E-CASA 3.6 / 5.0 unit in fact is a hybrid unit that also allows the connection of the solar strings.

This reduces the number of components installed for greater system reliability and maximum energy efficiency. EDO system is very compact and allows installation of all the electrical system components,

photovoltaic and storage, in a single point minimizing the space occupied in the technical room of the house.



FOR EXISTING PV PLANTS

The new EDO storage system is a reliable, flexible and simple Solution to install. EDO allows you to integrate a storage system also on existing solar plant and

thanks to the high DC / AC ratio it adapts to all systems of different installed power. EDO can be used maintaining the existing photovoltaic inverter coupling the storage

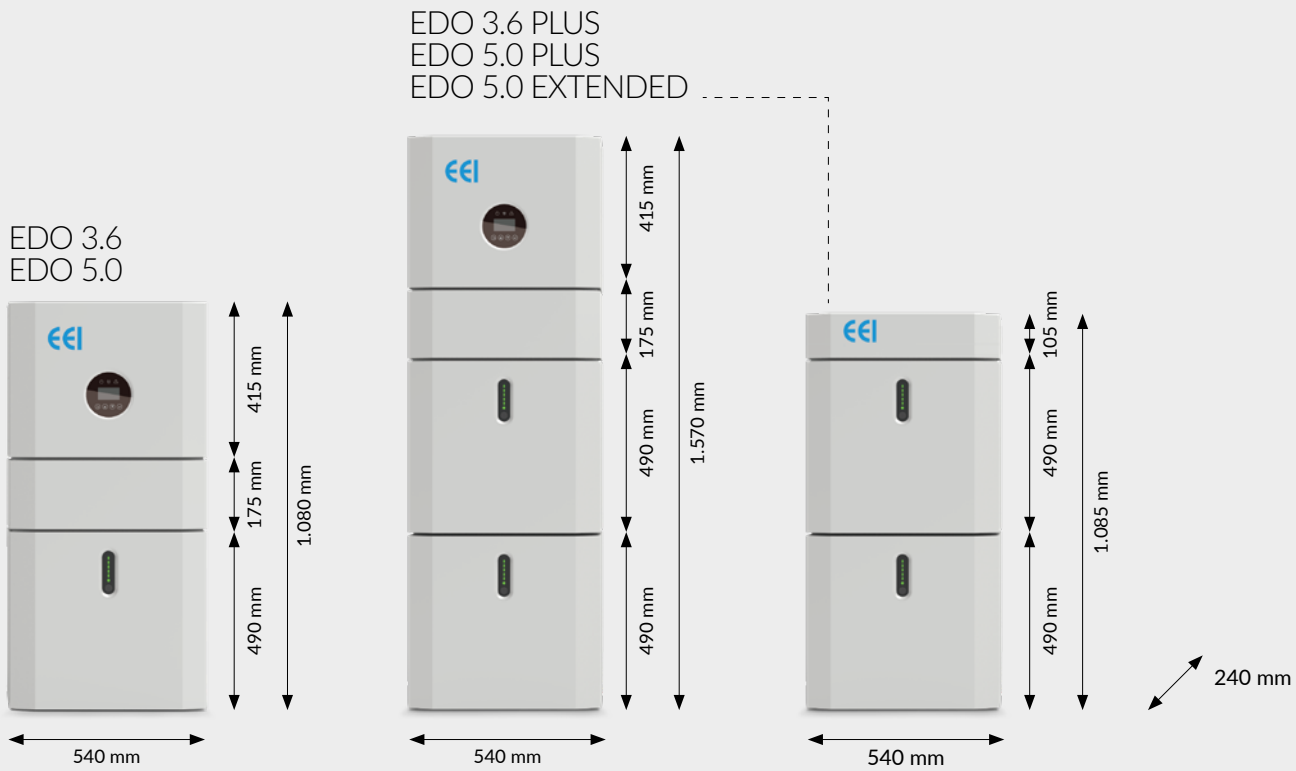
in AC, therefore with none necessary modification of the existing system and maximum simplicity of installation.

EDO. RESIDENTIAL HYBRID STORAGE UNIT
GENERAL TECHNICAL FEATURES

	E-CASA 3.6 HU	E-CASA 5.0 HU
AC OUTPUT PARAMETER		
Rated AC output power	230Vac	
Output voltage range	150V ~280V	
Output frequency range	50 / 60Hz(±5Hz), (adjustable)	
Rated Input Current	31A	
Max. Current from Utility Grid	32A	
Max. Apparent Power from Utility Grid	7360VA	
Max. Power Output to Utility Grid	3680W	4999W
Max. Current Output to Utility Grid	16A	21.7A
AC Output Connection	L+N+PE, Transformerless	
Power Factor (cos Φ)	(0.9 leading - 0.9 lagging), (adjustable)	
THDi	<3%	
Power grid disconnection	Bipolar miniature circuit breaker (40A/pole)	
AC OUTPUT - BACKUP		
Rated Output Voltage	230 (Fluctuation range±2%)	
Rated Output Frequency	50/60Hz (Fluctuation range±0.2%)	
Rated Output Current	13A	20A
Rated Output Power	4000W	4600W
Max. Output Apparent Power	3680VA	5000VA
THDv	<2% (Linear load)	
Automatic Switch Time	<20ms	
OverLoad	110% 10sec	
Off-line AC disconnection	Bipolar miniature circuit breaker (25A/pole)	
SOLAR DC INPUT		
Max. PV Input power	4800W	6500W
Max. PV input voltage	580V	
MPPT Range	120V ~550V	
Rated Input Voltage	400V	
MPPT Range at full load	184~550V	230~550V
Number of MPPT	2	
Max. PV Input Current	13A*2	
Isc PV	16A*2	
GENERAL SPECIFICATION		
Dimensioni (W×H×D)mm	540*590*240	
Weight (Kg)	39	
Ambient Temperature Range °C	-20 ~+60 (Rated Power@45)	
Relative Humidy	0~95% (NO CONDENSATION)	
Protection Degree	IP65	
Topology	High Frequency Isolation	
Cooling	Natural Convection	
Noise Emission [dB]	<25	
Display	LCD/APP	
Communication Interface	RS485/CAN2.0/WIFI	
Altitudine	≤2000m	
Overvoltage Category	II(DC SIDE), III(AC SIDE)	
Max. Efficiency (from battery)	94.0%	
Max. Efficiency (from PV)	97.6%	
Euro Efficiency	97.0%	
MPPT Efficiency	99.5%	
Protection Function	Short Circuit Protection, AC Leakage Fault Protection, Grounding Fault Protection, Anti-islanding Protection, Overload Protection Surge Protection DC Polarity Protection	
STANDARDS AND SAFETY		
Grid Regulation	AS/NZS 4777.2, VDE-AR-N4105, VDE0126-1-1, CEI 0-21	
Safety Regulation	IEC/EN 62109-1&2, IEC62040-1	
EMC	EN61000-6-1, EN61000-6-2, EN61000-6-3, EN61000-6-4,EN61000-4-16, EN61000-4-18, EN61000-4-29	

	E-CASA 5.1 BU
BATTERY PACK SPECIFICATION	
Rated Battery Voltage	51.2V
Battery Voltage Range	40~60V
Max. Discharging Current	80A
Max. Charging Current	50A
Battery Switch	Bipolar DC Switch (125A/Pole)
Energy Capacity	5.12kWh
Battery Type	LFP (LiFePO4)
Depth of Discharge (DoD)	90%
Rated Voltage	51.2V
Operating Voltage Range	44.8~57.6V
Internal Resistance	≤ 20 mΩ
Number of Cycles	10.000 cycles
Operating Temperature Range	0 ~+50 (charge)/-10 ~+50 (discharge)
Storage Temperature Range	-30 ~+60
Hmidity	0% ~ 90%
Modules Connection	max. 4 batteries in parallel (each module 5.12 kWh)
Power Consumption	<2 W
Monitoring Parameters	System voltage, current, cell voltage, cell temperature, PCBA temperature measurement
Communication	CAN e RS-485
Ventilation Type	active and passive
Weight (Kg)	59
Dimension (W×H×D)mm	540*490*240
IP Protection	IP65
Warranty	5 years on product, 10 years on performance
Safety (Cell)	IEC 62619 UL 1973 UN 38.3

The data contained in this data sheet may be subject to changes without notice.



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DESIGNED FOR MORE THAN 10 YEARS OF OPERATION

EEI guarantees 10.000 cycles of batteries use, all products have 5 years of product warranty.

MAINTENANCE

EEI remotely supports its customers by connecting to its products via network and with the timely dispatch of spare parts from warehouse located in Italy.

SERVICE CENTER

EEI has its Headquarter in Italy and allows a direct support to all its customers directly or through its own partners.

www.eei.it

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