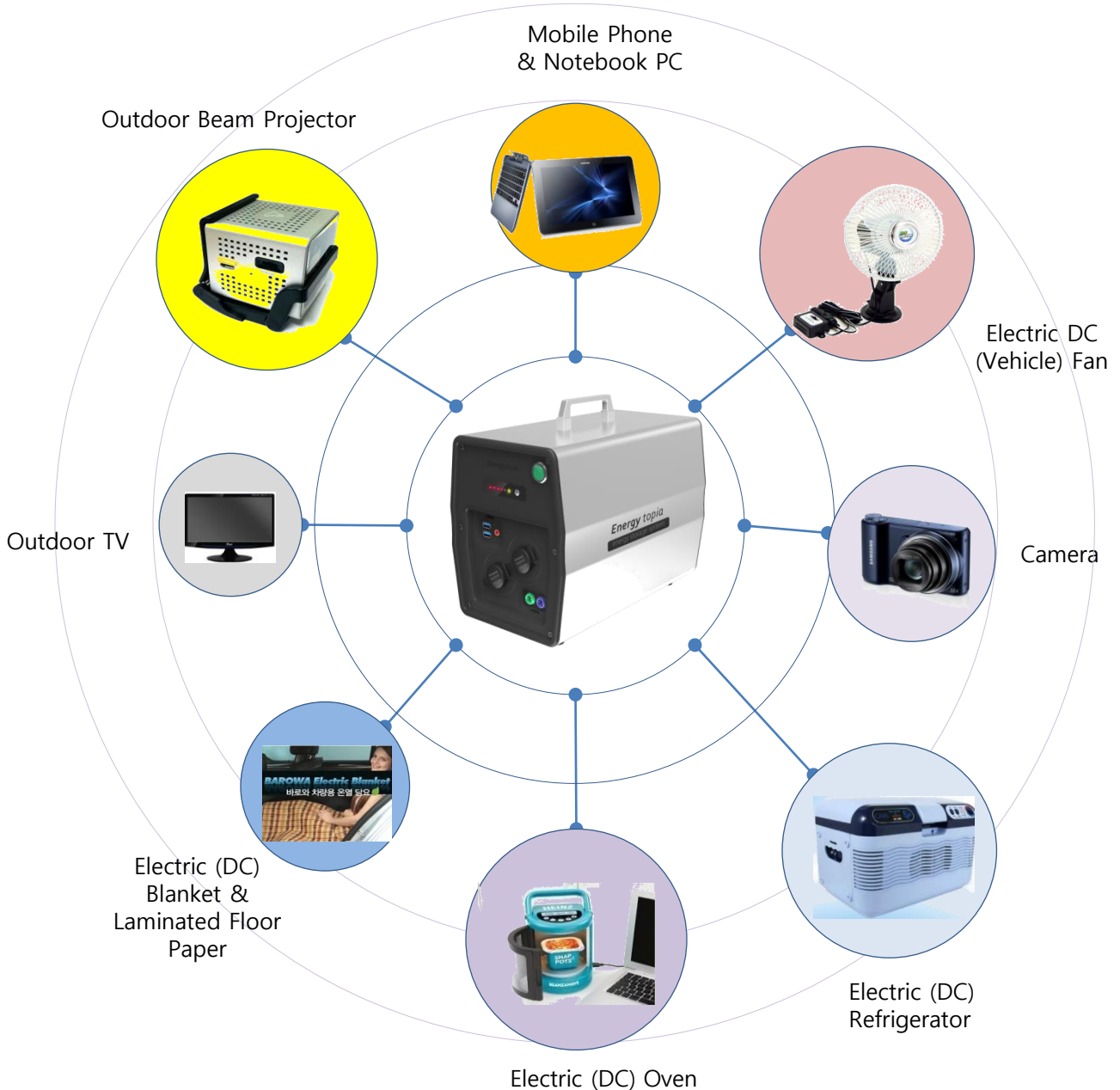


Energy Storage System

Energy Topia *ES640W, ES320W*



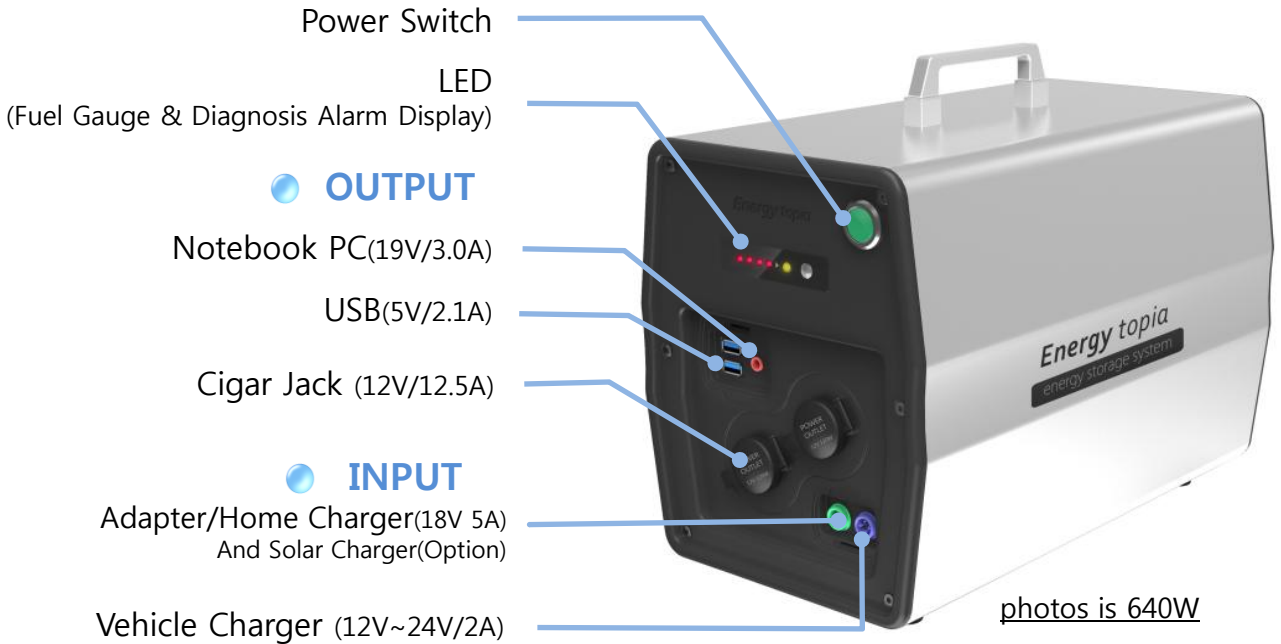
Get Power When You are Powerless !!!
It's a Real Portable. It just weights 18 lb at 640W.



IIAN TECH CO., LTD.
www.iian.kr

1

Configuration of Product



Standard parts

Charging Adapter



- Constant Current (CC), Constant Voltage (CV) compatibility. (Conventional charger: Compatible w/CV only.)
- KC, UL, CE, CCC certified product(Quality assured.)
- Connector preventing incorrect insertion employed.
- ※ for 320W : 18V4A , for 640W : 18V5A

LED Lamp set (2set)



- LED Lamp 5W
- Cigar Jack Plug and Wire 5meter
- LED Chip by SAMSUNG

USB Charging wire (1set)



- USB Cable 3in 1 type
- I-Phone, I-PAD, Samsung Smart Phone

2

Features of Product

Operating

1. Operating Time :
 - Capable to use 10W LED for 64 hours.
(Max: 10W * 8EA * 8 hours operation applicable)
 - Capable to continuously use Notebook PC for about 20 hours.
(320W : ½ of 640W.)
2. Charging Time :
 - 320W – Appx. 5 hours (18V4A Charger)
 - 640W – Appx. 8 hours (18V5A Charger)
3. Battery Type and Life Cycle
 - Lithium Ferric Phosphate (Li-FePO4) Can Type
 - 2,000 cycles (Life cycle: 4 times longer than mobile phone battery)
 - Capable to use 5.4 years when charging & discharging daily.
4. Instantaneous Output – cigar Jack ports
 - Designed to use with output below 150W.



3

Features of Product

Operating



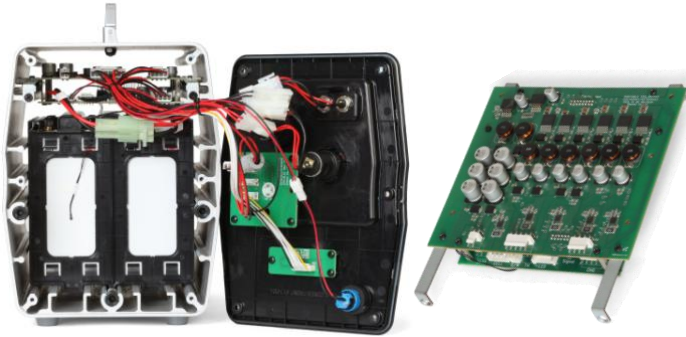
4

Technologies & Safety

- Beautiful design and Water resistance



- Advanced assembly



- Design heat release is possible with a body



Quality Certifications



**Product Certified by
KC, EMF, PL & etc.**



※ UL and JIS certification in Process.



Innovative Portable Energy Storage System ES Series



ES Series ES320/640

The Energy Storage System **ES Series (ES320, ES640)** are silent, clean, safe, and portable **Lithium Iron Phosphate(LiFePo4) Battery** based silent generator that operates without fumes so can be used in shelters and enclosed areas.

The **portable battery ES Series** store the captured power in a state of the art **Lithium Ion Phosphate(LiFePo4) Battery** pack to be taken with you and used whenever or wherever you might need it.

When you need to **power** a laptop computer, lights (for best results use LED lighting) and other devices using DCs during an **emergency** or **electrical power outage**, the ES Series will give you the **Power**.

The ES Series are so light, it's **portable** enough to take wherever you want to go.

Technical Specification of ES320/640

- **57Ah LiFePO4 Battery** provides 640Wh of electric power using DC (**ES320 : 320Wh**)
- Battery charge time 2.5hrs (for a fully discharged battery-pack) (**ES320 : 1.5hrs**)
- Battery charge from a **100W solar panel** 6 - 8 hours sunlight (**ES320 : 3-4 hours**)
- Battery rating: Over 2,000 complete charge/discharge cycles
- **Battery shelf-life 10 Years**
- **World Top Class MCU Based BMS(Battery Management System) Technology**
- Integrated battery protection / charge control module
- Durable Design with Aluminum Alloy Case for outdoor usage
- **Outputs :**
 - **USB** : 2 x 5V @ 2100mA, **Cigar Jack** : 12.5 x 12V @ 4A, **Note Book** : 1 x 19V @ 3A
- **Inputs :**
 - AC/DC Adapter : 18V/4~5A, Vehicle Charger : 12~24V/2A and Solar Charger (24V/2A)
- Battery Level Indicator (LED) and Power Switch



Comparison Table of current battery chemistry solutions

Chemistry		Voltage	Energy Density (Wh/kg)	Working Temp (°C)	Cycle Life	Safety	Environmental	Cost Base on Cycle Life x Wh of SLA
LifePO4		3.2	>120	-20 ~ 60	>2,500	Safe	Good	0.15 ~ 0.25
Lead acid	AGM /SLA	2.0	>35	-20 ~ 40	>300	Safe	Not Good	1
NiCd		1.2	>40	-20 ~ 40	>1,000	Safe	Bad	0.7
NiMH		1.2	>80	-20 ~ 50	>500	Unsafe (Need PCM)	Good	1.2 ~ 1.4
LiCoO ₂		3.7	>200	-20 ~ 60	>500	Unsafe	OK	1.5 ~ 2.0

Comparison Table of useable Ah and weight on current battery chemistry solutions

Capacity(Ah)	Useable(Ah)	Type	Weight(kg)
420	220	Flooded	109
392	196	Gel	130
400	200	AGM	118

EnergyTopia

Energy Storage System



Technical Data

Item	Specification	Comparison	
SIZE	L311 x W191 x H250 L217 x W191 x H250	640W 320W	
Battery Type	16V/20A	Li-FePO4	5S1P(320W) 5S2P(640W)
Nominal Voltage	18V	3.6V/Cell	
Input Port	Cigar Jack	12 ~24V / 2A	
	AC/DC Adapter	12 ~24V / 4~5A	
Output Port	Cigar Jack 2Port	12V/12.5A	
	USB 2 Port	5.0V/2.1A	
	Note Book 1 Port	19V/3A	
Display	LED	Fuel Gauge & Diagnosis Alarm	
Main Power Switch	Waterproof	Hard or Soft Switch	
Weight	10.5Kg 7Kg	640W 320W	
Life Cycle	2,500Cycle	7 years	
Solar Charging (Option)	60Wp	with Controller & Module	

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