DC POWER SUPPLY SOLUTION WITH TELEMETRY

DC BOX SMART

POWER SUPPLY AND BACKUP SOLUTION FOR SURVEILLANCE

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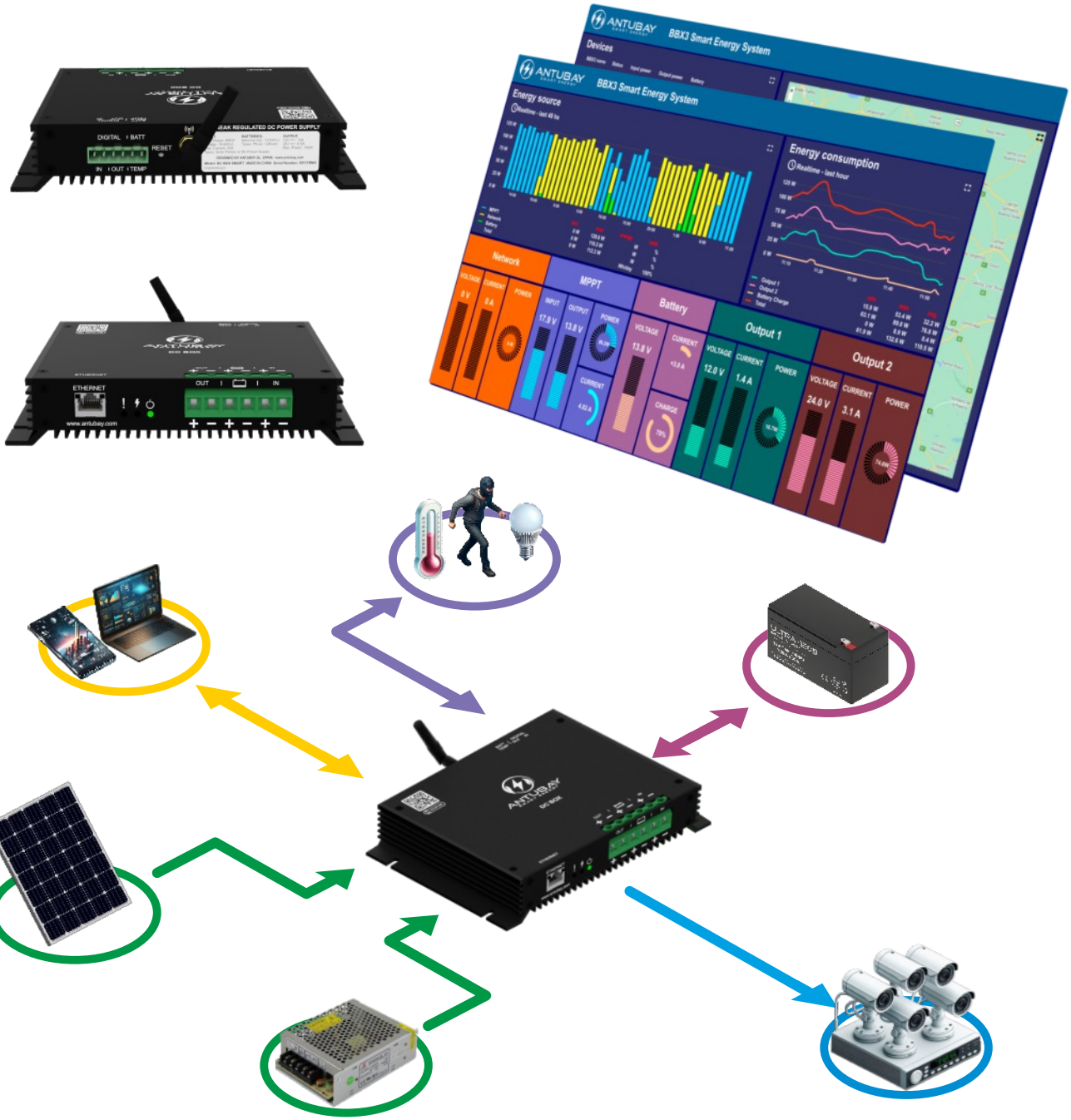
A Complete Solution

The DC Box is an intelligent power supply solution, with a backup battery intelligent charger, telemetry and a powerful monitoring platform.

It provides a "real time" energy management tool at your nodes, in order to make proactive and effective decisions.

The DC Box Smart sends alarm events, provides historical data, and can also receive commands from your network operator.

Our system reduces your infrastructure and maintenance costs, and improves your service level.



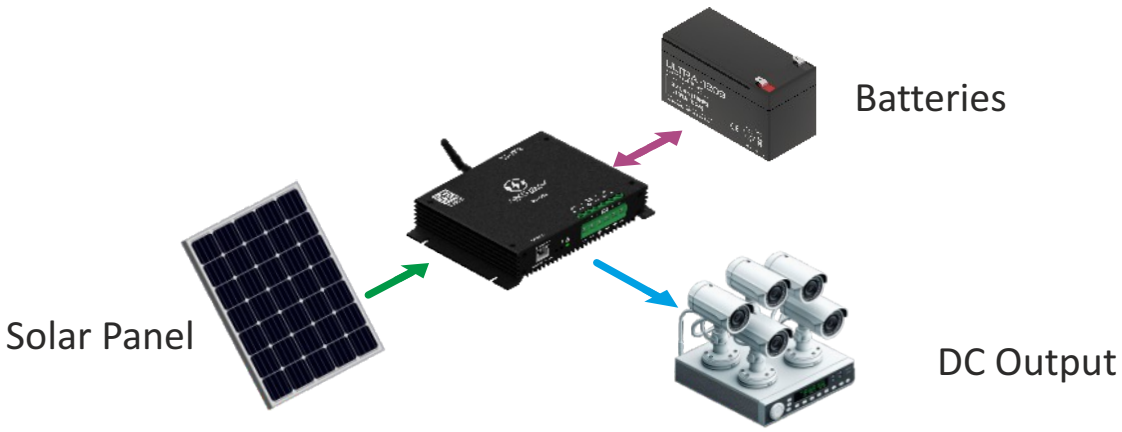
Topology

The DC Box Smart holds a self-configurable input.

The DC Box accepts many different energy sources such as an AC/DC power supply, a solar panel or even a wind turbine generator.

The DC Box can be set up in multiple possible configurations.

OFF GRID



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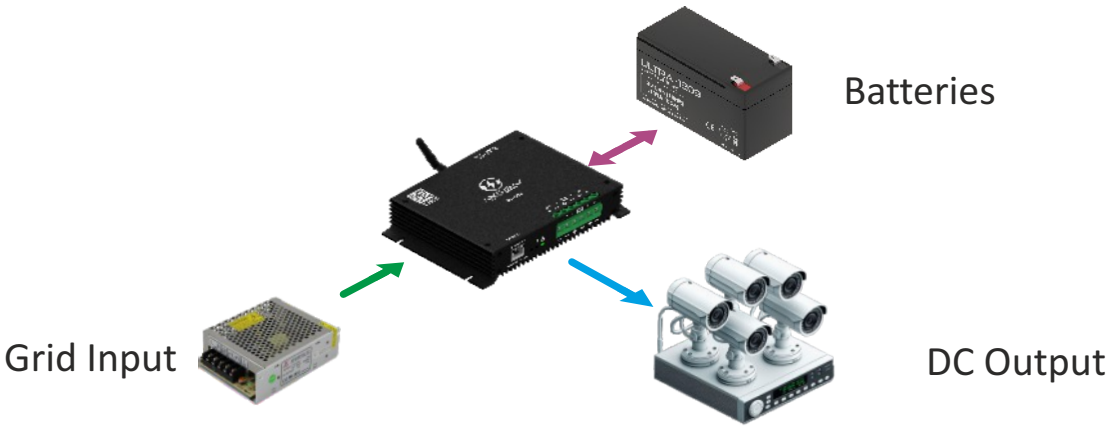
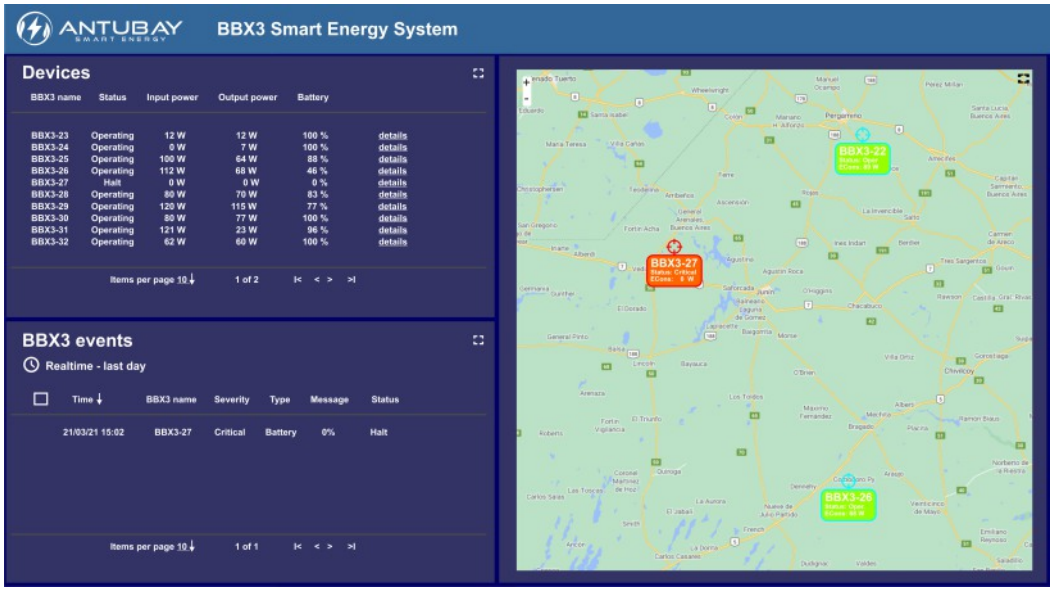


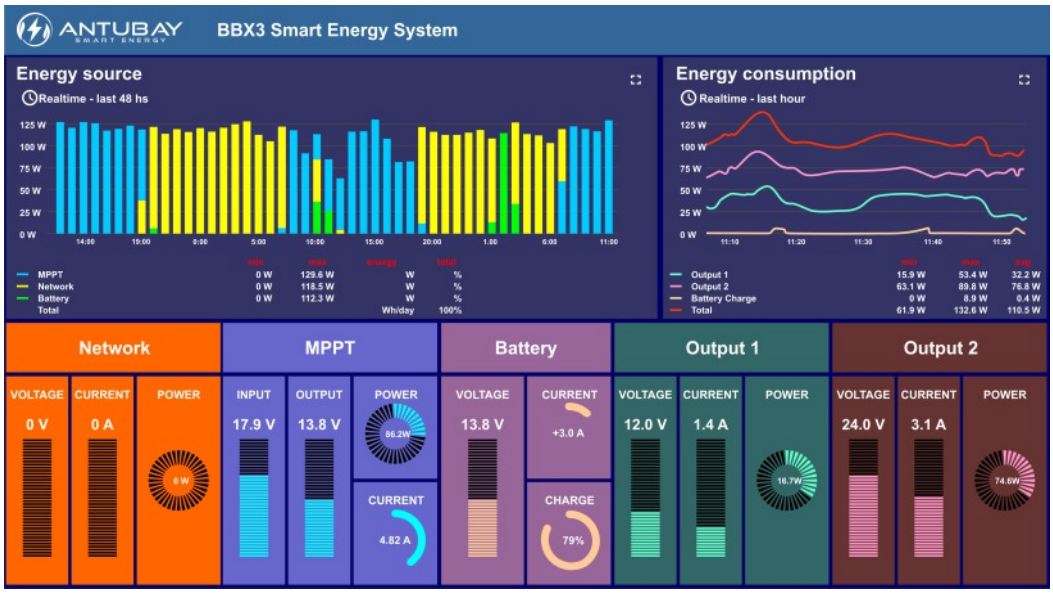
Telemetry

The DC Box Smart includes an Ethernet port and a Wi-Fi module to setup and broadcast data for decision-making. The device has energy-meters on all connectors, one analog input, one digital I/O, a temperature sensor, and a PWM output.

The web monitoring platform allows you to locate each device on a map easily, and monitor your network status in real time. The DC Box sends events for power outages, battery charge percentages, and triggers alerts for disconnections to make proactive decisions, and to increase your service-level provided to your customers.

Permanent energy measurements are sent to our monitoring platform. This platform generates energy-load histograms and consumption curves to each output to identify equipment failures. Energy analysis is a very powerful tool for detecting failures, optimizing nodes, and performing preventive maintenance. Events can be sent via Telegram APP and you can control your network from a mobile device.





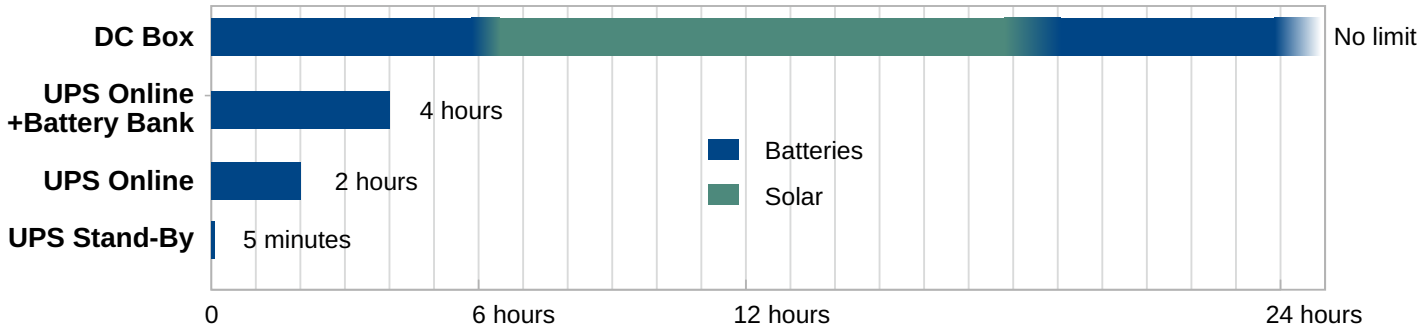
Competitive Adventages

	UPS	SOLAR CHARGE CONTROLLER	NO-BREAK POWER SUPPLY	SOLAR INVERTER	DC-BOX SMART
Grid input	√	x	√	√	√
Renewable input	x	√	x	√	√
Long autonomy	o	√	√	√	√
Maintenance-free	x	x	x	x	√
High efficiency	x	o	√	x	√
Low ripple	o	x	√	√	√
Regulated output	√	x	o	√	√
Lithium batteries	o	o	o	o	√
Instant alerts	x	x	x	x	√
Remote monitoring	o	o	o	o	√
Ethernet	√	o	x	o	√
Wi-Fi	o	o	x	o	√
External telemetry	x	x	x	x	√
Suitable for poles	x	o	√	x	√

√ Yes.
o Optional, limited or only on some models.
x No.

DC Box Smart vs UPS

The DC Box replaces the use of an UPS in dc applications because it is more efficient, maintenance free, it occupies less volume, and it is suitable to use inside electrical cabinets. The greatest benefit is the autonomy when powered via solar panels.



Specifications

PARAMETERS		DC-BOX SMART
Inputs	MPPT/DC	18-60Vdc <=480W (1)
Regulated outputs	Output	12/24Vdc <=150W
	Rated current @12Vdc	13A
	Rated current @24Vdc	6.5A
	Regulation	Vdc +/- 1%
	Ripple	+/- 200mv
Battery Charger	Charging modes	Float/3 stages
	Nominal Voltage (2)	12/24Vdc
	Current	<=20A/h
Battery	Type	Pb-Ac/Li-Ion/LiFePO4/Custom
	Nominal voltage (5)	12/24Vdc
Protections	Inputs	Current limit
	Outputs	Short-circuit and over current
	Battery	Under voltage
	Temperature	Device critical
	Energy	End of power
Digital I/O	Input	1 Digital
		1 Temperature sensor
	Output	1 PWM/Digital
Communications		Wi-Fi, Bluetooth, Ethernet
Measurements	Inputs	Voltage and Current
	Outputs	Voltage and Current
	Battery	Voltage and Current
	Input Power	Calculated
	Output Power	Calculated
Reset	Output	Watchdog/Remote
Working environment	Humidity	20- 90% Non-cond. RH
	Temperature	-30 to +70°C
Mechanical	Enclosure Material	Anodized aluminium
	Dimensions	W x H x D (mm) 192 x 38 x 142
	Weight	950g

(1) Panels can be placed even in series or parallel, as long as the open circuit voltage does not exceed 60Vdc.
(2) Due to the current limit, to achieve maximum charging power it is recommended to use nominal 24Vdc battery banks.