

Local Power Worldwide




SMART BASESTATIONTM

An innovative, fully-integrated off-grid solution to provide power for a range of applications as a turnkey solution for the off-grid market.



+44 1981 241668 

@leadingedgepower 

sales@leadingedgepower.com 

www.leadingoffgrid.com 

Smart BaseStationTM Features



Rugged

Designed to be durable in the world's harshest conditions.

Ideal for remote locations

Pre-configured and self-contained, everything in one box.

Flexible and modular

Choose AC or DC, solar add-ons, generator or fuel cell.

Quick to Deploy

Unfurl the solar panels, tilt up the masts, install the ground anchors.

Monitor remotely

See how the system is performing via intuitive web portal.

Integrate your solution

Supports two tilt-up masts, choose to integrate your equipment.

Maintenance free

Site visits are a thing of the past, no refuelling needed.

Typical examples of where the Smart BaseStationTM has been utilised include connecting rural communities with Relay Broadband, providing 5G on construction sites, and CCTV on highways projects.

The Smart BaseStationTM is designed to be installed in remote locations, even on sloping, uneven ground, any time of the year, in any weather.



Flexible and Modular

At Leading Edge, we recognise that not all applications are the same, Smart BaseStationTM has been designed to be as flexible as possible.

Options include wind turbine type and inverter size, as well as choosing whether or not a remote monitoring control system is required. Back-up can be provided by a generator or methanol fuel cell.

Applications

- Telemetry systems
- Environmental monitoring
- Remote weather stations
- LIDAR & SODAR installations
- Rural WiFi and broadband
- Radio repeater stations
- CCTV and security systems
- UPS backup power supplies
- Media & Event displays
- Roadside signage
- Private LAN or WAN



Smart BaseStationTM Technical

Rugged construction

Smart BaseStationTM provides an easy to deploy robust solution, pre-configured to supply power in hard to reach areas where the cost of running a grid connected supply is too expensive or not possible.

The tilt up/down masts make for easy deployment of the required equipment in a safe and effective manner, even in remote areas. A galvanised finish completes the design with additional paint on the base and towers for aesthetics of your choice. Combined with the use of innovative ground screws, installation is much quicker and provides an environmentally friendly alternative to concrete bases.

Integrated solar

The unique fold-away design of the system's solar panels means they are protected during transport and can be set up in seconds. The enclosure design allows the solar panels to be set at the correct angle to the sun.

Remote control & condition monitoring

The full specification Smart BaseStationTM is fitted with a Victron Cerbo GX, which provides full control over The system. When connected to the Internet via a built-in Ethernet port, or via the optional WIFI receiver or 3G/4G router, live data is transmitted to Victron's proprietary VRM portal.

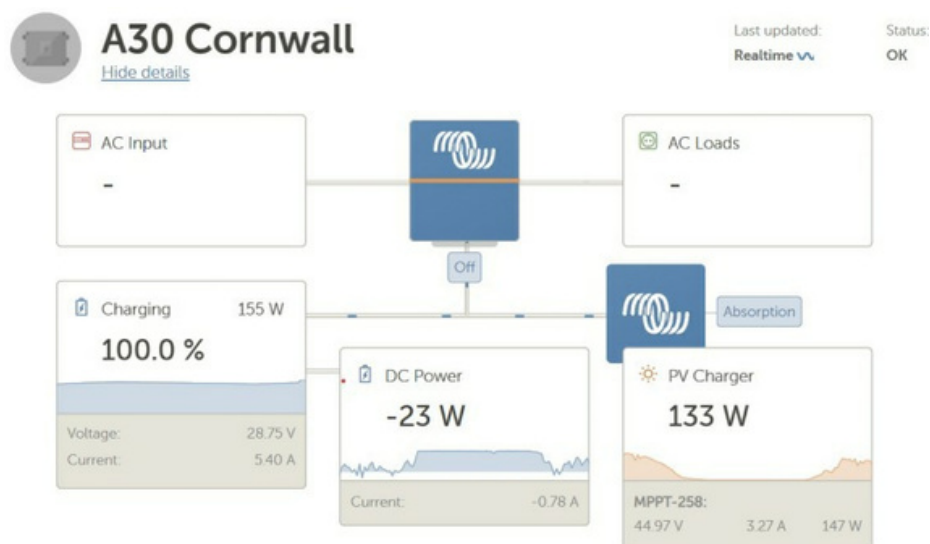
Using two 160W ultra-high-efficiency solar panels made from Sunpower® cells, Smart BaseStationTM can generate over 1.2kWh a day in summer. An extendable solar option adds two 160w solar panels providing a total of 640W of solar.

Wind-Solar hybrid

Unlike other "complete" power solutions, Smart BaseStationTM comes with our wind turbine, designed and built by us for some of the world's harshest environments. In contrast to the sun, wind can be a 24-hour a day power source; therefore, hybrid wind and solar power systems are significantly more productive than just solar or wind alone. In winter, wind generates more power than the sun. By having both wind solar, the system is an effective year-round power source.

Fitted as standard with either our LE-300 or LE-600 wind turbine, wind power accounts for between 0.5kWh to 1.5kWh of power a day. This can be boosted by attaching two wind turbines for maximum output. In higher wind areas(>6m/s annual wind speeds) we recommend the LE-v150 Extreme.

Logging in to the VRM Portal from your laptop or the mobile app anywhere in the world, means that you can see exactly how your Smart BaseStationTM is performing (live and historical), receive alarm signals by email and even change system setting remotely.



Smart BaseStationTM Features

AC, DC and Backup

The standard Smart BaseStationTM has both AC and DC available, as well as a DC only version. Based on the renowned inverter-chargers from Victron Energy, Smart BaseStationTM can supply 230V from 500W to 3000W. The system can also be connected to a generator or mains power supply.

When connected, the system will automatically switch away from the batteries and feed AC power directly to the electrical equipment in use. This changeover happens in about 12ms, which is fast enough to keep even sensitive electronics continuously powered. As well as feeding power from the generator or mains directly, Smart BaseStationTM uses surplus power to simultaneously boost charge the battery bank.



If a backup generator with an autostart function is available, the system can be set up to automatically start & stop the generator depending on the battery state of charge. The autostart function can also be set to activate the generator when the electrical load exceeds the capacity of the onboard inverter. In these instances, Smart BaseStationTM combines both power sources using Victron's onboard Power-AssistTM function.

Fuel cell or Diesel Generator Backup

When power supply is absolutely crucial, Smart BaseStationTM can be fitted with an Efoy methanol fuel cell to boost the system's capabilities.



Stored Power

Batteries are essential in storing power generated. They also provide the "reserve" for days when there is neither much sun or wind, keeping equipment running no matter the weather.

Smart BaseStationTM is fitted with a bank of industrial grade deep-cycle AGM (Absorbent Glass Matting) batteries designed to give 2-4 day autonomy and many years' service, even when they are heavily used. AGM batteries do not contain any free-liquid electrolyte so are suited to the rigours of transport. As standard, six 120Ah batteries storing a total of 8.64kWh of energy are used. For greater storage, systems can be "daisy- chained" together.

We are happy to discuss requirements and provide a bespoke solution.



Call +44 (0) 1981 241668
www.leadingoffgrid.com

Leading Edge Power
Skyrrid Farm | Pontrilas
Herefordshire | HR2 0BW
sales@leadingedgepower.com
Copyright © 2023 Leading Edge Turbines