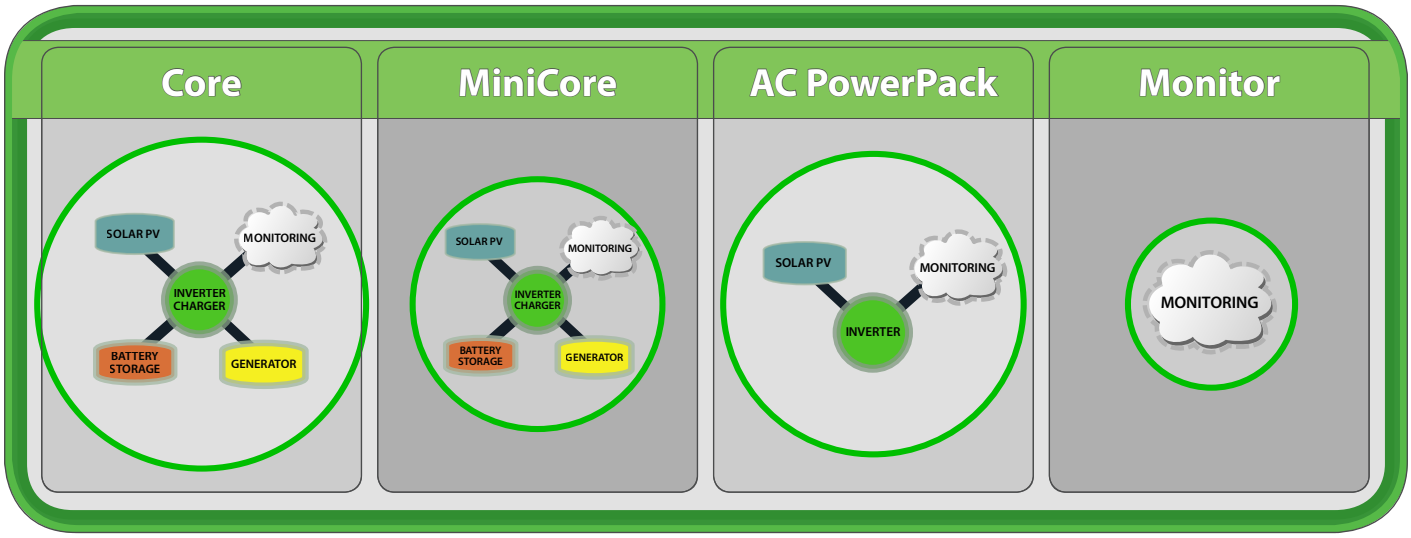
PICOGRID
OPEN CLUSTER MODULES



Bite-sized power solutions

As you deploy a micro-grid, we believe you need to stay flexible and keep your options open as technology moves ahead. This means adopting the best and most affordable technology today, without locking yourself into one vendor's catalogue. PicoGrid Open Cluster modules allow you to do just this - make use of today's best technology while remaining ready and open to leverage future innovations. PicoGrid Cluster modules are pre-tested, pre-configured and attach easily to the external wall of any building to solve your AC and DC power requirements.

PicoGrid is open

The best strategy involves using a flexible and open platform made up of repeatable, standardized off-the-shelf components. The PicoGrid solution relies on an elegant software framework that monitors and manages four basic modules: Core, MiniCore, PowerPack, and Monitor. These can be assembled to form a robust micro-grid design tailored to your needs, and then rapidly deployed. Because they are managed using Open Source software and hardware, you have "complete" control and you can customise and manage solutions to suit your needs. Our engineering team can deliver turnkey systems, or we can work with your team to customise solutions. We know that active communities of users drive innovation, so up-skilling your team is part of what we do. We encourage and support you to do what's best for *your* project, within *your* budget and time frame and our engineers are always there to help.

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PicoGrid uses open standards

Because we adhere to open standards, our modules not only connect to each other, they can also be integrated with other suppliers products. While vendors of power electronics will have a variety of features implemented internally, the total functionality needed within a particular deployment is not likely to be provided by any one manufacturer. For this reason, we stick to open standards, so as new products emerge, they easily fit within the PicoGrid framework. The renewable energy industry has grown massively both in volume and scope since its inception. Supporting open standards is essential as the industry looks toward the future.

PicoGrid modules make it easy

Micro-grids can be complex and configuring one from raw components is a big job. The design, construction, configuration and then testing of any system can eat up many hours. Our PicoGrid systems keep everything organized and compartmentalized in a sealed marine grade cabinet that's low profile and designed to attach to the exterior wall of a building. This provides for a fast and simple, pre-configured deployment. If desired the internal components are also accessible via sealed doors so you can inspect the high quality components and upgrades or hardware reconfigurations are always possible. Using the SolarNetwork management and monitoring platform allows PicoGrid modules to be snapped together and activated online.

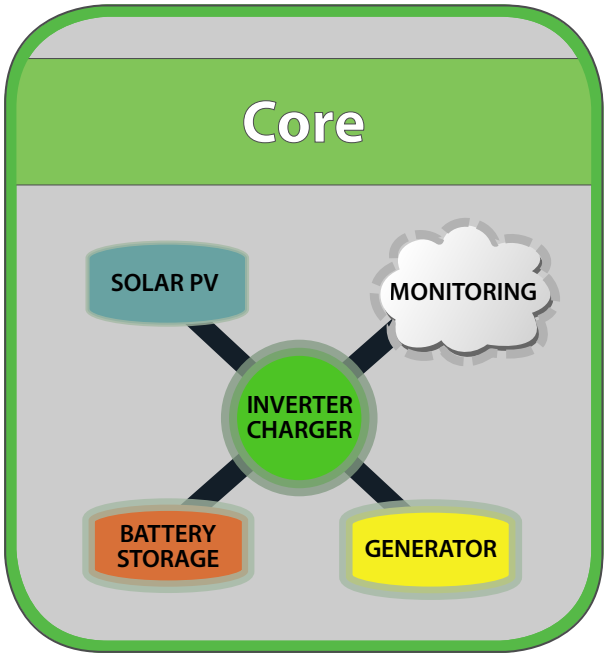
PicoGrid gives you options

For many projects, the basics of energy management is easy. However, for the more technical requirements, the software framework and the choice of componentry is open to the electrical and IT services professional. If your site has specific logic requirements or needs different features from our core product line, access to the source code and electrical designs is fully available. The renewable energy management field is growing and technology will continue to move and mature at a rapid pace over the next decade. Keep your options open with the PicoGrid platform.

PicoGrid is enterprise level gear

There are a lot of promises out there, but solutions need to be proven in the field. This is why we use the most robust and tested Linux kernels available, with industrial grade media and embedded hardware. Our choice of renewable energy gear includes all the top brands of inverter, charge controllers, switches, battery computers and batteries. Reliability is achieved through clever design, attention to detail and proven results in the field.

PICOGRID CORE



The PicoGrid Core is a micro-grid or micro-generation and storage module.

The PicoGrid is both self contained and expandable, so it is easy to increase your generation or storage capacity in the future.

All PicoGrid components are standards-based and managed by an Open Source software platform that keeps your microgrid operating optimally.

As a stand alone power source, the Core can generate and store enough power to supply a small business or several small residential buildings in single or 3-phase configurations.

The Core is able to accept additional renewable power sources whether they are AC or DC coupled.

The Centre of the Solution

As you deploy a microgrid, we believe you need to stay flexible and keep your options open as technology moves ahead. This means adopting the best and most affordable technology today, without locking yourself into one vendor's catalogue. The PicoGrid Core, like all PicoGrid modules, allows you do just this - be ready for the future while also taking advantage of the best technology available today.

PicoGrid Core is delivered pre-tested, pre-configured and ready to attach to the external wall of any building. Just add your PV and optional diesel generator inputs and your PicoGrid Core is ready to deliver all the AC and DC power that you need. Picogrid Core units can be augmented with more Lithium Iron Phosphate lightweight battery storage, more local DC-Coupled PV or, if there is a roof within 150 metres, just add an AC-PowerPack.

It's a turn-key system out of the box but the flexibility is there for advanced configuration and modification.

Features

- Single or 3-Phase 240V supply
- 48V DC supply
- 8kW or 24kW of battery based inverter power
- Optional DC-Coupled PV generation available
- Up to 100 kWh of usable lightweight Lithium Storage
- Compact and sealed marine grade cabinet
- Full remote monitoring
- Add PicoGrid AC PowerPacks as needed
- Storm-Surge Protection Design
- Swappable Commodity Internal Components

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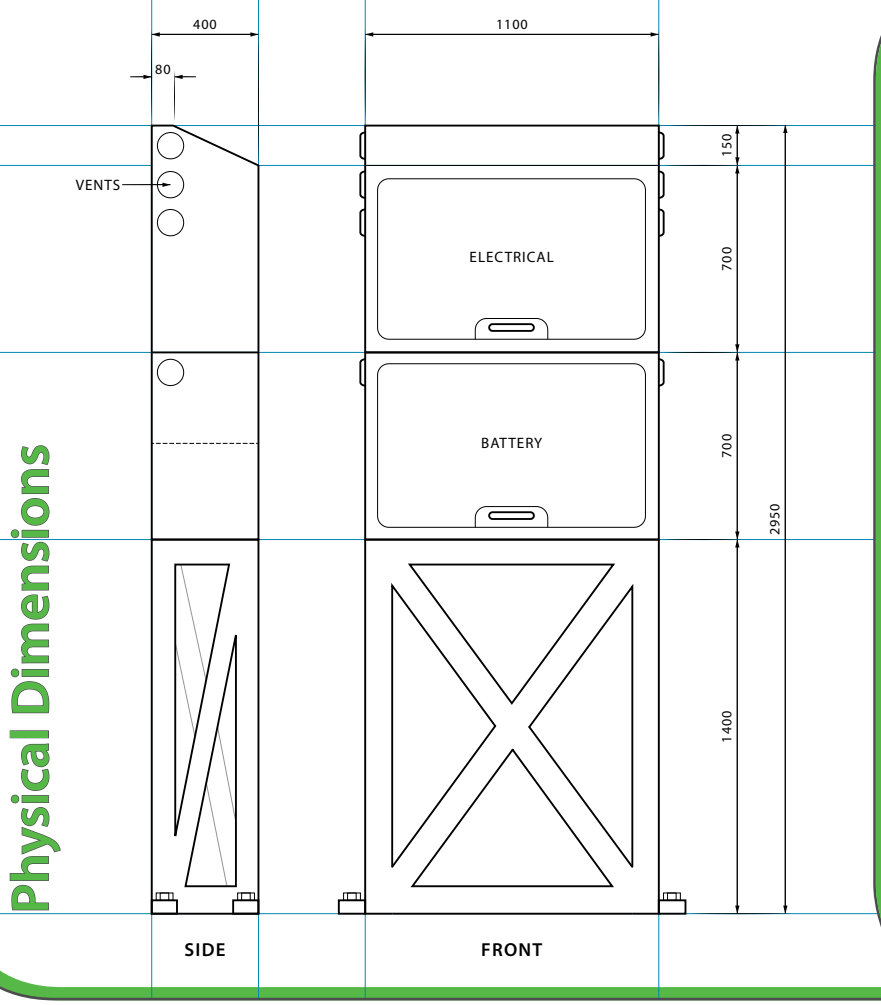
PICOGRID CORE

Physical Dimensions



Technical Specifications

Hardware

- Inverter Power: 8kW continuous 240VAC 50Hz
- Battery Storage Size: 28.8kWh (3 cabinets)
- Auto-Start Generator: Premac Diesel 9kVA (external to the cabinet)
- Battery chemistry: LiFePO4
- Battery Voltage: 48V
- Battery Capacity: 300Ah
- IP Rating: IP55

Software

- SolarNode 5W embedded controller
- Open-Source SolarNetwork platform
- HTML5 performance dashboard
- Remotely monitored

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PICOGRID
DISTRIBUTED CLUSTERS

Diagram for distributed cluster strategy
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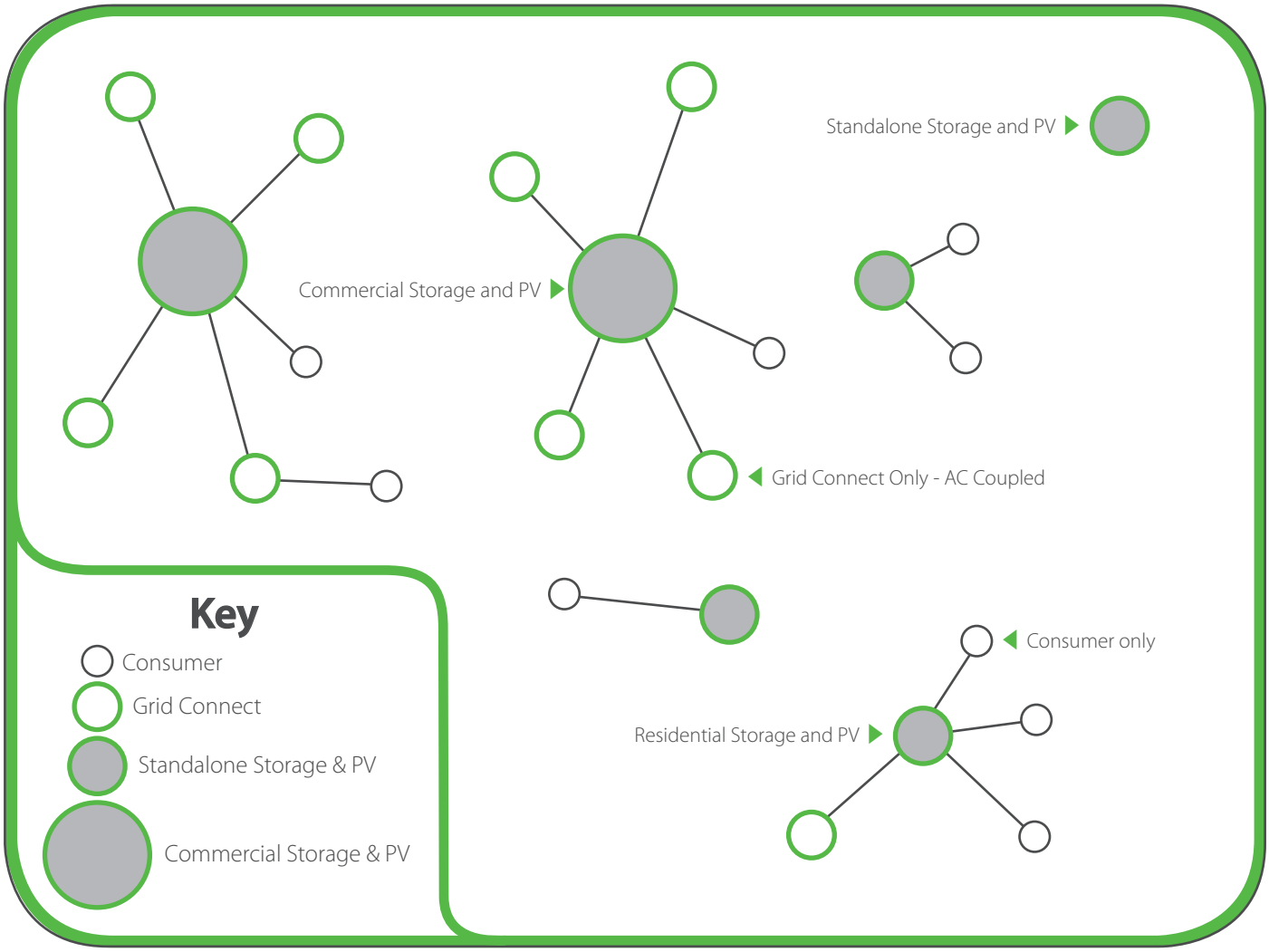

The PicoGrid strategy aims to fill requirements where needed based on local distance from consumer to the available resources, taking full advantage of local generation and storage potential. The advantage of this PicoGrid deployment is that nodes are upgradable, meaning that resources only have to be allocated when there is a clear reason to deploy.

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