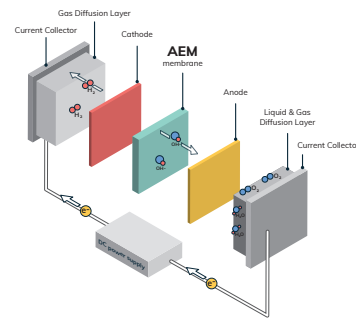
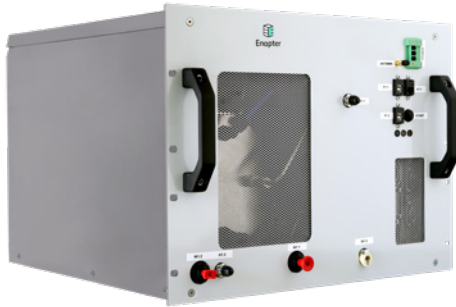


Electrolyser Systems

Onsite green Hydrogen production

Enapter electrolysers are the portal to the hydrogen economy.
Stack as many as you need. Simple, flexible, scalable, fast-to-deploy.

Electrolyser EL 2.0



Key Features

- High efficiency
- Low requirements for input water purity
- Native operation with Enapter Energy Management System

What is AEM electrolyser technology?

Our patented **Anion Exchange Membrane** electrolyser requires no noble metals to achieve good performance and lifetime. It also has a simple balance of plant, so we can produce high quality, pressurized hydrogen gas at an extremely low cost.

**Simple installation and low maintenance.
Stackable to form larger electrolyser systems.**

Up to four EL 2.0 modules and one optional Dryer 2.0 can be combined in a single 19" cabinet by Enapter or a qualified system integration partner.

Our AEM electrolysers are the most cost-effective solutions for Hydrogen production ranging from 0.5Nm³/hr to 20Nm³/hr.



Building blocks for the future of energy



EL 2.0 data sheet

H ₂ production rate	500 NL/hr
Working pressure	35 Bar
Operative power consumption (at standard conditions)	2.4 kW
Peak power consumption (max power draw at anytime)	3.0 kW
Power supply options	AC 100-240 Vac, 50-60Hz
Water consumption	0.4 L/hr
Water specification	<20 µS/cm
Water input pressure	1-4 Bar
Ambient temperature	5-45 °C
Ambient humidity	20-95%
Module dimensions (WxDxH)	483 x 490 x 354 mm (8U)
Module weight (without water)	53 Kg




Simple Modular Integration



Dryer 2.0

The optional dryer module can process up to 2Nm³/hr of hydrogen gas from the EL 2.0 and bring the output purity to >99.999%.


H ₂ flow rate	Up to 2 Nm ³ /hr (4 x EL 2.0)
Operative power consumption	375 W
Dimension	483 x 490 x 178 mm (4U)



19" Cabinet Integration

Enapter offers integration of EL 2.0 in a standardized cabinet/rack for deployment directly on the customer site.


Enapter Water Supply System Components



Water Purification Module (WPM)

Input water	tap/ rain water
Output water	<20 µS/cm
Operative power consumption	200 W (20W standby)
Typical flow rate	0.2-0.4L/min

Mounted on sidewall of cabinet or other wall surface



Water Tank

An optional 35L clean water tank can be integrated into the cabinet. It can be filled by the WPM or other clean water supply and includes a pumping system to supply the electrolysers. Size in cabinet: 8U.

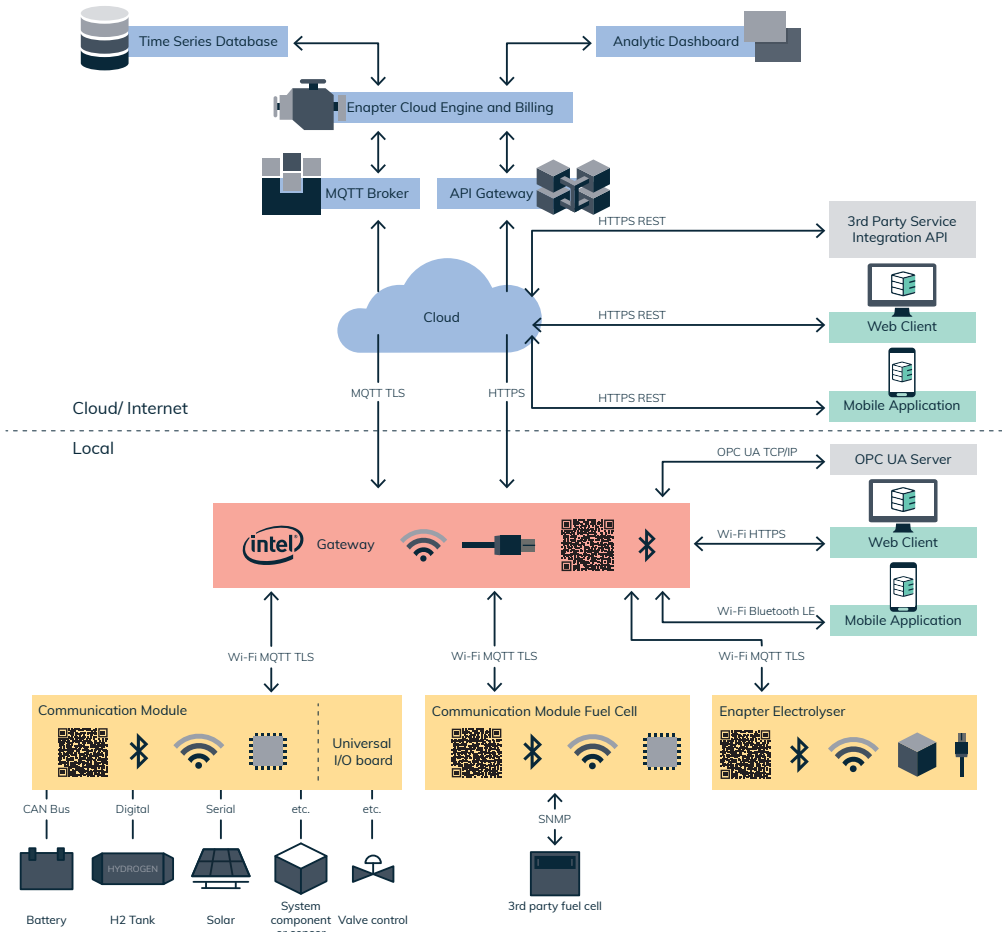
Enapter's water supply system is completely optional and our customers are welcome to use any water supply system to EL that meets the specifications (<20 µS/cm).



Energy Management System

Enapter's unique Energy Management System allows for easy integration of the building blocks of any energy system. All of Enapter's hardware, as well as thrid party hardware, can easily be monitored and controlled to understand both your system and the environment it operates in.

Cloud Platform + Energy Monitoring Gateway



The Enapter Cloud aggregates the data from connected devices and sites. It provides online analytics, reporting and monitoring with Machine Learning algorithms.

The Mobile Application is the interface for the end-user's connected devices. It allows for easy system setup, management and monitoring all over the world.

The IoT Gateway serves multiple functions:

- Aggregate the connections of Communication Modules to save data locally
- Mitigate connectivity issues, and minimize amount of traffic pushed to the Cloud
- Provide rule-based engine to control connected devices.

The IoT Communication Module connects analog and digital sensors, and devices to the internet to allow real time monitoring and control.





Energy Management Platform




The image shows the Enapter Energy Management Platform interface. On the left, a desktop monitor displays a dashboard with a table of devices and their status. In the foreground, two smartphones show the mobile application interface. On the right, a larger screenshot shows a detailed dashboard with various charts, gauges, and data tables, including a 'Production' section with a table of data points and a 'Temperature' section with a line graph.

Use Cases

Enapter technology is used in a variety of applications globally

Hydrogen's versatility is showcased with our plug-and-play building blocks. More examples are available upon request.

<p>Off-grid telecom power Digi</p>	<p>Microgrids EDF, Powidian</p>	<p>Residential storage Phi Suea House</p>	<p>District heating system DNV GL</p>
			
<p>Hydrogen powers remote towers during a grid outage, since 2016.</p>	<p>Only accessible by foot or helicopter, the community is energy secure since 2017.</p>	<p>World's first solar-hydrogen multi-house residential storage. Off-grid since 2015.</p>	<p>Hydrogen is supplied through a pipeline to the boiler room of nearby apartments.</p>
<p>Electrolyser : 1000 NL/hr Fuel Cell : 5 kW PV: 16kWp</p>	<p>Electrolyser : 500NL/hr Fuel Cell : 3kW Storage : 3Kg Autonomy : 10 days PV : 8.7kWp</p>	<p>Electrolyser : 2000 NL/hr Fuel Cell : 4.5 kW Storage : 7.5kg Autonomy : 30 hours</p>	<p>Electrolyser : 4000 NL /hr</p>

<p>Seasonal storage Powidian</p>	<p>Rural electrification Tiger Power</p>	<p>Refueling station Bshark</p>
		
<p>Hydrogen keeps this refuge in the Alps operational year-round, since 2015.</p>	<p>Container based solar and storage solution provide households, businesses and social institutions reliable electricity.</p>	<p>Enapter electrolyzers are integrated into the first drone refueling station. Underway in 2019.</p>
<p>Electrolyser : 500 NL/hr Fuel Cell : 2 kW Storage : 5kg Autonomy : 16 days</p>	<p>Electrolyser : 500NL/hr</p>	



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