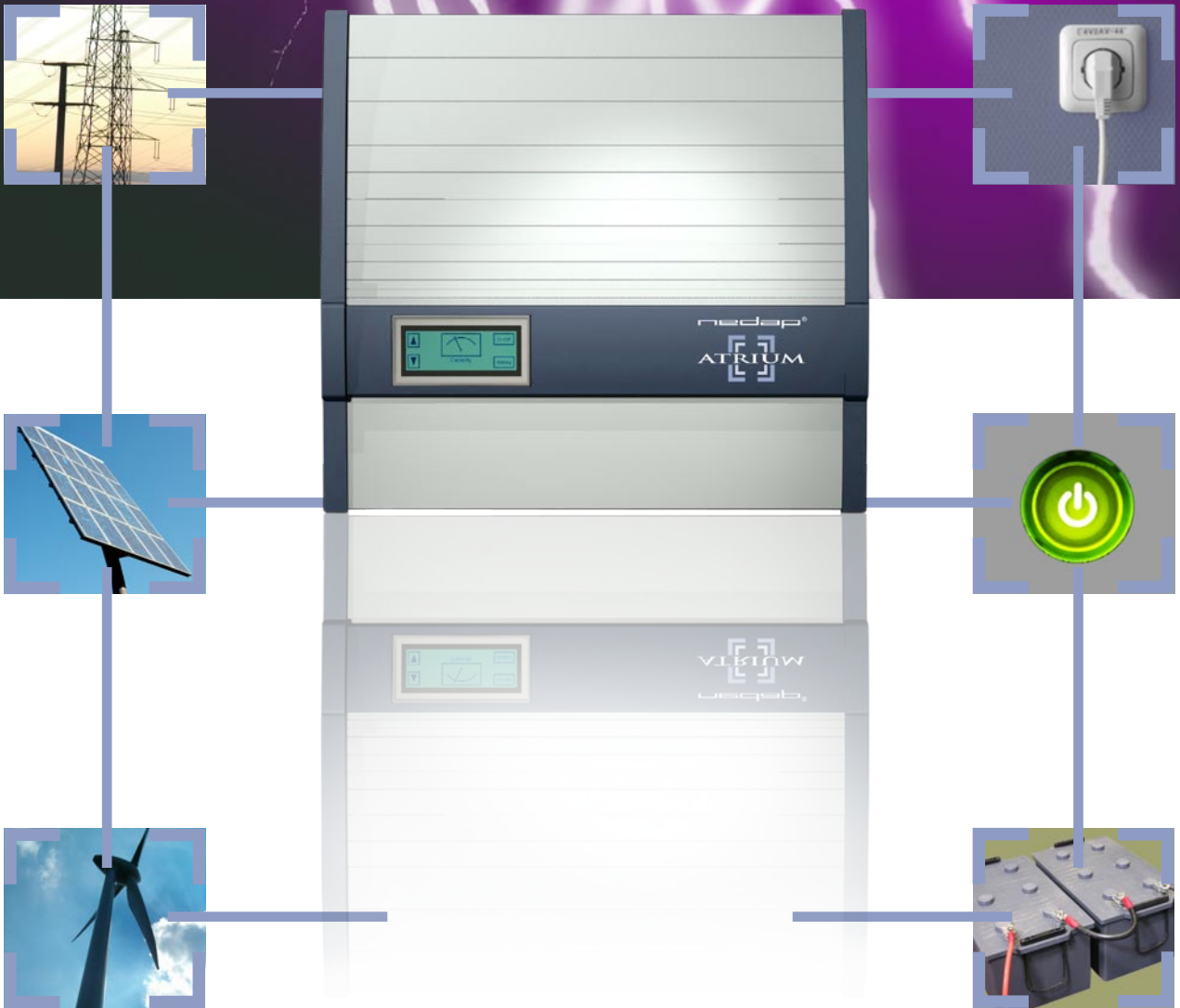


# ATRIUM



*smart modular  
energy manager*

The demand for more power, smaller dimensions and higher efficiency together with the need for clean energy make continuous attention to new technological developments vital. To comply with this demand, Nedap introduces a modular system for the conversion and storage of conventional and renewable energy, grid connected or autonomous, called Atrium. It is scalable from 5 kW to 30 kW.

Multiple input modules are possible, e.g. solar and/or wind. Combined with a battery module the system provides UPS and inverter/charger functions with generator or grid support. Via an open communication network technology the system can be fitted in any installation. The system is ready for future developments like hydrogen and supercaps (connect and grow).



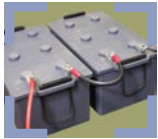
### Atrium as inverter

The inverter module offers a true sine wave output at 230 Vac, 50 Hz at maximum 5 kW per module. The system offers line or generator support and grid improvement options.



### Atrium as inverter/charger

With the Atrium in inverter/charger mode the system offers all benefits of the above mentioned single system in combination with a powerful battery charger.



### Atrium as Un-interruptible Power Supply (UPS)

Connected to a battery pack or other energy storage medium the Atrium UPS provides 5 kW of seamless backup power for your vital processes.



### Atrium as solar inverter

Off grid or on grid, Atrium offers an easy installable 5 kW solar inverter. It takes up to 600 Vdc strings and is provided with a VDE0126.1 and IEEE 929 approved anti-islanding protection.



### Atrium for home residential

Nedap's vision for future residential power needs, includes human awareness of power demand, differentiated energy prices and on-site generation and storage of energy (mini-grids).



### Atrium as power manager

Atrium modules are interlinked via an open communication network technology (CAN bus), allowing interfacing with future hard- and software developments.



### Atrium for the future

The Atrium is prepared for all future renewable applications like wind, hydrogen and SuperCaps (connect and grow).

## Main Atrium specifications

Atrium is characterized by the following specifications according market demands. Customer specifications can be implemented on request. Preliminary specification, subject to changes without notice.

#### Energy manager module

Output Voltage	230 Vac ± 2%
Output power continuous at 40 °C, 104 °F	5000 W Sine wave < 3% THD
Frequency	50 Hz ± 0.04% crystal controlled
Output peak power (5 seconds)	10,000 W (40 A)
Generator / Grid support	6 – 25 A adjustable
Maximum efficiency (%)	97 %
Efficiency at full load	91 %
No-load power consumption	< 18 W
Zero-load power usage (search mode)	< 2 W
External AC transfer switch (optional)	From 60 A
Multi purpose relay	Yes
Network enabled, NEDbus	Yes, NEDbus CAN based network protocol compliant
Operating temperature range (full power)	0 °C to 40 °C (derating at temperatures over 40°C)
Storage temperature	-40°C to 70 °C
Humidity	Maximum 95% non condensing
Regulatory Approvals and Standards	CE
Safety	EN 60335-1, EN 60335-2-29, EN 60950
Emission	EN 50081-1, EN55014, EN 61000-3-2, EN 61000-3-3
Immunity	EN 55014-2

#### Inverter/Charger\* Module

AC input range *	187 – 265 Vac	Frequency 45 – 65 Hz
Battery voltage range	19 – 33 Vdc	
Input current at 100 A charging *	14 A RMS (nominal)	
Output charge current, 3-stage *	100 Adc continuous	
Compatible battery types	Wet, Gel, AGM, Lion, NiMH, NCad	
Battery temperature sensor	Yes	
Galvanic separation	Yes	

#### Solar Module

Solar voltage	100 – 600 Vdc;
Max. input	6 kWp (2 x 15A)
Max. Efficiency	98%
Galvanic separation	Yes
Nighttime tare losses	< 1W

#### UPS Module

Battery Voltage	330-440 Vdc
Output charge current, float	4A
Compatible battery types	Gel, AGM

\* charger function enabled

For more detailed information please contact us via the following internet address: [info@nedap-atrium.com](mailto:info@nedap-atrium.com) or see for more information: [www.nedap-atrium.com](http://www.nedap-atrium.com)

