

OII7SENSE

THE ENERGY MANAGEMENT REVOLUTION

Professional energy management solution for the smart rack. Cost-efficient, simple, distributed and modular.

Content

Device details			Notifications	Reports
No device selected			43 Errors	Generate energy reports
ending	Only category Don't filter Only location Don't filter			
PDU	Remote Lab	Schleifenbauer BV	25.5	0
Category	Location	Vendor		
Remote Lab	Schleifenbauer BV		0.03	A
Location	Vendor			
192.168.2.35	Schneider Electric		0	A
Location	Vendor			
Remote Lab	Raritan Inc.		0.19	A
Location	Vendor			
Remote Lab	Schleifenbauer BV		0.03	A
Location	Vendor			
Remote Lab	Gude		0	A
Location	Vendor			
Remote Lab	Gude		0	A
Location	Vendor			
SENSORBOX	Remote Lab	HW Group	26.8	0
Category	Location	Vendor		

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Overview

With Om7Sense, professional energy management becomes available to small and medium-sized data centres for the first time – cost-efficient, simple, flexible, distributed and modular.

Savings, energy efficiency, sustainability: Green IT in your data centre with Om7Sense

Measuring and analysing energy usage in computer centres offers the biggest opportunity for savings and has hence become a central focus of managers and analysts. Legal changes and rising energy costs now force small and medium-sized computer centres and industrial IT installations to reconsider their energy strategies.

Intuitively optimize the energy consumption in your data centre with Om7Sense

Om7Sense supports you in optimizing the energy consumption of your data centre in a very comprehensive way. As an innovative energy monitoring and management system, Om7Sense provides simple, reliable and cost-efficient collection, management and control of vital energy and environmental data of data centres. You can see all connected PDUs, cooling systems and sensors clearly structured, at a glance.

Increase the competitiveness of your data centre with Om7Sense

For the first time, Om7Sense enables small and medium-sized data centres to measure, and thus reduce, their energy consumption effectively and comprehensively and increase their competitiveness.

The Om7Sense installation runs (almost) automatically and identifies all your PDUs, sensors, cooling systems and other DC equipment

Om7Sense provides energy monitoring and control for PDUs and sensors from many different manufacturers in one place and registers everything connected to it automatically – an essential feature in the heterogeneous technology landscape of data centres and no additional installation hassle for you (currently we support e.g. PDUs and sensors from Raritan, PDU eXpert, APC / Schneider, HW group, OEC / AP, Schleifenbauer and Gude). Om7Sense also adapts optimally to different sensors of a data centre.

We offer two solutions of Om7Sense for professional use

- An industrial-quality hardware solution
- Software solution (virtual machine) – more cost-effective and can be easily integrated in every IT landscape

Om7Sense is based on Internet of Things (IoT) technologies and can therefore be used in a completely geographically flexible and modular way.

Advantages

Smart Rack: Profit from this game changing architecture with Om7Sense and optimize your data centre's energy consumption and competitiveness in an easy and comprehensive way

- Om7Sense is an innovative and distributed monitoring and control system. As such it offers you a better, more intelligent and more flexible way to collect and manage the large amounts of data provided from current energy and sensor sources, compared to older, monolithic concepts (e.g. DCIM).
- A Smart Rack is a single intelligent rack, and groups its contained servers with their PDUs, and sensors into one logic unit of management.
- This Smart Rack will provide detailed analysis data to a specific customer group, and will be connected in a standard hierarchical manner to concentrators which then provide a wider group of management and administrators with the type of data they need (e.g. history and trending over the complete data center or specific events).
- The auto-detect feature of Om7Sense will automatically provide IP-devices with an address on the private network, and will add the device to your management overview. (Note: only possible for supported devices with DHCP and using factory settings).
- This means that there is no need for costly in-cabinet IP or other configuration or additional Ethernet switches, turning your cabinet into a Smart Rack.
- In contrast to many DCIM platforms Om7Sense offers full device support: instead of only very simple SNMP GET-functions of many DCIM platforms, Om7Sense supports all measurement and control functions of a connected device through our specially designed device software.

Overview
Overview of all devices
Details
PDU eXpert
Alarms
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Reports
Generate energy reports

Open Vendor Admin Panel
Information
Configuration

PDU eXpert

Output Measurements

#	Name	Bank	Socket model	Outlet status	Active energy	Actual current	History
1	port_1	1-A1	IEC 320 C13	--	0.00 kWh	0.00 A	—
2	port_john_2	1-A2	IEC 320 C13	--	0.66 kWh	0.00 A	—
3	test_name_3	1-A3	IEC 320 C13	--	0.08 kWh	0.00 A	—
4	port_5	1-A4	IEC 320 C13	--	0.04 kWh	0.00 A	—
5	Outlet_1_5	1-A5	IEC 320 C13	--	0.00 kWh	0.00 A	—
6	Outlet_1_6	1-A6	IEC 320 C13	--	0.00 kWh	0.00 A	—
7	Outlet_1_7	1-A7	IEC 320 C13	--	0.00 kWh	0.00 A	—
8	outlet_8	1-A8	IEC 320 C13	--	0.69 kWh	0.00 A	—

Environment Sensors

#	Location	Type	Value	History
1	temp_and_humidity	TIH	35 C	30 %
2	Motion	Infrared	Normal	

Switching

#	Name	State	Locked
1	port_1	●	<input type="checkbox"/>
2	port_john_2	●	<input type="checkbox"/>
3	test_name_3	●	<input type="checkbox"/>
4	port_5	●	<input type="checkbox"/>
5	Outlet_1_5	●	<input type="checkbox"/>
6	Outlet_1_6	●	<input type="checkbox"/>
7	Outlet_1_7	●	<input type="checkbox"/>
8	outlet_8	●	<input type="checkbox"/>

Input Measurements

Parameter	L1	History
Power energy	1.81 kWh	—
Rated power	3520.00 kWh	—
Remaining power	3520.00 kWh	—
Apparent power	0.00 kWh	—

Status

Parameter	Value
Load alert	Inactive
Defective fuse alert	Inactive
Environment alert	Inactive
Temperature alert	Inactive

Current Event Info

Parameter	Value
SourceID	
Power description	
Event source	
Event sensor descr	

Actions

Parameter	Value
Direct alarm	Execute

Advantages

Om7Sense offers you many more advantages.

- Om7Sense presents you and your users with their energy and sensors data in a way that they can easily and quickly understand. A dashboard front page gives the user an overview of all connected devices, and with a single click, the detail page of a selected device.
- The collected data is visualized using state-of-the-art charting technology. You can easily see weighted averages and historical high values, both of which are important for determining the remaining power budget or for seeing trends over time.
- Reports based on the collected data can be created for further offline analysis of specific devices. These reports can be used as the basis for billing documents.
- Data or device changes are displayed immediately in Om7Sense - no need to refresh.
- Many different PDU types and environmental sensors are fully supported by Om7Sense. The list growing all the time - please ask if your devices are supported.
- The Om7Sense user interface is displayed in the web browser on desktop and tablets, no plugins needed. Most modern browsers are supported (JavaScript must be enabled).
- Devices from different manufacturers which are being monitored and controlled within Om7Sense appear in a common form. This is a major advantage for users as they do not need to understand the remote device features. Should the user wish to access the on-device administration interface directly, this can be done with a single click.
- The embedded Om7Sense alarm architecture enhances the individual device alert systems with a unified concept of multiple thresholds. Alarms can be simply sent to multiple destinations (E-Mail, SYSLOG, Apps).
- The auto-detect Om7Sense architecture will automatically provide IP-devices with an address on the private network, and will after interviewing the device automatically register it. (Note: only possible for supported devices with DHCP and using factory settings). This means that there is no need for in-cabinet IP configuration or additional Ethernet switches, turning your cabinet into a Smart Rack.
- Direct access to non-ethernet remote devices via RS-485, RS-232C, USB, CAN-bus using Modbus and other protocols.
- The data from all the connected devices can be exported into a remote MySQL database. The user can then analyse the data from all the connected devices in any way he wishes.

More Advantages

- The Om7Sense notification data is available at various priority levels. Selected priority levels can be exported into the enterprise SYSLOG, sent as E-Mails.
- Om7Sense also includes a SNMP agent to allow its data to be collected by a SNMP manager. This SNMP manager then collects the data from all the different devices in a common form using the Om7Sense MIB.
- Om7Sense is a complete solution pre-installed on an industry quality device for immediate installation. It is also available as a virtual machine or Docker container.
- The Om7Sense architecture is based on a price winning industry standard “KURA”. KURA, which in its turn is built on the OSGi standard, provides a secure and stable environment well placed in the IoT market place.
- The Om7Sense distributed architecture can be extended by linking the gateways to a Om7Sense concentrator. The industry standard secure protocol MQTT ensures that no data is lost in these transfers.
- Remote software support can be offered to users of Om7Sense. The support is based on the secure OSGi protocols, which only allow remote access when specifically enabled from the individual gateway. To maintain the customers network security strategy, the Om7Sense gateway (when enabled) makes an outgoing call to the support services, and does not need any incoming firewall rules.



Specifications

Supported remote devices

- All Schleifenbauer PDUs connected via the data-bus or Ethernet. Auto-detection only supported for hPDUs connected via Ethernet.
- Raritan PDUs connected via Ethernet.
- PDU eXpert PDUs connected via Ethernet. Auto-detection only supported when the DHCP client function is enabled.
- rPDU2 APC / Schneider PDUs: connected via Ethernet
- HW group sensor boxes: connected via Ethernet
- OEC / AP PDUs: e.g. connected via Ethernet
- Gude PDUs connected via Ethernet.
- BM Green Cooling Sidecooler connected via RS-485.

Installation

The installation of Om7Sense depends on the form factor:

- Preinstalled in an industrial quality fan-less device, with an external power supply. Depending on the customer interface requirements (multiple LANs, RS-485, RS-232, etc), different form factors are available. The devices can be mounted on the DIN-rail or in a 19 inch rack (Om7 Gate Serial).
- Preinstalled in professional 1 U SuperMicro server with four Ethernet ports with internal power supply (Om7 Gate Pro).
- Preinstalled on ultra small desktop form factor with three Ethernet ports with external power supply (Om7 Gate).
- Preinstalled in a virtual machine or Docker container to be installed on a server. This only offers single Ethernet support without auto-detection.

Export Data

Om7Sense can easily be bound into an existing management structure using any of the following standard features:

- The data from all the connected devices can be exported to an external MySQL server. The schema that is necessary to set this up is available from our web-site.
- Om7Sense includes an SNMP agent (the MIB is available via the web-site). SNMP managers can query the Om7Sense gateway for data collected from the connected devices, and receive the important data in a concise form without the necessity of loading all the individual device MIBs.
- Notifications can be automatically passed on to SYSLOG server. Om7Sense offers a simple way to select which notifications are exported (e.g. only errors).
- Notifications can be automatically sent as E-mails to a specific user. The decision which notification level will be sent, is also a simple Om7Sense setup parameter. Om7Sense will try reduce the number of E-mails sent by packing multiple notifications into one message.
- Notifications can be sent via push to specific smartphone users.

We would love to hear from you.

If you have question or would like to get a personal demonstration, just get in touch, we would be glad to help.

Don't hesitate to call as anytime:

+49 (0) 89 / 215 43 614

Or drop us a mail with you question:

info@om7sense.com

Or even follow us on Twitter: **@om7sense**

Om7Sense wird im Rahmen des EXIST-Programms durch das Bundesministerium für Wirtschaft und Energie und den Europäischen Sozialfonds gefördert.

Gefördert durch:



Om7

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