

BACHMANN Whitepaper

PDU with Master-Slave concept

Cost-efficient network design

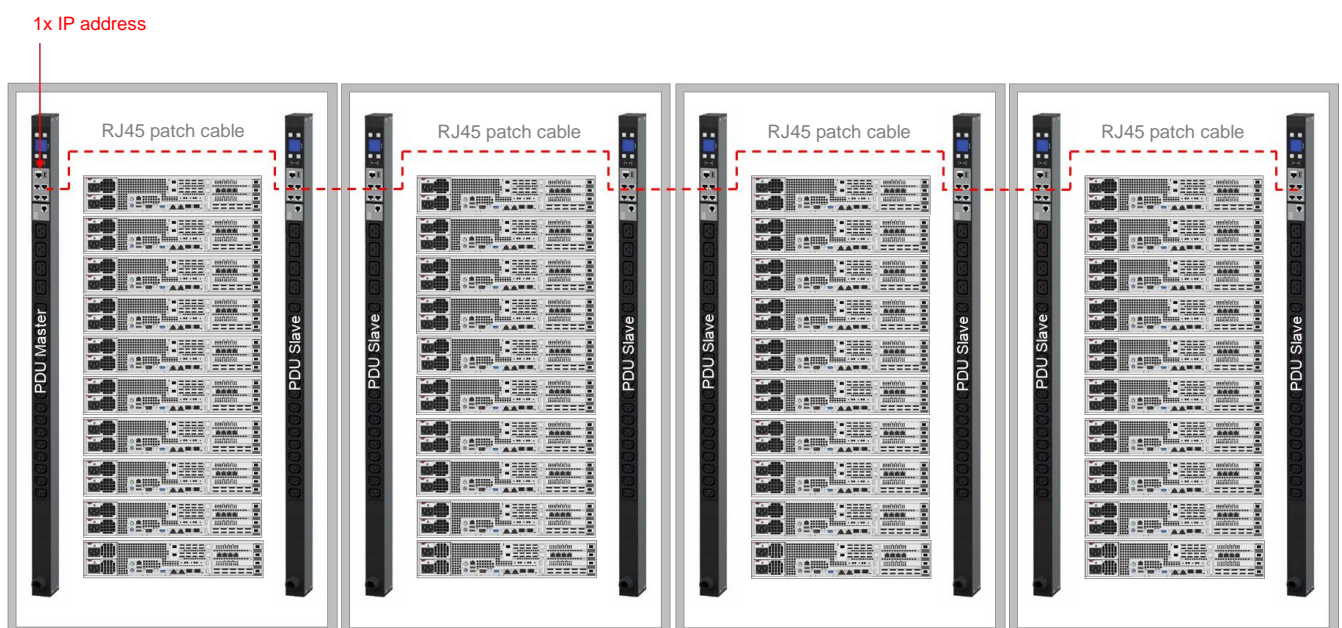
Network interface as cost factor

Modern data centres provide the core infrastructure for a vast amount of activities and processes both in the private and business environment. These include email or IP telephony communication, modern ERP systems (ERP = Enterprise Resource Planning) or procedures at production plants based on the Industry 4.0 standard. Networking of IT applications right down to industrial production has meant that not only is 100% availability vital, efficient network planning and administration are also an absolute necessity. Reducing the number of IP ports and the assigned IP addresses helps to reduce annual costs substantially.

Modern PDUs with network interface

To guarantee the 100% availability mentioned above, the power supply of final circuits must be designed with a redundant A/B supply. This is where modern PDUs (Power Distribution Units) are used and each PDU is fitted with an RJ45 network interface. Each of these network interfaces uses one port of a switch, which – with a large number of 10-1000 PDUs or even more – quickly escalates the costs associated with procuring switches or managing each port.

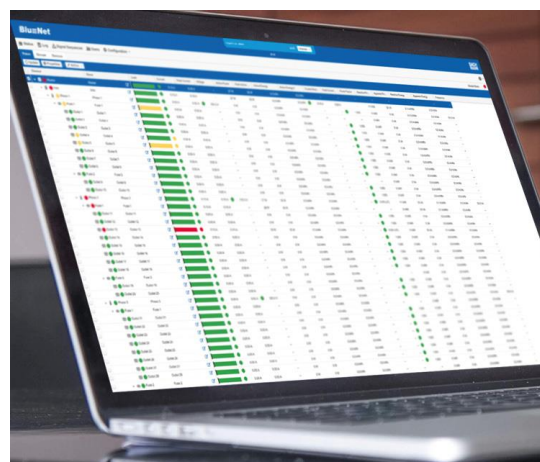
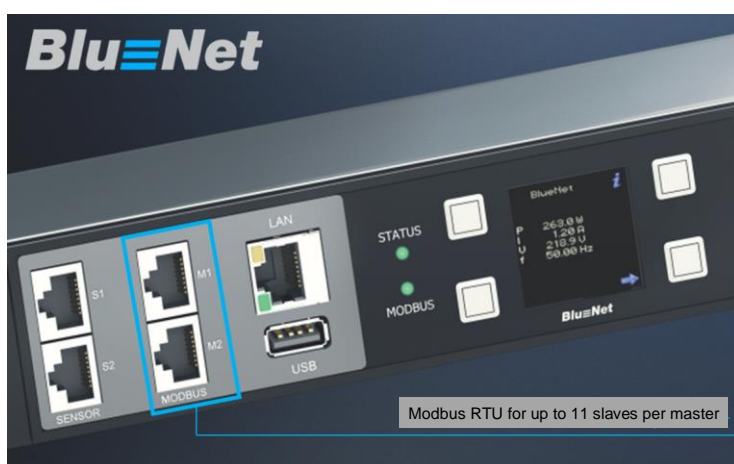
In view of the cost factors mentioned, modern PDUs allow users to set up small sub-networks in order for the PDUs to communicate with each other. The advantage is that only the master PDU uses an IP port, which considerably reduces costs.



Internal communication via Modbus RTU

The intelligent controllers in each BlueNet PDU feature two additional interfaces (M1-M2) for connecting further slave PDUs.

The master PDU communicates with the connected slave PDUs via Modbus RTU, hence avoiding unnecessary load on the actual network. The web interface of the master PDU can be displayed in the browser by entering the IP address (master PDU). All the connected slave PDUs (maximum of 11) are likewise displayed centrally in a type of tree structure on the master PDU web interface. In this way, the user has a perfect overview of all metrics and can simply make configurations in one of the interfaces.



Bachmann GmbH
Ernstaldenstrasse 33
70565 Stuttgart
Germany

Telephone +49 (0)711 86602 0
Fax +49 (0)711 86602 34
Email info@bachmann.com
<http://www.bachmann.com/>