ΠΕΤΙΟ
Networked power sockets

PRODUCTS OVERVIEW 2022

www.netio-products.com

NETIO
Networked power sockets

WHO IS NETIO?

The NETIO products company is a Czech producer of PDUs (Power Distribution Units) that can be controlled over LAN and WiFi. Our motto is: "NETIO products: Smart power sockets controlled over LAN and WiFi".

We are headquartered in Prague and our products are designed and manufactured in Europe. Product quality and ease of use are our primary recipes for customer satisfaction and solving customers' needs.

WHO ARE OUR PRODUCTS FOR?

Our power sockets are dedicated mainly for businesses (B2B). A typical user is a system integrator that uses our products in various industrial projects. Our products can be found in demonstration booths, shops, showrooms, digital signage screens, hospitals, and many other M2M and IoT applications.

We provide many power socket variants and different form factors for different application areas (PDUs for datacenter racks, DIN versions for smart building and electromobility applications, cables for compact solutions).

WHAT MAKES NETIO UNIQUE?

Remote WEB control

Control and configuration via web interface, where you can easily switch ON, OFF or REBOOT. Simple functions, such as Scheduler, IP Watchdog, Power-Up state and more...

NETIO Cloud (secured service)

NETIO Cloud is a perfect solution for remote restarting - one screen to control multiple devices from anywhere! Have you tried turning it OFF and ON again remotely?

Industrial quality

Quality is the number one priority: Long-life products with Zero Current Switching, well documented API standards, firmware updates, backwards compatibility and support - that is NETIO.

Precise power metering

NETIO power socket models with metering support measure: Current [A], Output Power [W], Energy [Wh], True Power Factor, Voltage [V] and more... Great data source for your power analysis!

Easy integration using Open API

Control your NETIO power socket via any interoperable device, software or cloud. NETIO products support many Open API standards such as MQTT, Modbus/TCP, JSON over HTTP, SNMP, ...

AV Drivers ready

To make integration even simpler, our partners develop amazing drivers for home automation and AV controllers - Control 4, ELAN, Crestron, RTI, Neets, Brightsign and many more...

LAN
Ethernet 10/100 Mbit interface (RJ-45) for wired connection to LAN (Local Area Network).

WIFI
2,4 GHz wireless interface for connection to LAN (Local Area Network). Supports standard security options.

WEB INTERFACE
NETIO devices include their own web server. Each output can be controlled (switch on/off/restart) and configured over the web interface.

POWER METERING
Some NETIO devices can measure electrical values – [A], [W], [Wh], TPF (True Power Factor), [V], [Hz], [°], ...

SERIAL PORT (RS-232)
Some NETIO devices include a (3-pin) RS-232 serial port. The serial port (serial console) can be connected to a specified TCP/IP port.
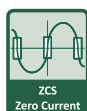
DI (DIGITAL INPUT)
Digital Input is an interface, which allows to detect binary signals (0 or 1). A digital input (DI) can be used to control the outputs or count S0 pulses.

19" RACK
Some NETIO devices fit into 19" cabinet (1U). Metal brackets (Rack Mount Kits) are available as an accessory.
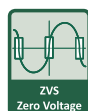
MOBILE APPLICATION
NETIO Mobile2 is a mobile application, which allows you to control multiple NETIO smart PDUs, strips, sockets and cables from a single screen.

NETIO CLOUD
NETIO Cloud is a service for controlling multiple NETIO devices from one screen. It is well-secured and reliable. It is accessible via any web browser.

INDUSTRIAL PRODUCT
Long-life products with wide operating temperature range, well documented devices and APIs, firmware updates, backwards compatibility,...

ZCS (ZERO CURRENT SWITCHING)
The relay contacts switch the output on or off when the current crosses the zero level. This reduces the negative effect of Inrush Current.

ZVS (ZERO VOLTAGE SWITCHING)
The relay contacts switch the output on or off when the voltage crosses the zero level. This reduces the negative effect of Inrush Current.

POWERUP STATE
This parameter defines the output state (On/Off/Last) after powering up the device or when power is restored after a power outage.

SCHEDULER
The Scheduler function (also known as Planner or Calendar) allows to specify a time plan for swit-ching individual electrical sockets on and off.

CONDITION & RULES
NETIO Condition (PAB & WatchDog) & Rules are pre-defined detections (Conditions) and related actions. Runnig in NETIO PDU devices.

IP WATCHDOG (PING)
Function, that checks the availability of another device in the network using the "ping" command (ICMP protocol).

NFC PRE-CONFIG
Some devices can be easily configured (e.g.WiFi connection parameters set) using a mobile phone and the NETIO Mobile2 app.

POWER WATCHDOG
PDU based autonomous monitoring of connected (powered) electrical device system. Power consumption drops-down can be used for autonomous restart.

JSON over HTTP
JavaScript Object Notation (JSON) is a platform-independent data transfer format. A JSON data structure is transferred over HTTP(s).

MODBUS/TCP
Modbus/TCP is a communication protocol designed for industrial applications - exchanging data messages in a master-slave mode.

SNMP v1/v2
SNMP v1/v2 (Simple Network Management Protocol) is a UDP-based protocol for monitoring and management of networks and services.

SNMP v3
SNMP version 3 supports secure communication. Unlike SNMP v1 and v2, it uses username and password authentication and SSL encryption.

MQTT-flex
The MQTT-flex version of the MQTT protocol can be configured in detail thanks to the "flex" extension.

MQTT
MQTT (Message Queuing Telemetry Transport) is a simple protocol for exchanging messages among devices. It is frequently used in IoT applications.

Telnet
Telnet is a TCP/IP-based protocol used in computer networks that allows the user to connect to a re-mote computer using a Telnet application (console).

XML over HTTP
XML stands for eXtensible Markup Language. It is a language that uses tags in a defined structure. A XML data structure is transferred over HTTP(s).

HTTP(s) Push JSON
NETIO devices can periodically connect to the specified server over http/https and send data in a .json (JavaScript Object Notation) structure.

URL API (http get)
Simple method for passing parameters as a part of a URL address (http get). In this way, it is easy to turn on/off or toggle each individual socket.

PRODUCT FAMILIES

PowerBOX family

PowerPDU family

PowerDIN family

PowerCable family

LAN

WiFi

WEB

POWER METERING

SERIAL RS-232

S0 DI

19" 19" Rack

MOBILE APPLICATION

NETIO CLOUD

°C INDUSTRIAL PRODUCT

ZCS Zero Current

ZVS Zero Voltage

PowerUp state

9 SCHEDULER

Condition & Rules

PING PING WATCHDOG

NFC pre-config

W Power WATCHDOG

JSON HTTP

Modbus/TCP

UDP SNMP v1/v2

SNMPv3

MQTT-flex

MQTT

Telnet

XML HTTP

{.json} Push JSON

URL API HTTP

PowerPDU 4KS

PowerPDU 4KS is a metered PDU with four IEC-320 C13 power outlets, LAN port and 1x DI (Digital Input). PowerPDU 4KS measures electrical parameters (A, kWh, TPF, W, V, Hz) on each power outlet individually. Each output is controllable via device web, NETIO Cloud service (not mandatory) or NETIO Mobile2 App. Integrations are simple thanks to its Open API and ready to use AV drivers (Crestron, Extron, Savant, RTI, Neets, ELAN and more).

Power Metering & Switching
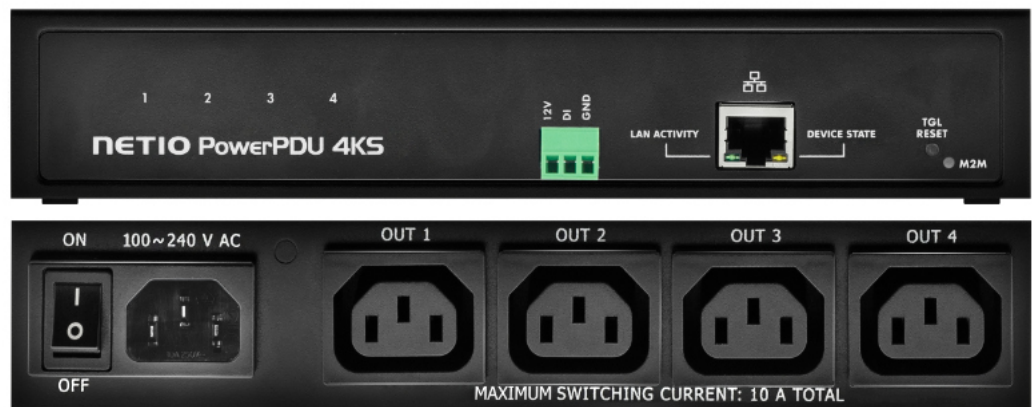
SPECIFICATIONS

- Switching & metering each power output independently
- **4x power metering (A, W, kWh, TPF, V, Hz)**
- Power input: IEC-320 C14 (110/230V AC) 10A
- Power output: 4x IEC-320 C13 / 10A
- 1x RJ45 Ethernet
- 1x **DI** - Digital Input
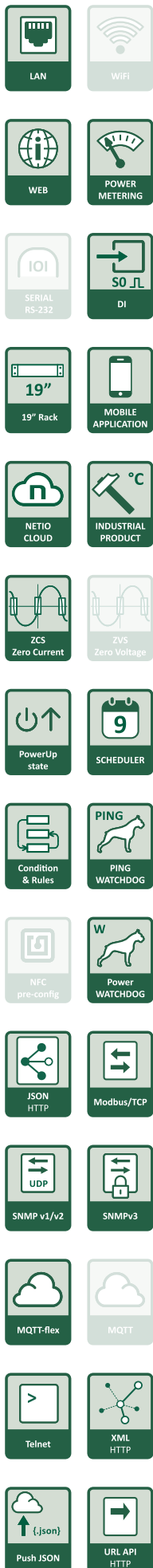- ZCS (Zero Current Switching)

FEATURES

- **Ping + Power WatchDog**
- Week Scheduler function
- PowerUp state
- PowerUp delay
- AV drivers ready

CONTROL OPTIONS

- Web interface
- Open API
- NETIO Cloud service
- NETIO Mobile2
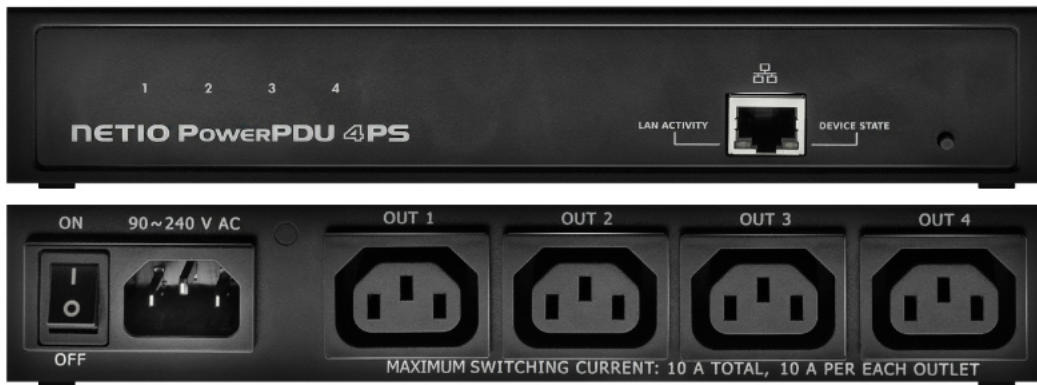- 1x DI (Digital Input)

OPEN API

- Telnet
- SNMP v1/v3
- Modbus/TCP
- MQTT-flex
- URL API — HTTP get
- JSON over HTTP
  & more

PowerPDU 4PS

PowerPDU 4PS is a managed PDU (Power Distribution Unit) with four power outlets (4x IEC 320 C13). Each output can be switched on/off individually. NETIO PowerPDU 4PS can be mounted in rack cabinets – horizontally, vertically, or as a 1U device. Integration into third-party systems is possible by using various protocols (JSON over HTTP, Modbus/TCP, SNMP, MQTT-flex, Telnet, …). With the NETIO Cloud service, the outputs can be controlled from anywhere. Drivers for AV systems are available (Crestron, Neets, ELAN and many more).

Power Switching

SPECIFICATIONS

- Switching each power output independently
- Power input: IEC-320 C14 (110/230V AC) 10A
- Power output: 4x IEC-320 C13/10A
- 1x RJ45 Ethernet
- ZVS (Zero Voltage Switching)

FEATURES

- Ping WatchDog function
- Week Scheduler function
- PowerUp state
- PowerUp delay
- AV drivers ready

CONTROL OPTIONS

- Web interface
- Open API
- NETIO Cloud service
- NETIO Mobile2

OPEN API

- Telnet
- SNMP v1/v3
- Modbus/TCP
- MQTT-flex
- URL API – HTTP get
- JSON over HTTP
  & more

LAN | WiFi
WEB | POWER METERING
SERIAL RS-232 | SO DI
19" Rack | MOBILE APPLICATION
NETIO CLOUD | INDUSTRIAL PRODUCT
ZCS Zero Current | ZVS Zero Voltage
PowerUp state | 9 SCHEDULER
Condition & Rules | PING WATCHDOG
NFC pre-config | Power WATCHDOG
JSON HTTP | Modbus/TCP
UDP | SNMPv3
SNMP v1/v2 | SNMPv3
MQTT-flex | MQTT
Telnet | XML HTTP
Push JSON | URL API HTTP

LAN	WiFi
WEB	POWER METERING
SERIAL RS-232	S0 DI
19" Rack	MOBILE APPLICATION
NETIO CLOUD	INDUSTRIAL PRODUCT °C
ZCS Zero Current	ZVS Zero Voltage
PowerUp state	9 SCHEDULER
Condition & Rules	PING WATCHDOG
NFC pre-config	W Power WATCHDOG
JSON HTTP	Modbus/TCP
UDP SNMP v1/v2	SNMPv3
MQTT-flex	MQTT
Telnet	XML HTTP
{.json} Push JSON	URL API HTTP

PowerPDU 8QS

PowerPDU 8QS is a PDU (Power Distribution Unit) with eight power outputs controlled and metered over LAN. Each output can be switched on/off individually. It fits into a 19" cabinet (1U). PowerPDU 8QS supports two channels for electrical measurements: the PDU as a whole (all outputs combined), and the first output separately (Output1). A Digital Input (DI) can be used to control the outputs or count S0 pulses. With the NETIO Cloud service, the outputs can be controlled from anywhere. Drivers for AV systems are available (Crestron, Extron, Savant, RTI, Neets, ELAN and more).

Power Metering & Switching

SPECIFICATIONS

- Switching each power output independently
- 2x Power metering (Total + Output1 separately)
- Power input: IEC-320 C20 (110/230V AC) 16A
- Power output: 8x IEC-320 C13 / 10A
- 1x RJ45 Ethernet
- ZVS (Zero Voltage Switching)
- 1x DI (Digital Input)
- 19" rack mounting as a 1U device

FEATURES

- Ping + Power WatchDog
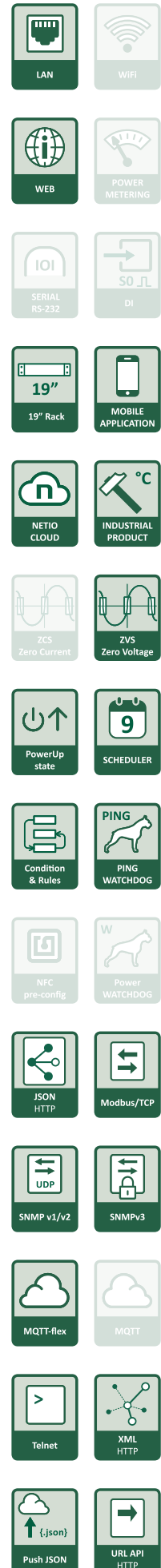- Week Scheduler function
- PowerUp state
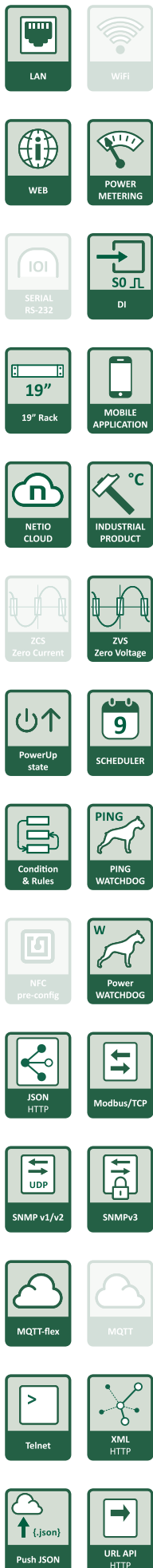- PowerUp delay
- AV drivers ready

CONTROL OPTIONS

- Web interface
- Open API
- NETIO Cloud service
- NETIO Mobile2
- DI (Digital Input)

OPEN API

- Telnet
- SNMP v1/v2
- SNMP v3
- MQTT-flex
- URL API – HTTP get
- XML over HTTP
- JSON over HTTP
- HTTP(s) Push JSON
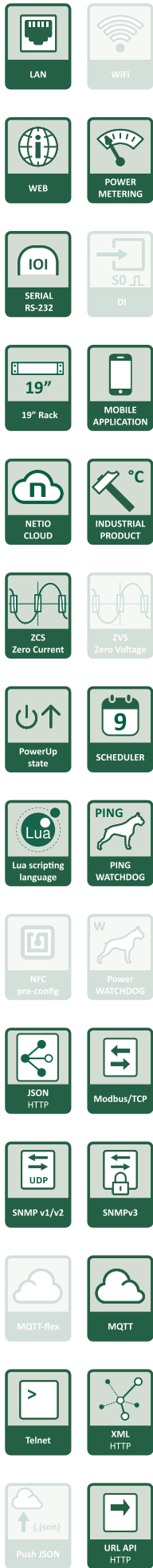- HTTP(s) Push XML
- Modbus/TCP

## 11 options how to control NETIO device power output(s):

- From the **device's web** (it can be different than Admin's username/psw for that).

- Using the **NETIO Mobile2** on **LAN**.

- Using **NETIO Cloud service** from anywhere (Welcome credit for free, basic service price approx 5€/year/device.)

- Using the **NETIO Mobile2** (**NETIO Cloud** user account).

- Using **AV drivers** you can control Outputs from many Audio Video SW (Crestron, Control4, Neets, BrightSign, …).

- Using built in **Week-Scheduler** function you can define several On/Off intervals per each output. It requires time NTP synchronization.

- With built in **PING WatchDog function,** you can restart (by power output) any LAN device when not responding to PINGs from NETIO PDU (Device frozen / sleeping / in IDLE mode).

- With built in **Power consumption WatchDog function,** you can restart (by power output) any device powered from metered NETIO PDU output. Device frozen / sleeping / IDLE mode is detected by power consumption drop for several times.

- Each **DI input** on the NETIO device can be assigned by Rules to Switch On/Off/Toggle any power output(s) on the same device.

- There are several **Open APIs** (protocols) to control outputs/meter power consumption in M2M applications: JSON over HTTP, XML, SNMP, Modbus/TCP, MQTT, URL-API (http get), and others.

- Using **FLIC 2 button** (BT + LAN gw) you can control up to 3 outputs (group of outputs) inside building.

LAN

WiFi

WEB

POWER METERING

SERIAL RS-232

DI

SO

19" Rack

MOBILE APPLICATION

NETIO CLOUD

INDUSTRIAL PRODUCT °C

ZCS Zero Current

ZVS Zero Voltage

PowerUp state

SCHEDULER 9

Lua scripting language

PING WATCHDOG

NFC pre-config

Power WATCHDOG W

JSON HTTP

Modbus/TCP

UDP SNMP v1/v2

SNMPv3

MQTT-flex

MQTT

Telnet

XML HTTP

Push JSON {.json}

URL API HTTP

PowerPDU 4C (Linux based)

PowerPDU 4C is a metered PDU with four IEC-320 C13 power outlets, 2 LAN ports (embedded Ethernet switch) and a serial port (RS-232). PowerPDU 4C measures electrical parameters (A, kWh, TPF, W, V, Hz) on each power outlet individually. Each output is controllable via its web interface over the local network or, when used with the NETIO Cloud service, integrators can easily access it remotely. Integrations are simple thanks to its Open API and ready AV drivers (Crestron, Extron, Savant, RTI, Neets, ELAN and more).
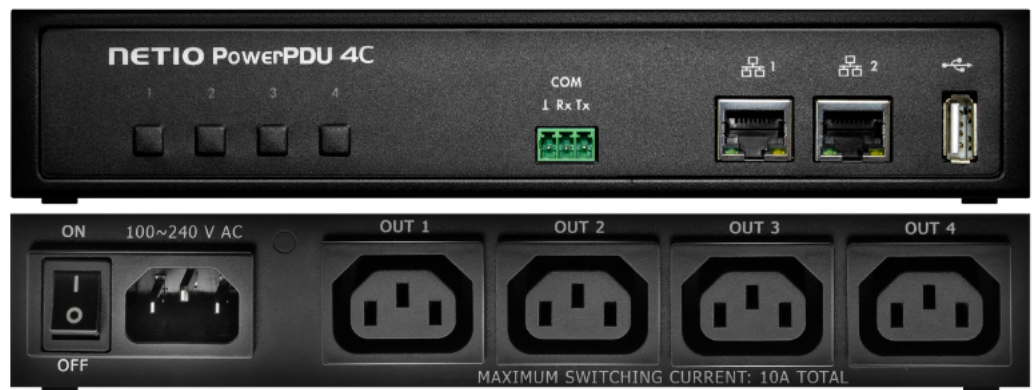
Power Metering & Switching

SPECIFICATIONS

- Switching each power output independently
- 4x power metering (A, W, kWh, TPF, V, Hz)
- Power input: IEC-320 C14 (110/230V AC) 10A
- Power output: 4x IEC-320 C13 / 10A
- **2x RJ45 Ethernet (built-in LAN switch)**
- **Serial port (RS-232)**
- ZCS (Zero Current Switching)

FEATURES

- Ping WatchDog function
- Week Scheduler function
- PowerUp state
- PowerUp delay
- Lua scripting
- AV drivers ready

CONTROL OPTIONS

- Web interface
- Open API
- NETIO Cloud service
- NETIO Mobile2
- Buttons
- Lua script

OPEN API

- Telnet
- SNMP v1/v3
- Modbus/TCP
- MQTT
- URL API – HTTP(s) get
- XML over **HTTP(s)**
- JSON over **HTTP(s)**

PowerDIN 4PZ

PowerDIN 4PZ is a dual 230V/16A electricity meter with LAN/WiFi and I/O, designed to fit on a DIN rail. Each of the 4 outputs can be switched on or off independently using the Web interface, Open API or NETIO Cloud. Power Outputs 1 & 2 are metered (A, W, kWh, TPF, V, Hz). Energy (Wh) is metered in both directions (consumed / supplied energy). States of 2x DI (Digital Input) with S0 pulse counter (32 bit) can be also read remotely.

Power Metering & Switching
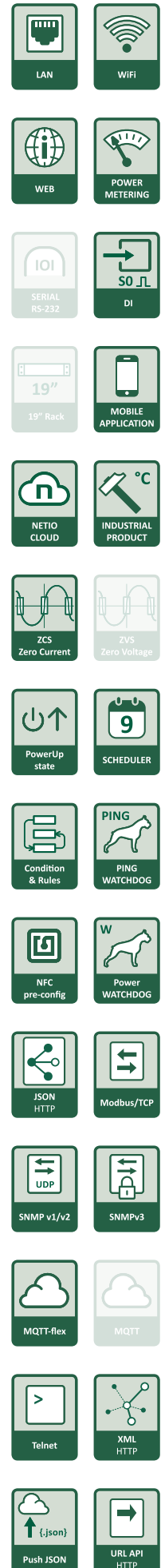

SPECIFICATIONS

- 1 phase (power input 230V / max 16A)
- Switching each power output independently
- 2x Power metering (Output 1 & 2)
- 1x RJ45 Ethernet
- ZCS (Zero Current Switching) on Power Output 1 & 2

FEATURES

- Ping + Power WatchDog
- Week Scheduler function
- PowerUp state
- PowerUp delay
- AV drivers ready

- Power Outputs 1 & 2 – independently-metered and switched channels (230V/max 16A AC)
- Relay Outputs 3 & 4 – relay outputs NO/NC (max 230VAC/2A or 48VDC/2A)
- DI (Digital Inputs) In1 & In2 – can be used to connect any dry contact or S0 pulse meter

CONTROL OPTIONS

- Web interface
- Open API
- NETIO Cloud service
- NETIO Mobile2
- 2x DI (Digital Input)

OPEN API

- Telnet
- SNMP v1/v2
- SNMP v3
- MQTT-flex
- URL API – HTTP get

- XML over HTTP
- JSON over HTTP
- HTTP(s) Push JSON
- HTTP(s) Push XML
- Modbus/TCP

Icons (right column):
LAN | WiFi
WEB | POWER METERING
SERIAL RS-232 | DI (S0)
19" Rack | MOBILE APPLICATION
NETIO CLOUD | INDUSTRIAL PRODUCT (°C)
ZCS Zero Current | ZVS Zero Voltage
PowerUp state | SCHEDULER (9)
Condition & Rules | PING WATCHDOG
NFC pre-config | Power WATCHDOG (W)
JSON HTTP | Modbus/TCP
SNMP v1/v2 (UDP) | SNMPv3
MQTT-flex | MQTT
Telnet | XML HTTP
Push JSON {.json} | URL API HTTP

LAN · *WiFi*
WEB · *POWER METERING*
SERIAL RS-232 · *DI SO*
19" Rack · *MOBILE APPLICATION*
NETIO CLOUD · *INDUSTRIAL PRODUCT °C*
ZCS Zero Current · *ZVS Zero Voltage*
PowerUp state · *SCHEDULER 9*
Condition & Rules · *PING WATCHDOG*
NFC pre-config · *Power WATCHDOG*
JSON HTTP · *Modbus/TCP*
SNMP v1/v2 UDP · *SNMPv3*
MQTT-flex · *MQTT*
Telnet · *XML HTTP*
Push JSON {.json} · *URL API HTTP*

PowerBOX 3Px

NETIO PowerBOX 3Px is a professional electrical socket device with 3 outputs and LAN connectivity. Each output socket can be separately switched on or off over the web interface. Integration into third-party systems using various protocols (JSON over HTTP, Modbus/TCP, SNMP, MQTT-flex, Telnet, ...). With the NETIO Cloud service, the outputs can be controlled from anywhere. Drivers for AV systems are available (Crestron, Extron, Savant, RTI, Neets, ELAN and many more).

Power Switching

PowerBOX 3PG   PowerBOX 3PE   PowerBOX 3PF

SPECIFICATIONS

- Switching each power output independently
- Power Input: 230V / 16A (13A for 3PG)
- Power Output: **3x**; max 16A per output (13A for 3PG)
- 1x RJ45 Ethernet
- ZVS (Zero Voltage Switching)

FEATURES

- Ping WatchDog function
- Week Scheduler function
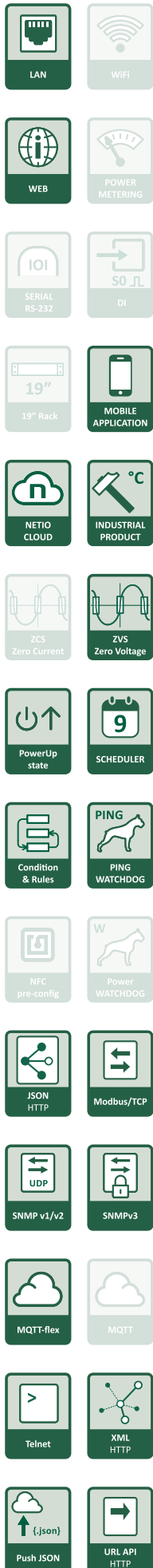- PowerUp state
- PowerUp delay
- AV drivers ready

CONTROL OPTIONS

- Web interface
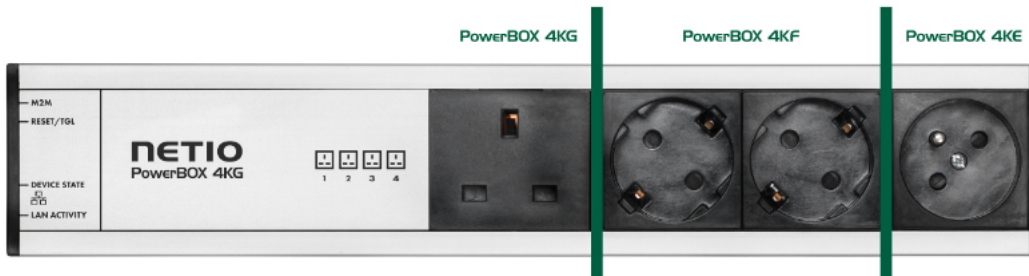- Open API
- NETIO Cloud service
- NETIO Mobile2

OPEN API

- Telnet
- SNMP v1/v2
- SNMP v3
- MQTT-flex
- URL API – HTTP get
- XML over HTTP
- JSON over HTTP
- HTTP(s) Push JSON
- HTTP(s) Push XML
- Modbus/TCP

PowerBOX 4Kx

NETIO PowerBOX 4Kx is a LAN-enabled smart power strip with 4 outputs. Each output socket can be switched on or off individually over the web interface. Integration with third-party systems using various protocols (JSON over HTTP, Modbus/TCP, SNMP, MQTT-flex, Telnet, ...) is possible. With the secure NETIO Cloud service, the outputs can be controlled from anywhere. Drivers for AV systems are available (Crestron, Extron, Savant, RTI, Neets, ELAN and more).

Power Metering & Switching

PowerBOX 4KG   PowerBOX 4KF   PowerBOX 4KE

SPECIFICATIONS

- Switching each power output independently
- 4x Power metering (A, W, kWh, TPF, V, Hz)
- Power input: 230V / 16A (13A for 4KG)
- Power output: **4x**; max 16A per output (13A for 4KG)
- 1x RJ45 Ethernet
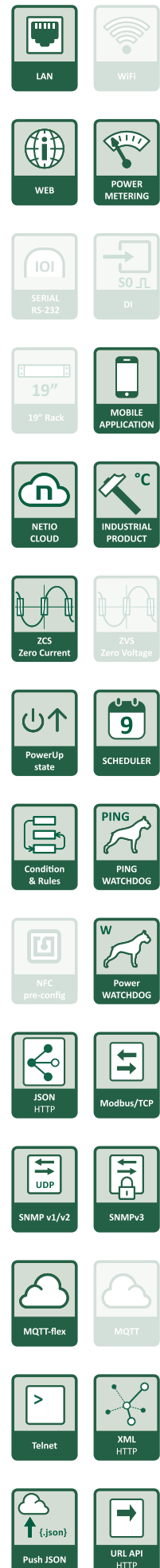- ZCS (Zero Current Switching)

FEATURES

- Ping + Power WatchDog
- Week Scheduler function
- PowerUp state
- PowerUp delay
- AV drivers ready

CONTROL OPTIONS

- Web interface
- Open API
- NETIO Cloud service
- NETIO Mobile2

OPEN API

- Telnet
- SNMP v1/v2
- SNMP v3
- MQTT-flex
- URL API – HTTP get
- XML over HTTP
- JSON over HTTP
- HTTP(s) Push JSON
- HTTP(s) Push XML
- Modbus/TCP

Icons:
LAN · WiFi · WEB · POWER METERING · SERIAL RS-232 · DI · 19" Rack · MOBILE APPLICATION · NETIO CLOUD · INDUSTRIAL PRODUCT · ZCS Zero Current · ZVS Zero Voltage · PowerUp state · SCHEDULER · Condition & Rules · PING WATCHDOG · NFC pre-config · Power WATCHDOG · JSON HTTP · Modbus/TCP · UDP · SNMP v1/v2 · SNMPv3 · MQTT-flex · MQTT · Telnet · XML HTTP · Push JSON · URL API HTTP

LAN

WiFi

WEB

POWER METERING

SERIAL RS-232

DI

19" Rack

MOBILE APPLICATION

NETIO CLOUD

INDUSTRIAL PRODUCT

ZCS Zero Current

ZVS Zero Voltage

PowerUp state

SCHEDULER

Condition & Rules

PING WATCHDOG

NFC pre-config

Power WATCHDOG

JSON HTTP

Modbus/TCP

UDP SNMP v1/v2

SNMPv3

MQTT-flex

MQTT

Telnet

XML HTTP

Push JSON

URL API HTTP

PowerCable REST 101x

NETIO PowerCable REST 101x is a smart WiFi power socket for integration with third-party systems. Use PowerCable REST to measure electrical parameters (A, W, kWh, TPF, V, Hz) and switch its output on/off using one of the 10 Open API protocols, the web interface, NETIO Cloud, or the mobile app. Drivers for AV systems are available (Crestron, Extron, Savant, RTI, Neets, ELAN and more).

Power Metering & Switching

SPECIFICATIONS

- Power output switching
- Power metering (A, W, kWh, TPF, V, Hz)
- Power input: Depending on the model
- Power output: 110/230V 10-16A (by model 101x)
- WiFi connection
- ZCS (Zero Current Switching)

FEATURES

- Ping + Power WatchDog
- Week Scheduler function
- PowerUp state
- PowerUp delay
- AV drivers ready

CONTROL OPTIONS

- Web interface
- Open API
- NETIO Cloud service
- NETIO Mobile2

OPEN API

- Telnet
- SNMP v1/v2
- SNMP v3
- MQTT-flex
- URL API – HTTP get
- XML over HTTP
- JSON over HTTP
- HTTP(s) Push JSON
- HTTP(s) Push XML
- Modbus/TCP

Available models

PowerCable REST 101F

PowerCable REST 101E

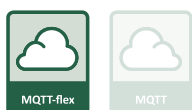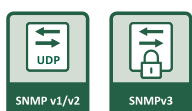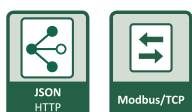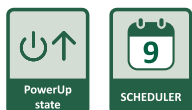**PowerCable REST 101J**

PowerCable REST 101S

PowerCable REST 101Y

PowerCable REST 101G

|	
LAN	WiFi
WEB	POWER METERING
SERIAL RS-232	S0 DI
19" Rack	MOBILE APPLICATION
NETIO CLOUD	INDUSTRIAL PRODUCT °C
ZCS Zero Current	ZVS Zero Voltage
PowerUp state	SCHEDULER 9
Condition & Rules	PING WATCHDOG
NFC pre-config	Power WATCHDOG W
JSON HTTP	Modbus/TCP
UDP SNMP v1/v2	SNMPv3
MQTT-flex	MQTT
Telnet	XML HTTP
Push JSON {.json}	URL API HTTP
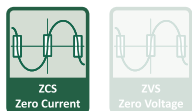
PowerCable 2KF

NETIO PowerCable 2KF is LAN & WiFi based power socket with 2 power outputs. Several power cable device type options can be ordered: 2KZ without power cables or 2KF with EU plug and 2x Type F (Schuko) power sockets.

Device measure electrical parameters (A, W, kWh, TPF, V, Hz) and switch both output(s) on/off/restart. Energy (Wh) is metered in both directions (consumed / supplied energy). 2x DI (Digital Input) with S0 pulse counter (32 bit) and 12V power output available on the front panel. Device is easy to be integrated with 3rd party systems (Open API + AV drivers).

Power Metering & Switching
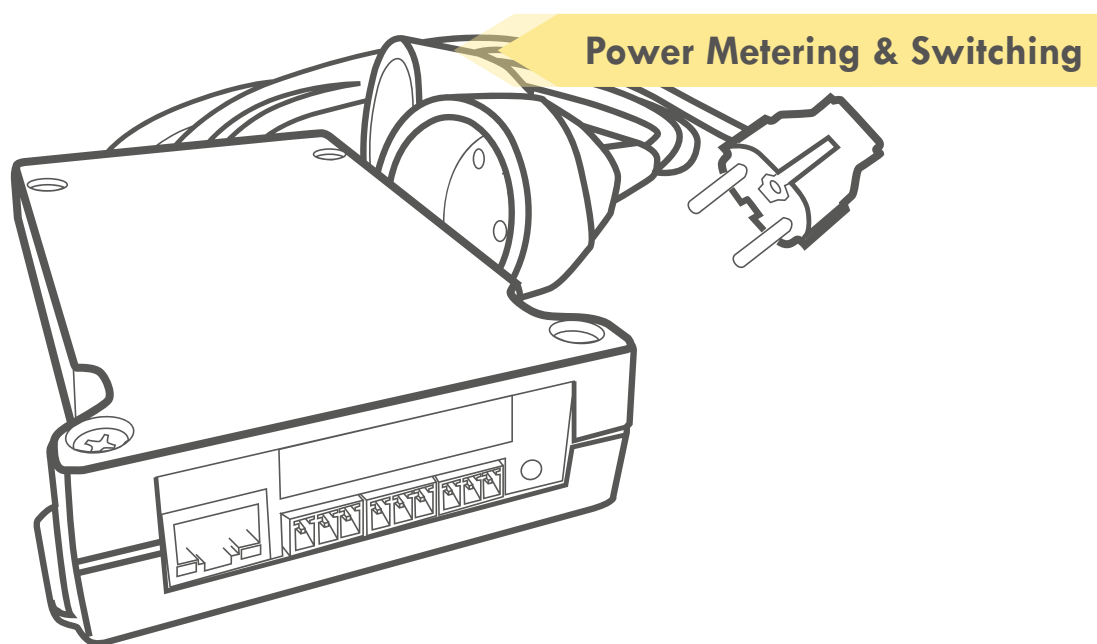
SPECIFICATIONS

- Power input: 230V / 16A
- 2x Power switching + metering (A, W, kWh, TPF, V, Hz)
- RJ45 Ethernet + WiFi
- ZCS (Zero Current Switching)
- 2x DI (Digital Input) with 12V power

FEATURES

- Ping + Power WatchDog
- Week Scheduler function
- PowerUp state
- PowerUp delay
- AV drivers ready

DEVICE TYPE OPTIONS

- PowerCable **2KF** – EU plug, 2x Type F sockets (schuko)
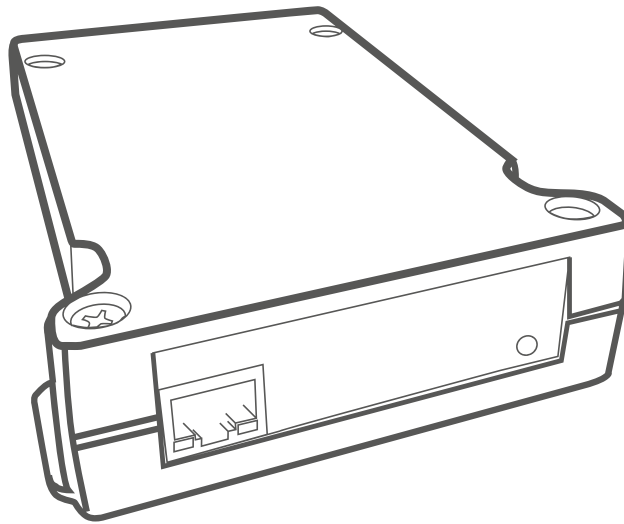- PowerCable **2KZ** – no power cables, terminal block inside

CONTROL OPTIONS

- Web interface
- Open API
- NETIO Cloud service
- NETIO Mobile2

PowerCable 2PZ

NETIO PowerCable 2PZ is cost effective version of PowerCable. LAN based power socket with 2 power outputs. Just one device type 2PZ without power cables is available. Device switch both output(s) on/off/restart. Device is easy to be integrated with 3rd party systems (Open API + AV drivers).

Power Switching

SPECIFICATIONS

- Power input: 230V / 16A
- Outputs: 2x Power switching
- RJ45 Ethernet
- ZVS (Zero Voltage Switching)

FEATURES

- Ping WatchDog function
- Week Scheduler function
- PowerUp state
- PowerUp delay
- AV drivers ready

DEVICE TYPE OPTIONS

- PowerCable **2PZ** – no power cables, terminal block inside

CONTROL OPTIONS

- Web interface
- Open API
- NETIO Cloud service
- NETIO Mobile2

LAN · WiFi · WEB · POWER METERING · SERIAL RS-232 · DI · 19" Rack · MOBILE APPLICATION · NETIO CLOUD · INDUSTRIAL PRODUCT · ZCS Zero Current · ZVS Zero Voltage · PowerUp state · SCHEDULER · Condition & Rules · PING WATCHDOG · NFC pre-config · Power WATCHDOG · JSON HTTP · Modbus/TCP · UDP · SNMP v1/v2 · SNMPv3 · MQTT-flex · MQTT · Telnet · XML HTTP · Push JSON · URL API HTTP

DE (schuko)
Type F

FR
Type E

UK
Type G

CH
Type J

S: IEC-320
C13/C14

Z: Terminal
block
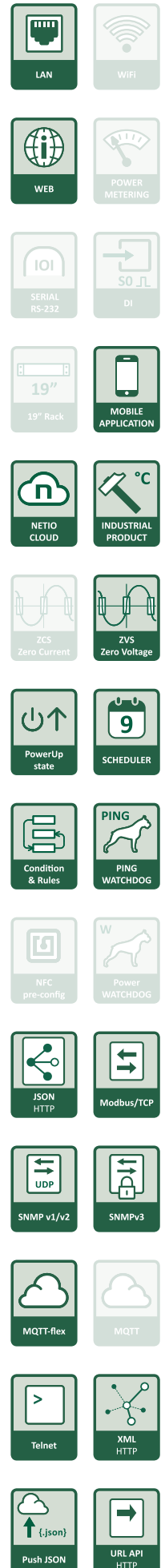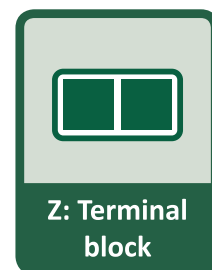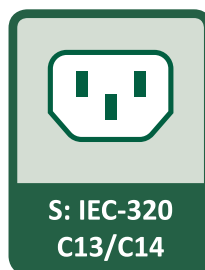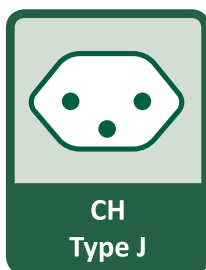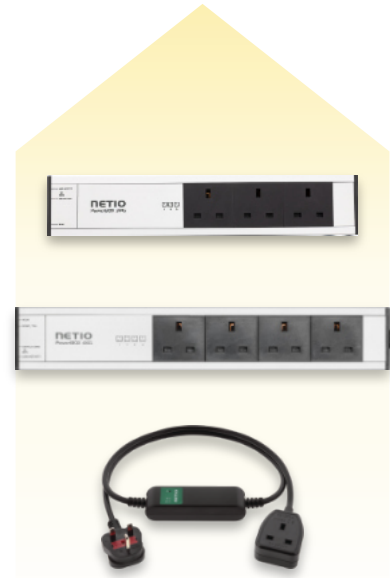
PowerPDU family accessories

NETIO RM1 4C

Metal brackets to install one PowerPDU 4PS, 4KS or 4C device into a 1U space in a 19" rack frame.
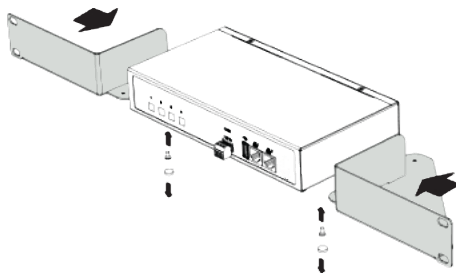
NETIO RM2 2x4C

Metal brackets to install two pieces of PowerPDU 4PS, 4KS or 4C devices into a 1U space in a 19" rack frame.
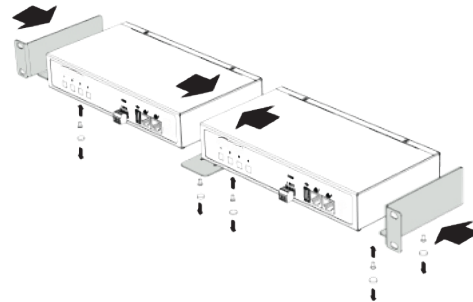
NETIO RM3 4C vertical

Metal brackets to fasten one NETIO PowerPDU device (PowerPDU 4PS, 4KS or 4C) to a vertical bar in a rack frame.
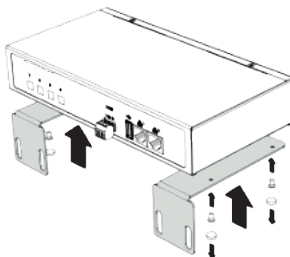
NETIO RM4 4C universal

Universal metal brackets to fasten one PowerPDU 4PS, 4KS or 4C device e.g. to horizontal bars in a rack frame.
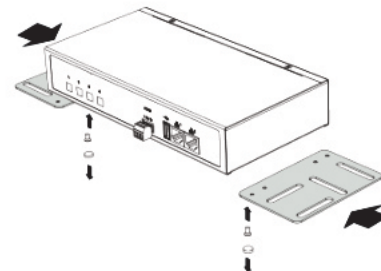
PowerBOX family accessories

NETIO MK1 PowerBOX

Metal bracket for mounting 1 piece of PowerBOX 3Px or PowerBOX 4Kx on the wall, contains two metal pieces. Both parts slide into the aluminum profile (back side).

NETIO MK2 PowerBOX 19 horizontal

Metal brackets for 1 unit of NETIO PowerBOX 3Px / 4Kx into a 1.5U space in a 19" rack frame.

NETIO MK3 PowerBOX 19 vertical

Metal brackets to fasten 1 unit of NETIO PowerBOX 3Px/4Kx to a vertical bar in a rack frame.

NETIO Cloud

NETIO CLOUD

NETIO Cloud is an ideal solution for remote control and restarting. With NETIO Cloud, all power outputs of multiple NETIO devices can be switched on/off or power-cycled over a single screen (web) independently. Unlimited number of NETIO devices connected to the Cloud. For metered outputs, the service displays the up-to-date overall consumption reading.

- **One web page** to control dozens and hundreds of electrical power outputs (On / Off / Power-cycle).
- **End to end SSL (TLS) secured** communication is used between devices, servers, apps and your web browser.
- Name and group assignment for each output and device.
- **Outputs can be arranged into groups** (buildings, location, customer, ...).
- For metered outputs, up-to-date overall consumption readings (kWh) are shown.
- With each NETIO device, **"Welcome credit"** is given free of charge. The welcome credit is loaded automatically when the device is first connected to the NETIO Cloud.
- NETIO Cloud supports Open API (MQTTs), it can be used as the single point for integration of multiple devices.
- The basic NETIO Cloud service can be extended for **individual outputs** by activating NETIO Cloud **Premium**. Premium is paid daily from the credit deposited in the user account.
- Premium version includes the option of displaying power measurements, alarming for individual outputs and exporting measurement history in csv format.
- Premium further reduces the response time to a connection loss (email alert from the cloud) of individual device from 35 minutes to 2 minutes.

NETIO Mobile2

MOBILE APPLICATION
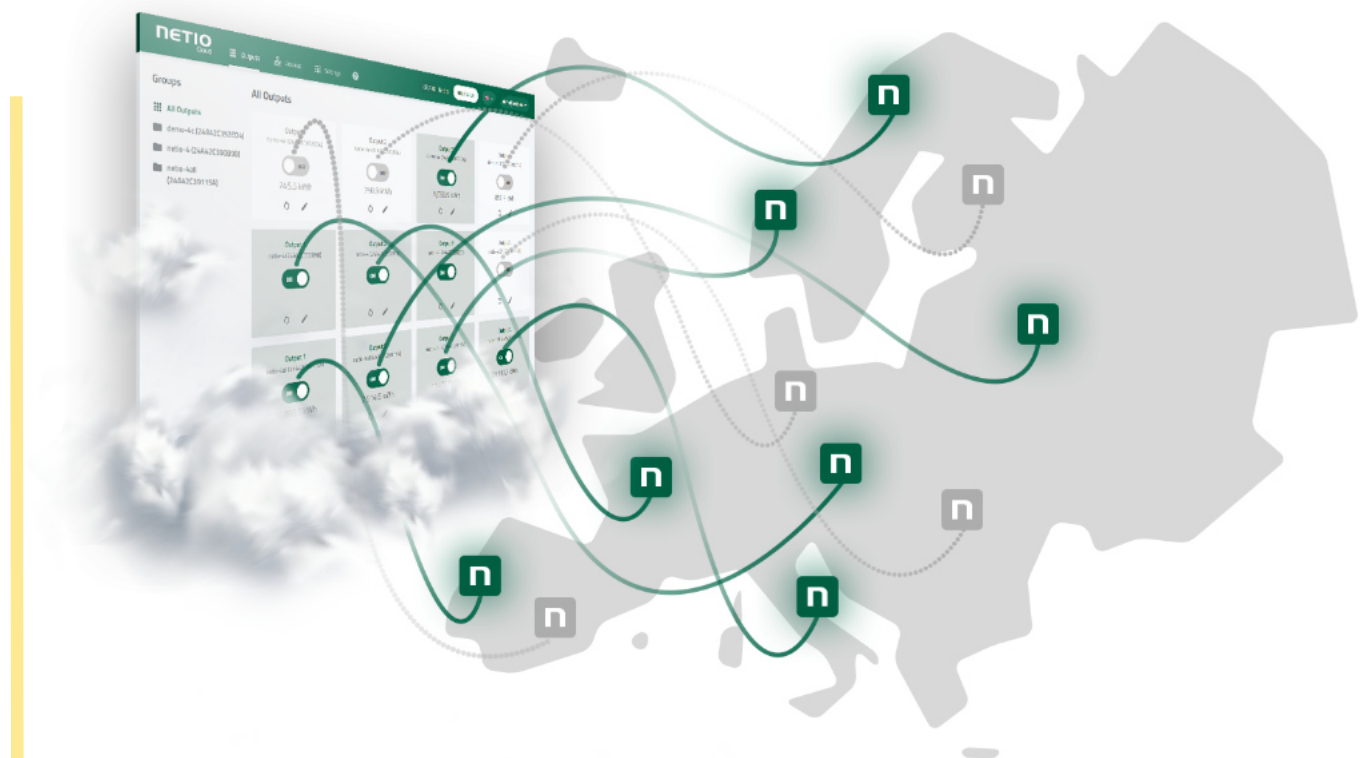
NETIO Mobile2 is a mobile app to control all outputs on several NETIO devices over LAN (WiFi) or NETIO Cloud account from mobile phones and tablets. It is supported by all NETIO devices.
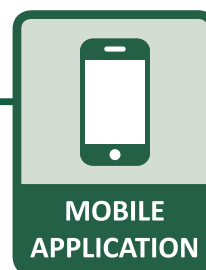
- **Control individual power outputs** – switch ON, switch OFF, RESET
- Mobile App control devices on **LAN** or all devices in defined **user account** (NETIO Cloud).
- **Read power consumption data** (A, W, Wh) from outputs that support energy metering
- Turn the Scheduler on / off for each output
- Outputs can be arranged into groups
- Group control - switch on/off all outputs in the group
- Group control - turn the Scheduler on/off for all outputs in the group
- Organize the outputs within groups (by function or location)
- Change output / device names (visible in the application)
- Add multiple devices to the mobile app
- Search your network for NETIO devices (LAN discover function)

- **For NFC enabled NETIO devices and mobile devices:**
- Quick WiFi config – use NFC to connect multiple devices quickly to your WiFi
- WiFi config with a Profile (saved WiFi configuration) using NFC

  NFC diagnostics – identify serial number and basic configuration (FW, device name, WiFi network info, …)
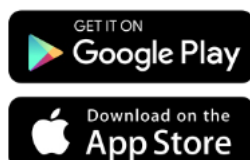
Accurate power metering

POWER METERING

As a unique feature, NETIO power socket models that support power metering can measure electrical parameters with a high accuracy (1%) - each device is two-point calibrated at the factory, giving you a reliable data source for your power analysis!
All metered values are accessible via web interface and Open API.

Metered values*

- Current [A]
- Output power [W]
- Phase shift [°]
- TPF (True Power Factor)

- Voltage [V]
- Grid frequency [Hz]
- Energy [Wh]
- Reverse Energy [Wh]

*Actual number of metered values depends on the product model

How can you use the data?

- Power & Cost analysis of your electrical appliance (TV screens, fridges etc.)
- Long-term behavior monitoring and predictive maintenance
- Threshold warnings when power is too high / too low
- Monitoring fault conditions (e.g. water pump is running dry)
- Power monitoring over SNMP in Zabbix / Nagios / Prometheus / Grafana etc.
- Counting repeated work cycles of a generic mechanical machine (e.g. gates, robots or vending machines)
- Download CSV file from NETIO Cloud if Premium account is enabled per output.
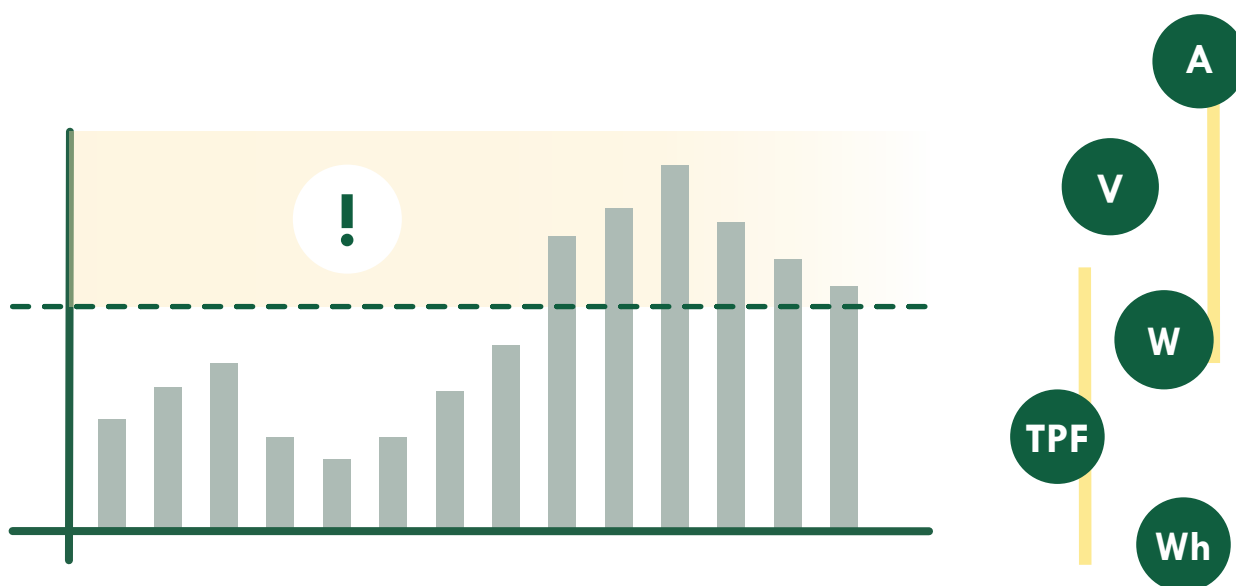
User-friendly web interface

NETIO devices include their own web server and can be configured over the web interface. The web interface is accessible over the local network with any web browser at the device´s IP address. Each output can be controlled independently and electrical metering data are visible for metered outputs.

WEB

- **Switching** each power output On / Off / Reset
- Electrical **metering** data visible

- **Open API** configuration
- **NETIO Cloud** connection

- **Scheduler function:** Time-based power switching for each output
- **IP WatchDog(s), Rules & Condition configuration.**
- **PowerUp state:** Define the behavior of the power output after the device is powered up (or after power is restored after power outage). Possible values: On / Off / Last state.
- **PowerUp delay:** Set a delay (in milliseconds) to wait before switching the output (e.g. when the power is restored after an outage). This prevents circuit breakers from tripping.
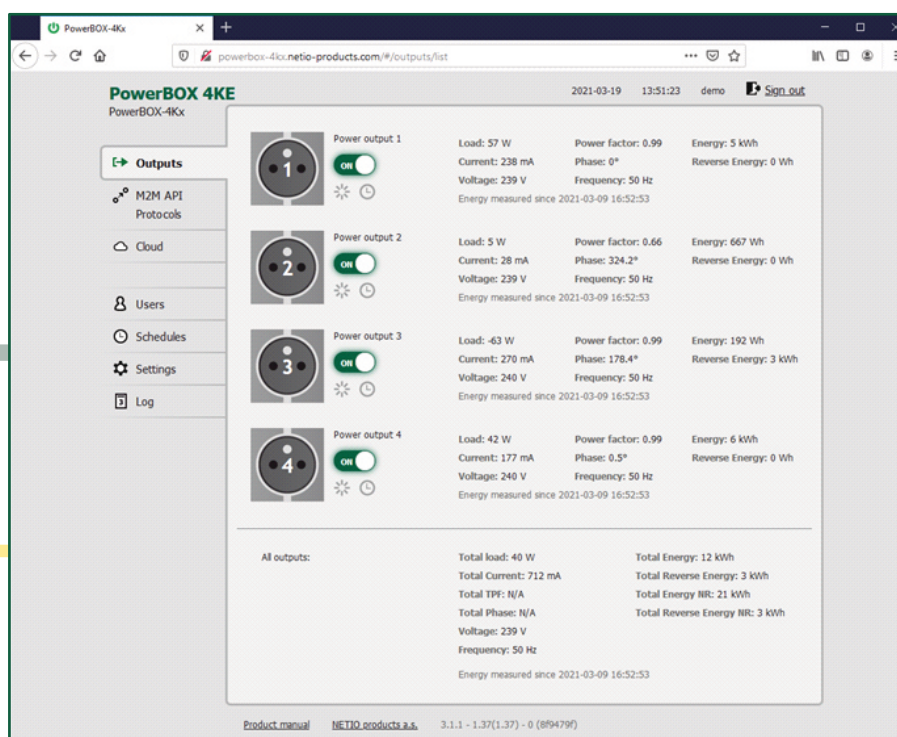
Open API

Monitor and control your NETIO power socket via any interoperable device, software or cloud. NETIO devices can be easily integrated into the systems you are already using. NETIO products support many Open API standards such as MQTT, Modbus/TCP, JSON over HTTP, SNMP, XML and more...

JSON and XML over HTTP(s)
JSON and XML are popular thanks to their simplicity and human-readability. JSON is the most popular protocol, used in most integrations in the AV market – Crestron, Control4, RTI, Savant and more.

URL API (http get)
By accessing a certain WWW address, a socket can be switched on, switched off, or toggled. This method is often used in IP surveillance cameras, JAVA scripts, or other web technologies.

HTTP(s) Push – JSON / XML
NETIO devices can periodically connect to the specified server over http / https and send data in a JSON or XML structure. It is useful in cases where the NETIO device is not acce-ssible from the internet or the server (NETIO device is in a LAN behind a NAT).

MQTT / MQTT-flex
MQTT is often used in IoT applications and related cloud services. It is designed for large networks with low data traffic to minimize data volumes. MQTT-flex is a text based configurable version of the standard MQTT protocol (broker details, topics, payloads, etc.).

SNMP v1/v2, SNMP v3
NETIO sockets can be controlled via SNMP v1/v2 or the more secure SNMP v3. Popular SNMP applications are: Nagios, Zabix, Cacti, Paessler PRTG Network Monitor and more.

Modbus/TCP
Modbus/TCP is very common in industry, where it is a de-facto standard for communication on a local level. It does not support any security. Thanks to Modbus/TCP support, NETIO sockets can be controlled from PLCs or various SCADA applications.

Telnet
NETIO sockets can be controlled with commands sent over a Telnet connection. We maintain Telnet command compatibility with the KShell (Koukaam Shell) instruction set to ensure backward compatibility with Koukaam products.

Application Notes

A huge library of Application Notes helps with a better understanding of using NETIO products in your applications. Visit www.netio-products.com – to learn about "How to API", browse examples of integrations, setups and more…

NETIO AN41: Power monitoring by SNMP system Zabbix / Nagios for NETIO power sockets.

NETIO AN42: Power Analyzer - Utilita pro analýzu grafů spotřeby elektrických přístrojů

NETIO AN44: EcHo Plus (Neets) pro AV aplikace ovládá elektrické zásuvky a reaguje na el. proud.

NETIO AN48: Paessler PRTG power monitoring with NETIO Power Sockets and Electricity meters

NETIO AN49: PAB: Counting cups of coffee from the coffee machine's electricity consumption (Node-RED)

NETIO AN54: Control4 AV system driver to control NETIO LAN/WiFi power sockets

Integration partners

We believe in interoperability and easy integration using Open API. Each NETIO device supports multiple APIs, which makes it a versatile component to your system.

Product comparison

	PowerPDU 4C	PowerPDU 4KS	PowerPDU 4PS	PowerPDU 8QS	PowerBOX 3PF	PowerBOX 3PE	PowerBOX 3PG	PowerBOX 4KF	PowerBOX 4KE
Power input type	C14	C14	C14	C20	Europlug	Europlug	Type G	Europlug	Europlug
Power input voltage	100-240 V	100-240 V	100-240 V	100-240 V	100-240 V	100-240 V	100-240 V	100-240 V	100-240 V
Power input current	max 10A	max 10A	max 10A	max 16A	max 16A	max 16A	max 13A	max 16A	max 16A
Power output type	4x C13	4x C13	4x C13	8x C13	3x Type F	3x Type E	3x Type G	4x Type F	4x Type E
Switched channels	4	4	4	8	3	3	3	4	4
ZCS/ZVS	ZCS	ZCS	ZVS	ZVS	ZVS	ZVS	ZVS	ZCS	ZCS
Metered channels	4	4	-	1+ Total	-	-	-	4	4
Surge protection (SPD Type 3)	●	●	●	●	●	●	●	●	●
Internal consumption	2 - 5 W	1 - 2 W	1 - 2 W	1 - 3 W	1 - 2 W	1 - 2 W	1 - 2 W	1 - 2 W	1 - 2 W
RS-232 (serial port)	●	-	-	-	-	-	●	-	-
PAB (Power Analyze Block)	-	●	-	●	-	-	-	●	●
Relay outputs (NO/NC)	-	-	-	-	-	-	-	-	-
Digital Inputs (DI) + S0 counter	-	1	-	1	-	-	-	-	-
LAN	●	●	●	●	●	●	●	●	●
LAN switch	2 ports	-	-	-	-	-	-	-	-
WiFi	-	-	-	-	-	-	-	-	-
Web interface	●	●	●	●	●	●	●	●	●
Open API	●	●	●	●	●	●	●	●	●
PowerUp state	●	●	●	●	●	●	●	●	●
PowerUp delay	●	●	●	●	●	●	●	●	●
Week Scheduler function	●	●	●	●	●	●	●	●	●
PING WatchDog	●	●	●	●	●	●	●	●	●
Power WatchDog	-	●	-	●	-	-	-	●	●
Condition & Rules	-	●	●	●	●	●	●	●	●
Lua scripting	●	-	-	-	-	-	-	-	-
NETIO Cloud support	●	●	●	●	●	●	●	●	●
Mobile App	●	●	●	●	●	●	●	●	●
SNMP v1/v2/v3	●	●	●	●	●	●	●	●	●
Modbus/TCP	●	●	●	●	●	●	●	●	●
MQTT-flex	-	●	●	●	●	●	●	●	●
MQTT	●	-	-	-	-	-	-	-	-
JSON over HTTP (XML)	●	●	●	●	●	●	●	●	●
Telnet	●	●	●	●	●	●	●	●	●
URL API (http get)	●	●	●	●	●	●	●	●	●
HTTP(s) Push - JSON	-	●	●	●	●	●	●	●	●
HTTP(s) Push - XML	-	●	●	●	●	●	●	●	●
HTTPs	●	-	-	-	-	-	-	-	-
19" rack mount	○	○	○	●	-	-	-	-	-

PowerBOX 4KG	PowerDIN 4PZ	PowerCable 2PZ	PowerCable 2KZ	PowerCable REST 101F	PowerCable REST 101E	PowerCable REST 101G	PowerCable REST 101S	PowerCable REST 101J	PowerCable REST 101Y	
Type G	Term. b.	Term. b.	Term. b.	Europlug	Europlug	Type G	Type S	Type J	Europlug	**Power input type**
100-240 V	100-240 V	100-240 V	100-240 V	100-240 V	100-240 V	100-240 V	100-240 V	100-240 V	100-240 V	**Power input voltage**
max 13A	max 16A	max 16A	max 16A	max 16A	max 16A	max 13A	max 10A	max 10A	max 10A	**Power input current**
4x Type G	4x Term. b.	2x Term.b.	2x Term.b.	1x Type F	1x Type E	1x Type G	1x Type S	1x Type J	1x Type S	**Power output type**
4	4	2	2	1	1	1	1	1	1	**Switched channels**
ZCS	ZCS	ZVS	ZCS	ZCS	ZCS	ZCS	ZCS	ZCS	ZCS	**ZCS/ZVS**
4	2	-	2	1	1	1	1	1	1	**Metered channels**
●	●	●	●	●	●	●	●	●	●	**Surge pr. (SPD Type 3)**
1 - 2 W	1 - 2 W	1 - 2 W	1 - 2 W	1 - 2 W	1 - 2 W	1 - 2 W	1 - 2 W	1 - 2 W	1 - 2 W	**Internal consumption**
-	-	-	-	-	-	-	-	-	-	**RS-232 (serial port)**
●	●	●	●	●	●	●	●	●	●	**PAB (Pow. Anal. Block)**
-	2	-	-	-	-	-	-	-	-	**Relay outputs (NO/NC)**
-	2	-	2	-	-	-	-	-	-	**Dig. Inp. + S0 counter**
●	●	●	●	-	-	-	-	-	-	**LAN**
-	-	-	-	-	-	-	-	-	-	**LAN switch**
-	●	-	●	●	●	●	●	●	●	**WiFi**
●	●	●	●	●	●	●	●	●	●	**Web interface**
●	●	●	●	●	●	●	●	●	●	**Open API**
●	●	●	●	●	●	●	●	●	●	**PowerUp state**
●	●	●	●	●	●	●	●	●	●	**PowerUp delay**
●	●	●	●	●	●	●	●	●	●	**Week Scheduler func.**
●	●	●	●	●	●	●	●	●	●	**PING WatchDog**
●	●	-	●	●	●	●	●	●	●	**Power WatchDog**
●	●	●	●	●	●	●	●	●	●	**Condition & Rules**
-	-	-	-	-	-	-	-	-	-	**Lua scripting**
●	●	●	●	●	●	●	●	●	●	**NETIO Cloud support**
●	●	●	●	●	●	●	●	●	●	**Mobile App**
●	●	●	●	●	●	●	●	●	●	**SNMP v1/v2/v3**
●	●	●	●	●	●	●	●	●	●	**Modbus/TCP**
●	●	●	●	●	●	●	●	●	●	**MQTT-flex**
-	-	-	-	-	-	-	-	-	-	**MQTT**
●	●	●	●	●	●	●	●	●	●	**JSON over HTTP (XML)**
●	●	●	●	●	●	●	●	●	●	**Telnet**
●	●	●	●	●	●	●	●	●	●	**URL API (http get)**
●	●	●	●	●	●	●	●	●	●	**HTTP(s) Push - JSON**
●	●	●	●	●	●	●	●	●	●	**HTTP(s) Push - XML**
-	-	-	-	-	-	-	-	-	-	**HTTPs**
-	-	-	-	-	-	-	-	-	-	**19" rack mount**

NETIO

Networked power sockets

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