

NETIO

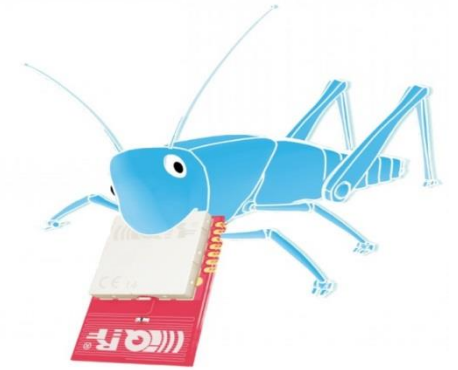
Networked power sockets

www.NETIO-products.com

NETIO products overview

Smart power sockets controlled over LAN and WiFi

Member of IQRF Alliance



- We are member of IQRF Alliance since October 2016.
- We produce LAN / WiFi / IQRF networked power sockets
- NETIO products a.s. is a pure manufacturer.
No installations, no projects, no SI (System Integration).
- We would like to offer our easy to integrate IQRF product to other members of the IQRF Alliance.

Networked power sockets

Devices to measure energy consumption and switch ON / OFF the power socket over the network.

NETIO

Networked power sockets



ABOUT NETIO PRODUCTS A.S.

The NETIO products company is a Czech producer of networked power sockets (can be controlled over LAN & WiFi).

Main focus is professionals & business usage (B2B).

A typical user is a SI (System Integrator), uses **NETIO 4x** (NETIO 4 / 4All / 4C) in various industrial projects.

- Network infrastructure
- IoT / Industry 4.0
- Wind power plants, Digital signage
- Audio / Video multimedia, ..



Usage case: Audi showroom

The automobile maker Audi company uses NETIO smart sockets to control the Light & Sound effects in their car-show.

Around 80 NETIO smart socket units controls the lights, background music, and so on.

Based on LAN it's possible to pack whole car-show and move it easy to another location (Auto Show Geneva / Fankfurt / Paris / ...)



Main features



NETIO are the smartest power sockets you have ever seen..



1) M2M API integration

NETIO 4x products support all mainly used **M2M API protocols**.
This product could be connected to **any software or service** on the market.



2) EUROPEAN PRODUCT

NETIO 4x smart sockets can be really **secure** from LAN side..
NETIO products is stable **long-term manufacturer from Europe**.



3) PROGRAMMABLE

NETIO 4x products can be **programmed by customer in Lua**.
NETIO will introduce plenty of Application Notes (**ANxx**) examples..

Feature 1: M2M API integration



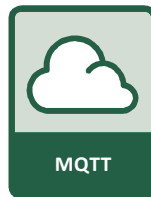
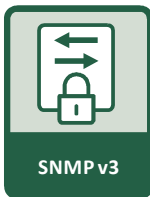
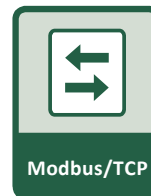
- 1) NETIO 4x currently supports **13 various M2M protocols**.
SNMP v3, HTTP(s) (xml/soap), MQTT, Modbus/TCP, SIP VoIP, Telnet(ssl), ..
- 2) NETIO is ready to be easily integrated with 3rd party software*).
- 3) 30 manufactures of LAN/WiFi networked power sockets exists on the market.
Only 3 of them has published some M2M API protocol.
Only 1 has SNMPv3 in as secure base communication.
Only NETIO supports 13 protocols now, more under development.
- 4) Being 3rd party integration friendly we are unique on the market.
- 5) None of competitors is ready for **IoT** or **Industry 4.0**

*)3rd party software = Various software for home automation, audio video, etc..

M2M API protocols

NETIO 4x products can be used with all popular **M2M API protocols** you can find on the market.

This product can be used with plenty 3rd party **software or services**.



Main features

NETIO are the smartest power sockets you have ever seen..



M2M API

1) M2M API integration

NETIO 4x products support all mainly used **M2M API protocols**.
This product could be connected to **any software or service** on the market.



2) EUROPEAN PRODUCT

NETIO 4x smart sockets can be really **secure** from LAN side..
NETIO products is stable **long-term manufacturer from Europe**.



3) PROGRAMMABLE

NETIO 4x products can be **programmed by customer in Lua**.
NETIO will introduce plenty of Application Notes (**ANxx**) examples..

Feature 2: EUROPEAN PRODUCT



NETIO products is company from Europe. It means something:

- 1) **We do believe in LAN security.** Security is hidden in 100 details..
- 2) We are follow all certifications for 230V devices.
It's not your problem at all.



- 3) We are stable / long-term vision company (stable prices & profit)
- 4) Robust product in metal housing.
- 5) Manuals, Support, FW updates, SDK, Application Notes, ..
- 6) Backward compatibility.

New products generation can be used in one system along with previous generations.



Main features

NETIO are the smartest power sockets you have ever seen..



1) M2M API integration

NETIO 4x products support all mainly used **M2M API protocols**.
This product could be connected to **any software or service** on the market.



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3) PROGRAMMABLE

NETIO 4x products can be **programmed by customer in Lua**.
NETIO will introduce plenty of Application Notes (**ANxx**) examples..

Feature 3: PROGRAMMABLE



- 1) User can program and run **his own script in the NETIO 4x device**.
Power sockets 230V with user definable scripts are unique feature on the market.
- 2) NETIO products is publishing plenty of Application Notes (**ANxx**) examples..
- 3) Average user don't want to program anything. But want to have this possibility!
ANxx are easy to use. 90% of users will copy-paste **and use it only**..
- 4) Based on ANxx NETIO devices can be easily connected and used with most of the IP based devices on the market. It can be useful for the marketing..
- 5) **Lua** (programming language) is not for dummies, but it's not a rocket science.
Your kids are using Lua for the Minecraft user add-ons..
- 6) The IT guys are in love with Linux or Rabsberry PI, but hate 230V outputs. NETIO devices are their gateway to control electrical devices.



USAGE CASES

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Networked power sockets

Usage case: Environmental applications

NETIO 4 smart sockets make it easy to implement a “**night**” or “**weekend**” mode.

NETIO are smart power sockets, so it's possible to switch on devices even on the weekend based on fact the central printer is ON for example..

It can be additional lamp, or any other electrical device..



Usage case: Advertising kiosks / Vending machines



NETIO power sockets with a timer function switch ON or OFF an advertising booth or various vending machines at appropriate times.

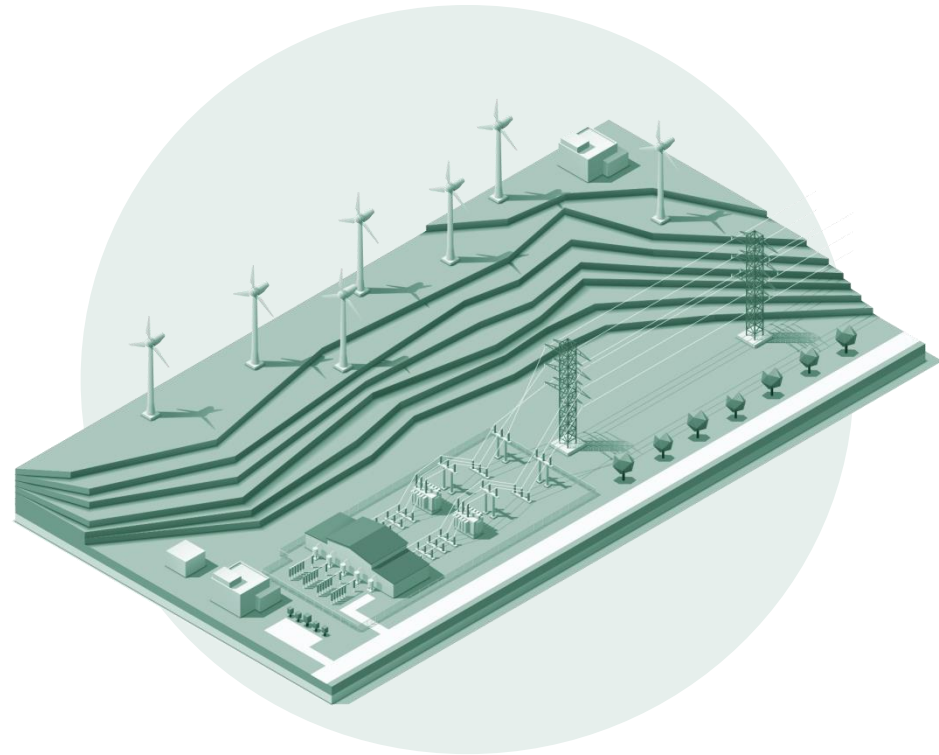
Why to do it?

- To have possibility restart it remotely.
- save electricity (30% time)

Usage case: Wind power plants – remote restarts

NETIO 4 can control the power for technological devices installed on remote sites.

The Windmill companies are using NETIO networked power sockets to restart or activate some technologies on the wind farms, where is complicated access.



PRODUCTS

IQRF

NETIO
Networked power sockets

NETIO: Coming soon products



| | NETIO WiFi Cobra | NETIO Cobra IQRF |
|----------------------------|------------------|------------------|
| Power sockets | 1x power plug | 1x power plug |
| Network | WiFi | IQRF |
| Current measurement | Optionally | Not now |
| Power plug types | DE, FR, IT, CH | DE, FR, IT, CH |
| All certifications | ✓ | ✓ |

How many power socket types?

We are in Europe now, how many types of the power sockets do you really need in Europe?

Plug Type E



Schuko
Plug Type F



Plug Type G



Plug Type J



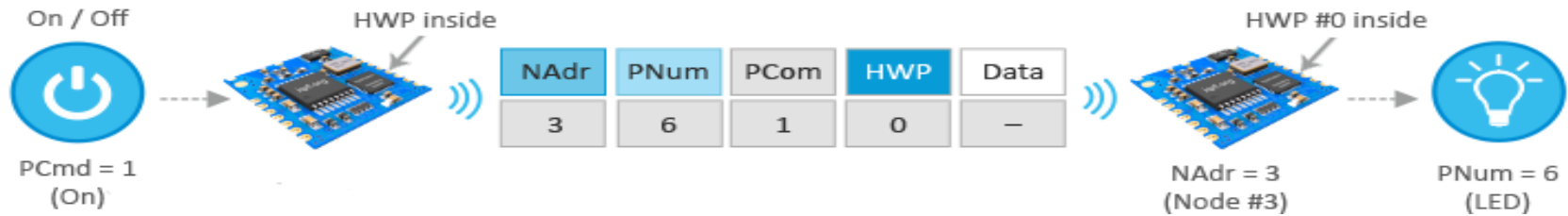
Plug Type L



NETIO Cobra IQRF



Vision with IQRF products



My dream is to have simple switch On/Off power socket 230V, which can be easily controlled from **any** other IQRF device.

- Thermostat can simply switch on heating.
- Home control system can switch on additional light.
- CO₂ sensor can simply switch on ventilation.

NETIO PRODUCTS

LAN / WiFi

NETIO
Networked power sockets

Products overview



| | NETIO 4All | NETIO 4 | NETIO 4C |
|----------------------|--|---------------------------|--------------------------------|
| Network interface | LAN + WiFi | LAN + WiFi | 2x LAN |
| WiFi Antenna | RSMA external (3dBi) | Fixed (2dBi) | - |
| Power Input | Europlug (DE + FR) | Europlug (DE + FR) | IEC320 C13 |
| Power Output | 4x power socket (DE + FR) | 4x power socket (DE + FR) | 4x power outlet IEC 320 C14 |
| Energy metering | Yes | - | - |
| Serial port (RS-232) | - | - | Yes |
| Bluetooth 4.0 LE | Yes | - | - |
| M2M API protocols | SNMP, HTTP, HTTPs, MQTT, Modbus/TCP, Telnet (SSL), XML, JSON, CGI, SIP | | |
| Lua scripting | Yes | Yes | Yes |
| Mobile App | Yes | Yes | Yes |

NETIO 4All

LAN/WiFi networked power sockets

M2M API protocols support

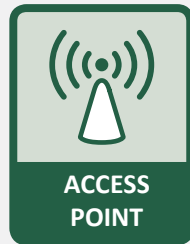
LUA scripting language

Energy metering



NETIO 4/4All can be WiFi AP (Access Point)

- WiFi a,b,g,n
- 4 different WiFi modes
 - Cable
 - WiFi Client
 - WiFi Access Point
 - Netio Configuration



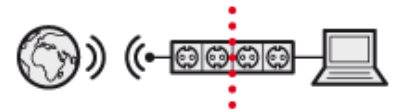
Cable

Connects to a local network using the ethernet cable
Turns the Wi-Fi adapter off



Wi-Fi Client

Connects to a local Wi-Fi network
Uses the ethernet cable as fallback access to Netio
Doesn't bridge Wi-Fi to ethernet



Wi-Fi Access Point

Connects to a local network using the ethernet cable
Bridges ethernet to Wi-Fi



Netio Configuration

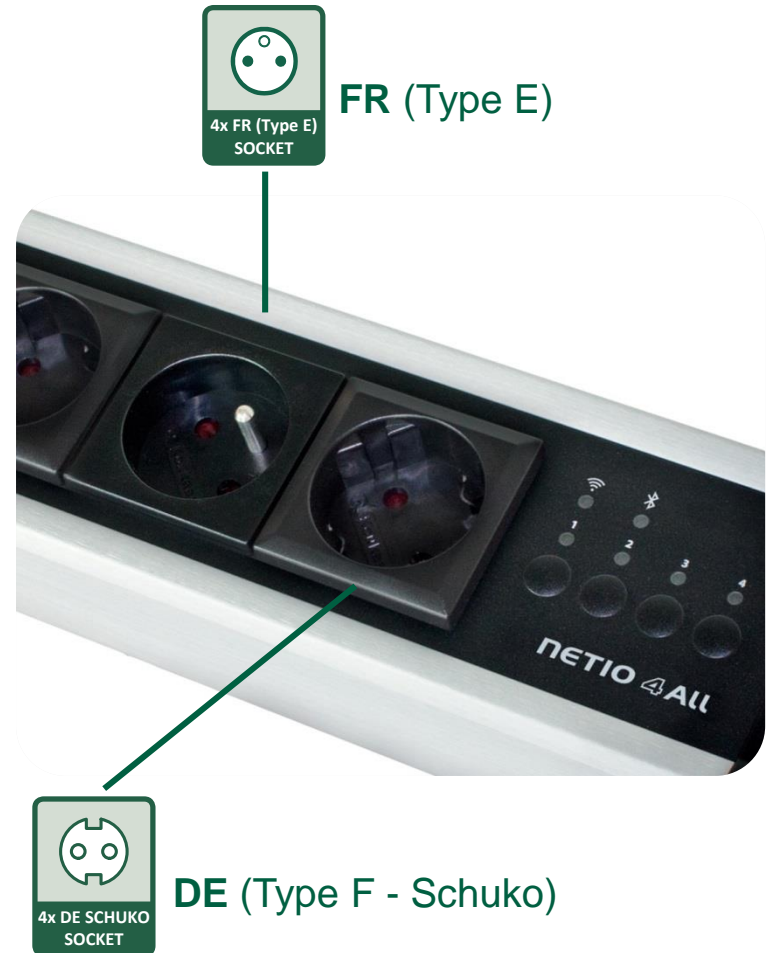
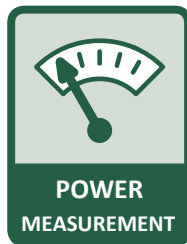
Connects to a local network using the ethernet cable
Provides Wi-Fi access point
Doesn't bridge ethernet to Wi-Fi



* NETIO 4All = External antenna -3db with RSMA connector

Power meter on NETIO 4All

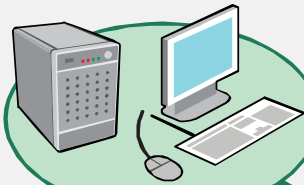
- Monitor energy consumption
- Each socket measured independently
- Alert by email if power consumption on the socket is too low (Lua)..
- Switch On/Off if consumption is too high or low (Lua)..



HOME

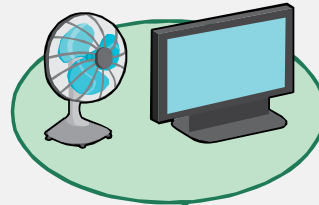
COMPUTERS

DATA STORAGE
COMPUTER



FAN

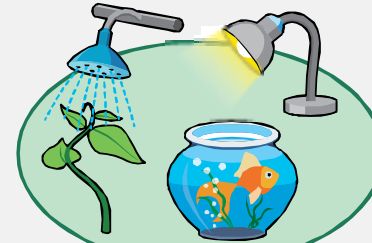
TELEVISION



HOBBY

IRRIGATION

LAMP



AQUARIUM

REMOTE CONTROL

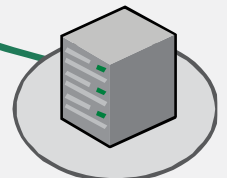
MOBILE PHONE



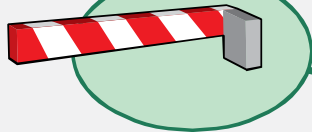
NOTEBOOK



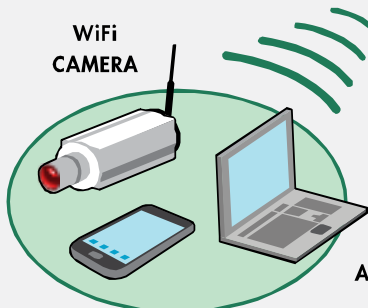
SERVER



ELECTRIC GATE

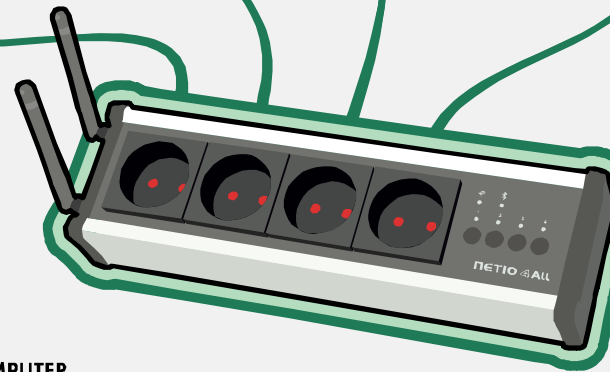


WiFi CAMERA



COMPUTER ACCESS POINT

BLUETOOTH



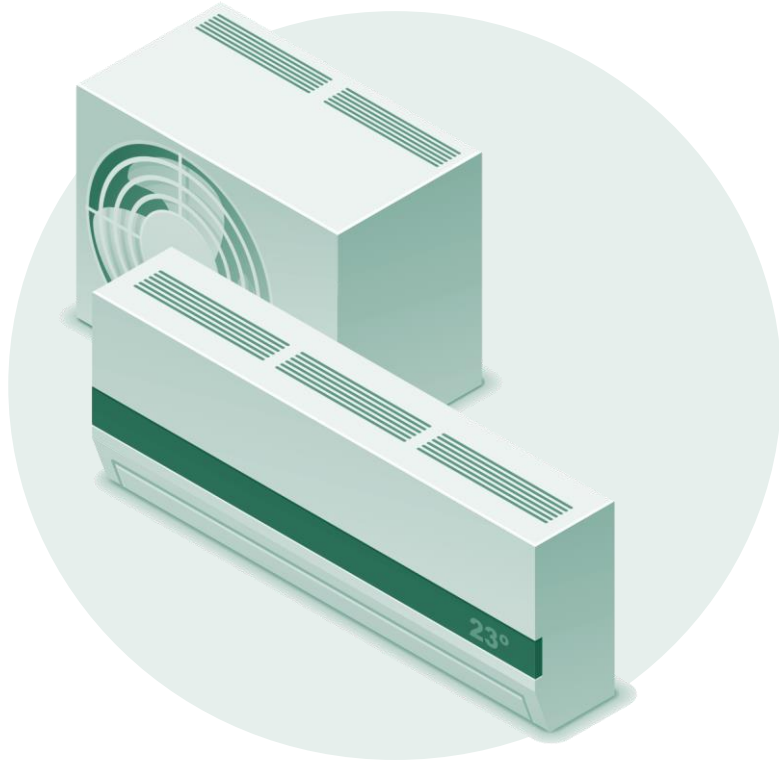
ROUTER



M2M API

NETIO 4All

Usage case: Activate the BackUp A/C (Air Conditioning)



The customer operates a small server room with too low-cost air-conditioning (not designed to 24/7). It sometimes stops working (filter, ...).

The temperature in the room is measured with an IP thermometer (3rd party product), and a simple Lua script checks the temperature every 10 seconds.

Whenever the temperature rises to 25°C, a backup air-conditioning unit is switched on to lower the temperature again.

**NETIO ARE THE SMARTEST
NETWORKED POWER SOCKETS
YOU HAVE
EVER SEEN...**

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NETIO 4

PLAN/WiFi networked power sockets 230V

M2M API protocols support

LUA scripting language

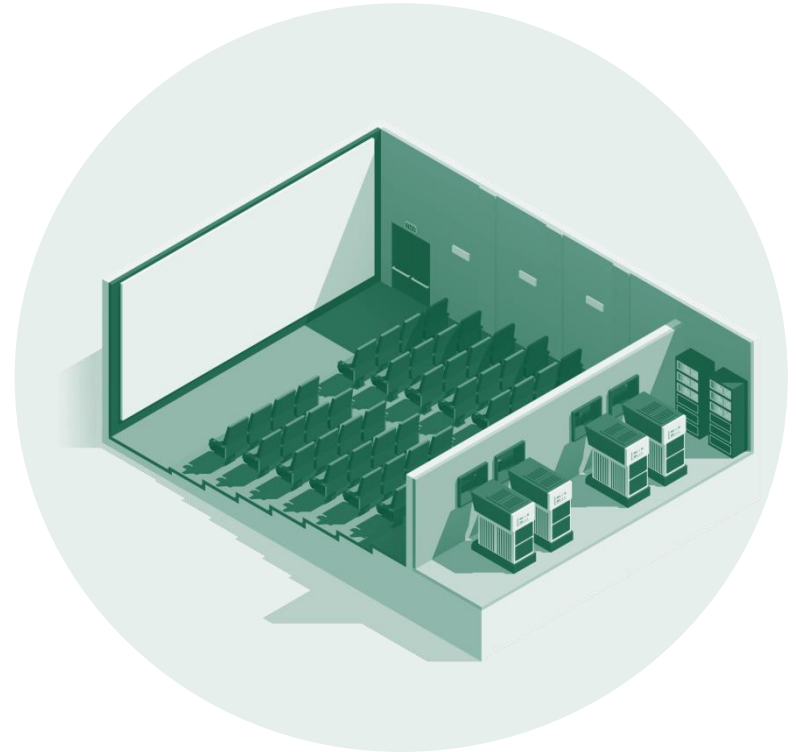


Usage case: Movie theaters

The audio system in a cinema viewing room of a multiplex consumes electricity even when no film is being shown and no music is playing.

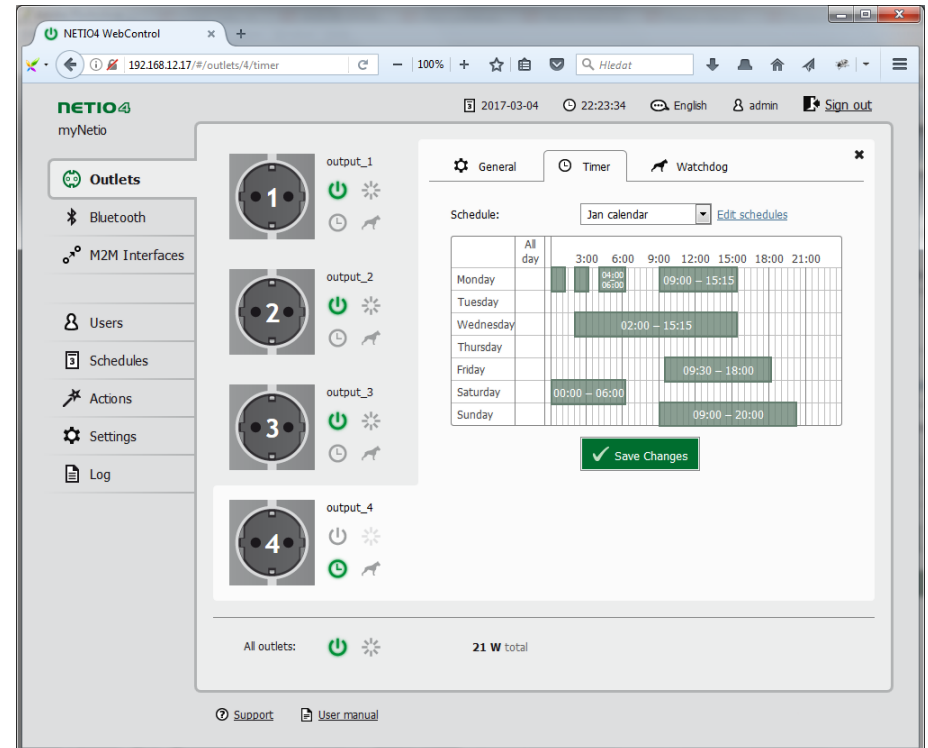
The customer uses NETIO 4 to disconnect individual parts of the audio system. When there is no show, there is no need to power the audio system.

Approximately 38% of electricity is saved.



Scheduler

- Easy to setup calendar functions
- Separated per each power socket
- User's profiles
- Graphical user interface

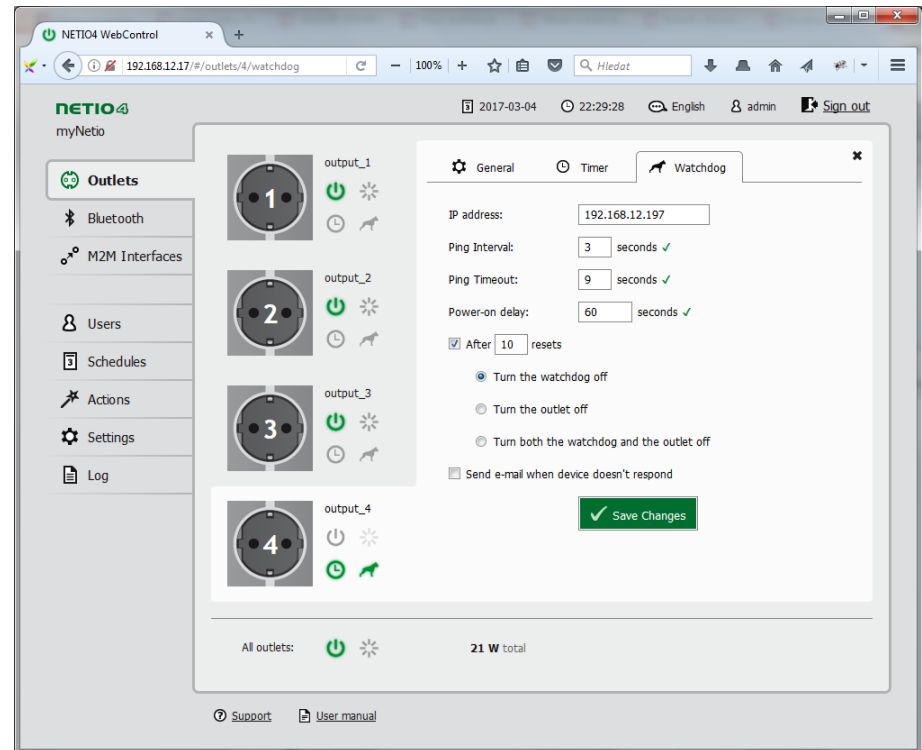


The screenshot displays the NETIO4 WebControl interface for configuring a scheduler. The browser address bar shows the URL `192.168.12.17/#/outlets/4/timer`. The interface includes a sidebar with navigation options: Outlets, Bluetooth, M2M Interfaces, Users, Schedules, Actions, Settings, and Log. The main content area shows four outlets (output_1 to output_4) with their respective power status icons. A 'Timer' tab is active, displaying a calendar view for January 2017. The calendar shows scheduled power-on times for each day of the week. A 'Save Changes' button is visible at the bottom of the calendar view.

| Day | 3:00 | 6:00 | 9:00 | 12:00 | 15:00 | 18:00 | 21:00 |
|-----------|---------------|---------------|---------------|---------------|---------------|-------|-------|
| Monday | | 09:00 - 09:50 | | 09:00 - 15:15 | | | |
| Tuesday | | | | | | | |
| Wednesday | | | 02:00 - 15:15 | | | | |
| Thursday | | | | | | | |
| Friday | | | | | 09:30 - 18:00 | | |
| Saturday | 00:00 - 06:00 | | | | | | |
| Sunday | | | | | 09:00 - 20:00 | | |

IP Watchdog

- Monitor your network devices
- Restart your router automatically
- Easy to use
- Can be extended in Lua



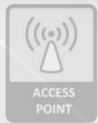
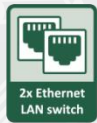
NETIO 4C

Networked IEC-320 power outlets 110/230V

M2M API protocols support

LUA scripting language

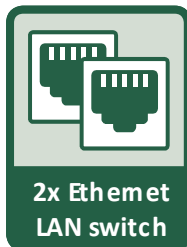
RS-232 interface

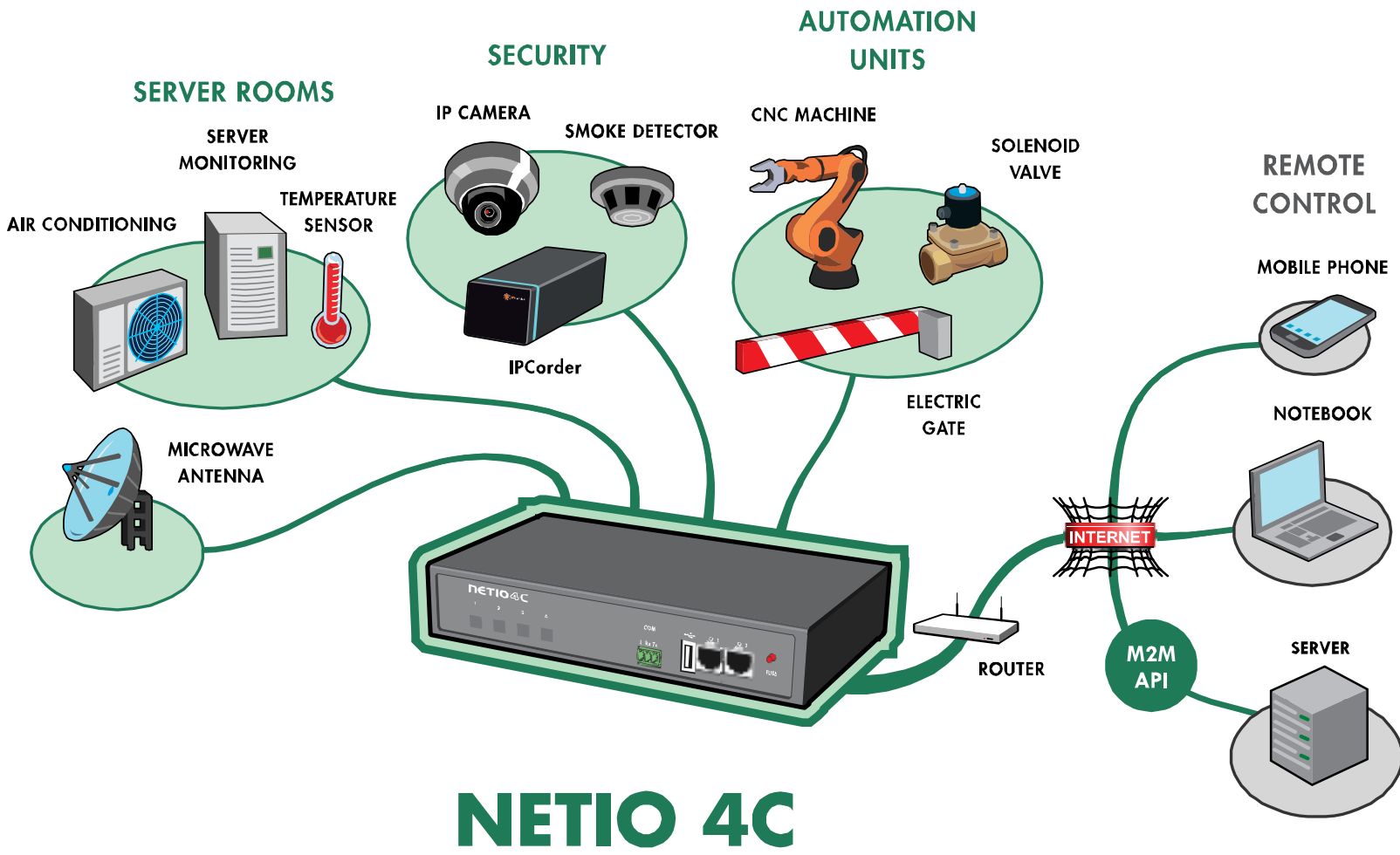




Ethernet Switch / Serial port RS-232

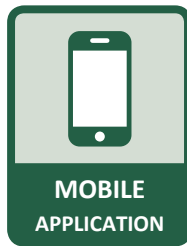
- Integrated Ethernet switch
- Easy to connect ethernet devices in daisy-chain topology
- Serial port RS-232
- Can be used as a virtual serial port
- Can be controlled by Lua from your scripts (switch ON power socket if something received by serial port)



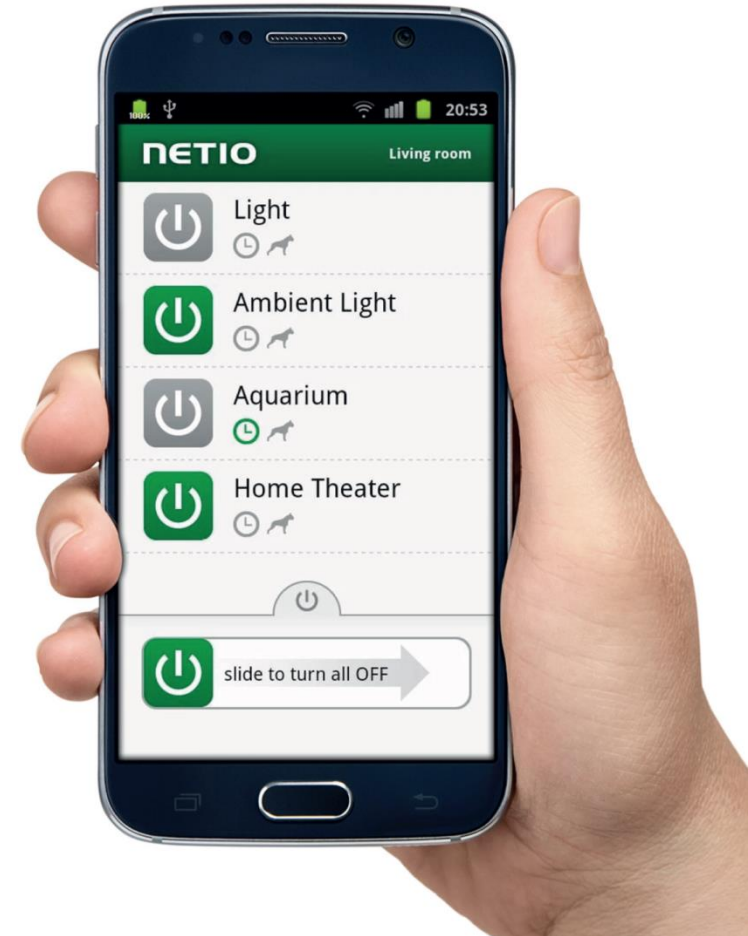


NETIO MOBILE App

Switch the lights, home appliances, routers ... Using mobile phones.



Free download for **iOS** & **Android**



NETIO Lua scripting

Write your own script, that runs in the NETIO 4x power sockets.



- Scripting & timing
- Ping to defined IP
- Read XML from the defined IP
- much more..

```
local state = " "  
function turnoff()  
  for i=1,4 do  
    state = devices.system["output" .. i  
    .. "_state"]  
    if state == "on" then  
      devices.system.SetOut{output=i,  
      value=false}  
      logf("Vypinam zasuvku c.%d",i)  
    else  
      devices.system.SetOut{output=i,  
      value=true}  
      logf("Zapinam zasuvku c.%d",i)  
    end  
  end  
end  
turnoff()
```


NETIO ANxx Application Notes

Application Notes for NETIO products are easy to use guidelines how to connect NETIO with other products.

- How use with M2M protocols
- Step by step guide how to use with several software applications
- Lua scripts examples
- Customer's FAQ in detailed version

NETIO PRODUCTS USAGE CASES SUPPORT COMPANY WHERE TO BUY CONTACT Search in NETIO EN V

NETIO > AN01: Controlling NETIO 4 sockets using URLs

AN01: Controlling NETIO 4 sockets using URLs

Tagy: LUA scripts

NETIO 4 network sockets can be easily switched on and off by accessing a URL in a browser or from the command line. The M2M API interface using cgi http (https) is very simple.

Individual power sockets of NETIO 4 products can be easily controlled by invoking a URL with parameters (a CGI command). In this way, it is easy to power something on or off by accessing a URL from an IP camera or by pressing a button of an IP phone.

The control mechanism is based on HTTP (HTTPS) / CGI requests linked to custom actions in a LUA script. Therefore, the following LUA script needs to be entered for the URL control to work. If needed, parameter names can be changed and more complex functions can be programmed.

Quick and easy control is possible, for example, with an executable script on the desktop, bookmarks or buttons in the web browser that directly perform the programmed action on NETIO4 by sending the corresponding HTTP request.

```
<pre class="brush: php"> http://192.168.101.116/event?password=mickeymouse&
amp;action=toggle&outlet=1</pre>
```

Usage examples

- Pressing a button on an IP telephone accesses a URL = turns a socket on or off
- IP camera system accesses a URL to turn on outdoor lighting
- Multimedia system accesses a URL in order to keep an audio system turned on only during playback

NETIO 4 configuration

In the Actions section of NETIO 4 web administration, click **Create Rule** to add a rule (see figure 1) and fill in the following parameters:

- Enable: checked

**THANK YOU
FOR YOUR ATTENTION**

NETIO
Networked power sockets