Expert Power Control NET 8x 8210 / 8211





Expert Power Control NET 8x 8210 / 8211 © 2010 Gude Analog- und Digitalsysteme GmbH 23.08.2010

Table of content

Chapter '	1 Security Advise	5
Chapter 2	2 Description	5
Chapter	3 Hardware	6
3.1	Content of delivery	6
3.2	Connections	7
3.3	Installation	7
3.4	Status LED	8
Chapter 4	4 Configuration	8
4.1	DHCP	8
4.2	Network settings with GBL_Conf	8
4.3	Configuration via webinterface	10
4.3.1	Configuration - Power Ports	10
4.3.2	Configuration - IP address	12
4.3.3	Configuration - IP ACL	13
4.3.4	Configuration - HTTP	13
4.3.5	Configuration - Messages	14
4.3.6	Configuration - SNMP	15
4.3.7	Configuration - SNMP Trap Receiver List	16
4.3.8	Configuration - Syslog	17
Chapter :	5 Operation	18
5.1	Switching at the device	18
5.2	Switching by Webinterface	18
5.2.1	Switching	18
5.2.2	Batchmode	19
5.3	Switching via serial interface	19
5.4	Sensor	20
Chapter	6 Features	21
6.1	Bootloader mode	21
6.2	Firmware update	21
6.3	Technical information	21

Expert Pow	er Control NET 8x 8210 / 8211	Table of content	4
6.4	Fabrique settings	_	21
Chapter	7 Support		22
Chapter	8 Declarations of conformity		23

1 Security Advise

The device must be installed only by qualified personnel according to the following installation and operating instructions. The manufacturer does not accept responsibility in case of improper use of the device and particularly any use of equipment that may cause personal injury or material damage.

The device contains no user-maintenable parts. All maintenance has to be performed by factorytrained service personnel. Check if the power cord, the plug and the socket are in proper condition.

The device can be connected only to 230V AC (50 or 60 Hz) sockets.

Always connect the device to properly grounded power sockets.

The device is intended for indoor use only. Do NOT install them in an area where excessive moisture or heat is present. Because of safety and approval issues it is not allowed to modify the device without our permission.

Please note the safety advises and manuals of connected devices, too.

The device is NOT a toy. It has to be used or stored out or range of children.

Packaging material is NOT a toy. Plastics has to be stored out of range of children. Please recycle the packaging materials. In case of further questions, about installation, operation or usage of the device, which are not clear after reading the manual, please do not hesitate to ask our support team.

2 Description

The Remote Power Switch Expert Power Control NET 8x 8210 / 8211 allows the switching of electrical devices via a TCP/IP network and a serial interface.

For installation just connect the power and network cables to Expert Power Control NET 8x 8210 / 8211.

After the device has received an IP address every client in the same network is able to switch the eight Power Ports (max. 10 A) via webinterface. Expert Power Control NET 8x 8210 / 8211 offers also features like SNMP and Syslog. Additional Expert Power Control NET 8x 8210 / 8211 can be controlled via a serial connection.

A temperature sensor and a hybrid sensor (temperature and humidity) can be connected to Expert Power Control NET 8x 8210 / 8211.

A watchdog function for each power port is implemented.

The display on the front is able to show the IP address, the recent total load, the peak current (timeframe adjustable) and the measurements of the sensors.

Furthermore the access to the device can be restricted by IP access control lists and a HTTP password.

3 Hardware

3.1 Content of delivery

Included in delivery are:

- Expert Power Control NET 8x 8210 / 8211
- Power supply cable (IEC)
- CD-ROM including Software and Manual
- Short manual



3.2 Connections

Connections Expert Power Control NET 8x 8210



Connections Expert Power Control NET 8x 8211



- 2) Buttons "select" and "ok"
- 3) Status LED
- 4) Aux connector for serial interface (RS232-PS2 cable) or Sensor
- 5) TEMP connector for Sensor
- 6) Ethernet connector (RJ45)
- 7) Display
- 8) 8 Power Ports (IEC C13, max. 10A)
- 9) Power supply (IEC C20, max. 16A)

3.3 Installation

1.) Connect the power supply cable to the power socket at the rear side (Expert Power Control NET 8x 8210) or front side (Expert Power Control NET 8x 8211) of Expert Power Control NET 8x 8210 / 8211 and a socket. Expert Power Control NET 8x 8210 / 8211 now is booting and shortly after ready for usage.

2.) Plug the Ethernet cable into the connector on the front side of Expert Power Control NET 8x 8210 / 8211 and connect it to your Ethernet.

3.) Connect the clients to the Power Ports at the rear side (Expert Power Control NET 8x 8210) or front side (Expert Power Control NET 8x 8211) of the device.

3.4 Status LED



The Status LED shows different states of the device:

- Status LED red: Device is not connected to the ethernet
- Status LED orange: Device is connected to the ethernet, TCP/IP settings are not allocated
- Status LED green: Device is connected to the ethernet, TCP/IP settings allocated, device is ready to use
- Status LED blinks alternately red and green: Device is in Bootloader mode.

4 Configuration

4.1 DHCP

After switch-on Expert Power Control NET 8x 8210 / 8211 looks for a DHCP server and requests an available IP address .

Please check the IP address allocated to Expert Power Control NET 8x 8210 / 8211 in the DHCP server settings to make sure that the same address is used at every reboot.

4.2 Network settings with GBL_Conf

For changing the network properties manually, the program *GBL_Conf.exe* is required. This tool is available for free on our website **www.gude.info**.

Furthermore *GBL_Conf.exe* enables you to install firmware updates and to reset **Expert Power Control NET 8x 8210 / 8211** to its factory settings.

Activate bootloader mode of **Expert Power Control NET 8x 8210 / 8211** and run *GBL_Conf.exe*. The program will look automatically for connected devices and will display their network configuration.

pPowerMeter - v1.2 - EPMETE	R	Host OS: Windows 2000 Version 5.0, Build 2195
		BootLoader Version: 2.3 GBL v4 uC:ColdFire Firmware Version: 1.2
		Host DS: Windows: 2000 Version 5.0, Build 2195 GBL_Conf exe v1.35 searching devices, please wait 1 devices found
etwork Configuration	IP Address:	
etwork Configuration MAC Address: 00:19:32:00:01:1A	IP Address: 192.168.0.2	
etwork Configuration MAC Address: 00:19:32:00:01:1A Netmask:	IP Address: 192.168.0.2 Gateway:	
etwork Configuration MAC Address: 00:19:32:00.01:1A Netmask: 255:255:255:0	IP Address: 192 1680.2 Gateway: 192 1680.1	
etwork Configuration MAC Address: 00:19:32:00:01:1A Netmask: 255:255:255:0 Use HTTP password	IP Address: 192.1680.2 Gateway: 192.1680.1 HTTP Port:	
Alter Antiguration MAC Address: 00:19:32:00:01:1A Netmask: 255:255:255:0 Use HTTP password IV TCP/IP-Settings by DHCP	IP Address: 192.1680.2 Gateway: 192.1680.1 HTTP Port: 80	

If the displayed IP address accords with the factory settings (192.168.0.2), there is either no DHCP server available in the network or no free IP address could be allocated.

Enter a free IP address and the according netmask in the entry mask, then save these changes by clicking on *Program Device* \rightarrow *SaveConfig.*

Restart the firmware of **Expert Power Control NET 8x 8210 / 8211**, so that the changes will take effect. Now click on *Search* in order to have the new network configuration displayed.

4.3 Configuration via webinterface

Go to the website of Expert Power Control NET 8x 8210 / 8211. Enter the IP address of Expert Power Control NET 8x 8210 / 8211 into the address line of your internet browser: http://"IP address of Expert Power Control NET 8x 8210 / 8211"/ and press LOGIN.



To enter the configuration menu, click on "Configuration" on the upper left side of the screen.

4.3.1 Configuration - Power Ports

Power Ports + IP Address + IP ACL + HTTP + Messages + SNMP + Syslog
Configuration - Power Ports
Choose Power Port 1: Power Port 1
Label: Power Port 1
• After power-up switch $ \odot $ off $ \bigcirc $ on $ \bigcirc $ remember last state
If switching on after power-up, wait O seconds before switching
• After turning off, wait 0 seconds then turn on again
• Enable watchdog 💿 off 🔘 on
• Watchdog type 💿 ICMP 🔘 TCP
Host IP 0.0.0.0 - TCP Port 80
Ping interval 10 Ping retry 6

Expert Power Control NET 8x 8210/8211 - v.3.0.0

4.3.1.1 Label

A name with a maximum of 15 characters can be entered here for each Power Port.

4.3.1.2 After power-up switch

The Power Port's switching state after a power-on of the device can be defined here (on, off, remember last state).

4.3.1.3 If switching on after power-up, wait ...

A switching delay of a Power Port can be defined here that is applied after switch on of the device. The delay can last up to 8191 seconds.

4.3.1.4 After turning off, wait ...

While this function is enabled, the Power Port will reactive after the stated time, when it got switched off.

4.3.1.5 Watchdog

While using the watchdog, electrical devices can be observed. The watchdog sends ICMP-pings or TCP-pings to the device. If these pings were not answered, during a defined delay (time or pings), the power port will reset. The watchdog function allows to restart e.g. crashed servers or NAS systems.

You can check the watchdog function and other imformation inside of the switching menu. There are different colors:

Green text: Watchdog is active and receives ping replies Orange text: Watchdog is activating at the moment, waiting for first ping reply Red text: Watchdog is active and does not receive ping replies any longer

When watchdog is activating it waits of a first ping reply. During this time, the information is written as an orange text. After the receive of the first ping reply, it switches to active, written in green letters.

When a watchdog reset a power port, the watchdog again waits for a first ping reply, as stated above.

4.3.1.5.1 Enable Watchdog

Here you can activate the watchdog for this power port.

4.3.1.5.2 Watchdog type

Here you can switch between ICMP ping or TCP ping.

4.3.1.5.3 Host IP

Here you can enter the IP address this watchdog should observe.

4.3.1.5.4 TCP Port

If TCP pings are used, here you can enter the TCP port. A TCP port is not needed, when ICMP pings are choosen.

4.3.1.5.5 Ping interval

Here you can enter the time between two pings.

4.3.1.5.6 Ping retry

Here you can enter how often the ping should be repeated, before a power port reset will be done.

4.3.2 Configuration - IP address

Power Ports · IP Address · IP.	ACL · <u>HTTP</u> · Mess	ages · SNMP · Syslog
Configurati	ion - IP Address	
• Hostname:	EPC-NET-8x	
 IP Address: 	192.168.1.242	
Netmask:	255.255.255.0	
Gateway:	192.168.1.3	
Use DHCP	⊙yes ⊖no	
	<u> </u>	.]

Expert Power Control NET 8x 8210/8211 - v.3.0.0

4.3.2.1 Hostname

Enter the host name of Expert Power Control NET 8x 8210 / 8211. Expert Power Control NET 8x 8210 / 8211 uses this name to connect with DHCP server.

Special signs may destabilize your network.

All changes need a restart of the firmware to get valid.

4.3.2.2 IP Address

Here you can change the IP address of Expert Power Control NET 8x 8210 / 8211.

All changes need a restart of the firmware to get valid.

4.3.2.3 Netmask

Here you can change the netmask of Expert Power Control NET 8x 8210 / 8211.

All changes need a restart of the firmware to get valid.

4.3.2.4 Gateway

Here you can change the standard gateway of Expert Power Control NET 8x 8210 / 8211.

All changes need a restart of the firmware to get valid.

4.3.2.5 Use DHCP

Here you can set, if **Expert Power Control NET 8x 8210 / 8211** shall get its TCP/IP settings directly from your DHCP server. If DHCP is activated, **Expert Power Control NET 8x 8210 / 8211** proves if a DHCP server is active inside of your LAN. Then **Expert Power Control NET 8x 8210 / 8211** requests TCP/IP settings from this server. If there is no DHCP server inside of your network, we recommend to deactivate this function.

All changes need a restart of the firmware to get valid.

4.3.3 Configuration - IP ACL

Power Ports	IP Address · IP ACL	• HTTP • Message	s · SNMP · Syslog
	Configuration - IF	Access Control	List
	Reply ICMP-Ping re	quests 🔽	
	Enable IP Filter		
	1		
	2.		
	3.		
	4.		
	5.		
	6.		
	7.		
	8.		
		(Ar	nhy

Expert Power Control NET 8x 8210/8211 - v.3.0.0

IP Access Control List (IP ACL) acts as an IP filter for your **Expert Power Control NET 8x 8210 / 8211**. Wether it is active hosts and subnets only can contact **Expert Power Control NET 8x 8210 / 8211**, if their IP adresses are stated in this IP ACL. e.g.: *"http://192.168.0.1"* or *"http://192.168.0.1/24"*

If you locked yourself out by mistake, please activate the bootloader mode of **Expert Power Control NET 8x 8210 / 8211**, start *Gbl_Conf.exe* and deactivate IP ACL.

You can find more information about configuration of IP ACL or have a look at http://www.gude.info/wiki.

4.3.3.1 Reply ICMP-Ping requests

Here you can set, if Expert Power Control NET 8x 8210 / 8211 shell react on pings.

4.3.3.2 Enable IP Filter

Here you can activate the IP Access Control List (IP ACL) of Expert Power Control NET 8x 8210 / 8211.

If IP ACL is active, DHCP and SNMP only work, if all necessary servers and clients are registered in this list.

4.3.4 Configuration - HTTP

Configuration - HTTP		
HTTP Port:	80	
Enable HTML Autorefresh	⊛yes ⊖no	
Require HTTP Password	⊖yes ⊙no	
 Check Password on Start Page Administrator 	⊖yes ⊙no	
Login Name:	admin	
Password:		
User		
Login Name:	user	
Password:		

Expert Power Control NET 8x 8210/8211 - v.3.0.0

4.3.4.1 HTTP Port

Here you can enter the HTTP port number, if necessary. Possible numbers are 1 ... 65534 (standard: 80). To get access to **Expert Power Control NET 8x 8210 / 8211**, you have to enter the port number behind the IP address of **Expert Power Control NET 8x 8210 / 8211**, e.g.: *http://192.168.0.2:1720*

All changes need a restart of the firmware to get valid.

4.3.4.2 Require HTTP Password

Password protected access can be activated here. In this case, a user and an admin password have to be defined. Passwords have a maximum lengths of 15 characters.

Administrators are authorized to switch all ports and to modify the settings of **Expert Power Control NET 8x 8210 / 8211** and of all ports. The username of the admin is "admin".

Users are authorized to switch all ports but are not allowed to modify the settings of neither **Expert Power Control NET 8x** 8210 / 8211 nor the ports. The username of the user is *"user"*.

If you have forgotten your password, activate the bootloader mode of **Expert Power Control NET 8x 8210 / 8211**, start GBL-Conf.exe and deactivate the password request.

All changes need a restart of the firmware to get valid.

4.3.4.3 Check Password on start page

If activated, the user has to enter his password, before logging in to the webinterface.

4.3.5 Configuration - Messages



4.3.5.1 Generate Temperature Messages

Here you can configure if and at which Min-/Max-Temperature Expert Power Control NET 8x 8210 / 8211 shell send temperature alerts via SNMP-Traps and Syslog.

4.3.5.2 Max Temperature

Here you can define the maximum temperature, if the sensor measures this temperature the device will generate an alert via SNMP and Syslog.

4.3.5.3 Min. Temperature

Here you can define the minimum temperature, if the sensor measures this temperature the device will generate an alert via SNMP and Syslog.

4.3.6 Configuration - SNMP

Power	Ports · IP Addres	ss · IP ACL · H	ITTP · Messagi	es · <u>SNMP</u> · Syslog
		<u>Config</u>	Traps	
	Config	guration - SNI	MP	
	• Enab	le SNMP-get 🔘	yes 💿 no	
	• Com	munity public: p	ublic	
	• Enab	le SNMP-set 🔘	yes 💿 no	
	• Com	munity private: p	rivate	
		Download SNI		
		Download Sive		ny j

Expert Power Control NET 8x 8210/8211 - v.3.0.0

4.3.6.1 SNMP

To get detailed status information of Expert Power Control NET 8x 8210 / 8211 SNMP can be used. SNMP communicates via UDP (port 161) with Expert Power Control NET 8x 8210 / 8211: You can use SNMP to switch the power ports as well. Supported SNMP commands:

- SNMPGET: request status information

- SNMPGETNEXT: request the next status information

- SNMPSET: Expert Power Control NET 8x 8210 / 8211 request change of status

You will need a Network Management System, e.g. HP-Open View, OpenNMS, Nagios etc., or the command line tools of NET-SNMP to request information of **Expert Power Control NET 8x 8210 / 8211** via SNMP.

4.3.6.1.1 SNMP-communities

SNMP authentifies requests by so called communities.

The public community has to be added to SNMP-read-requests and the private community to SNMP write requests. You can see the SNMP communities like read/write passwords. SNMP v1 and v2 transmit the communities without encryption. Therefore it is simple to spy out these communities. We recommend to use a DMZ or IP ACL.

4.3.6.1.2 MIB

All information, that can be requested or changed, the so called "Managed Objects", are descripted in "Management Information Bases" (MIBs).

There are three MIBs, which can be requested from Expert Power Control NET 8x 8210 / 8211:

"system", "interface" and "powerports"

"system" and "interface" are standardised MIBs (MIB-II). "powerports" (GUDEADS-EPC-MIB::gadsEPC) was created especially for **Expert Power Control NET 8x 8210 / 8211**.

At least, there are so called Object Identifiers (OID) subordinated to those three structures. An OID describes the location of an information inside a MIB.

4.3.6.1.3 SNMP-traps

SNMP-Traps are system messages, sent via SNMP-protocol to different clients. On following events, **Expert Power Control NET 8x 8210 / 8211** will dispatch a SNMP-Trap:

- Switching of the Power Ports
- · Min/Max-Alerts from the sensors

You can find more information about configuration of SNMP at http://www.gude.info/wiki.

4.3.6.2 Enable SNMP-get

Here you can activate SNMP-get protocol of Expert Power Control NET 8x 8210 / 8211.

Use SNMP only if your network is fitted for.

4.3.6.3 Community public

Here you can enter the SNMP public community.

Use SNMP only if your network is fitted for.

4.3.6.4 Enable SNMP-set

Here you can activate SNMP-set protocol of Expert Power Control NET 8x 8210 / 8211.

Use SNMP only if your network is fitted for.

4.3.6.5 Community private

Here you can enter the SNMP private community.

Use SNMP only if your network is fitted for.

4.3.6.6 Download SNMP MIB

Here you can download the MIBs of Expert Power Control NET 8x 8210 / 8211.

Use SNMP only if your network is fitted for.

4.3.7 Configuration - SNMP Trap Receiver List



4.3.7.1 Enable Traps

Here you can activate SNMP-traps. if enabled, Expert Power Control NET 8x 8210 / 8211 will dispatch SNMP-traps to all receivers listed. Receivers have to be listed as follows: IP address (and, if necessary the HTTP port), e.g.: 192.168.0.2:8000

Use SNMP only if your network is fitted for.

4.3.7.2 Trap Version

Here you can choose between SNMP-traps standard v1 and v2c.

Use SNMP only if your network is fitted for.

More information about the SNMP functions of **Expert Power Control NET 8x 8210 / 8211**, you can find in chapter SNMP, on *http://www.gude.info/wiki* or ask our support team.

4.3.8 Configuration - Syslog

Power	Ports · IP Address · IP	ACL · HTTP ·	Messages · SNMP · <u>Syslo</u>
	Configuratio	n - Syslog	
	 Enable Syslog Syslog Server 	g Oyes ⊙no IP:	
	Syslog Port:	514	
	8		(Amarka)

Expert Power Control NET 8x 8210/8211 - v.3.0.0

Syslog messages are simple text messages transmitted to a syslog server using UDP.

Linux OS regularly have a syslog daemon installed, e.g. syslog-ng. For Windows there are some freeware tools available. On following events, **Expert Power Control NET 8x 8210 / 8211** will send a syslog message:

- Booting up
- Activation/deactivation of syslog
- Switching of Power Ports

You can find more information about configuration of Syslog in chapter Configuration - Syslog or have a look at *http://www.gude.info/wiki*.

4.3.8.1 Enable Syslog

Here you can activate Syslog of Expert Power Control NET 8x 8210 / 8211.

4.3.8.2 Syslog Server IP

If syslog is active enter here the IP address of you Syslog server.

4.3.8.3 Syslog Port

If syslog is active enter here the port number, that your Syslog server uses to receive syslog information.

More information about Syslog you can find in chapter Syslog, on http://www.gude.info/wiki or ask our support team.

5 Operation

5.1 Switching at the device

Expert Power Control NET 8x 8210 / 8211 disposes of two buttons: "*select*" and "*ok*". By pushing "*select*", the LED of Power Port 1 starts blinking which means that it is selected. By pushing the button again, the next Power Port is selected. If you want to change the switching state of the selected Power Port, push the "*ok*" button for two seconds.



You can check the status of the Power Ports by the color of the Power Port status LED (green=enabled/red=disabled).

5.2 Switching by Webinterface

Go to the website of Expert Power Control NET 8x 8210 / 8211. Enter the IP address of Expert Power Control NET 8x 8210 / 8211 into the address line of your internet browser:

http://"IP address of Expert Power Control NET 8x 8210 / 8211"/ and press LOGIN



5.2.1 Switching

Here you are able to switch the ports directly.

You can check the status of the Power Ports by the color of the Power Port status LED (green=enabled/red=disabled).

5.2.2 Batchmode

Each Power Port of **Expert Power Control NET 8x 8210 / 8211** can be switched on or switched off for a selectable delay (1-30 sec. or 1-30 min.). After the chosen delay the selected port will be switched off or switched on again auto-matically.

Configuration Logout
Switching · <u>Batchmode</u>
Switch 1: Power Port 1 💌 off 💌, wait 5 💌 sec 💌, switch on 💌
Ok

Expert Power Control NET 4x Desktop - v.1.1.1

Optionally the device can be accessed by using the perl script "*EPC_Control2.pl*" through the command line (e.g. for automatic or time-triggered switching).

For more information please refer to our website: www.gude.info/wiki

5.3 Switching via serial interface

Alternatively to the Ethernet interface, the Power Ports of **Expert Power Control NET 8x 8210 / 8211** can be switched through its serial interface. It only requires a terminal program like HyperTerminal, a program provided under Windows for free (to be found under *Programs -> Accessories -> Communication*).

Connect your PC with **Expert Power Control NET 8x 8210 / 8211** with the PS2-RS232 adaptor cable and plug the device into a outlet. Now you can turn on **Expert Power Control NET 8x 8210 / 8211**. The boot process lasts a few seconds longer than by Ethernet.

You can access **Expert Power Control NET 8x 8210 / 8211** through the terminal program as soon as the status LED shines green. Choose the COM port that is connected to **Expert Power Control NET 8x 8210 / 8211** and enter the following values for the serial interface:

Bits per seconds	115200
Data bits	8
Parity	none
Stop bits	1
Flow control	none

If you do not use HyperTerminal, please make sure that the terminal program supports VT100 commands.

After having it connected successfully, **Expert Power Control NET 8x 8210 / 8211** answers as shown in figure below. Press *Enter* for login.

Datei Bearbeiten	Ansicht Anrufen Übertragung ?	
16 68		
Expert P	Power Control NET 8x v2.	3.0

Now the Power Ports can be switched on and off per number keys. By pressing *c* you can check the network configuration and by pressing *Esc* you can log out.

Expert Power Control NET 8x - HyperTerminal
Expert Power Control NET 8x v2.3.0
$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$
press <1><8> to toggle port 18 press <z> for configuration menu press <esc> to logout</esc></z>
-

5.4 Sensor

Connect the temperature sensor with the TEMP and AUX connector at the front of the device. If it is connected exactly, the recent temperature is displayed in the login window, in the switching window and can be requested via SNMP. The temperature sensor can be ordered as additional supplies. More information can be found at www.gude.info or requested at mail@gude.info.



Hybrid sensor 7002

Temperature sensor 7001		
Cable length	~ 2m	
Connection	PS2	
Measurement	-10°C bis +70°C bei ±2°C (maximal) und ±1°C (typisch)	

Hybrid sensor 7002		
Cable length	~ 2m	
Connection	PS2	
Measurement	(-40 bis +80 Grad, +- 0,5Grad/ Feuchte 0-100% +-3%)	

6 Features

6.1 Bootloader mode

To activate the bootloader mode of **Expert Power Control NET 8x 8210 / 8211** the select button must be pushed while restarting the device. In bootloader mode it is possible to disable the password protection, to update the firmware and to restore the default settings by running the program *GBL_Conf.exe*.

If the device runs already, press the buttons "*select*" and "*ok*" for three seconds. The bootloader mode of **Expert Power Control NET 8x 8210 / 8211** is indicated by "*BOOT-LDR*" appended to the device name in the program window of *GBL_Conf. exe.*

During bootloader mode an alteration of the relais is not possible.

To restart the firmware, without toggle the Power Ports, press the buttons select and ok for three seconds again.

6.2 Firmware update

In order to update the firmware the program GBL_Conf.exe and the latest firmware are needed.

Start the device in bootloader mode and run the program GBL_Conf.exe. On the left side of the program window all Gude devices that are in the network are listed. Select the device, that should be updated, click on Program DeviceFirmware Update and determine the location of the new firmware.

Please note: The up-to-date firmware and GBL_Conf.exe can be found at www.gude.info, free to download.

6.3 Technical information

Connections:	1 x Ethernet (RJ45)
	2 x PS2 Connector
	8 x Power Ports (IEC C13, max. 10A)
	1 x Power supply inlet (IEC C20, max. 16A)
Network:	10/100 MBit/s 10baseT Ethernet
Protocols:	TCP/IP, HTTP,
	SNMP v1 und v2c, SNMP traps, Syslog
Switched Power (total):	16 A (~ 3600W)
Switched Power (per port):	10 A (~ 2000W)
Power supply:	IEC C20 (16A, 230V AC)
Operating temperature:	0°C-50°C
Dimensions:	19" / 1 rack unit
Total weight:	ca. 1,5 kg

6.4 Fabrique settings

In order to restore the default settings the device must be started in bootloader mode. Besides that the program *GBL_Conf. exe* is required.

Run GBL_Conf.exe and select the device whose settings should be restored. Then click on Program Device -> Reset to Fab default.

Please notice that all current settings will be deleted. The default settings will be loaded when the firmware of the device is restarted the next time.

7 Support

More information, current drivers and software can be found on http://www.gude.info.

In case of further questions, about installation or operation of **Expert Power Control NET 8x 8210 / 8211**, please have look at *www.gude.info/wiki* or do not hesitate to contact our support (*mail@gude.info*).

8 Declarations of conformity



CE

*		
-	-	
· · · ·		

Konformitätserklärung / Declaration of Conformity

Die Firma / The manufacturer

	Gude Analog- un	d Digitalsysteme GmbH		
Anschrift/Address	Eintrachtstr. 113,	50668 Köln		
Telefon/Phone:	0221 – 912 90 97	Fax: 0221 - 912 90 98	Web: www.gude.info	Mail: mail@gude.info

erklärt hiermit, dass die Produkte / hereby declares that the following products

Produktkennzeichnung / Product name

Expert Power Control NET 1x Schuko, Expert Power Control NET 1x IEC, Expert Power Control NET 4x, Expert Power Control NET 8x, Expert Power Control NET 2x6, Expert Power Control NET 24x, Expert Power Control NET D4x, Expert Power Control NET D1M3S, Expert Power Control NET 4x DIN

Schaltbare Ein- bzw. Mehrfach-Steckdose für TCP/IP Netzwerke / Switchable single and multiple socket for TCP/IP networks

mit den Bestimmungen der nachstehenden EU-Richtlinien übereinstimmen /

are in accordance with the following european directives

Referenz-Nummer / Reference no.	Titel / Title
89/336/EWG / 89/336/EEC	Elektromagnetische Verträglichkeit / Electromagnetic Compatibility
2006/95/EWG / 2006/95/EEC	Niederspannungsrichtlinie / Low Voltage Electrical Equipment
93/68/EWG / 93/68/EEC	CE Kennzeichnung / CE marking

und dass die nachstehenden Europäischen Normen zur Anwendung gelangt sind. /

and comply with the following european standards.

Norm /	Titel /	
Standard	Title	
EN 55022:2006 + A1, A2	Einrichtungen der Informationstechnik: Funkstöreigenschaften – Grenzwerte und Messverfahren	
EN 55022:2006 + A1, A	2 Information technology equipment: Radio disturbance characteristics - Limits and methods of measurement	
EN 55024:1998 + A1, A2	Einrichtungen der Informationstechnik: Störfestigkeitseigenschaften – Grenzwerte und Prüfverfahren	
EN 55024:1998 + A1, A	2 Information technology equipment: Immunity characteristics - Limits and methods of measurement	
EN 61000-3-2:2006	Elektromagnetische Verträglichkeit Teil 3-2: Grenzwerte - Grenzwerte für Oberschwingungsströme	
EN 61000-3-2:2006	Electromagnetic compatibility Part 3-2 : Limits – Limits for harmonic current emissions	
EN 60950-1:2006	Sicherheit von Einrichtungen der Informationstechnik	
EN 60950-1:2006	Safety for Industrial Control Equipment	

Köln, 09.02.2010

L

Dr. Michael Gude, Geschäftsführer / CEO

GUDE ANALOG - und DIGITALSYSTEME GmbH htrachtstr. 113, 50668 Köin 1:: 0221 / 912 90 98 ww.gude.info - info@gude.info

Der Hersteller/ The manufacturer

> Gude Analog- und Digitalsysteme GmbH Eintrachtstrasse 113 50668 Köln

erklärt hiermit, dass für folgende Produkte/ hereby declares that the following products:

Expert mouseClock (alle Varianten/all versions)

EMC Professional NET (alle Varianten/all versions)

Expert GPS Clock (alle Varianten/all versions)

Expert Power Control NET (alle Varianten/all versions)

Expert Power Meter (alle Varianten/all versions)

Expert OptoBridge

USB-RS232 OptoBridge

Expert ISDN Control (alle Varianten/all versions)

Aktive Antennen / Active Antennas

mit den Bestimmungen der nachstehenden Richtlinien übereinstimmen/ are in accordance with the following directives:

> 2002/95/EG (RoHS - Restriction of certain Hazardous Substances)

> 2002/96/EG (WEEE - Waste Electrical and Electronic Equipment)

ElektroG (Elektro- und Elektronikgerätegesetz)

Köln, 07.05.2009

h 200

Dr. Michael Gude, Geschäftsführer / CEO Fax: 0221 / 912 90 98

GUDE ANALOG - und DIGITALSYSTEME GmbH

Tel.: 0221 / 912 90 97 Fax: 0221 / 912 90 98 www.gude.info - info@gude.info

Expert Power Control NET 8x 8210 / 8211 © 2010 Gude Analog- und Digitalsysteme GmbH 23.08.2010