

Remote Access Gateway IGW/922 with DIL/NetPC ADNP/9200

Hardware Reference



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CONTENT

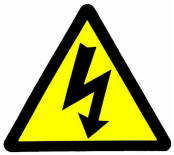
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1 INTRODUCTION

This document describes the hardware components and the necessary cable connections of the Remote Access Gateway IGW/922.

1.1 Safety Guidelines

Please read the following safety guidelines carefully! In case of property or personal damage by not paying attention to this document and/or by incorrect handling, we do not assume liability. In such cases any warranty claim expires.



ATTENTION: Observe precautions for handling – electrostatic sensitive device!

- Discharge yourself before you work with the device, e.g. by touching a heater of metal, to avoid damages.
- Stay grounded while working with the device to avoid damage through electrostatic discharge.

1.2 Conventions

Convention	Usage
bold	Important terms
<i>italic</i>	Filenames, user inputs and command lines
monospace	Pathnames, internet addresses and program code

Table 1: Conventions used in this document

1.3 Features and Technical Data

- 1x QIL-128 socket for DIL/NetPC ADNP/9200
- 1x modem socket option for GSM/GPRS/UMTS/HSPA wireless modems
- 2x 10/100 Mbps Ethernet LAN interface with status LEDs
- 1x RS232 serial port (COM1) with handshake lines and 9-pin Sub-D connector
- 1x RS232/485 serial port (COM2) with 3-pin screw terminal and software-selectable mode switch
- 1x semiconductor relay output (30 VDC, 500 mA)
- 1x power LED
- 1x user LED (programmable)
- Supply voltage 11 .. 28 VDC (typ. 24 VDC)
- Mechanical dimensions: 45 mm x 100 mm x 112 mm
- 0 °C to +70 °C operating temperature
- RoHS conform

1.4 Main Applications

- Remote Access Security Gateway
- GPRS/UMTS Router

2 OVERVIEW

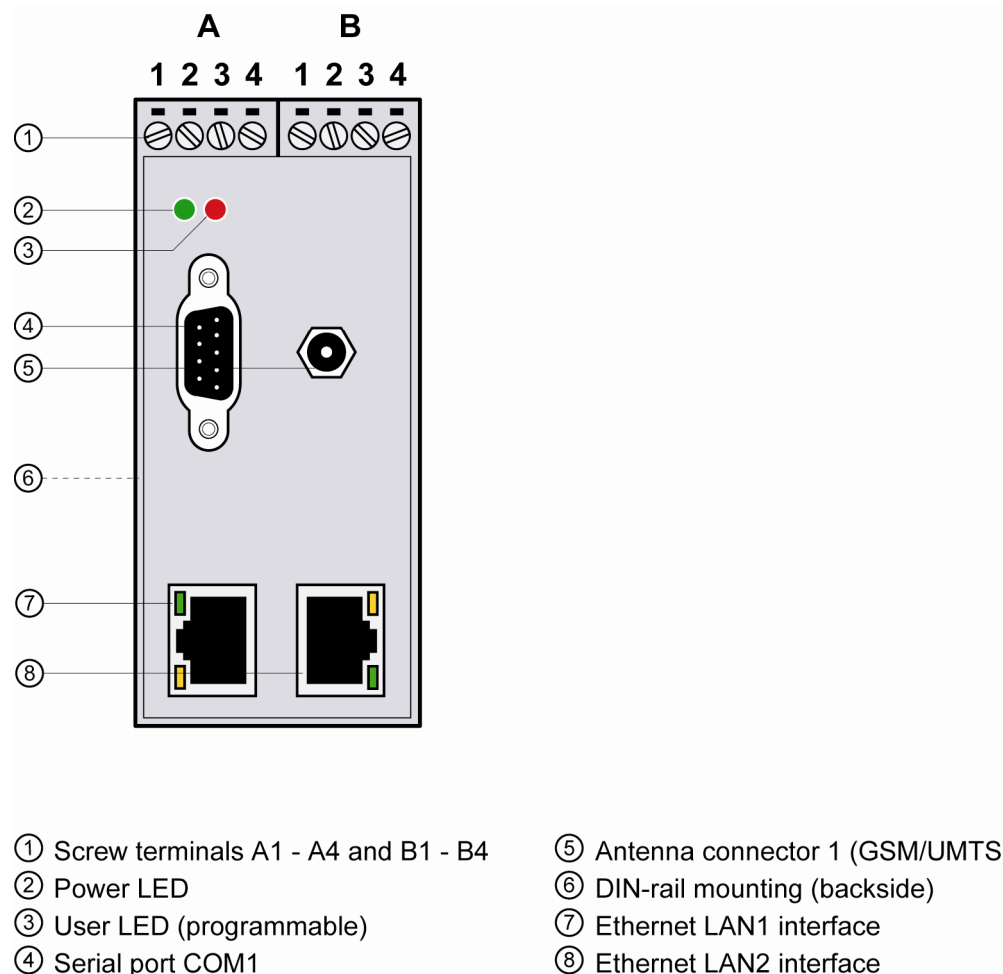


Figure 1: Overview Remote Access Gateway IGW/922

3 PINOUTS

3.1 Screw Terminals

The **table 2** shows the pinout of the screw terminals of the IGW/922.

		Pin	Power	COM2		Alarm
				RS232	RS485*	
A	B					
1 2 3 4	1 2 3 4					
		A1				Alarm -
		A2				Alarm +
		A3	V+ IN			
		A4	GND IN			
		B1				
		B2		TXD	RX/TX -	
		B3		RXD	RX/TX +	
		B4		GND	GND	

Table 2: Pinout of the screw terminals



* **Please note:** The RS485 (officially called TIA/EIA-485-A) connection between your IGW/922 and the field devices needs termination resistors on both ends for proper operation. The IGW/922 does **not** offer internal termination resistors. Please make sure, that the RS485 cable connection is equipped with external termination resistors.

3.2 Ethernet LAN1 and LAN2

The Ethernet LAN1 and LAN2 interfaces are standard RJ45 connectors.

Both have a green LED. It is on when there is a LAN link established and blinks when there is traffic. The yellow LED is not connected.

Pin	Name	Function
1	TX+	10/100 Mbps LAN, TX+ Pin
2	TX-	10/100 Mbps LAN, TX- Pin
3	RX+	10/100 Mbps LAN, RX+ Pin
4	---	Not Connected
5	---	Not Connected
6	RX-	10/100 Mbps LAN, RX- Pin
7	---	Not Connected
8	---	Not Connected

Table 3: Pinout Ethernet interfaces

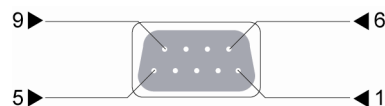


3.3 Serial Port COM1

The serial port COM1 is a standard Sub-D connector.

Pin	Name	Function
1	DCD	COM1 Serial Port, DCD pin (RS232)
2	RXD	COM1 Serial Port, RXD pin (RS232)
3	TXD	COM1 Serial Port, TXD pin (RS232)
4	DTR	COM1 Serial Port, DTR pin (RS232)
5	GND	Ground
6	DSR	COM1 Serial Port, DSR pin (RS232)
7	RTS	COM1 Serial Port, RTS pin (RS232)
8	CTS	COM1 Serial Port, CTS pin (RS232)
9	DCD	COM1 Serial Port, DCD pin (RS232)

Table 4: Pinout COM1 connector



4 CONNECTIONS

4.1 Serial Port COM2

To create an RS232 serial link on port COM2 of the Remote Access Gateway IGW/922 connect the adapter cable and the null-modem cable like shown in the figure below.

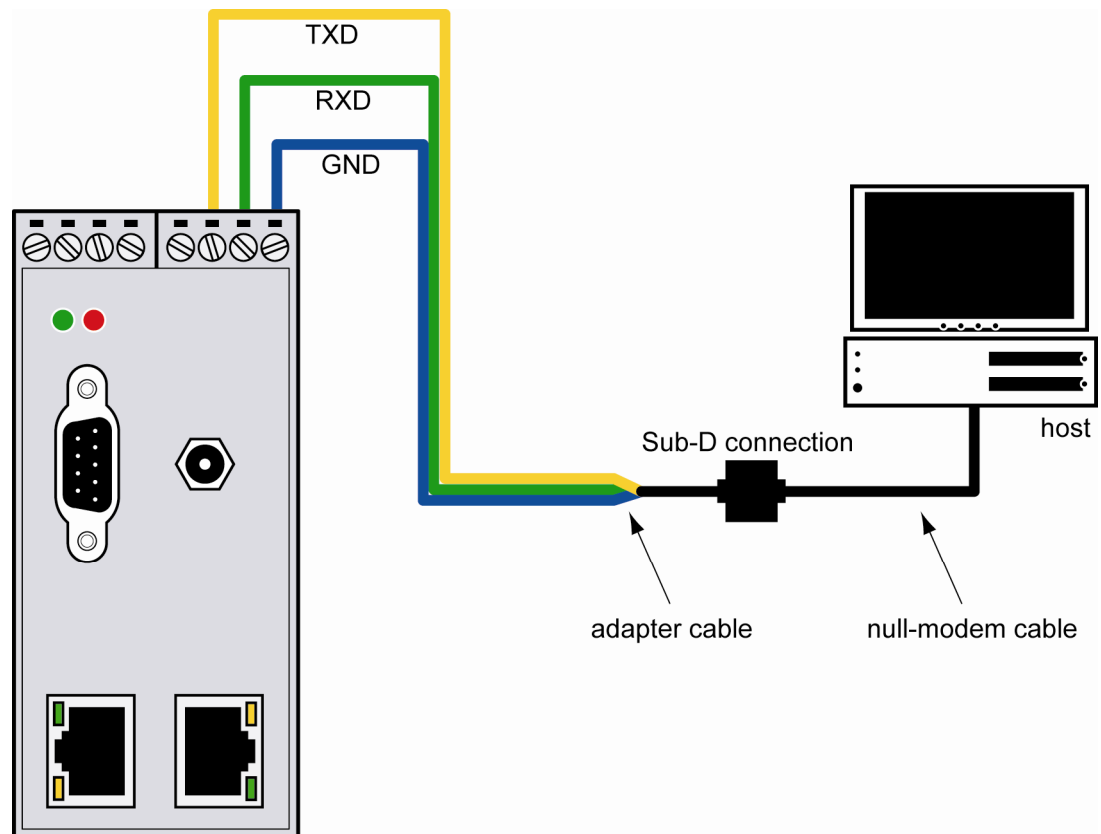


Figure 2: RS232 link on serial port COM2

Terminal	Signal
B2	COM2 Serial Port: TXD (RS232), RX/TX- (RS485)
B3	COM2 Serial Port: RXD (RS232), RX/TX+ (RS485)
B4	Ground

Table 5: Screw terminal COM2

4.2 Power Supply

The Remote Access Gateway IGW/922 needs a supply voltage of 11 .. 28 VDC to work. Use the power adapter cable to provide the system with the necessary power like shown in the figure below.

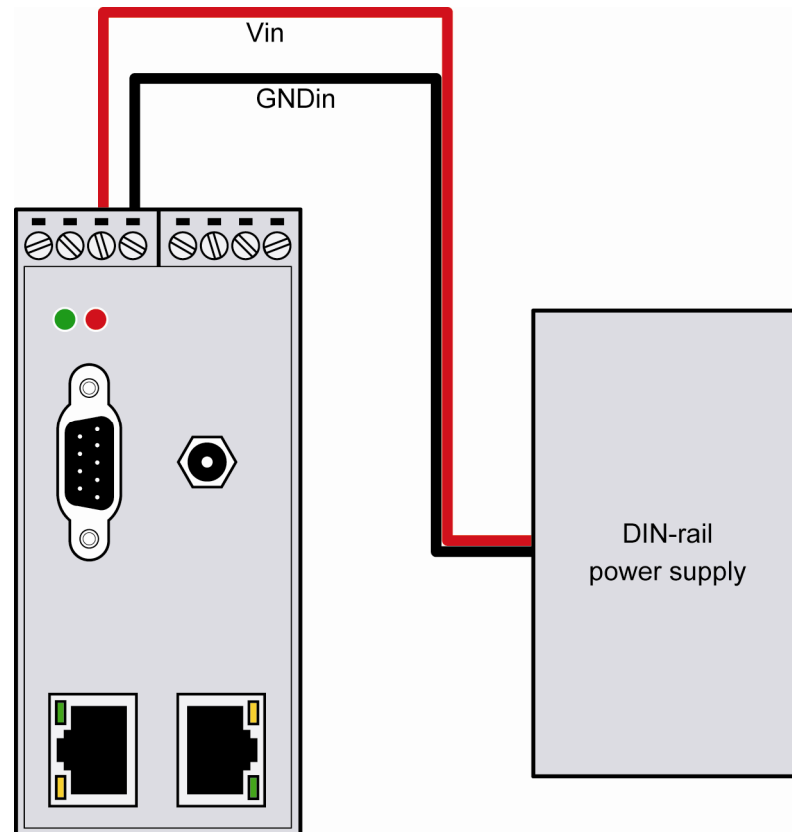


Figure 3: Power supply for the Remote Access Gateway IGW/922

Terminal	Signal
A3	Vin (11 .. 28 VDC)
A4	GNDin

Table 6: Screw terminal power



CAUTION: Providing the Remote Access Gateway IGW/922 with a higher voltage than the regular 11 .. 28 VDC could cause damaged board components!



CAUTION: Do NOT turn on the power supply while connecting the power adapter cable with the Remote Access Gateway IGW/922. This could cause damaged board components! First connect the power adapter cable and THEN turn the power supply on.

4.3 Semiconductor Relay Output

The Remote Access Gateway IGW/922 offers a semiconductor relay output to switch an external alarm device with up to 30 VDC and 500 mA on and off.

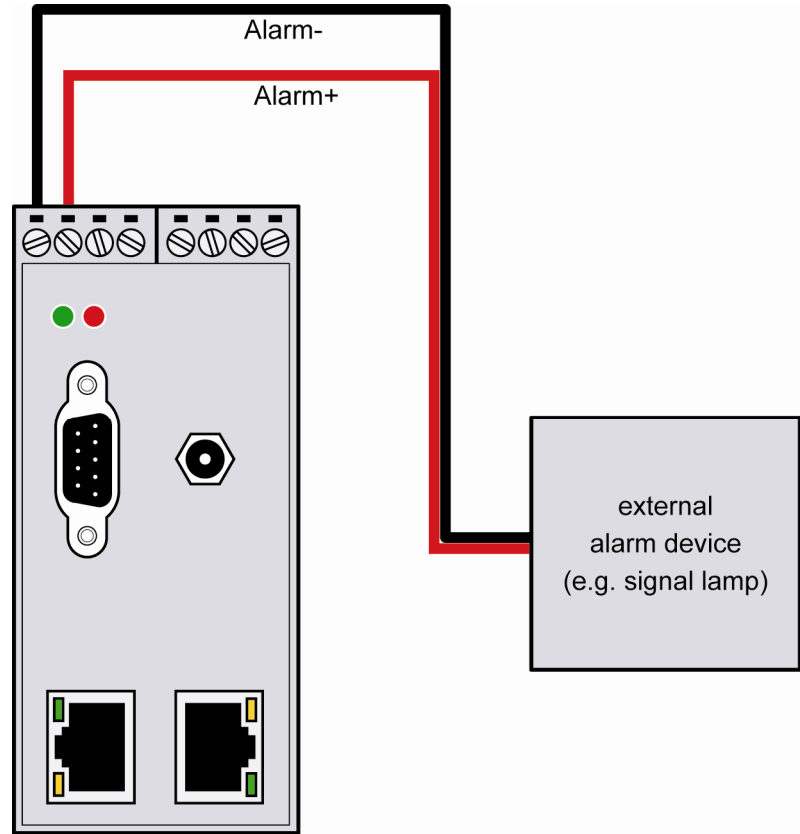
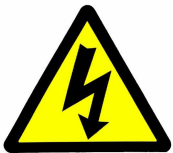


Figure 4: Connecting an external alarm device

Terminal	Signal
A1	Alarm- Semiconductor Relay Output (max. 30 VDC / 500 mA)
A2	Alarm+ Semiconductor Relay Output (max. 30 VDC / 500 mA)

Table 7: Screw terminal semiconductor relay output



CAUTION: Using the alarm output with more than the regular 30 VDC and 500 mA could cause damaged board components!

5 HELPFUL LITERATURE

- DIL/NetPC ADNP/9200 hardware reference

CONTACT

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DOCUMENT HISTORY

Revision	Date	Remarks	Name
1.0	2009-09-18	first version	WBU
1.1	2011-02-21	changed title	WBU
1.2	2012-01-16	warning added in chapter 3.4	WBU
1.3	2012-04-12	Added new chapter 3.1 and 4	WBU

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