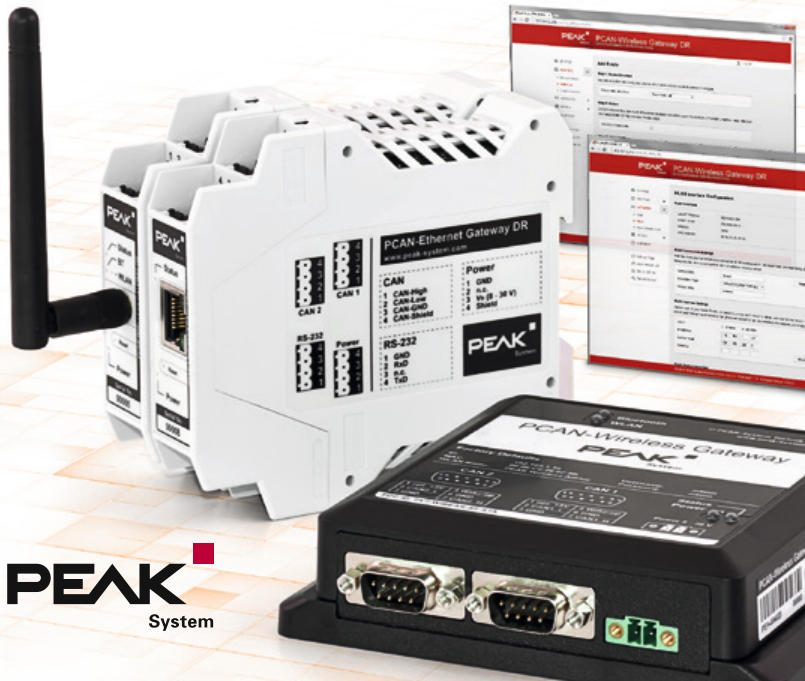# PCAN-Gateway

Quick Start Guide

PEAK System

Congratulations ...

... on your new PCAN-Gateway. This guide covers the basic configuration and operation of the PCAN-Gateway product family.

Documentation

Detailed documentation in PDF format is available on the supplied product DVD and on our website. See the last page of this quick start for download links.

Simplified EU Declaration of Conformity

PEAK-System Technik GmbH declares:

- The products PCAN-Ethernet Gateway DR (IPEH-004010), PCAN-Wireless Gateway DR (IPEH-004011) and PCAN-Wireless Gateway (IPEH-004020 and IPEH-004020-A) are in compliance with the EU directives 2014/30/EU (EMC) and 2011/65/EU (RoHS 2).
- The radio equipment PCAN-Wireless Gateway DR (IPEH-004011) and PCAN-Wireless Gateway (IPEH-004020 and IPEH-004020-A) are in compliance with the directive 1999/5/EC.

The full texts of the EU declaration of conformity are available in the documentation of each product. See the last page of this quick start for download links.

Connectors

PCAN-Ethernet Gateway DR (IPEH-004010)

CAN 1 & 2: High-speed CAN channels, connectors via 4-pole screw-terminal strips (Phoenix)
Power: Voltage supply (8 - 30 V)
LAN: RJ-45 connector

CAN 2
CAN 1

Power
RS-232
Antenna
or RJ-45
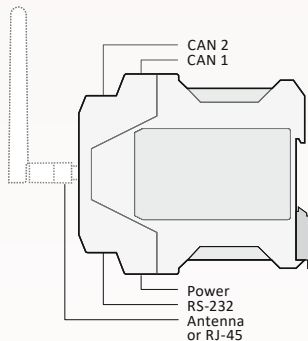
PCAN-Wireless Gateway DR (IPEH-004011)

CAN 1 & 2: High-speed CAN channels, connectors via 4-pole screw-terminal strips (Phoenix)
Power: Voltage supply (8 - 30 V)
WLAN: 2.4 GHz dipole antenna

Pin Assignment CAN

1	CAN-High
2	CAN-Low
3	CAN-GND
4	CAN-Shield

1 2 3 4

Pin Assignment Power

1	GND
2	not connected
3	Vbat (8 - 30V)
4	Shield

1 2 3 4

PEAK
System

PCAN-Wireless Gateway (IPEH-004020)

CAN 1 & 2: High-speed CAN channels, connectors via D-Sub, 9-pin (in accordance with CiA® 303-1)
Power: Voltage supply (8 - 30 V)
WLAN: Internal chip antenna

CAN 2   CAN 1   Power
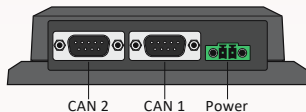
Pin Assignment D-Sub & Power

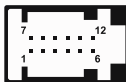| 1	opt. +5V
2	CAN-Low
3	GND
4	Wake-up
6	GND
7	CAN-High

PCAN-Wireless Gateway (IPEH-004020-A)

CAN 1 & 2: High-speed CAN channels, connectors via automotive connector, 12-pin (Tyco)
Power: Voltage supply (8 - 30 V)
WLAN: Internal chip antenna

CAN 1, CAN 2, Power

Pin Assignment Tyco

1	Vb
2	GND
3, 9	CAN1-Low
4, 10	CAN1-High
5, 11	CAN2-Low
6, 12	CAN2-High
7	Wake-up
8	GND

Basic Configuration

Preparation

1 **Power Supply:** Connect the PCAN-Gateway to a suitable power supply (8 - 30 V DC). When the Status LED is blinking green, the device is ready and the default configuration is executed.

2 **Computer:** Configure your PC with IP address settings that correspond to the default settings of the PCAN-Gateway (IP: 192.168.1.xxx, Subnet mask: 255.255.255.0).

3a **IP Connection for the PCAN-Ethernet Gateway DR:** Use the supplied RJ-45 network patch cord to connect the device to your LAN network.

3b **IP Connection for the PCAN-Wireless Gateway (DR):** Connect your PC to the WLAN network that is provided by the PCAN-Gateway (SSID: *PEAK Wireless Default* | Password: *iCANaccess*).

4 **Configuration Website:** Open the device's address: 192.168.1.10 in a web browser to access the configuration website. Enter *admin* for username and password and confirm with *Enter*. Now you can start with the basic device configuration.

CAN Configuration

Open the page *Network >> CAN* to configure the CAN channels.

Bit Rate: Select a value from the drop-down menu. The bit rate must match the one currently set on the connected CAN bus.

Listen-Only-Mode: If the PCAN-Gateway should act as a pure observer, not affecting the data traffic, Listen-Only-Mode must be enabled.

Save your settings for each channel with the button *Save Settings*.

IP Configuration

Depending on your device the connection to the IP network is done via LAN or WLAN. Open the page *Network >> LAN* or *Network >> WLAN* to configure the IP interface.

Connection Settings: Only available on PCAN-Gateways with WLAN interface! Enter the access data of the WLAN network you will be connecting to.

Address Settings: Enter an IP address and Subnet mask that match the settings of your IP network.

Please note: *DHCP* is not recommended.

After you have saved the settings, you are automatically logged out and the basic configuration of the device is completed. For devices with WLAN interface: After the basic configuration the default WLAN network is no longer available.

Please note: If the PCAN-Gateway is no longer accessible due to an incorrect configuration for example, the device can be reset to factory defaults. To perform this reset, press with a paper clip for more than 5 seconds into the small reset hole.

Application Example

The PCAN-Gateways allow the connection of different CAN busses over IP networks. CAN frames are wrapped in TCP or UDP message packets and then forwarded via LAN or WLAN from one device to another.

CAN Bus A   **Gateway 1**   **IP Network**   **Gateway 2**   **CAN Bus B**
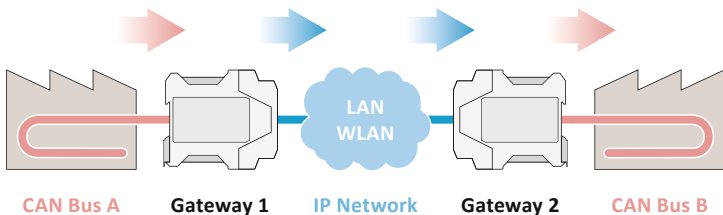
In this application example, message traffic from CAN bus A is being forwarded to CAN bus B via an IP network.

For this unidirectional data transmission two PCAN-Gateways and the creation of a route on each device are required.

PEAK
System

Gateway 1: Create a Send Route

Gateway 1 is connected to CAN bus A via its CAN channel 1. To transfer the CAN messages to Gateway 2, you have to create a Send route on Gateway 1.

1	**Add Route**	Open the configuration website of Gateway 1 and go to the page *Routing >> Manage Routes.* Click the button *Add Route.*
2	**Configure Route**	Select *Send: CAN > IP* from the *Choose the direction* drop-down list. Complete the form with the values from the table below.

Status	Activate
CAN	CAN Channel 1 (connected to CAN bus A)
IP Address	192.168.1.202 (address of Gateway 2)
Port	50000
Protocol	TCP

3	**Confirm**	Click the *Add Route* button at the bottom of the page to complete the route creation process. After saving, the route will be displayed in the overview on the page *Routing >> Manage Routes*.

PEAK
System

Gateway 2: Create a Receive Route

Gateway 2 has to receive the messages sent by Gateway 1. Furthermore the extracted CAN messages, have to be transferred to CAN bus B, which is connected to CAN channel 2. To make that work, you have to create a Receive route on Gateway 2.

1	**Add Route**	Open the configuration website of Gateway 2 in another browser tab and go to the page *Routing >> Manage Routes.* Click the *Add Route* button.
2	**Configure Route**	Select *Receive: IP > CAN* from the *Choose the direction* drop-down list. Complete the form with the values from the table below.

Status	Activate
Port	50000 (like the Send route)
Protocol	TCP (like the Send route)
CAN	CAN Channel 2 (connected to CAN bus B)

3	**Confirm**	Click the *Add Route* button at the bottom of the page to complete the route creation process. After saving, the route will be displayed in the overview on the page *Routing >> Manage Routes*.

Final Check

Open the page *Routing >> Manage Routes* on both devices.
If the Status LEDs of the Send route on Gateway 1 and the
Receive route on Gateway 2 are green, everything is fine and the
unidirectional message forwarding is working.

Please note: If you like to setup a bidirectional message
transmission, you have to create a message forwarding in the
opposite direction. For this a Send route on Gateway 2 and a
Receive route on Gateway 1 are required.

A detailed description of this application example is available in
the documentation of your PCAN-Gateway.

Video Tutorials

With short video tutorials on YouTube, we demonstrate how to
configure and use the PCAN-Gateways.

www.youtube.com/user/peaksystemtechnik

PEAK
System

Software Updates

Each model of the PCAN-Gateway product family requires its own software update. Therefore, download the appropriate update package for your device via the URLs below.

The update can be installed via the configuration website. Simply follow the instructions on the page *Device >> Software Update*.

PCAN-Ethernet Gateway DR

Part No.: IPEH-004010
Software Package Download: *www.peak-system.com/quick/DLP4010*
Documentation (English): *www.peak-system.com/quick/DOC4010E*

PCAN-Wireless Gateway DR

Part No.: IPEH-004011
Software Package Download: *www.peak-system.com/quick/DLP4011*
Documentation (English): *www.peak-system.com/quick/DOC4011E*

PCAN-Wireless Gateway

Part No.: IPEH-004020 & IPEH-004020-A
Software Package Download: *www.peak-system.com/quick/DLP4020*
Documentation (English): *www.peak-system.com/quick/DOC4020E*

PEAK
System