

TECHNOLOGIEN MIT
VORSPRUNG



isNet H@rt

User Manual



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CHAPTER 1 : HARDWARE INSTALLATION

Introduction

The Ethernet gateway isNet H@rt is an additional module for isNet Cube which supports the HART communication protocol standard and provides an efficient data exchange.

The rack mountable Ethernet gateway is suited for varied tasks in remote control and remote operation. Device parametrisation, network configuration or data acquisition can be done directly from the workstation.

Figure 1: The Ethernet gateway isNet H@rt



The module supports the transmission speed of 1200 bit/s and can work as primary Master as well as secondary Master. The interface is available with galvanic-isolation to the HART network. The device comes with a Windows DLL which allows the easy integration of the modem into any applications.

Optionally a device type manager (DTM) compliant to the current version 1.2.1 of the FDT specification is delivered. It works like a device driver which allows the communication between devices on the HART bus and their DTMs. With the help of the DTM the start-up process of the HART bus can be done easily.

Documentation

This documentation contains important information for the secure and correct operation of the Ethernet gateway isNet H@rt. Please read this documentation carefully before using the device.

Throughout the manual different fonts are used to indicate different meanings. A short explanation can be found below:

Courier New:	file names, code sequences
Arial:	names, commands, remarks

Our Service

In case you have any questions which can't be solved by this manual, please contact our service by phone, fax or e-mail.

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PC Connection

System Requirements

To connect the interface isNet H@rt with your computer an available Ethernet port is required. The operating systems Windows 2000, XP or Vista are supported.

Delivery Contents

The interfaces are delivered with user manual and driver software on CD.

Technical Data

Table 1: Hardware capabilities

Hardware	
HART	
Modem Chip	A5191 HRT
Connector	Screw type
Transmission speed	1200 bit/s
Ethernet	
Connector	RJ 45
Transmission speed	10/100 Mbit/s
Main Module	
Dimensions	114,5 (l) x 45 (w) x 99 (h) mm
Weight	212 g
isNet H@rt Module	
Dimensions	114,5 (l) x 22 (w) x 99 (h) mm
Weight	145 g

Table 2: Software capabilities

Driver	
Interfaces	DLL
Operating systems	Windows 2000, XP and Vista

Installation

Steps of Installation

1. Driver installation
2. Interface installation
3. Configuration

The module can be connected to the HART network with the pin test clips directly.

The LEDs indicates the actual operating mode.

Figure 2: isNet H@rt Module



CHAPTER 2 :

SOFTWARE INSTALLATION AND CONFIGURATION

Software Installation

The driver software package isHRT Multidriver contains a Dynamic Link Library (DLL) which allows the access to the HART firmware under the operating systems Windows 2000, XP and Vista. The actual operating system is detected automatically by the driver DLL.

The configuration of the interface can be done fast and easily with the configuration software isHRT Driver Configurator which is installed into the ifak system directory of the Start Menu.

The software comes on CD-ROM. The installation follows the steps mentioned below:

- Login as administrator under the operating systems Windows 2000, XP or Vista.
- Insert the installation CD-ROM into your CD drive.
- The setup starts with an autoroutine; proceed according to the instructions displayed on the screen.
- The software is installed in the default program directory of your computer under the subdirectory
*c:\Programm\ifak system\isHRT Multidriver *

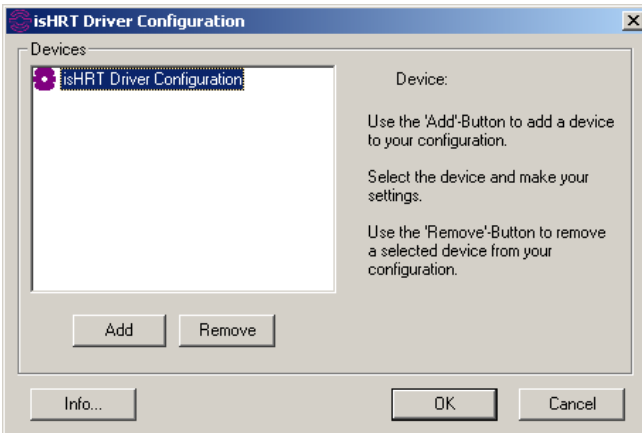
Configuration Software

The configuration software isHRT Driver Configurator is provided in order to adapt the DLL access to your hardware. It is installed in the Start Menu.

This dialog based application allows the easy addition and removal of HART interfaces. It also checks the available resources of the system.

A device number is assigned to each Hart interface which enables the software to address it. Empty devices can be included in order to allow gaps in the enumeration of devices; see section Empty-Slot.

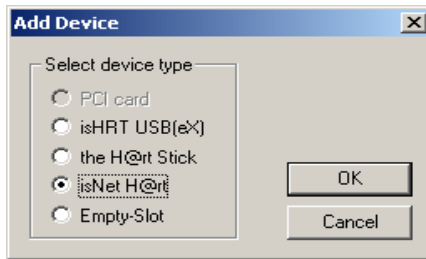
Figure 3: Configuration program: add and remove devices



Add a Device

Please press the button **Add**, choose the device type you would like to add. Then make your settings.

Figure 4: Configuration software: add a device



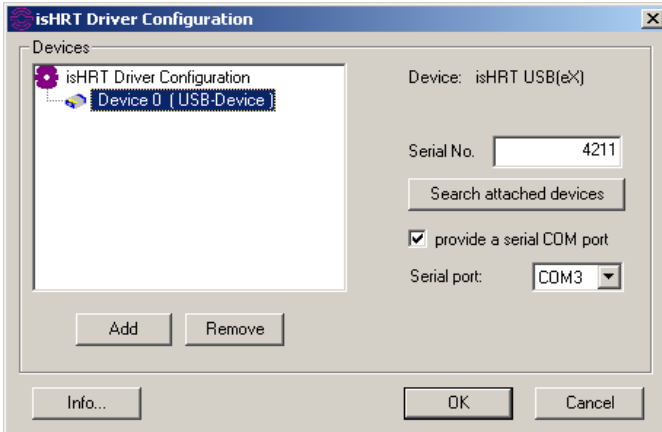
Device isHRT USB/isHRT USBeX

The device possesses an unique **serial number** for clear identification. The number is located on the downside of the case. The configuration software offers the possibility to search automatically for all attached devices and to detect their serial numbers. Please fill in the number in the intended field.

The device can work like a serial modem under the operating systems Windows 2000, XP and Vista. Therefore it offers a serial COM-port so that already existing applications can be used without any changes.

The serial COM-port can be selected. The configuration software checks the available COM-ports to avoid an address conflict.

Figure 5: Configuration software: select a serial COM-port

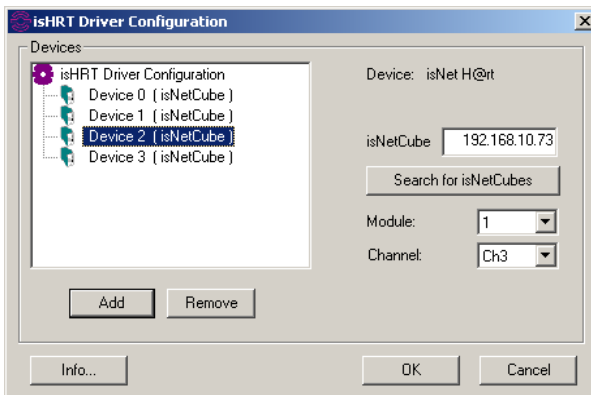


If you are working under Windows 2000, XP or Vista just fill in your settings and end with OK.

isNet H@rt

The isNet H@rt Module is identified by the serial number or the IP-address of the main module. Furthermore one has to choose which module on which channel you want to access.

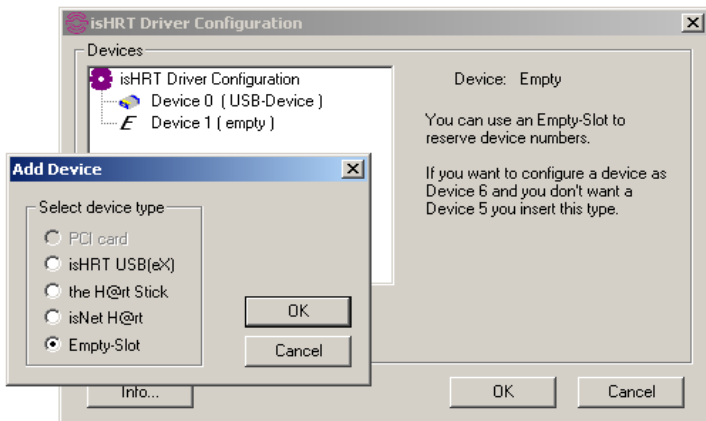
Figure 6: Configuration software: select module



Empty-Slot

The empty device does not contain any resources. It serves as a substitute for device numbers not yet assigned. Using empty-slots enables a free enumeration of devices by inserting empty devices between existing ones.

Figure 7: Configuration software: add an empty slot



Remove a Device

Mark the device you wish to remove and press the button Remove.

isHRT Test

The correct installation and functionality of isNet H@rt can be checked with the test application "isHRT Testprogramm" in the driver software.

The programm searches for connected HART slaves.

Figure 8: "isHRT testprogramm"

