

# blue PiraT2

## Ethernet Spy Mode User Guide

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### 3. Overview

The **[Ethernet Spy Mode]** feature of the blue PiraT2 enables the following options:

- Logging all Ethernet data in promiscuous mode
- Setting filters for logging selected Ethernet data

A license is required to use the **Ethernet Spy Mode** feature. All steps can be performed only with a valid license.

With the Ethernet spy mode license it is possible to log data of the Ethernet interface in promiscuous mode. It is not possible to pass-through Ethernet data to another interface. You are able to configure up to eight Ethernet channels with the blue PiraT2 Client.

Spy Mode simply means logging of all Ethernet data packets of an interface on the data link layer (□ OSI layer 2). This is independent of the used protocol (TCP, UDP, IP...□ OSI layer 3/4)

This user guide only describes the configuration and usage of the Ethernet Spy Mode (logging promiscuous mode). For further information about licenses and license handling please have a look at the blue PiraT2 user manual.

This document refers to blue PiraT2 FW 01.09.01 and blue PiraT2 client version 1.9.1. Some features depending on model and feature license or may not be available in older versions.

Software updates are frequently available in the blue PiraT Service Center.

Please make sure to use always current firmware and software versions.

### 4. System requirements

#### Control Unit

A Laptop or a PC is used to configure the devices by a software client. It also allows to save the recorded data and to use them offline.

#### blue PiraT2

The **blue PiraT2** is an data logger developed by Telemotive AG with a lot of appointments and in the meantime newly developed with blue PiraT2 5E. He offers a lot of capacity and flexibility which can be expanded by combining it with blue PiraT Mini.

The communication of bus systems and control units is monitored and relevant data can be recorded very precisely with the data loggers of Telemotive AG. The collected data are stored on the data logger and can be downloaded to a PC or network storage for analysis

#### License

The **“Ethernet Spy Mode”** function works on any blue PiraT2 system. However, it is necessary to install a special license for this function. For further information about license and license handling please read the general bluePiraT2 manual.

## 5. Connection

On blue Pirat2 the Ethernet Spy mode is available only for the front Ethernet connector. All data which are on the line and not addressed to the logger itself can be logged. Please connect the ECUs over an Ethernet hub (do NOT use a switch!) to the data logger because a switch will not forward these data to the data logger unless you're using an managed switch with some needed modifications.

**Note:**

**It is not possible to pass-through Ethernet data to another Ethernet port of the blue PiraT2!**

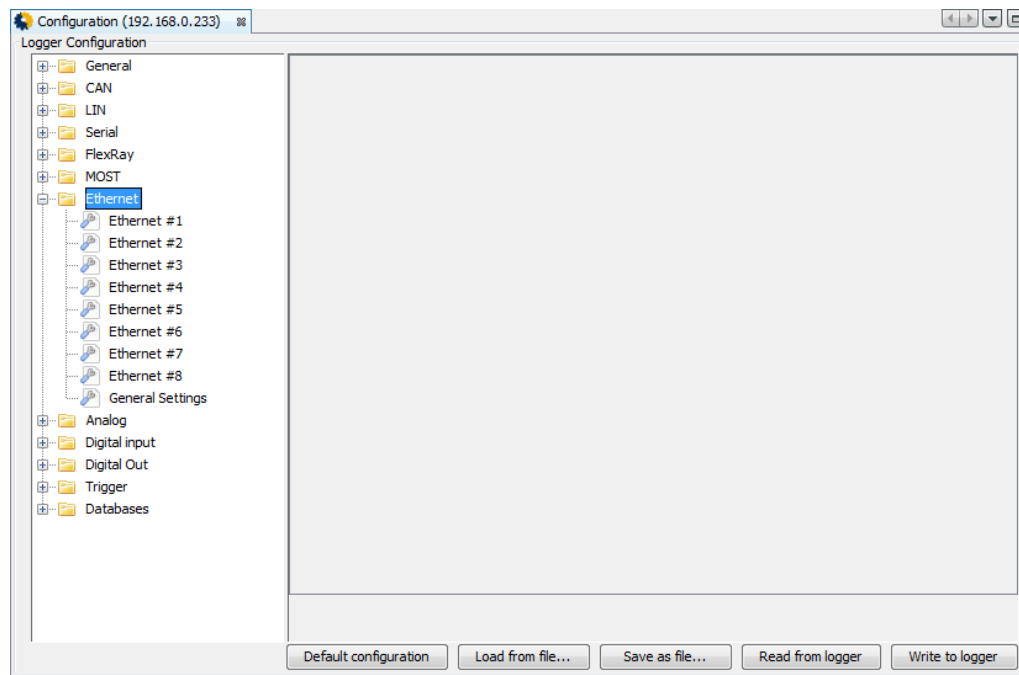
**Attention:**

**To log ALL Ethernet data of a network in spy mode please use the front connector only. Due to the fact that there's a switch inside the rear ports they just can log all data if the logger is the target of the traffic.**

## 6. Configuration

For the configuration of the Ethernet Spy Mode, a connection to the data logger is required. Please connect the data logger to your computer and start the client.

In the client please open the logger configuration and choose the sub menu **[Ethernet]** from the selection tree.



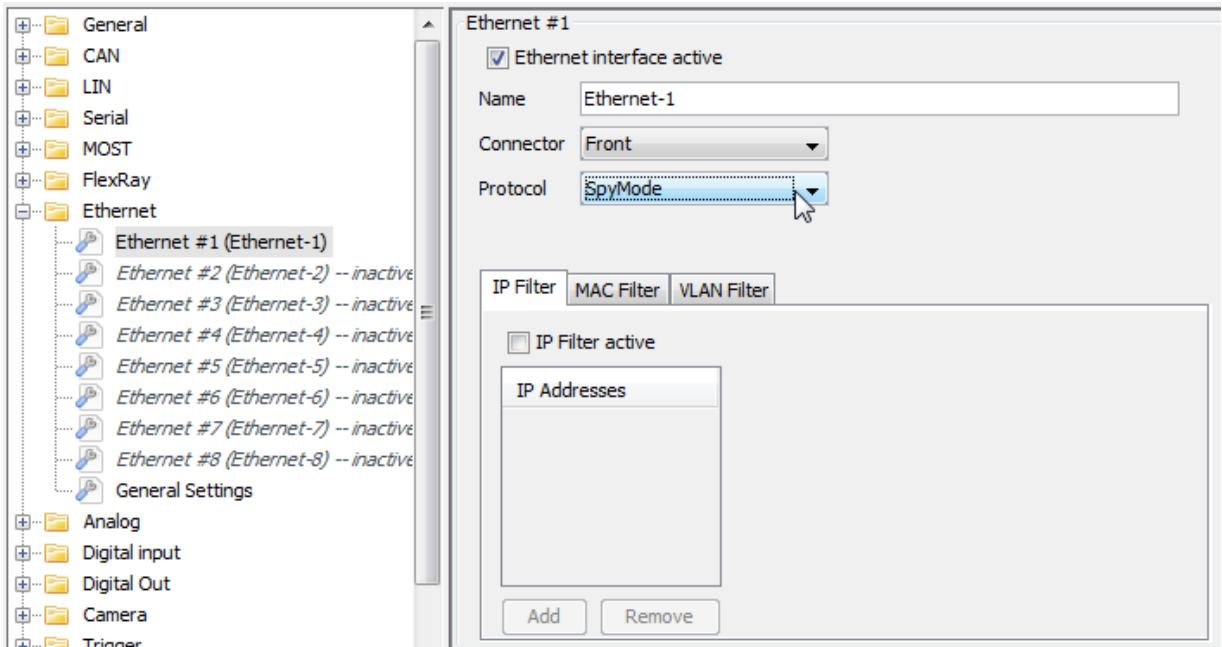
The complete data logger configuration can be managed by following buttons:

<b>Default configuration</b>	Loading a default configuration
<b>Load from file</b>	Loading data from a locally stored configuration file
<b>Save as file</b>	Save the current configuration to a local file
<b>Write to logger</b>	Send the configuration to the connected data logger

The configuration is applied immediately

## 6.1. Configuration menu

In the client the configuration of the logger must be opened to configure the Ethernet Spy Mode function. If the license has been installed properly, the selection tree shows the entries “Ethernet #1 to #8”. In the “Protocol” dropdown menu the entry **[SpyMode]** is now available.



### 6.1.1. Configuration of an Ethernet Channel for SpyMode

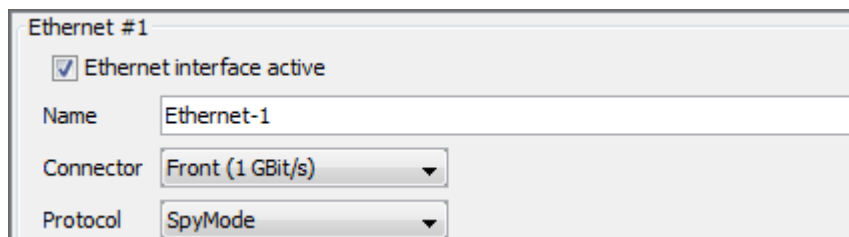
In the blue PiraT2 there are 8 channels available for the Ethernet Spy Mode configuration.

**Note:**

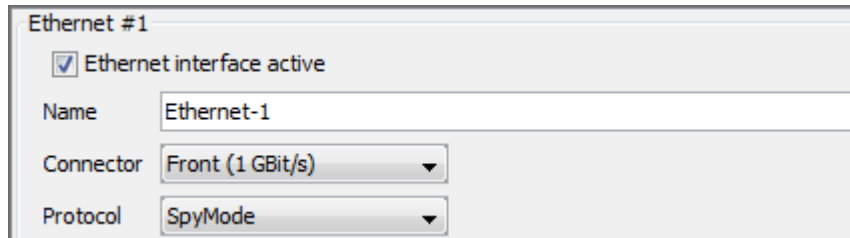
**All Messages which are directed to the logger itself, are filtered out to prevent a double logging**

### 6.1.2. Ethernet interface activation

Each Ethernet interface that will be used for logging can be activated or deactivated separately.



### 6.1.3. Name, Connector and Protocol



**Name:**

You can configure a new name for each Ethernet channel.

**Connector:**

Just the front Connector (1GBit/s) can be used for Ethernet spy mode: Ethernet data will be stored in the chosen blue PiraT2 Ethernet channel.

**Protocol:**

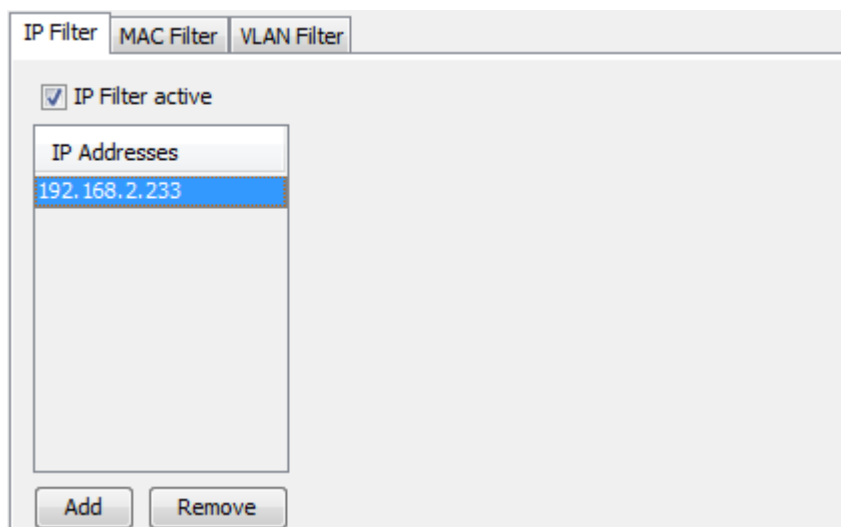
For Spy Mode configuration please choose the **[SpyMode]** protocol from the dropdown menu.

### 6.1.4. Filter configuration

For each Ethernet channel three types of filters can be configured. All filters are independent and can be used coincident.

**IP Filter:**

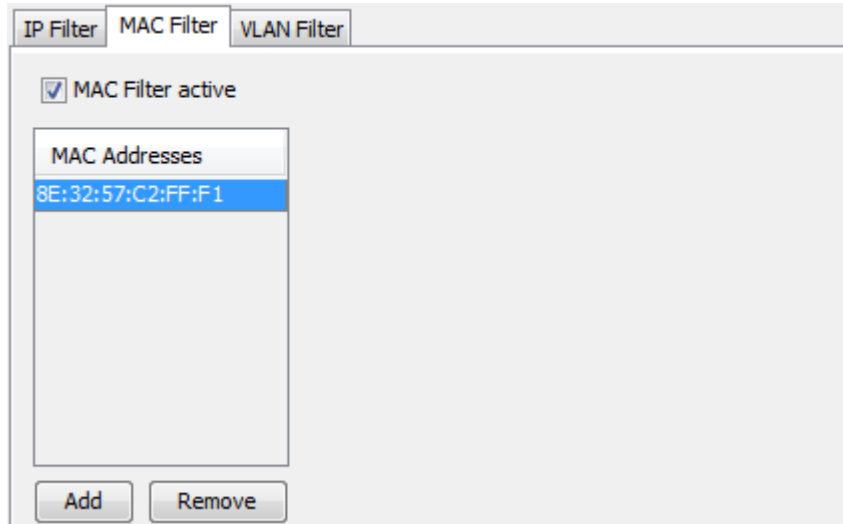
You can define a set of IP addresses that should be recorded. There are only Ethernet data packets recorded that are sent from / to the defined IP addresses. To add IP addresses to the filter please press the “Add” button. For deleting an IP address please mark the IP address in the list and press the “Remove” button. IP address has to be the following scheme: “xxx.xxx.xxx.xxx” where xxx got a range from 0...255 (e.g. 192.168.2.233)





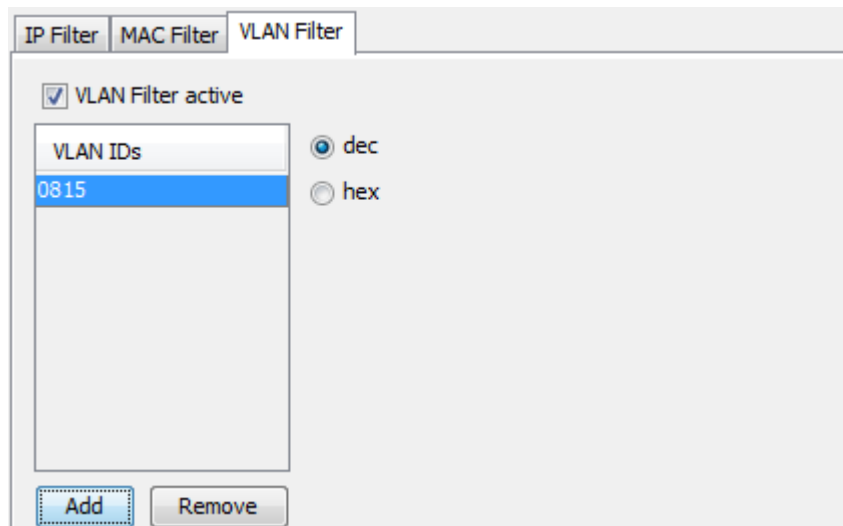
### MAC Filter:

You can define a set of MAC addresses that should be recorded. There are only Ethernet data packets recorded that are sent from / to the defined MAC addresses. To add MAC addresses please press the "Add" button. For deleting a MAC address please mark the MAC address in the list and press the „Remove" button. MAC addresses got to be the following scheme: "xx:xx:xx:xx:xx:xx" where xx got a hexadecimal value from 00...FF (e.g. 8E:32:57:C2:FF:F1)

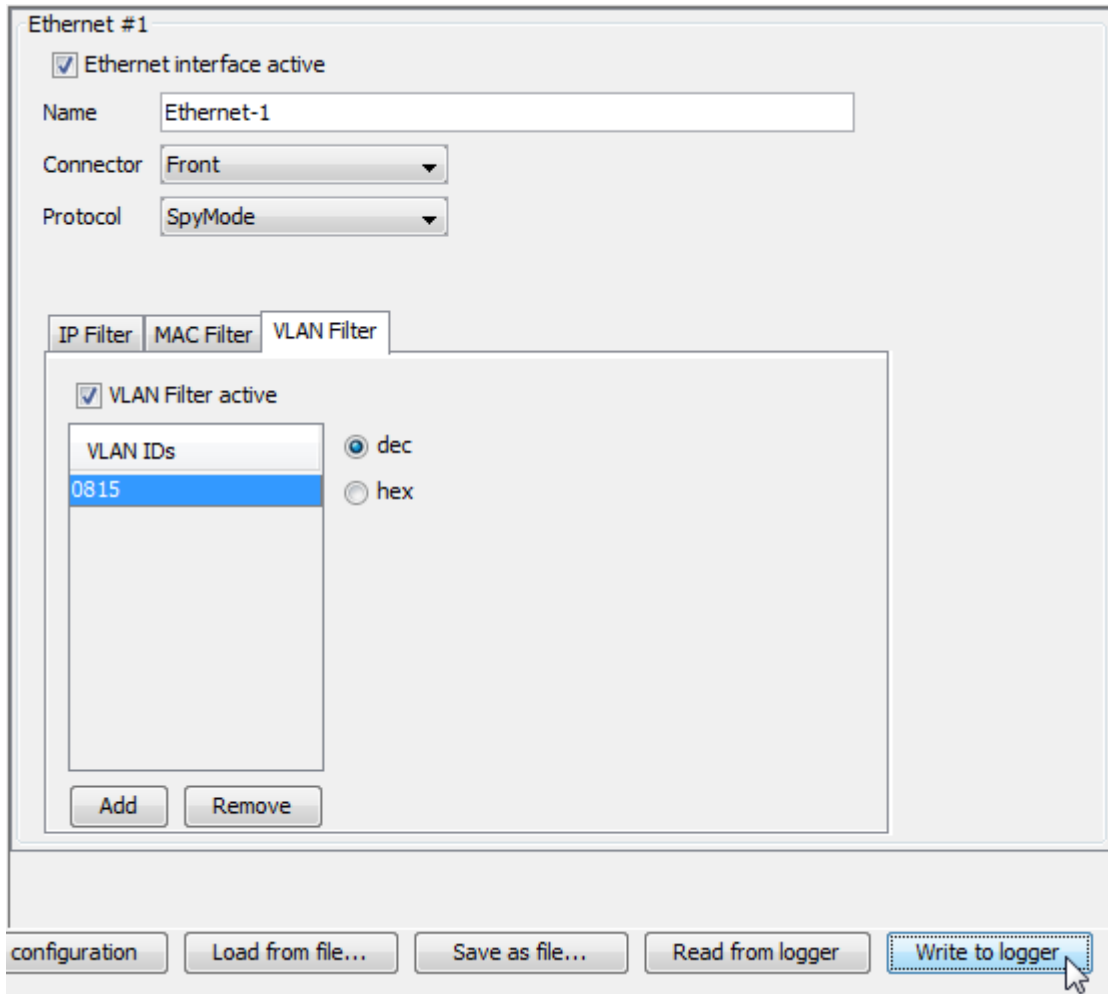


### VLAN Filter:

You can define a set of VLAN IDs that should be recorded. There are only Ethernet data packets recorded that are sent from / to the defined VLAN IDs. To add VLAN IDs please press the "Add" button. For deleting an VLAN ID please mark the VLAN ID in the list and press the "Remove" button. A VLAN ID got to be a number between 1 and 4094.



If everything is configured correctly the configuration has to be written to the data-logger by pressing the button **[Write to logger]**.



## 7. Data Download & Converting

For data download and converting data please have a look at the general manual for blue PiraT2.

## 8. Contact



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