LINEEYE

LE590-NIC
User's Manual

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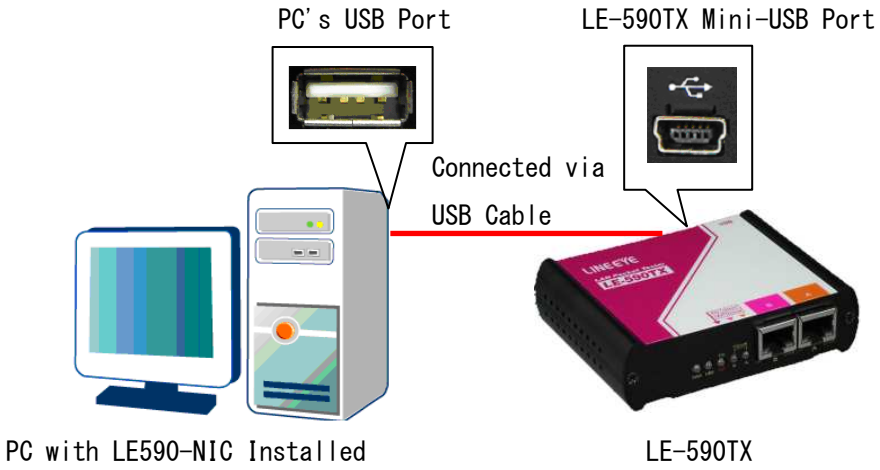
1. LE590-NIC Overview

LE-590TX has a mini-USB port for PC connection. In addition to network TAP, system control and system upgrade functions. LE-590TX can also be used as a network interface card. With control software and LE-590TX's hardware conversion, network data streams can flow between LE-590TX's USB and network port.

1.1. Hardware Installation

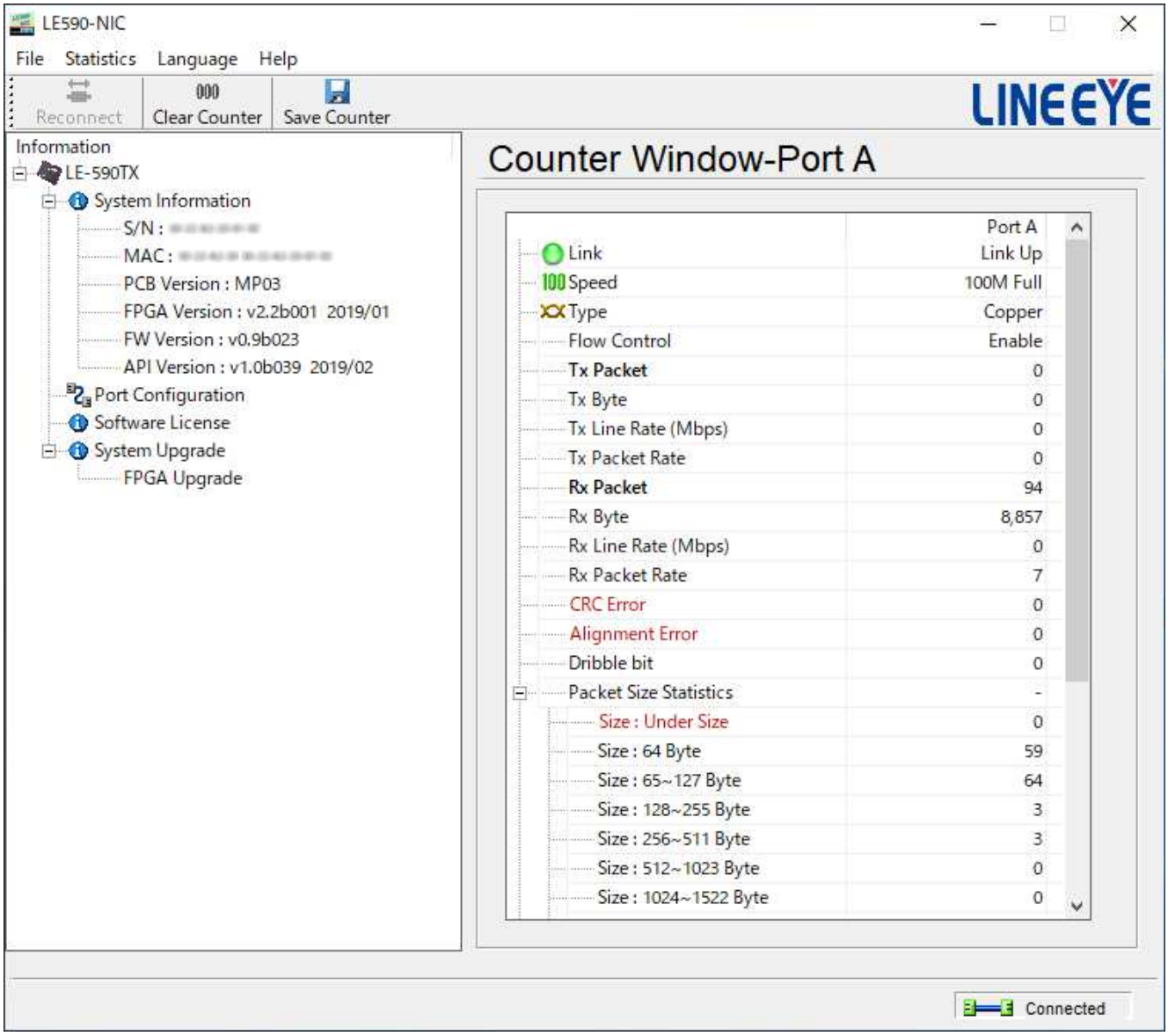
Before starting LE590-NIC, your PC and LE-590TX shall be connected properly. The figure down below illustrates connecting PC and LE-590TX. You can connect LE-590TX with PC in the same manner.



1.2. Starting LE590-NIC

Before starting LE590-NIC, the DUT, your PC, and LE-590TX shall be connected as shown in "**1.1. Hardware Installation**".

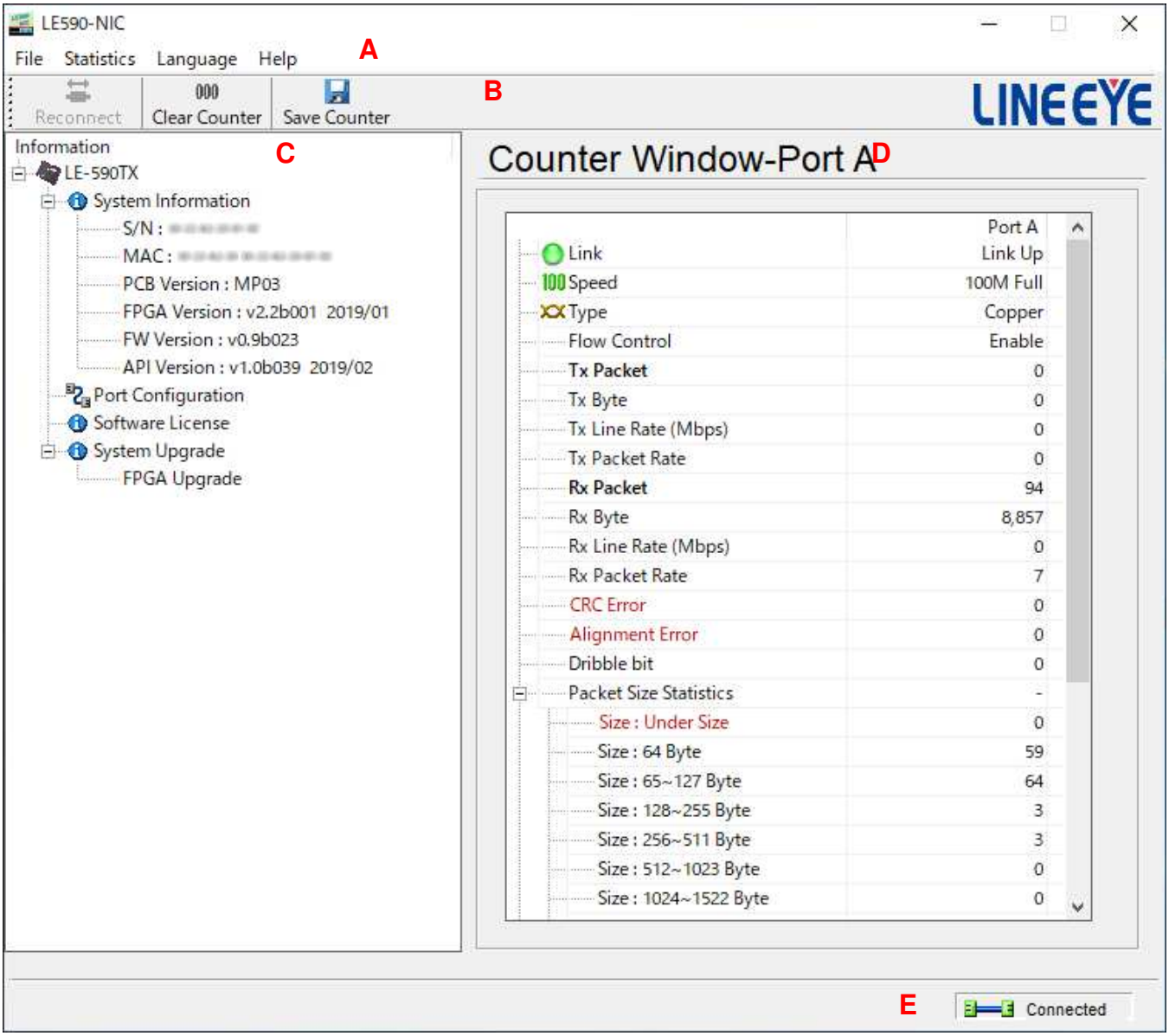
You can start running LE590-NIC by:
➢ Click **Start** → **Programs** → **LINEEYE** → **LE-590TX** → **LE590-NIC Vxxxxx** → **LE590-NIC Vxxxxx**.
➢ Double-click LE590-NIC icon located on your PC's desktop. LE590-NIC.exe



If your PC is not connected with LE-590TX, you can still run LE590-NIC under Demo mode. Almost all LE590-NIC's functions are available under Demo Mode. However, please note that **Demo Mode is for system demo purposes only**, and does not serve any testing purposes at all.

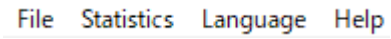
1.3. LE590-NIC Main Window Overview

LE590-NIC Main Window



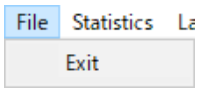
LE590-NIC Functions Overview		
A	**Menu Bar**	The **Menu Bar** allows you to switch between counter of port A or port B, to enable or disable flow control, to upgrade the FPGA and License of your LE-590TX, change language displayed, view the version of the software/LE-590TX and system requirement.
B	**Tool Bar**	The **Tool Bar** allows you to reconnect your PC to your LE-590TX, clear counter window of port A or B and save the counter result.
C	**System Info/Software License**	From **System Info/Software License** you can view the system information and the Software License of your current connected LE-590TX.
D	**Counter Window**	You can view real-time testing diagrams in here.
E	**System Connection Status**	This icon shows the connection status between your PC and LE-590TX.

1.4. Menu Bar



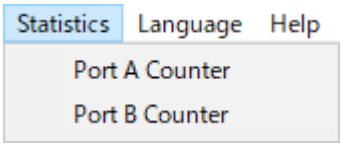
LE590-NIC Menu Bar includes configuration options such as **File**, **Statistics**, **Language**, and **Help**. Please refer to the sections down below for detail information regarding to each configuration option.

1.4.1. File



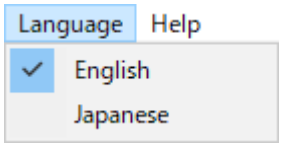
File	
Exit	A prompt pop-up window will ask if you are sure to exit LE590-NIC. Click **YES** to exit LE590-NIC, or click **NO** to cancel.

1.4.2. Statistics



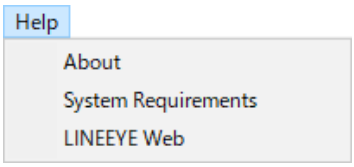
Statistics	
Port A/B Counter	You can select Port A or Port B counter window to be displayed by clicking **Port A Counter** or **Port B Counter**.

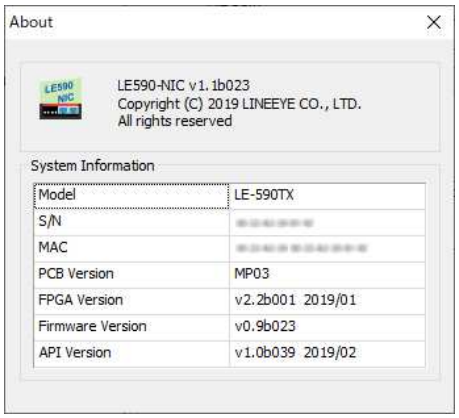
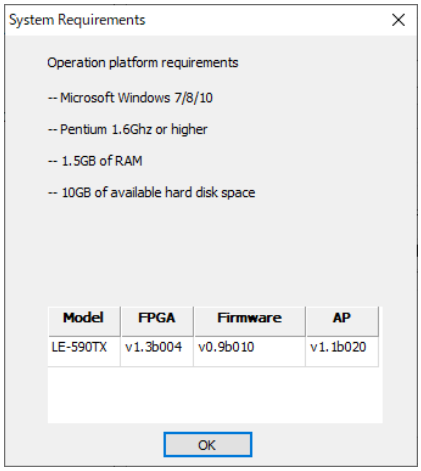
1.4.3. Language



Language	
English/ Japanese	LE590-NIC has **2** different languages for its UI available. You can set the language of UI to **English** or **Japanese**.

1.4.4. Help



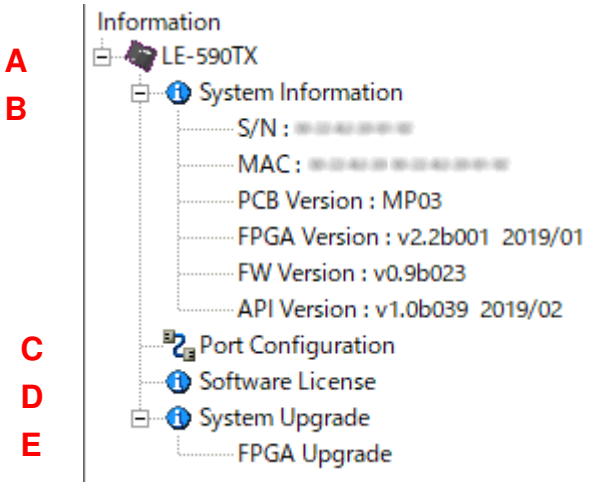
Help		
About…		An "**About**" window will pop up and show detailed system information. Click the **OK** button to exit the "**About**" pop-up window.
System Requirements		A "**System Requirements**" window will pop up and show the requirements for your PC and the FPGA/Firmware of the module. Click the **OK** button to exit the "**System Requirements**" pop-up window.

1.5. Tool Bar

The **Tool Bar** allows you to reconnect your PC to your LE-590TX, clear counter window of port A or B and save the counter result.

Tool Bar	
Reconnect	If the USB connection between your PC and LE-590TX is down, a "**Disconnected**" icon Disconnected will be shown in "**System Connection Status**". Press **Reconnect** button Reconnect to re-establish the connection between your PC and LE-590TX. If the connection has been established successfully, a message window will pop up, and the "**System Connection Status**" will be shown as "**Connected**" Connected.
000 Clear Counter	Click the **Clear Counter** button to refresh the **Counter Window-Port A** and **Counter Window-Port B**.
Save Counter	Click the **Save Counter** button to save the current **Counter Window-Port A** and **Counter Window-Port B** results.

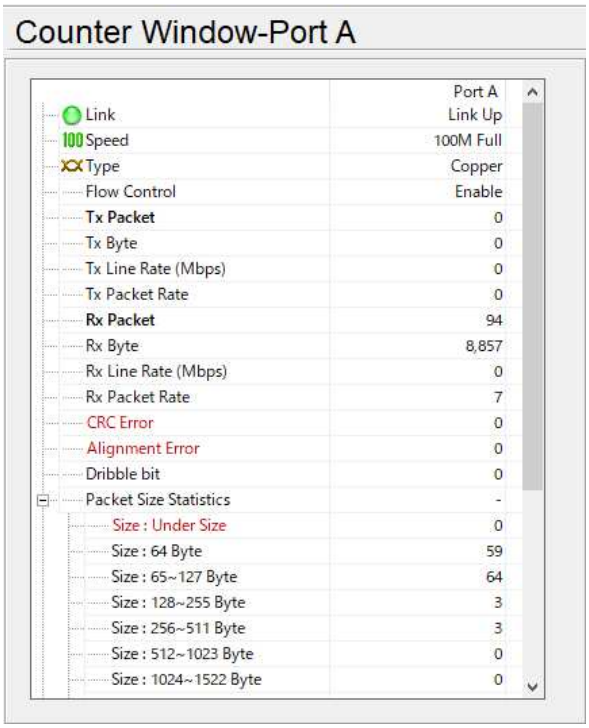
1.6. System Info/Software License



The **System Info/Configuration List** allows you to view system information, making port/test configurations, and check test reports on the **Main Display Screen**.

System Info/Software License	
A	Shows the current LE-590TX model connected to your PC.
B	Shows the current information of the System
C	You can select choose to **Enable** or **Disable** the Flow Control here.
D	Click on the LE590 software to pop up a window showing the license information regarding to other LINEEYE softwares.
E	FPGA upgrade will allow you to upgrade the FPGA version of your LE-590TX.

1.7. Counter Window



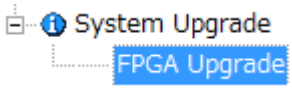
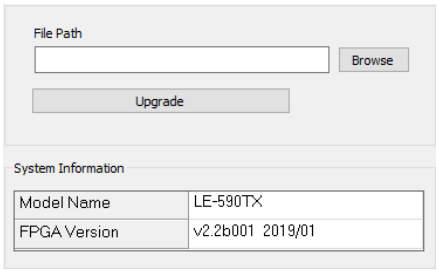
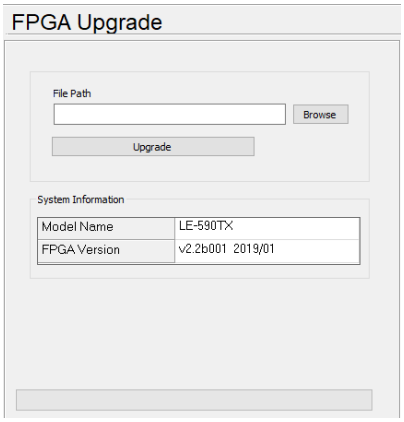
The Counter Window shows the status of the packets transmission of Port A and Port B of your LE-590TX, when it performs simulation of Network Interface Card (NIC).

For more details about simulation of Network Interface Card (NIC), please refer to the **3. Simulation of Network Interface Card (NIC)**.

2. FPGA and License upgrade

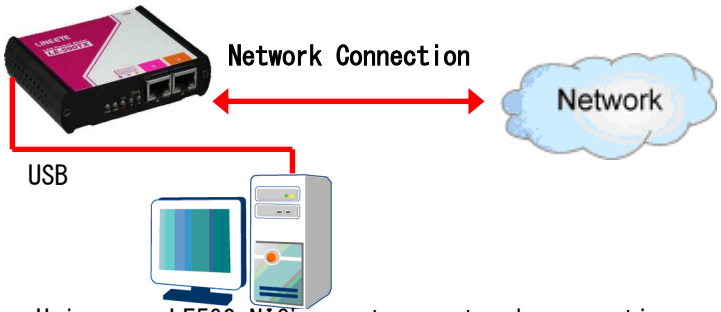
You can upgrade the FPGA and License of your LE-590TX from LE590-NIC. Please connect your LE-590TX on your PC as shown on the figure of **1.1. Hardware Installation.**

2.1. Upgrade FPGA

Upgrading FPGA	
	1. Select "FPG Upgrade" in the Information window.
	2. Please click the **Browse** button and select your FPGA upgrade file, than click **Upgrade** button to start the process. The System Information shows the current LE-590TX model name and its FPGA version. You can cancel the upgrading process by clicking the **Cancel** button.
	3. Wait until the system completes the upgrading process. You can follow the upgrading process by referring to the progress bar down side of the window.
	4. When the upgrading process is completed, a window will pop up advising you to reconnect your LE-590TX to start the updated FPGA. To confirm if the FPGA version is installed, you can go to **Menu Bar** → **Help** → **About**.

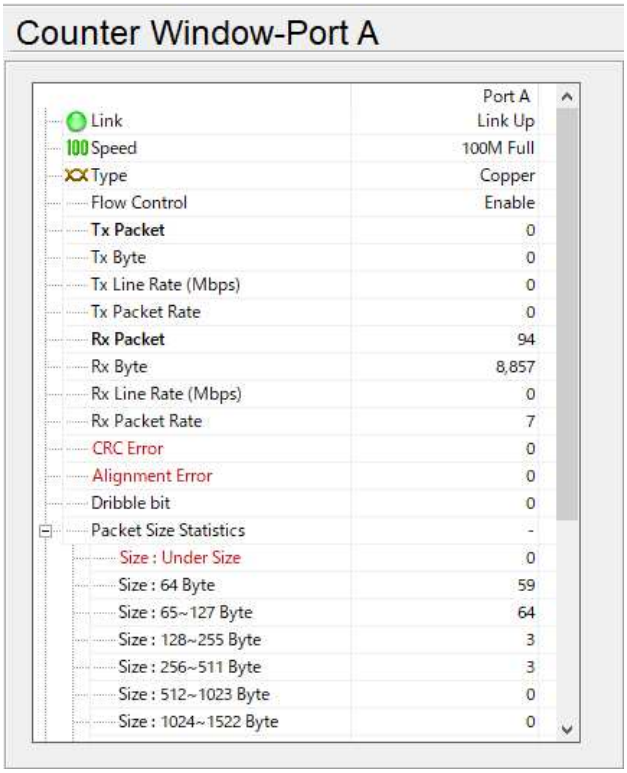
3. Simulation of Network Interface Card (NIC)

LE590-NIC is a software that allows LE-590TX to perform simulation of Network Interface Card (NIC). Please connect your LE-590TX on your PC as shown on the figure below:



Using one LE590-NIC's port as network connection

Through LE590-NIC, the network traffic status is showed based on Tx/Rx, CRC error, alignment error, dribble bit, packet size statistics, layer 2 packet counters and network layer conditions, please refer to the figure below:



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