

# LE590-TAP User's Manual

<2nd>

## **Table of Contents**

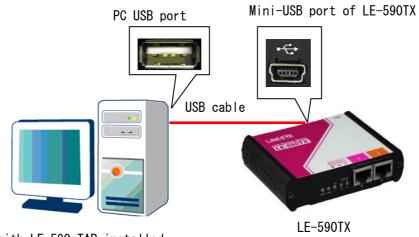
1. LE590-TAP Overview	3
1.1. Hardware Installation	3
1.2. StartingLE590-TAP	
1.3. LE590-TAP Main Window Overview	
2. LE590-TAP Functions	6
2.1. Menu Bar	-
2.1.1. File	6
2.1.2. Config	-
2.1.2.1. Run Mode	
2.1.2.2.Port Configuration	
2.1.2.3.Frame gap for USB transferring	8
2.1.2.4.Options	
2.1.3. Statistics	
2.1.3.1. Counter Window	9
2.1.3.2. Alarm Report	
2.1.4. Control	
2.1.4.1. Capture Forward	11
2.1.4.3. Auto Save	
2.1.5. Languages	
2.1.6. Help	13
2.2. Tool Bar	14
2.2.1. Reconnect	14
2.2.2. Counter	14
2.2.3. USC A & USC B	
2.2.4. Chart	16
2.2.5. Port AB	19
2.3. System Info/Configuration List	
2.3.1. System Information	24
2.3.2. Port A & Port B	25
2.3.3. Port A / Port B	
2.3.3.1. Media Type, Capture Criteria, Loopback and Alarm	26
2.3.3.2. Media Status	26
2.3.3.3. Capture Buffer Mode and Capture Forward Mode	27
2.3.4. Report: USC A/B	28
2.4. Control Buttons/ Operating Status Icon	
2.4.1. For TAP mode	
2.4.2. For Layer 1/Layer 2 Loopback mode and Single-End mode	28

#### 1. LE590-TAP Overview

For LE-590TX, all data streams between two network ports can be duplicated and sent to PC via mini USB port for monitoring and analyzing. The user can specify conditions to filter the packets wanted with LE590-TAP application software. It reduces USB port's network traffic and also cuts down PC resource consumption while dealing with large quantity of packets.

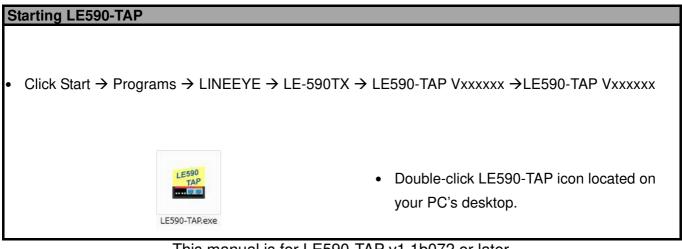
#### 1.1. Hardware Installation

Before starting LE590-TAP, 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.



PC with LE 590-TAP installed

#### 1.2. StartingLE590-TAP



This manual is for LE590-TAP v1.1b072 or later.

www.com.com.com.com.com.com.com.com.com.com	,							- 0 X
Reconnect Counter USCA USCB		Media AB	<mark>اکع</mark> Media A	සිදු Media B	Capture AB	Capture A	Capture B	LINEEY
Information								
E-590TX								
System Information								
• (1) S/N : (1) MAC :								
Der B Port A & Port B								
Capture Criteria								
Capture Buffer : Standard								
Capture Forward : Instant								
Loopback								
Alarm								
Port A								
Media Config : Auto 100M Full								
🛱 Media Status								
- O Link : Link Down								
Speed :								
Туре:								
OFF Flow Control : Off								
Rate Control : Off								
Capture Criteria								
Capture Buffer : Standard								
Capture Forward : Block								
Alarm : On								
E Port B								
Media Config : Auto 100M Full								
- Media Status								
Cink : Link Down								
Speed :								
Type :								
Flow Control : Off								
< >>								
								Connected

If your PC is not connected with LE-590TX, you can still run LE590-TAP under Demo Mode. Almost all LE590-TAP'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.

Message			×
LE590-TAP cannot detect your LE-590TX Would you like to run LE590-TAP under D If your system cannot detect the LE-590 please press the "Re-Install Driver" butto	)emo mode (for Demo p TX even though it is pro	perly connected to the system,	
Demo	Exit	Re-Install Driver	

When your PC cannot detect your LE-590TX, a window as shown above will pop up asking if you want to start the LE590-TAP in Demo mode or not, also a third option will pop up asking if you want to re-install WinPcap for successfully run the LE590-TAP.

#### 1.3. LE590-TAP Main Window Overview

E590-TAP	Α									- 🗆 🗙
File Config Statistics Control Languages Help					1		(m)			
Breconnect Counter USCA USCB	- 🧖 Ohart	Media AB	Media A	්දී <sub>ම</sub> Media B	Capture AB	Capture A	Capture B	D		LINEEYE
Information A										
E-590TX										
System Information     System System Information										
MAC:										
E-B2 Port A & Port B										
Capture Criteria										
Capture Buffer : Standard										
Capture Forward : Instant										
Loopback										
Alarm										
🖻 🖏 Port A										
Media Config : Auto 100M Full								E		
🚊 Media Status										
- 🕐 Link : Link Down										
Speed :										
Туре:										
Flow Control : Off										
Rate Control : Off										
Capture Criteria										
Capture Buffer : Standard										
Loopback : TAP Mode										
Alarm : On										
E-22 Port B										
Media Config : Auto 100M Full										
- Media Status										
Link : Link Down										
Speed :										
Type :										
- O Flow Control : Off										
< >>										
									F	Connected

LE:	590-TAP Functions Ov	verview
Α	Menu Bar	The <b>Menu Bar</b> allows you to make settings about task criteria, view Counter window, load/save settings you've made, and change language displayed.
в	Tool Bar	The <b>Tool Bar</b> contains buttons that allow you to reconnect your PC to LE-590TX, make task/port configurations, view Counter, USC A/B and Charts.
с		In the <b>Information Field</b> , you can view system information, making port configurations, or view port and USC status on right side <b>Main Display Screen</b> .
D	Control Buttons/ Run Status Icon	The <b>Control Buttons</b> allow you to start/stop tasks, and the <b>Run Status Icon</b> indicates if there's a task running.
Е	Main Display Screen	You can make detail configurations and view real-time testing diagrams on the <b>Main Display Screen</b> .
F	System Connection Status	This icon shows the connection status between your PC andLE-590TX.

#### 2. LE590-TAP Functions

2.1. Menu Bar

File Config Statistics Control Languages Help

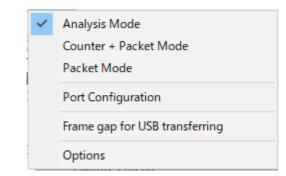
LE590-TAP Menu Bar includes configuration options such as File, Config, Statistics, Control,

**Languages**, and **Help**. Please refer to the sections down below for detail information regarding to each configuration option.

2.1.1. File

File						
Load default configuration	If you choose the <b>Load Default Configurat</b> the default configuration.	If you choose the <b>Load Default Configuration</b> option, the system will be restored to the default configuration.				
Load Saved Configuration	If you have a previously saved configuration setting file stored in your PC, you can load it and apply all the setting you've made by choosing " <b>File</b> $\rightarrow$ <b>Load Saved Configuration</b> " from the <b>Menu Bar</b> . All configuration files are saved in the format of " <b>*.xml</b> ".					
Save current configuration	The <b>Save current configuration</b> function on the <b>Menu Bar</b> allow you to save the settings you've made or the test results. To save the settings you've made, choose " <b>Save current configuration</b> " from the <b>Menu Bar</b> before performing any tasks, and choose the file path where you would like to save the configuration file. Configuration files are saved in the format of " <b>.xml</b> ".					
Set Instant Mode Save Path to…	Set Instant Mode Save Path to       X         Please choose the file path for Instant Mode Auto Save.       File Path:         Igram Files (x86)\Lineeye\LE-590TX\LE590-TAP v1.1b059\Report\Capture\Instant*       Change         Apply       Cancel	In this option, you can set the file path for auto save function. Click Change button to choose a new path, and <b>Apply</b> button to save the setting, or <b>Cancel</b> button to close the window.				
Exit	A prompt pop-up window will ask if you are sure to exit LE590-TAP. Click <b>YES</b> to exit LE590-TAP, or click <b>NO</b> to cancel.					

2.1.2. Config



2.1.2.1. Run Mode

Run Mode	
Analysis Mode	All the function of LE590-TAP is available.
Counter Mode	The packets capture function and interface will rely on Wireshark software.
Packet Mode	The packets capture function and interface will rely on others software. The Counter table will not show the status of capturing packets.

### 2.1.2.2.Port Configuration

Port Configuration	
Port Configuration       X         Flow Control       Packets of USB Burst Transfer         Port A	Click the Flow Control bar to turn Port A/B's Flow Control On/Off. If you turn ON the Flow Control, the Rate Control settings will be available. And when you turn On the Rate Control, you may set the Rate between 0.00~1000.00 Mbps. After finishing the settings, please click Apply button to save the configuration, or click Cancel to close window without saving
Port Configuration       X         Flow Control       Packets of USB Burst Transfer         Port A       20 packet         20 packet       Image: Control of the	In this window, you can set if the future warning window will pop up more often by choosing the <b>Often</b> option, o pop up less warning window by choosing <b>Seldom</b> option. After finishing the settings, please click <b>Apply</b> button to save the configuration, or click <b>Cancel</b> to close window without saving.

\*Note: Changing settings in Port Configuration window might cause Link Status changes and packet loss.

#### 2.1.2.3. Frame gap for USB transferring

guration		
r USB transferring	×	
ne gap for packet trans	ferring via USB	Four modes are available in Frame gap for USI transferring: Fast, Medium, Slow and User Define.
Medium	~	If you choose the <b>User Define</b> option, the <b>Gap</b> scroll fiel will be available to scroll down and to choose the size of
128 Byte	~	frame gap.
Apply		After finishing the settings, please click <b>Apply</b> button to save the configuration.
	r USB transferring ne gap for packet trans Medium 128 Byte	r USB transferring X ne gap for packet transferring via USB Medium V 128 Byte

## 2.1.2.4.Options

Options	
Options X Setting Often O Seldom Pop-up warning window will be displayed more often. Apply Cancel	In this window, you can set if the future warning window will pop up more often by choosing the <b>Often</b> option, or pop up less warning window by choosing <b>Seldom</b> option. After finishing the settings, please click <b>Apply</b> button to save the configuration, or click <b>Cancel</b> to close window without saving.

\*Note: Changing settings in Port Configuration window might cause Link Status changes and packet loss.

#### 2.1.3. Statistics

Save Update Clear All Hide Zero Sho	()» sw All		
	Port A	Port B	Port AB
Link Status	Link Down	Link Down	N/A
Speed mode	N/A	N/A	N/A
Tx Packet	0	0	(
Tx Byte	0	0	0
Tx Packets Rate	0	0	N//
Tx Line Rate (Mbps)	0.00	0.00	N/A
Tx Utilization(%)	0.00	0.00	N/A
Rx Packet	0	0	194
Rx Byte	0	0	(
Rx Packets Rate	0	0	N/A
Rx Line Rate (Mbps)	0.00	0.00	NA
Rx Utilization(%)	0.00	0.00	NA
CRC Error	0	0	1
Alignment Error	0	0	
Dribble bit	0	0	
Packet Size Statistics	2 <b>-</b>	-	
Size : Under Size	0	0	
- Size : 64 Byte	0	0	
- Size : 65~127 Byte	0	0	
- Size : 128~255 Byte	0	0	
- Size : 256~511 Byte	0	0	
- Size : 512~1023 Byte	0	0	
- Size : 1024~1522 Byte	0	0	
Size : Over Size	0	0	

Counter Window	
<b>Save</b>	Click the <b>Save</b> button to save the current counter data.
O Update	The <b>Update</b> button allows you to pause or start the counter operation. If the <b>Update</b> button is shown as the figure on the left, than the counter operation is paused.
O Update	If the <b>Update</b> button is shown as the figure on the left, the counter operation is started.
)∢ Hide Zero	Hide the data of zero.
<b>∢()</b> ► Show All	Show all data.
000 Clear All	Click the <b>Clear All</b> button to clear the counter data.

2.1.3.2. Alarm Report

larm Report		<u></u> 38			×
Save	Clear All				
16:45:54 Port A :	ARP : 631,000 Ove	er high threshold ( 10	00 ).		~
16:45:54 Port B :	ARP : 651,000 Ove	r high threshold ( 10	)0 ).		
16:45:56 Port A :	ARP : 634,000 Ove	er high threshold ( 10	00).		
16:45:56 Port B :	ARP : 654,000 Ove	r high threshold ( 10	). 00		
16:45:58 Port A :	ARP : 636,000 Ove	er high threshold ( 10	00).		
16:45:58 Port B :	ARP : 657,000 Ove	r high threshold ( 10	)0 ).		
16:46:00 Port A :	ARP : 637,000 Ove	er high threshold ( 10	.( 00		
16:46:00 Port B :	ARP : 661,000 Ove	r high threshold ( 10	00).		
16:46:02 Port A :	ARP : 639,000 Ove	er high threshold ( 10	00).		
16:46:02 Port B :	ARP : 667,000 Ove	r high threshold ( 10	)( 00		
16:46:04 Port A :	ARP : 640,000 Ove	r high threshold ( 1)	. 00		
16:46:04 Port B :	ARP : 673,000 Ove	r high threshold ( 10	00).		
16:46:06 Port A :	ARP : 641,000 Ove	er high threshold ( 10	.( 00		
16:46:06 Port B :	ARP : 675,000 Ove	r high threshold ( 10	00).		
16:46:08 Port A :	ARP : 643,000 Ove	er high threshold ( 1)	00).		
16:46:08 Port B :	ARP : 678,000 Ove	r high threshold ( 10	)0 ).		
16:46:10 Port A :	ARP : 644,000 Ove	er high threshold ( 10	00 ).		
16:46:10 Port B :	ARP : 681,000 Ove	r high threshold ( 10	00).		
16:46:12 Port A :	ARP : 646,000 Ove	er high threshold ( 10	00).		
16:46:12 Port B :	ARP : 686,000 Ove	r high threshold ( 10	).		123
16-46-14 Dort A -	ADD - 647 MMA Mus	or high threehold ( 1)	nni		Y
<				>	

This window will warn you about the over high threshold of the parameter chosen in port configuration, for more detail about how to set the parameter to be presented on Alarm Report window, please refer to the **2.2.5. Port AB, Alarm.** 

The **Save** button allows you to save the **Alarm Report** data on a path folder. If you click the **Clear All** button, you will clear all the data gathered on this window.

#### 2.1.4. Control

Control	Languages	Help
Cap	>	
Aut	>	

#### 2.1.4.1. Capture Forward

ontrol Languages He	lp				
Capture Forward	>	Port AB	>		Block
Auto Save	>	Port A	>	4	Instant
		Port B	>		

Capture Forward	
Block	Records received packets in the internal memory and forwards them to the PC via USB. After capturing data, it is possible to check the captured packets up to 32768 packets (16384 packets for one port). (Set the maximum packets in the "Capture Packet Number" in the Capture Criteria.)
Instant	Received packets are immediately forwarded to the PC via USB. It is possible to check the captured packets while the capture operation. 20000 packets are saved as one file, and the latest 20000 packets are displayed in the screen.

\*Note: Data is saved as a pcap format. To check the recorded data, you need to have a software such as Wireshark.

2.1.4.3. Auto Save

Control	Languages	Help			
Cap	ture Forward	>	🚿	<mark>ی</mark> 2	۳ <b>ک</b>
Aut	o Save	>	Chart	Data	
			Alarm	Report	
			Auto	Save Setting	
		1.24	-		

Auto Save					
Chart Data		on to auto save Ider in each 60	e <b>Chart Data</b> to t ) min.	he Report folde	r below your
Alarm Report		on to auto save Ider in each 60	e <b>Alarm Report</b> ) ) min.	to the Report fol	der below your
Auto Save Setting	Auto Save Optio	ns 15 mins 15 mins	30 mins 30 mins	45 mins 45 mins	60 mins

2.1.5. Languages

Languages		Help
~	English	1
	Simplif	ied Chinese
	Japane	se

Languages	
English/Simplified	LE590-TAP has 3 different languages for its UI available. You can set the UI
Chinese/Japanese	language to English, Simplified Chinese or Japanese.

2.1.6. Help

		Help	
		About	
		System Requirements	te
		LINEEYE Web	
		Log	
Help			
lieib			
	About	×	×
	LE590 LE590-TAP V	1. 15059 2019 LINEEYE CO., LTD.	
	All rights rese		
	System Information		An " <b>About</b> " window will pop up and
About	Model	LE-590TX	show detailed system information.
LE590-TAP	S/N	The second	
	MAC	응 감 43 35 43 44	
	PCB Version	MP03	
	FPGA Version	v2.2b001 2019/01/04	
	Firmware Version	v0.9b023 239	
	API Version	v1.0b037 2019/01/30	
		1	
System Requirements	System Requirements Operation platform requirem Microsoft Windows 7/8 Pentium 1.3Ghz or highe 1.0GB of RAM or higher 10GB of available hard of Model FPGA LE-590TX V2.0b002 v	ents 110 er disk space <b>Firmware</b>	<ul> <li>A "System Requirements" window will pop up and show the requirements for your PC, FPGA/Firmware, AP and API version of the equipment.</li> <li>&gt; OK: Click this button to exit the "System Requirements" pop-up window.</li> </ul>
LINEEYE Web	Open vour default w	ок eb browser and acc	cess LINEEYE Website (www.lineeye.com)
Log	Log 13:12:28: Language : English 13:12:33: COAPCLE-S90TX 13:12:33: TAP Model 13:12:33: FPGA Version:v2.2b001 2019/ 13:12:33: FPGA Version:v0.9b002 32' 13:12:33: API Version:v1.0b037 2019/01 13:12:33: H/W Type:Normal 13:12:33: SW Type:Normal 13:12:33: SW Type:Normal 13:12:33: Load configuration 13:12:33: Load configuration 13:12:33: Port A Packets of USB Burst Tr 13:12:33: Port A Flow Control : 13:12:33: Port A Flow Control : 13:12:33: Port A Rele Control : 13:12:34: Port A Flow Control : 13:12:34: Port A Rele Control : 13:12:34: Port B Flow Control : 13:12:34: Port B P	39 /30 SSAGE ation ansfer 20 packet	Clicking this option will pop up a <b>LOG</b> window showing the settings that you made on LE590-TAP program so far.

#### 2.2. Tool Bar

Reconnect	) Counter	USC A	USC B	📈 Chart	Nedia AB	Nedia A	Nedia B	Capture AB	🔓 Capture A	🔓 Capture B
-----------	--------------	-------	-------	------------	----------	---------	---------	------------	----------------	----------------

The **Tool Bar** contains buttons that allow you to reconnect LE-590TX, view Counter, view USC A/B, view Chart and Configure Port A/B. Please refer to the section down below for more detail descriptions regarding to **Quick Launch Buttons**.

#### 2.2.1. Reconnect

Reconnec	t							
	If the USB connection between your PC and LE-590TX is down, a "Disconnected" icon							
	ERACT Disconnected will be s	hown in " <b>S</b>	ystem Connection Status".					
Reconnect	Press <b>Reconnect</b> button	d∎ 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.							

2.2.2. Counter

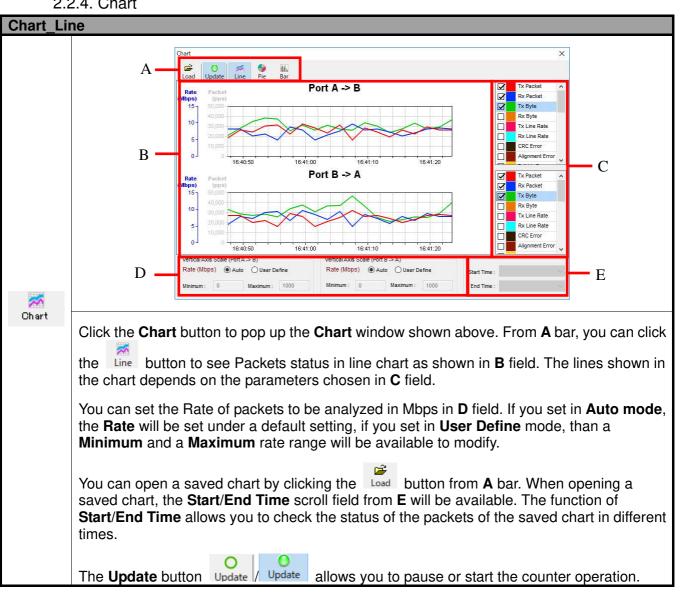
counter	Counter Window	(þ. Show All			
		Port A	Port B	Port AB	
	Link Status	Link Down	Link Down	N/A	
	Speed mode	N/A	N/A	N/A	
	Tx Packet	0	0		0
	Tx Byte	0	0		If you aligh the Counter button, the County
	Tx Packets Rate	0	0	N/	If you click the Counter button, the Counter
	Tx Line Rate (Mbps)	0.00	0.00	N	
THE I	Tx Utilization(%)	0.00	0.00	N/	Window will pop up showing the statu
	Rx Packet	0	0		
	Rx Byte	0	0		the packets.
Counter	Rx Packets Rate	0	0	N	
	Rx Line Rate (Mbps)	0.00	0.00	N	
	Rx Utilization(%)	0.00	0.00	N/	
	CRC Error	0	0		For more information, please refer to
	Alignment Error	0	0		
	Dribble bit	0	0		2.1.3.1. Counter Window.
	Packet Size Statistics	-	-		
	Size : Under Size	0	0		
	Size : 64 Byte	0	0		0
	- Size : 65-127 Byte	0	0	1	0
	5- Size : 128~255 Byte	0	0		
	- Size : 256~511 Byte	0	0		0
	+- Size : 512~1023 Byte	0	0	1	0

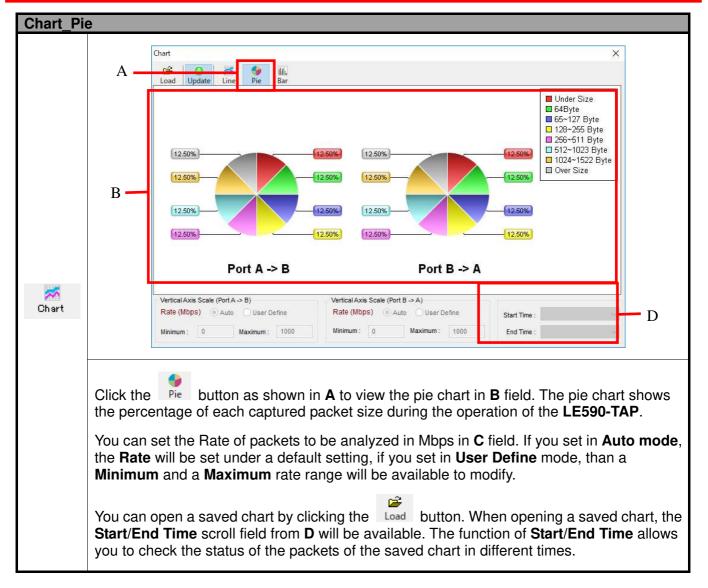
2.2.3. USC A & USC B

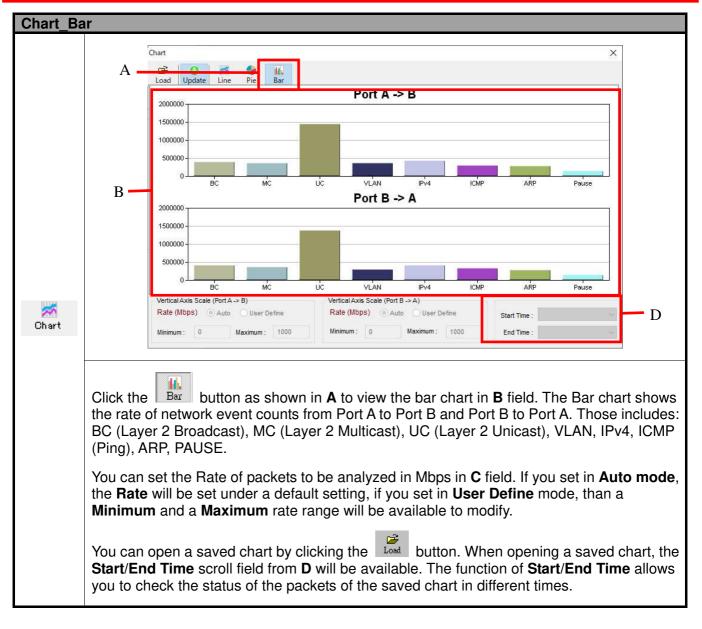
USC A/B		
USC A/B	Port A Universal Streams Counter	<ul> <li>Save Allows you to save the data of this window.</li> <li>Clear all the data of this window.</li> <li>Hide Zero Hide all the data that is zero.</li> <li>Show all the data of this window.</li> <li>Show all the data of this window.</li> <li>Set the Stream Counter Mode.</li> </ul>
	Rule:   Base on DA     Begin Stream Address     XX-XX-     00-00-00       Apply   Cancel	<ul> <li>modify the <b>Rule</b> (Stream Counter Mode) of USC. The chosen mode will be shown in the side pointed by the red arrow.</li> <li>Click the <b>Apply</b> button to save this setting or <b>Cancel</b> to close this window without saving.</li> <li>Note: The Operation mode is not available yet.</li> </ul>
USC A	Setting X Stream Counter Mode Rule: Base on DA Base on DA Begin St Base on SA Base on VLAN XX-XX- Base on VID Priority Base on MPLS Base on DIP Base on SIP Base on SP Disable	The left figure shows the <b>Rule</b> (Stream Counter Mode) available when you scroll down the field.
	Port A Universal Streams Counter         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         <	After applying your settings made on the <b>Setting</b> window, the changes will be shown on the <b>Port Universal Streams Counter</b> window.

## LINEEYE







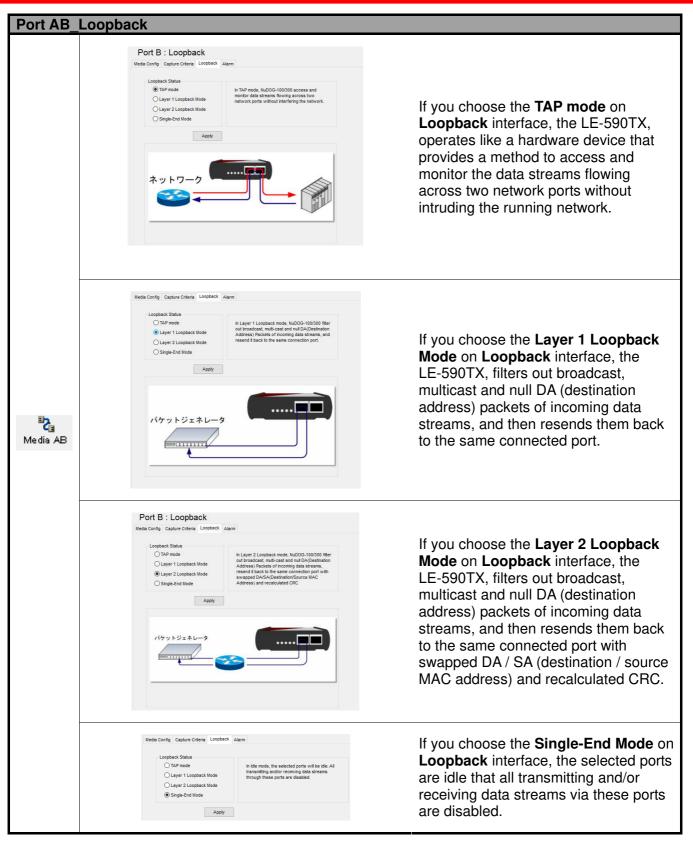


#### 2.2.5. Port AB

Port AB_	Media Type	
	Port A & Port B : Media Config	
	Media Config Capture Criteria Loopback Alarm	
	Auto	Force
	10M Half	Force 10M Full     Disable
	🗹 10M Full	O Force 100M Full
	100M Half	
	🗹 100M Full	
	MDIX Auto MDIX	
	O Force MDI (NIC side)	
	O Force MDI-X (Switch side) Set	
		Apply
Nedia AB	Click the <b>Port AB</b> button to pop up the Port A can set the <b>Media type</b> as <b>Auto</b> or <b>Force</b> mo	B configuration interface. In this interface, you ode.
	The <b>Auto</b> mode enables to choose the rate be auto modified by the LE590-TAP program	in 10/100M under Half/Full duplex, but it may to a best rate to run.
	The <b>Force</b> mode enables to choose and fix the	ne transfer rate in 10/100M under Full duplex.
	You can also set <b>MDIX</b> mode here, and click mode:	the <b>Set</b> button to save settings made for <b>MDIX</b>
	If you set Auto MDIX mode, the LE590- signal connection between LE-590TX with	TAP will auto sense the direction of Tx/Rx for n <b>NIC/Switch</b> side.
	You can choose Force MDI (NIC side) to on NIC side.	o force the direction of the Tx/Rx signal based
	You can choose Force MDI-X (Switch s based on Switch side.	ide) to force the direction of the Tx/Rx signal
	Click the <b>Apply</b> button to save the settings configuration.	, or <b>Cancel</b> button to recover to the default

Port AB_	Capture Criteria	
	Port A & Port B : Capture Criteria         Media Config       Capture Criteria       Loopback       Alarm         Protocol       SDFR       Result       Result         Capture All Packets       MAC       Protocol       Protocol         MAC       Network       Protocol       Protocol         MAC       Network       Protocol       Protocol         Muticast       ARP       BPDU       UDP         Unicast       Pv4       None Fv4       FTP         VLAN       Pv6       Pv4 with extension header       RTP         CRC error       PX       Pv4 checksum error       OSPF         Over Size       ICMP       RSVP       RSVP	In the <b>Protocol</b> interface, If you click the <b>Capture all packets</b> function, you will enable the LE590-TAP to capture all packets criteria. If you close the <b>Capture all packets</b> function, than the criteria from <b>MAC</b> , <b>Network</b> and <b>Protocol</b> will be available to choose.
	Packet Length Filter(with CRC)  Filter length (Bytes) Capture Packet Number 16384	The <b>Packet length filter</b> allows you to filter packets as equal, less than, greater than and not equal to a range of packets of 52~16384 bytes. Set the maximum number of captured packets (20-16384) in the "Capture Packet Number" if the Capture Forward setting is "Block".
Media AB	Port B : Capture Criteria         Vedia Config Capture Criteria       Loopback Alarm         Protocol       SDFR       Result         DA       SA       DA         SA       DA       DA         SP       DA       SA         DP       SP       0.00-00-00-00-00-00         DP       SP       0.00-00-00-00-00-00         DP       SP       0.00-00-00-00-00-00         DP       Single       0.000         DP       Sport       Single       0.000         DA & SA       DD       Single       0.000         DA & SA       DD       Sport       Single       0.000         Sport       Single       0.0000       0.000       0.0000         DA & SA       DD       DD       Single       0.00000000000000000000000000000000000	<ul> <li>SDFR (Self-Discover Filtering Rules).</li> <li>If you closed the Capture all packets function in the Protocol interface, the SDFR interface will be available for settings.</li> <li>The SDFR interface allows you to choose a single or multiple criteria for capturing packets.</li> </ul>
	Media Config         Capture Criteria         Loopback         Alarm           Protocol         SDFR         Result         (Filter length = 0) +         (DA + SA + VID) +         (DA + SA + VID) +         (DA + SA + VID) +         (Single) : 00-00-00-00-00-00         (SA (Single) : 00-00-00-00-00-00)         (VID (Single) : 0)         (Single) : 0         (Single) : 0	It shows the result of capture criteria by user's selection.

\*Note: Packet loss is possible if the captured traffic is higher than traffic allowed for USB port. \*Note: For SDFR items, you can tick the items that act as criteria. When you tick one option, some other options will be gray. It means the option what you tick has covered the range of those options in gray.



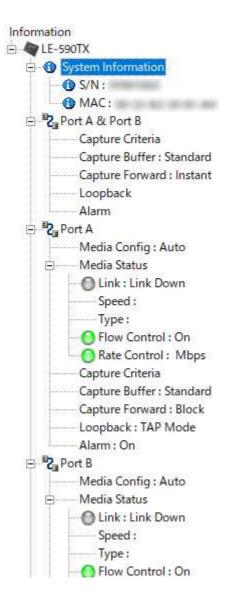
Port AB	Alarm				
	Me	dia Config Captu Alarm Setup	re Criteria Loopback Alarm		
		Enable	Item (packet per Second)	Threshold	
			Rx Packet	0	<b>•</b>
			Rate (Mbps)	0	
			CRC Error	0	
			Alignment Error	0	
			Dribble bit	0	
			Broadcast	0	÷
			ICMP	0	<u>+</u>
		Z	ARP	0	* ·
			Pause Packet	0	* *
			SDFR-DA	0	<u>*</u>
۳ <b>2</b> ۳			SDFR-SA	0	<u> </u>
Media AB			SDFR-VID	0	<u>+</u>
			SDFR-DIP	0	<u>+</u>
			SDFR-SIP	0	<u>▲</u>
			SDFR-DPort	0	▲ <b>∨</b>
				_	
				L	Apply
	report. When the che	eck box is		arm criteria	be displayed on the alarm are enabled if the network
	Click $\blacktriangle$ or $\blacktriangledown$ of $\checkmark$ starting the alarm rep		increase or decrease	e the value o	of threshold as the limit to
			through this device an s registered in alarm r		rk event triggers the alarm

The Settings of will configure the Port A and Port B at same time with the same packets capture criteria. If you want to configure Port A and Port B at different packets capture criteria, please choose the

Media A and Media B to configure separately wit

to configure separately with different packets capture criteria.

2.3. System Info/Configuration List



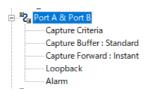
The **System Info/Configuration List** allows you to view system information and making port configurations.

#### 2.3.1. System Information

By clicking the **System Information** on the **System Info/Configuration List**, the **System Information** screen will be shown on the **Main Display Screen** located on the right side of LE590-TAP' main window.

Model	LE-590TX
S/N	10001000
MAC	0.000.000
PCB Version	MP03
FPGA Version	v2.2b001 2019/01/04
Firmware Version	v0.9b023 17
API Version	v1.0b037 2019/01/30

2.3.2. Port A & Port B



#### Media Type, Capture Criteria, Loopback and Alarm

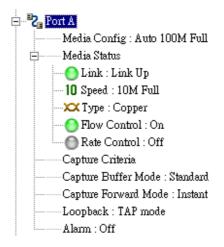
By clicking the **Port A & Port B** on the **System Info/Configuration List**, the **Port A & Port B Configuration** screen will be shown on the **Main Display Screen** located on the right side of LE590-TAP' main window, allowing you to make settings for LE-590TX ports.

Those settings include the Media Type, Capture Criteria, Loopback and Alarm related to Media AB.

For more detail description about Port A & Port B Configuration, please refer to 2.2.5. Port AB.

🗹 Auto	Force
🗹 10M Half	O Force 10M Full O Disable
2 10M Full	O Force 100M Full
100M Half	
🗹 100M Full	
MDIX	
Auto MDIX	
O Force MDI (NIC side)	
O Force MDI-X (Switch side)	iet .

2.3.3. Port A / Port B



2.3.3.1. Media Type, Capture Criteria, Loopback and Alarm

By clicking the **Port A** or **Port B** on the **System Info/Configuration List**, the **Port A** or **Port B Configuration** screen will be shown on the **Main Display Screen** located on the right side of LE590-TAP' main window, allowing you to make settings for LE-590TX ports.

Those settings include the Media Type, Capture Criteria, Loopback and Alarm related to

and Media B. Besides, the change on the status of Media Type, Capture Criteria, Loopback and Alarm are also shown in the System Info/Configuration.

For more detail description about **Port A or Port B Configuration**, please refer to **2.2.5. Port AB**.

🗹 Auto	Force
10M Half	O Force 10M Full O Disable
2 10M Full	O Force 100M Full
100M Half	
☑ 100M Full	
DIX	
Auto MDIX	
) Force MDI (NIC side)	
O Force MDI-X (Switch side) Set	1

#### 2.3.3.2. Media Status

By clicking the **Media Status** on the **System Info/Configuration List**, it will show the status of **Link**, **Speed**, **Mode**, **Type**, **Flow Control and Rate Control**.

Link	Link Up
Speed	100M
Mode	Full-dulpex
Туре	Coppler
Flow Control	On
Rate Control	100.00 Mbps

cket: 954 Captured Pac	xetis: 4		hadud. /uto Save Sav	e Glart Capture Stop Dapture
No.	Delta Time(us)	(with CRC)	Destination	Source
1	0.000	54	IF FE FF FF FF FF	10-20-80 (00-90-14)
2	275801.400	] 54	FF FF FF FF FF FF FF	N-1-26
3	151575.200	64	FF FF FF FF FF FF	\$5.50 (\$1.50 Text)
4	394696 200	54	FF FF FF FF FF FF	N 17 10 40 10 W
5	147637.000	64	TP FF FF FF FF FF	·····································
6	28700.160	84	TF FF FF FF FF FF	20.20 million 20.00 million
7	200000.360	64	FF FF FF FF FF FF	102497
8	77454.640	64	FF FF FF FF FF FF	10-11-00-11-00-00
9	372533 480	88	PF FF FF FF FF FF	3
em Name Ethernet II ARP, Address Resolution Hardware type Protocol type Hardware address Le Protocol address Len Opcode Source Hardware Ad Source Protocol Add Destination Hardware Destination Protocol	0x0001 Etheme 0x0800 ngth 0x06 gth 0x04 0001 Request dress 0x7071BCr1C30 ness 142,168,0,13 e Address 0x000000000	5	0000 FE FF FF FF FF FF FF 0110 08 00 06 04 00 0 0620 00 00 00 00 00 00 0 0030 00 00 00 00 00 00 00 0	E 00 00 00 00 00 00 00 00 00 00 00 00 00

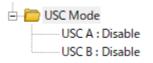
#### 2.3.3.3. Capture Buffer Mode and Capture Forward Mode

A: This field shows the number of packets and number of captured packets.

B: If you set Capture Forward Mode under Instant mode, this field will be available for settings:

- You can enable Auto Save by clicking the check box, and see the status of captured packets on a designated folder by clicking Status button. Or you can save the instant status by clicking the Save button.
- You can also initiate the packets capture operation by clicking Start Capture button, and stop the packets capture operation by clicking the Stop Capture button.
- C: In this field, you can check the status of each captured packet based on the order of packet (No.), Delta Time(us), Length(with CRC), Destination/Source MAC address, VLAN, Protocol and Destination/Source IP.
- **D:** This field shows the packet/frame view items, such as Ethernet II. User can click 
  <sup>⊕</sup> to expend the sub-tree on the **Item Name** column, and see the value of network frame on the **Value** column.
- **E:** Shows the data based on the field **C**.
- \* Both "Instant" and "Block" setting includes FCS in the captured data.
- \* "Block" setting cannot save captured data automatically.
- \* While capturing in the port A or port B, do not capture in the port A & port B.
- \* While capturing in the port A & port B, do not capture in the port A or port B.

2.3.4. Report: USC A/B



The **Report** shows the **Rule** chosen on the **Stream Counter Mode** settings for each **USC A** and **USC B**. Please refer to the **2.2.3. USC A & USC B** for more details.

2.4. Control Buttons/ Operating Status Icon

2.4.1. For TAP mode



The **Control Buttons** allow you to start/stop tasks, and the **Operating Status Icon** indicates if there's a task running.

Control Buttons				
Forward	Start task			
STOP	Stop task			

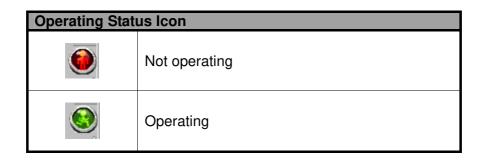
Operating Status Icon				
۲	Not operating			
	Operating			

2.4.2. For Layer 1/Layer 2 Loopback mode and Single-End mode



The **Control Buttons** allow you to start/stop tasks, and the **Operating Status Icon** indicates if there's a task running.

Control Buttons	
	Start task
STOP	Stop task



4F., Marufuku Bldg., 39-1, Karahashi Nishihiragaki-cho, Minami-ku, Kyoto, 601-8468, Japan Phone: 81-75-693-0161 Fax: 81-75-693-0163

URL: https://www.lineeye.com

M-29590TAPE/LE