

SmartWindow 软件安装及测试仪端口间环回测试

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1 SmartWindow 概述

SmartWindow 为 SmartBits 测试模块提供交互式测试和测量环境的图形用户界面。

SmartWindow 是一种直观、灵活和易于使用的虚拟控制面板(VFP)测试软件,它使您可以控制 SmartBits 网络性能分析系统的测试模块。SmartWindow 使您具有了预编程的应用程序所不具有的更强的测试控制。您可以利用本软件检测您的产品设计,执行批量生产与维修测试以及进行市场竞争分析。

SmartWindow 能够任意对 SmartBits 机箱上的测试模块进行配置并支持组合使用。根据 测试模块的不同,支持传统测量模式和 SmartMetrics 测量模式,在 SmartMetrics 模式下, 用户可以在每个端口上生成多种不同的 Stream,基于每个 Stream 还可以生成成千上万条 Flow。用户可以在每个测试端口定义测试流量和进行流量接收分析,也可以进行包捕获。用 户可以选择自己希望的协议分析仪对捕获的数据进行协议解码。

SmartWindow 还支持 IGMPv1/v2/v3、ARP、PING/PINGv6、TOS/DSCP/DiffServ/Traffic Class、超长帧测试和多种错误插入。SmartWindow 同时支持 IPv4 和 IPv6 混合测试。在支持 IPv6 方面, SmartWindow 支持路由器发现、扩展头编辑、下一跳判定、无状态自动配置等。SmartWindow 支持的主要测试项目包括:时延、时延分布、原始包标签、帧变化、包顺序、ARP 交换时间。

关键特性: IPv6、IGMP、IP QoS、10GbE、VLAN Tags、Smart Counters、Capture。

支持的板卡/模块:SMB200/2000上的所有卡。SMB600x/6000x机箱上除了ATM-3451A/As和ATM-3453A/As模块外的所有卡。

支持的协议:

- > Ethernet
- ➢ Fibre Channel
- Packet over SONET
- > WAN
- ➢ Frame Relay
- ➤ Layer 2 ATM

支持的测试:

➢ 每个 Stream 的时延。

- ▶ 每个端口的 over time 时延。
- ▶ 每个 Stream 的时延分布。
- ➢ 原始包 Tag。
- ➢ 每个 St ream 的帧变化。
- ▶ 序列跟踪。
- ▶ 序列跟踪加时延。

可测试的设备:NIC cards, servers, bridges, cable modems, xDSL modems, switches, routers, VLANs, firewalls, live networks, link turn-up, and multimedia scenarios。



2 SmartWindow 软件安装

(1) 进入到安装光盘目录,双击安装文件,启动安装。



編書 Sastallhold (B) form Landor 全年 Sastallhold Software Corporation 天井武主 1 1 100 1000 自動日期 1000-12-3 8 30 大 308 10 🚽 第25月第

(2) 确认程序安装,点击"NEXT"。



(3) 安装协议界面,选择"I accept",点击"NEXT"。



SmartTindov Setup	×				
License Agreement	×				
Please read the following license agreement carefully.	SPIRENT				
BY ACCESSING OR EXECUTING THE SOFTWARE, YOU AGREE TO BE BOUND BY THE TERMS OF THIS AGREEMENT.					
Spirent Communications, Inc. ("Spirent") and its licensors provide the software containe on the media in the package and/or as part of the equipment supplied by Spirent and a modifications, enhancements to and/or replacements of such Software supplied to you Spirent including, without limitation, firmware (collectively "Software"), together with the associated documentation (the "Documentation") and license their use on the terms an conditions set forth herein.	d ny by d				
LICENSE: Spirent grants you a nontransferable and nonexclusive license to use the	•				
I accept the terms of the license agreement					
○ I do not accept the terms of the license agreement					
InstallShield					
< <u>B</u> ack <u>N</u> ext > Ca	ancel				

(4)选择安装路径,点击"NEXT"。

SmartWindow Setup			×
Choose Destination Location			×
Select folder where setup will install files.			SPIRENT
Please enter the location where you would like I folder name or click the Browse button to find a	to install the program. new location.	You may type	a new
C:\Program Files\SmartBits\SmartWindow			
		B <u>r</u>	owse
InstallShield			
	< <u>B</u> ack <u>N</u>	<u>v</u> ext>	Cancel

(5)选择完整(Complete)安装,点击"NEXT"。



SmartWindow Se	tup	×
Setup Type Select the setup	p type to install.	SPIRENT
Please select a	setup type.	
	All program features will be installed. (Requires the most disk space.)	
C Cu <u>s</u> tom	Select which program features you want installed. Recommended for advanced users.	
InstallShield	< <u>B</u> ack <u>N</u> ext > C	ancel

(6) 设置程序在开始菜单中的名称(采用默认名称), 点击 "NEXT"。

SmartTindow Setup	×
Select Program Folder	Here
Please select a program folder.	SPIRENT
Setup will add program icons to the Program Folder listed below. You may type a ne name, or select one from the existing folders list. Click Next to continue.	ew folder
Program Folder:	
SmartBits Applications	
Existing Folders:	
ACD Systems	
DAEMON Tools Lite	
McAfee	
Microsoft Office	
Source Insight 3	
VMware	_
JWinBAR	_
InstallShield	
< <u>B</u> ack <u>N</u> ext>	Cancel

(7) 点击" Install ", 开始安装。



SmartWindow Setup			×
Ready to Install the Program			×
The wizard is ready to begin installation.			SPIRENT
Click Install to begin the installation.			
If you want to review or change any of your in: the wizard.	stallation setting	gs, click Back. Click (Cancel to exit
installShield			
n no senino ni mense		······	I
	< <u>B</u> ack		Cancel

(8) 在弹出的界面中点击"是",安装完毕后在桌面上创建快捷方式。



(9) 在弹出的界面中点击"YES", 遵守 GNU Pubilc license 协议。

SmartVindow Setup	×
Ethereal - GNU Public License Agreement	SPIRENT
Press the PAGE DOWN key to see the rest of the agreement.	
GNU GENERAL PUBLIC LICENSE Version 2, June 1931 Copyright (C) 1989, 1991 Free Software Foundation, Inc. 59 Temple Place - Suite 330, Boston, MA 02111-1307, USA Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed. Preamble The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your	-
Do you accept all the terms of the preceding License Agreement? If you select No, the will not install Ethereal on your system. To install Ethereal, you must accept this agreement accepted as a second se	setup ent.
nstaliomeid	No

(10) 在弹出的界面中点击 "Finish", 安装完毕。

SmartTindow Setup	
there	InstallShield Wizard Complete
SPIRENT	The InstallShield Wizard has successfully installed SmartWindow. Click Finish to exit the wizard.
	☐ View Readme file
	< <u>B</u> ack Finish Cancel

3 基于 SmartWindow 的测试仪端口间环回测试

端口间环回测试指用双绞线(UTP-5)或光纤将 SmartBits 测试仪的两个端口(用户端口)直接连接起来,数据流不经过其他设备,用以验证测试仪自身功能。

注意:SmartBits 的模块(板卡)有的不支持自动翻转功能(Auto MDI-X),做端口间 环回测试时,需使用交叉网线连接,例如 LAN-3101B。

3.1 测试方案



3.2 测试环境需求

- ➢ SmartBits测试仪(SmartBits 600 机箱,LAN-3101B 板卡),1 套。
- ▶ 测试仪控制台 (PC 机, Windows2000 或 XP 操作系统), 1 台。

- ➢ SmartBits测试软件(SmartWindow 9.5,运行于控制台上),1套。
- ▶ 串口线,1条。
- ▶ 网线,若干。

3.3 测试环境搭建

使用双绞线(UTP-5)将 SmartBits 测试仪的两个端口(用户端口)直接连接起来,其他硬件安装请参考《SmartBits 硬件安装及机箱 IP 地址设定_Spirepair(V1.1)》相关章节。

3.4 详细测试步骤

3.4.1 启动 SmartWindow 软件并与机箱连接

(1)开始菜单\程序\SmartBits Applications\SmartWindow\SmartWindow, 启动SmartWindow 应用软件,出现如下界面:



(2) 选择相应的机箱型号(本文挡使用 SMB-600 机箱), 进入 SmartWindow 主程序界

面。



	Smar	Territod an Defen Perce tB Between to Between the	View (Sor (Big prise)	Analysis Systems	SPIRENT		
Hatoy Applications :	Linearing			NUN (:			
		La loc		Isana I wat	184 183a	125	

(3) 设置 SmartBits 的连接地址并测试连接:

<1> 菜单"Options" "Connection Setup...",进入"Connection Setup"对话框, 选择"IPv4",在"Remote IP Smartbits"框写入 SmartBits 机箱的 IP 地址(例 "192.168.0.100"), "TCP Port"为:"16385"。

Connection Setup	×
IP Version Ethernet/TCP Address IP v4 Remote IP SmartBits IP v6 I22.168.0.100 ICP Port 16385	OK Cancel

<2> 通过"ping"来测试网络连接状态。

Pi	ng = 192.168.0.100
Davar	Pinging [192.168.0.100] with 32 bytes of data: Reply from 192.168.0.100: bytes=32 time=43ms TTL=30 Reply from 192.168.0.100: bytes=32 time=27ms TTL=30 Reply from 192.168.0.100: bytes=32 time=11ms TTL=30 Ping statistics for 192.168.0.100: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 11ms, Maximum = 43ms, Average = 24ms
	<u>Ping</u> <u>S</u> top <u>C</u> lear Close

注意:192.168.0.100 为 SmartBits 600 的控制端口地址。PC 需要配置与 SmartBits 管理 IP 地址同一网段的地址,如 192.168.0.1,以确保它们的连通性。

(4) 连接 SmartWindow 与 Smartbits 机箱。

<1> 选菜单"Actions" "Connect"(快捷键为 F8), 进入 SmartWindow 主界面。

🖷 Snart Bit	ts - (untitled)		
<u>F</u> ile <u>E</u> dit	<u>Actions</u> Options Tests Admin View Help		
Sm	Layer3 ARP/Neighbor Discovery Set Renly To All ARP/ND Requests On All Cards	•	RENT
1		F10	
	Set All Dual Media Cards To Fiber Set All Dual Media Cards To Copper	Shift+F Shift+C	
2	Set All Dual Phy Mode Cards To LAN Mode Set All Dual Phy Mode Cards To WAN Mode	Shift+L Shift+W	
	Enable Deficit Idle Count On All XENPAK/XFP Po Disable Deficit Idle Count On All XENPAK/XFP P	orts ?orts	▼
	<u>S</u> tart All Cards S <u>top</u> All Cards	F5 F6	
	S <u>m</u> artCounters <u>C</u> lear All Counters	F9 Alt+Shift+C	
	C <u>o</u> nnect	F8	
	Disconnect	Shift+F8	
	<u>U</u> pdate Launch Workshop	Ctrl+H	

<2> 连接成功后,右下角的连接状态显示为"Online",并显示机箱的 IP 地址:

1	Snart¥indo	🕶 - (untitl	ed)										_ 🗆	×
]	<u>F</u> ile <u>E</u> dit <u>A</u> c	tions <u>O</u> ption	us <u>T</u> es	sts	Ad <u>m</u> i	in <u>1</u>	<u>/</u> iew	<u>H</u> e]	.p					
	Sma	rtBits	60)0		Pe	rfor	mai	nce Analy	/si	is System	SPIRENT	Group Start	
Γ	10/100	Base-TX	01	02	03	04	05	06						
ŀ		2 3 ↓ 5 6	Half <i>10</i>	Half <i>10</i>	Half <i>10</i>	Half <i>10</i>	Half <i>10</i>	Half <i>10</i>		1				
	LAN	3101B												
	10/100	Base-TX	01	02	03	04	05	06						
	2	2 3 4 5 6	Half <i>10</i>	Half <i>10</i>	Half <i>10</i>	Half <i>10</i>	Half <i>10</i>	Half <i>10</i>		2				
	LAN	3101B												-
L	AN-3101B 10/10	0Base-TX Ether	net Sma	artMe	trics I	Modu	le		OnLine	IP	=192.168.0.10	0 Port=16385		//.

3.4.2 选取测试所需的板卡

(1) 将鼠标移至 SmartWindow 中测试模块"LAN-3101B"的虚拟前面板上,按右键,选择"Reserve This Module",保留(占用)该模块。

注:虚拟前面板, SmartWindow 中仿照板卡前面板设计的、用于指示板卡各端口及 LED 状态的图形界面。



Ę	SmartTindow - (untit)	Led)	
<u>F</u> i	le <u>E</u> dit <u>A</u> ctions <u>O</u> ptio	ns <u>T</u> ests Ad <u>m</u> in <u>V</u> iew <u>H</u> elp	
	SmartBits	600 Performance Analysis System SPIRENT	Group A
1	10/100Base-TX	01 02 03 04 05 06 Half Half Half Half Half Half Mar Mar Mar Mar Mar Mar Mar Mar Mar Mar	
2	10/100Base-TX	<u>R</u> efresh Re <u>l</u> ease This Module Reser <u>v</u> e This Module	
Re	LAN-3101B serve the selected module	SmartModule File Open Eject This Module 6385	▼
		<u>U</u> pdate This Module	

(2) 当某测试模块被占用后,其虚拟前面板左下角的小三角由绿色变为蓝色,这时,

物理上连通的两个待测端口状态指示灯变为绿色(表示端口为"Link"状态),其他未连接端口指示灯为红色。

4	SmartWindow - (untitle	ed)				<u> </u>
Fi	le <u>E</u> dit <u>A</u> ctions <u>O</u> ption	s <u>T</u> ests Ad <u>m</u> i	n <u>V</u> iew <u>H</u> elp			
	SmartBits	600	Performanc	e Analysis Sy	stem SPIRENT	Group 🔺
	10/100Base-TX	01 02 03	04 05 06			
1	TX/PAUSE RX/ERR TRID/COL DVPLEX/SPEED 1 2 3 4 5 6	Full Half Half <i>100 10 10</i> ANO ANO ANO	Half Half Half <i>10 10 10</i> ANO ANO ANO	1		
10	LAN-3101B	Start Start Start	Start Start Start			
	10/100Base-TX	01 02 03	04 05 06			
2	TX/PAUSE RX/ERE TRID/COL DVPLEX/SPEED 1 2 3 4 5 6	Half Half Half <i>10 10 10</i> ANO ANO ANO	Half Half Full 10 10 100 AN• AN• AN•	2		
$\lfloor c$	LAN-3101B	Start Start Start	Start Start Start			•
LA	N-3101B 10/100Base-TX Ethern	et SmartMetrics M	lodule	OnLine IP=192	168.0.100 Port=16385	

3.4.3 配置端口的工作模式

板卡启动后端口默认工作在自协商状态,对LAN-3101B 而言,用网线直接连通的两个端 口会自协商为 100M 全双工,将鼠标移至虚拟前面板的虚拟端口上,按右键,在弹出菜单中 可看到当前端口的工作模式。

若端口不是工作在自协商状态,可在端口的右键弹出菜单中直接单击"Enable AutoNegotiation"进行设置。





特别说明:对 LAN-3321A、LAN3325A 等双介质板卡(光电互斥),板卡启动后默认工作 在光口自协商状态,若用双绞线连接做环回测试时,需先切换为电口(建议使能自协商)。



3.4.4 配置端口流量参数

环回测试使用默认配置即可。

3.4.5 启动结果查看器并清零统计结果

- (1) 菜单"Actions" "SmartCouters"或快捷键 F9, 打开"Results Framework"窗口。
- (2) 按住Ctrl键,并用鼠标左键依次单击所需端口。
- (3) 清除统计信息:

Results Framework											
Eile View Actions Too	ols <u>H</u> elp										
i d 🖪 🚭 🔳 🗖											
Ports Ex 🛠 🔣 Port Statistics 📉 🗶											
Port 1A-01 LAN-3101B											
Port 1A-02 LAN-3101B Port 1A-03 LAN-3101B		Events	Rates	Events	Rates 🔺						
Port 1A-04 LAN-3101B		Port 1A-01 LAN-3101B	Port 1A-01 LAN-3101B	Port 1A-02 LAN-3101B	Port 1A-02 LAN-3101B						
Port 1A-06 LAN-3101B	Ty Frames			0							
	Bx Frames	0	0	0	0						
	Tx Bytes	0	0	0	0						
	Rx Bytes	0	0	0	0						
	Tx Triggers	N/A	N/A	N/A	N/A						
	Rx Triggers	0	0	0	0						
	CRC Errors	0	0	0	0 =						
	OverSize	0	0	0	0						
	Frag/UnderSize	0	0	0	0						
	Tx From Stack	0	N/A	0	N/A						
	Rx To Stack	0	N/A	0	N/A						
	ARP Replies Sent	0	N/A	0	N/A						
	ARP Requests Sent	0	N/A	0	N/A						
	ARP Replies Received	0	N/A	0	N/A						
	ARP Requests Received	0	N/A	0	N/A						
	Gratuitous ARP Received	N/A	N/A	N/A	N/A						
	PING Replies Sent	U	N/A	U	N/A						
	PING Requests Sent	0	N/A	0	N/A						
	PING Replies Received	0	N/A	0	N/A N/A						
	Signature France Cent	0	N/A M/A	0	NZA NZA						
	Signature Frames Beceived	0	N/A	0	N/A N/A						
	Data Integrity Errors	0	N/A	0	NZA NZA						
	VLAN Frames Beceived	0	N/A	0	N/A N/A						
	Jumbo Frames Beceived	0	0.0	0	0						
	Pause Frames Beceived	N/A	N/A	N/A	N/A						
	IPv4 Frames Beceived	N/A	N/A	N/A	N/A 🗸						
		2									
Davk Shakishing Class County					<u> </u>						

此时各端口统计信息均应为"0"或者"N/A"。

3.4.6 运行测试

(1) 菜单 "Actions " "Update..."或使用快捷键 "Ctrl+H", 下发配置参数到测 试仪。

(2) 在虚拟前面板, 依次点击所要测试端口的 "Start" 键启动测试。



SPDI-TS-SMB-0933

1	6	SmartWindow - (untitle	d)									IJ×
]	[i]	le <u>E</u> dit <u>A</u> ctions <u>O</u> ptions	: <u>T</u> e	sts	Ad <u>m</u> i	n]	<u>(</u> iew	Hel	Р			
		SmartBits	60)0		Pe	rfor	mar	ice Analy	ys	is System SPIRENT	
Γ	1	10/100Base-TX	01	02	03	04	05	06				
		TRICFAUSE BANK SER TRIG/COL DUPLEX/SPEED 1 2 3 4 5 6	Full <i>100</i> ANO	Half <i>10</i> AN•	Half <i>10</i> AN•	Half <i>10</i> AN•	Half <i>10</i> AN•	Half <i>100</i> AN•		1		
L		LAN-3101B	Start	Start	Start	Start	Start	Start				
	Γ	10/100Base-TX	01	02	03	04	05	06				
	2	TX/PAUSE RX/ERE TRIG/COL DUPLEX/SPEED 1 2 3 4 5 6	Half <i>10</i> AN	Half <i>10</i> AN•	Half <i>10</i> AN•	Half <i>10</i> AN•	Half <i>10</i> AN•	Full <i>100</i> 6N°		2		
L		LAN-3101B	Start	Start	Start	Start	Start	Start				-
Ĺ	AN	V-3101B 10/100Base-TX Ethern	et Sm	artMe	trics I	Modu	le		OnLine	IP	P=192.168.0.100 Port=16385	

注:使用快捷键 "F5"可同时启动所有端口的测试 (未连接的端口也可能会被启动)。

点击启动后,若弹出下图所示警告对话框,说明未执行 Update 或执行失败,此时应点

击"是"重新 Update。

SnartT:	indo v
8	SmartWindow found ports that are not initialized and they may not match your current configuration.
-	You may avoid this message by selecting the option in the preferences dialog.
	Do you want to update now?
	<u> </u>

(3) 通过前面板端口状态指示灯查看各端口的工作状态,也可以在结果查看器

"Result Framework"里查看各端口实时的收发包情况。

	SmartTindow - (untitle	≥d)									
F	<u>F</u> ile <u>E</u> dit <u>A</u> ctions <u>O</u> ptions <u>T</u> ests Admin <u>V</u> iew <u>H</u> elp										
	SmartBits	600	Performar	ice Analysi	s System SPIRENT	Group A					
Г	10/100Base-TX	01 02 03	04 05 06								
1	TX/PAUSE RX/ERR TVIERCOL DVPLEX/SPECD 1 2 3 4 5 6	Full Half Hal 100 10 10 ANO ANO ANO	f Half Half <i>10 10 100</i> ANO ANO ANO	1							
	LAM-3101B	Stop Start Star	t Start Start Start								
	10/100Base-TX	01 02 03	04 05 06								
2	TX/PAUSE BAZERA DUPLEX/SPEED 1 2 3 4 5 6	Half Half Hal 10 10 10 ANO ANO ANO	f Half Half Full <i>10 10 100</i> ANO ANO ANO	2							
L	LAN-3101B	Start Start Star	t Start Start <mark>Stop</mark>								
L	AN-3101B 10/100Base-TX Ethern	et SmartMetrics	Module	OnLine IP=	=192.168.0.100 Port=16385						

3.4.7 结束测试并查看结果

(1) 测试两分钟后(根据需要可延长或缩短测试时间),单击 SmartWindow 测试面板 上的"Stop"键停止相应端口的测试,或使用"F6"停止所有端口的测试。



SPDI-TS-SMB-0933

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	<u>F</u> ile <u>E</u> dit <u>A</u> ctions <u>O</u> ptions <u>T</u> ests Admin <u>V</u> iew <u>H</u> elp										
		SmartBits	600)	Pe	rforn	nance Anal	ys	is System SPIRENT	itart	
ſ		10/100Base-TX	01 02	03	04	05 (36				
	1	TRIGACOL DUPLEX/SPEED 1 2 3 4 5 6	Full Half <i>100 10</i> ANO ANO	Half <i>IØ</i> AN●	Half <i>10</i> ANO	Half H <i>10</i> /	alf 00/	1			
		LAN-3101B	Stop Start	Start	Start	Start S	tart				
		10/100Base-TX	01 02	03	04	05 (06				
	2	TX/PAUSE RX/ERR DVFLEX/SPEED 1 2 3 4 5 6	Half Half 10 AN• AN•	Half <i>10</i> AN•	Half <i>10</i> ANO	Half F <i>10</i> / AN• A		2			
L		LAN-3101B	Start Start	Start	Start	Start	top				
	A	N-3101B 10/100Base-TX Ethern	et SmartMe	trics N	Nodu	le	OnLine	IP	P=192.168.0.100 Port=16385		

(2) 查验测试结果:

🕂 Results Framework	k					x
Eile View Actions Tool	ls <u>H</u> elp					
i d 🔒 🎒 🔳 🗆						
Ports Exp 🖉 🗙	Port Statistics				1	x
Port 1-01 LAN-31018 Port 1-02 LAN-31018	Port Counters 🔻 🛛	I 8 🔛 🎜				
Port 1-03 LAN-3101B Port 1-04 LAN-3101B Port 1-05 LAN-3101B		Events Port 1-01 LAN-3101B	Rates Port 1-01 LAN-3101B	Events Port 2-06 LAN-3101B	Rates Port 2-06 LAN-3101B	-
Port 1-06 LAN-3101B Port 2-01 LAN-3101B	Tx Frames	8,747,304	0		0	
Port 2-02 LAN-3101B	Rx Frames	8,461,860	<u>0</u>	8,747,304	0	
Port 2-03 LAN-3101B	I x Bytes By Butes	559,827,455	U 0	541,559,040	U 0	
Port 2-04 LAN-31018	Tx Triagers	N/A	N/A	N/A	N/A	
Port 2-06 LAN-3101B	Rx Triggers	0	0	0	0	
	CRC Errors	0	0	0	0	
	OverSize	0	0	0	0	
	Frag/UnderSize	0	0	0	0	
	Tx From Stack	0	N/A	0	N/A	
	Rx To Stack	0	N/A	0	N/A	
	ARP Replies Sent	U	N/A	U	N/A	
	ARP Requests Sent	U	N/A	U	N/A	
	ARP Replies Received	0	N/A N/A	0	N/A N/A	
	Gratuitous ABP Received	U N/A	N/A	U N/A	N/A N/A	
	PING Benlies Sent	008	N/A	0	N/A	
	PING Requests Sent	0	N/A	0	N/A	
	PING Benlies Beceived	0	N/A	0	N/A	
	PING Requests Received	Ő	N/A	Ŭ.	N/A	
	Signature Frames Sent	0	N/A	0	N/A	-
	1 <u> </u>	4			Þ	
Ready						11.

在"Results Framework"界面中"Events"列显示了各种事件的统计数据,如"Tx Frames"、 "Rx Frames"等数据,如果各端口的"Tx Frames"数据与对打端口"Rx Frames"数据相等,即表示无丢包发生,测试仪工作正常。

3.4.8 保存测试配置与测试结果

(1) 保存流量配置:





(2) 导出测试结果:

 1	Results Framewo	rk								
i Eil	e <u>V</u> iew <u>A</u> ctions <u>T</u> o	ools <u>H</u> elp								
Eile	View <u>A</u> ctions <u>T</u> oo	ls <u>H</u> elp								
D	<u>N</u> ew	Port Statistics							×	
	<u>S</u> ave	Port Counters	* II	8,	🖌 🎤					
	Save <u>A</u> s				Events	Rates	Events	Rate	es 🔺	
٢	Print			Port 1-0	01 LAN-3101B	Port 1-01 LAN-3101B	Port 2-06 LAN-3101B	Port 2-06 L4	4N-3101B	
	E⊻it	Tx Frames			8,747,304	0			0	
Po	rt 2-02 LAN-3101B	Rx Frames			8,461,860 559,927,456	0	E41 559 040		0	
Poi Poi	rt 2-03 LAN-3101B # 2-04 LAN-3101B	Rx Bytes			541,559,040	0	559.827.456		0	
Po	rt 2-05 LAN-3101B	Tx Triggers	E - Fall		,					
Po	rt 2-06 LAN-3101B	Rx Triggers	为任为							
		URC Errors	保存在	m [(二) 我的文料		v 0	at 🖂 🖂		
		Frag/UnderSize								
		Tx From Stack			🚞 Bluetooth	Exchange Folder	🔜 200803迈	克尔杰克逊最	ἑ经典MTVmp4.mp	
L		Rx To Stack	3		🚞 My eBooks		🖬 allegro_	free_viewer.	.jrl .	
L		ARP Replies Sent	我最近的文	2档	🚞 My PageMa	nager	🖬 allegro_	🖬 allegro_free_viewer. jrl, 1		
L		ARP Requests Se			🚞 My QQ Fil	es	🕘 Dei 类型:	🕘 Dei 类型: JRL 文件		
L		ARP Requests Re			🚞 Thunder		rei 修改	日期: 2009-3	-31 17:38	
L		Gratuitous ARP R	「一一」		🚞 Updater		🤁 Sm <mark>: 大小:</mark>	63.0 KB		
L		PING Replies Ser	未山		🚞 备份		🔂 smb600 c	hain1. sai		
L		PING Requests S			🚞 公文包		🧰 Throughp	ut_Chart.jp;	g	
L		PING Requests B			😬 图片收藏		🐴 Throughp	ut_Detail.c:	sv	
L		Signature Frames	我的文材	当	🥅 我的视频		🐴 Throughp	ut_PacketRa	te. csv	
L		1			📇 我的形状		🐴 Throughp	ut_PortErro	rs. csv	
Dear	-lu				🛃 我的音乐		🐴 Throughp	ut_StrayFra	mes.csv	
Real	, v		我的电射	È I	🔁 我接收到的	的文件	🐴 Throughp	ut_Summary.	csv	
			~							
					<				<u>></u>	
			网上邻居	품 :	文件名(M):	spirepair		*	保存(S)	
					保存类型(亚):	. csv		~	取消	

4 参考资料

- (1) 思博伦《SmartBits Virtural Front Panel SmartWindow》
- (2) 思博伦《SmartWindow User Guide》(Mar. 2006)
- (3) 思博伦《思博伦通信产品目录》(2005)

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