CERIO Corporation

CS-1008G-8P

Basic test report

Product Name	CS-1008G-8P	Date	2017 / 04 / 25
H/W Version	A1	S/W Version	N/A
Tested	Danny		

Item	Test description	Result	Other
1	Stability test of throughput		
1.1	[RJ-45 100M Cable] Test Giga Throughput and Stability	Pass	
1.2	[RJ-45 100M Cable] Test 10Mbps Throughput and stability	Pass	
1.3	Voltage/Frequency Variation Test	Pass	
2	PoE test	Pass	
3	Change 10Mbps rate and test RJ-45 280M Cable		
3.1	[RJ-45 280M Cable] Test 10Mbps Throughput and stability	Pass	
3.2	RJ-45 280M Cable connection Cerio's AP (application test) PoE + Data	Pass	
4	Summary		

Test purpose

a. CS-1008G-8P used 100M RJ-45 cable set Giga function, test PoE + data whether stability.
b. CS-1008G-8P used 280M RJ-45 cable (cat 6) set 10Mbps function, test PoE + data whether stability.

RJ-45 cable material

a. Use cat 6 cable and connector
b. RJ-45 cable 280M * 1
c. RJ-45 cable 100M * 1

1. Stability test of throughput

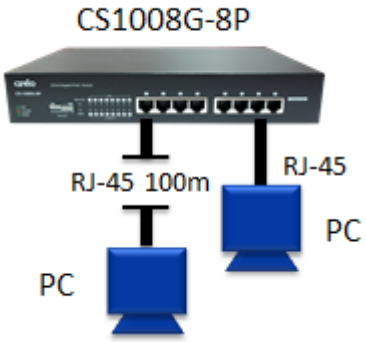
(1) Use Chariot software test CS-1008G-8P throughput

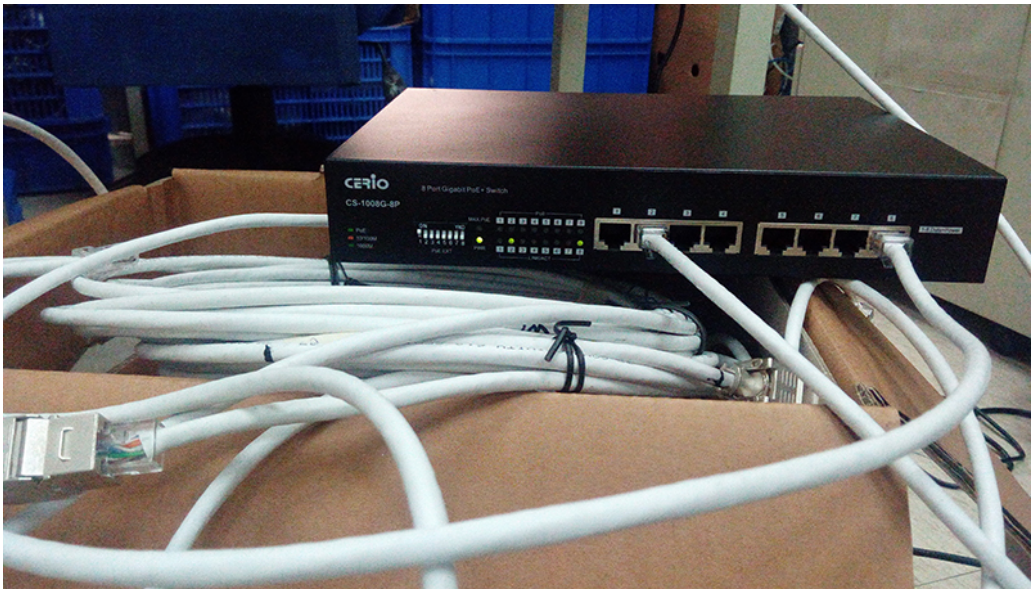
(2) SPIREN detection device test CS-1008G-8P

1.1 [RJ-45 100M Cable] Test Giga Throughput and Stability

Use Chariot software test CS-1008G-8P Giga Port throughput, mainly verify packet flow stability of CS-1008G-8P used Gigabit

a. Infrastructure test, as follow

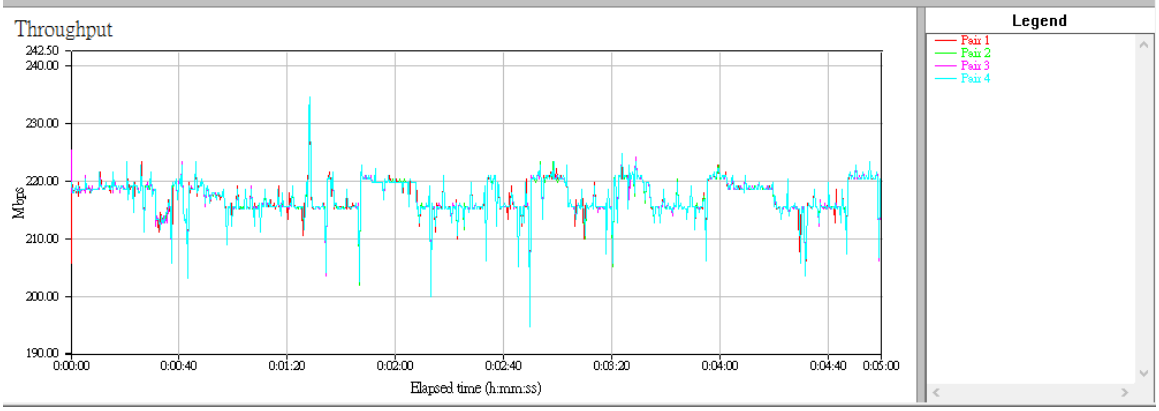




b. Use Chariot software test CS-1008G-8P Giga Port throughput, as follow packet transfer process is very stable of the CS-1008G-8P

Test Setup | Throughput | Transaction Rate | Response Time | Raw Data Totals | Endpoint Configuration

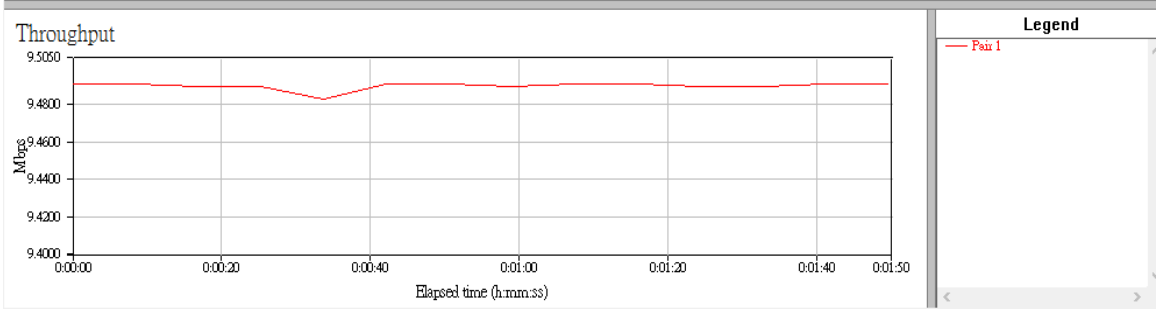
Group	Pair Group Name	Run Status	Timing Records Completed	95% Confidence Interval	Average (Mbps)	Minimum (Mbps)	Maximum (Mbps)	Measured Time (sec)	Relative Precision
All Pairs			**3,252**		**867.776**	**194.647**	**234.604**		
Pair 1	No Group	Finished	813	-0.226 : +0.226	217.248	195.122	234.604	299.381	0.104
Pair 2	No Group	Finished	813	-0.225 : +0.225	217.260	194.647	234.604	299.365	0.104
Pair 3	No Group	Finished	813	-0.225 : +0.225	217.269	194.647	234.604	299.352	0.104
Pair 4	No Group	Finished	813	-0.225 : +0.225	217.263	194.647	234.604	299.361	0.104



1.2 [RJ-45 100M Cable] set 10Mbps Throughput and stability test

Test Setup | Throughput | Transaction Rate | Response Time | Raw Data Totals | Endpoint Configuration

Group	Pair Group Name	Run Status	Timing Records Completed	95% Confidence Interval	Average (Mbps)	Minimum (Mbps)	Maximum (Mbps)	Measured Time (sec)	Relative Precision
All Pairs			**13**		**9.489**	**9.483**	**9.491**		
Pair 1	No Group	Finished	13	-0.001 : +0.001	9.490	9.483	9.491	109.589	0.014



1.3 Voltage/Frequency Variation Test

verify the CS-1008G-8P in max and min, test voltage and Frequency can work normally.

Test Equipment:

CS-1008G-8P x 1

T Packet generator SPIRENT (SPT-9000A) x1

AC Power Source (EXTECH 6600) x1

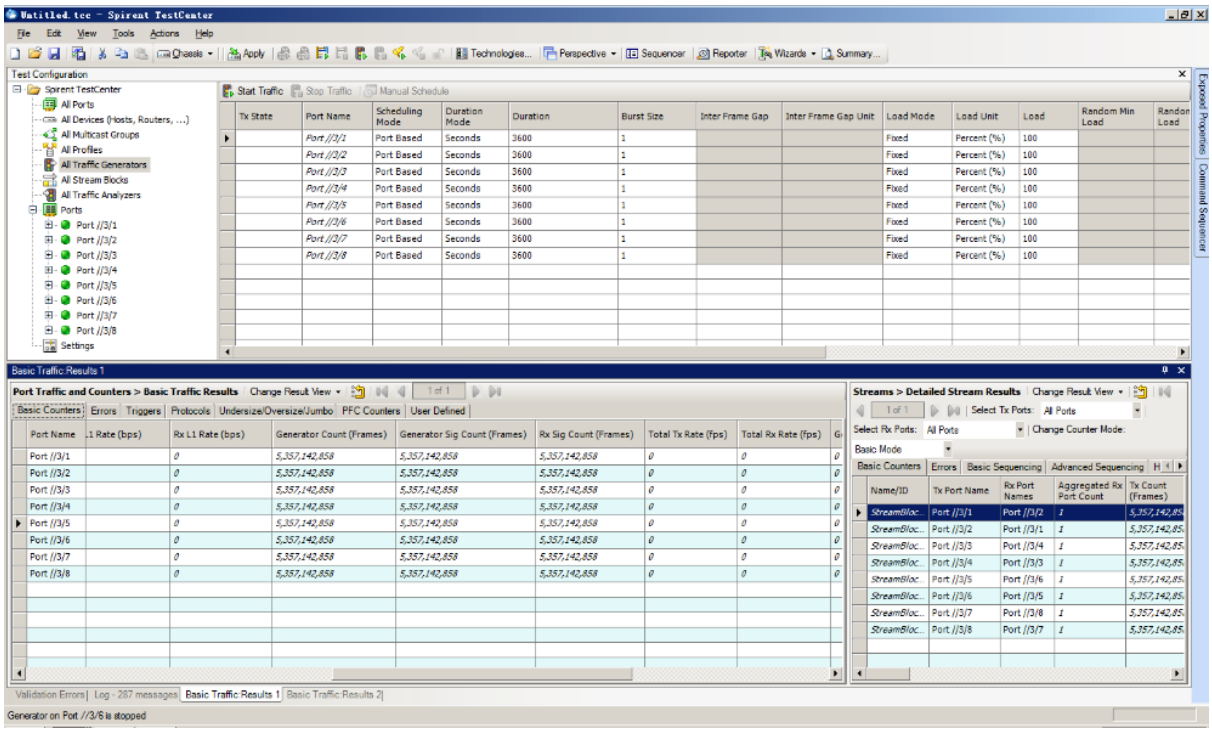
Test time: 1 hour (Change the condition, power off device then power on)

Test Voltage/Frequency: 90V/47Hz , 90V/63Hz , 264V/47Hz , 264V/63Hz

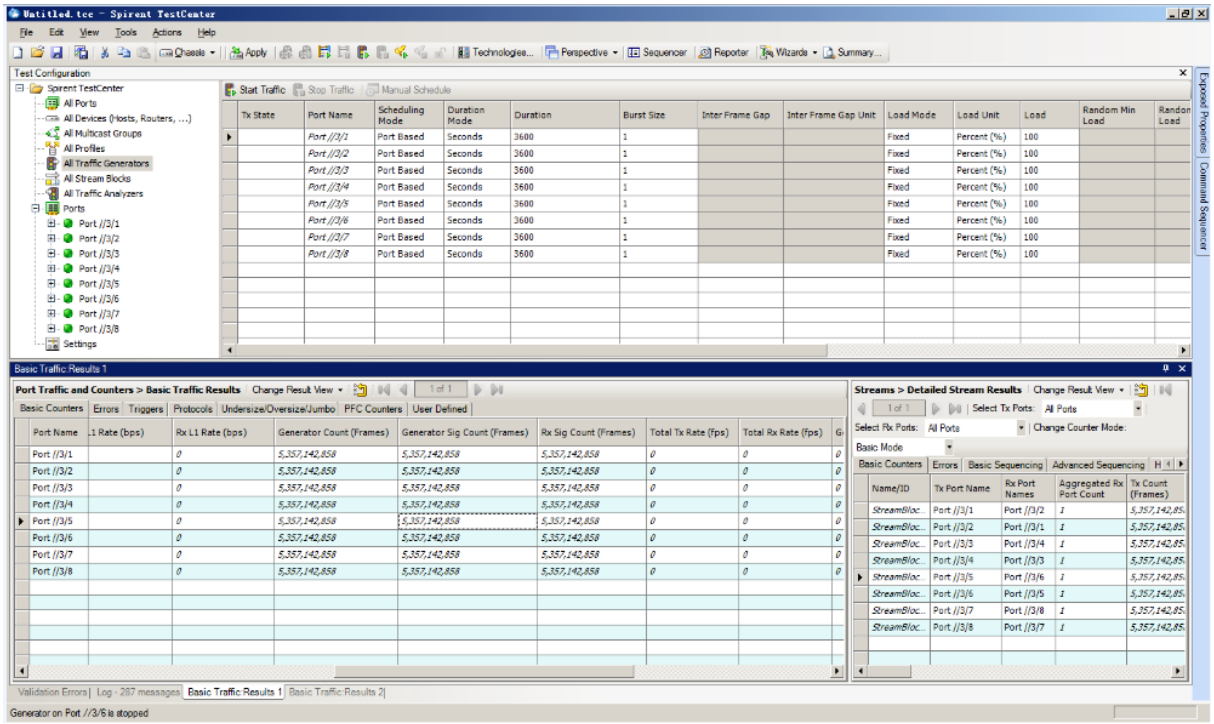
Test Procedure:

1. Connect all ports of the CS-1008G-8P to SPIRENT.
2. According the conditions and adjust the AC power source.
3. Let the CS-1008G-8P full loading for one hour in every condition, when change the condition, power off the CS-1008G-8P then power on.
4. Observe the CS-1008G-8P and record the result.

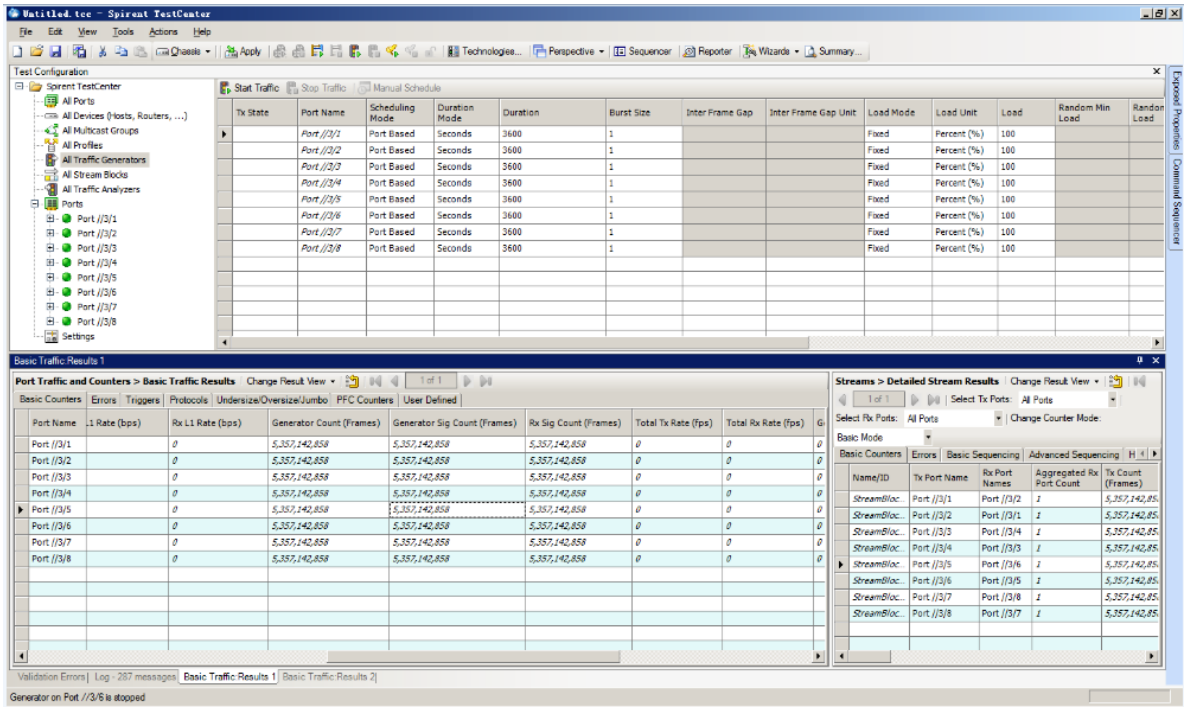
90V/47Hz



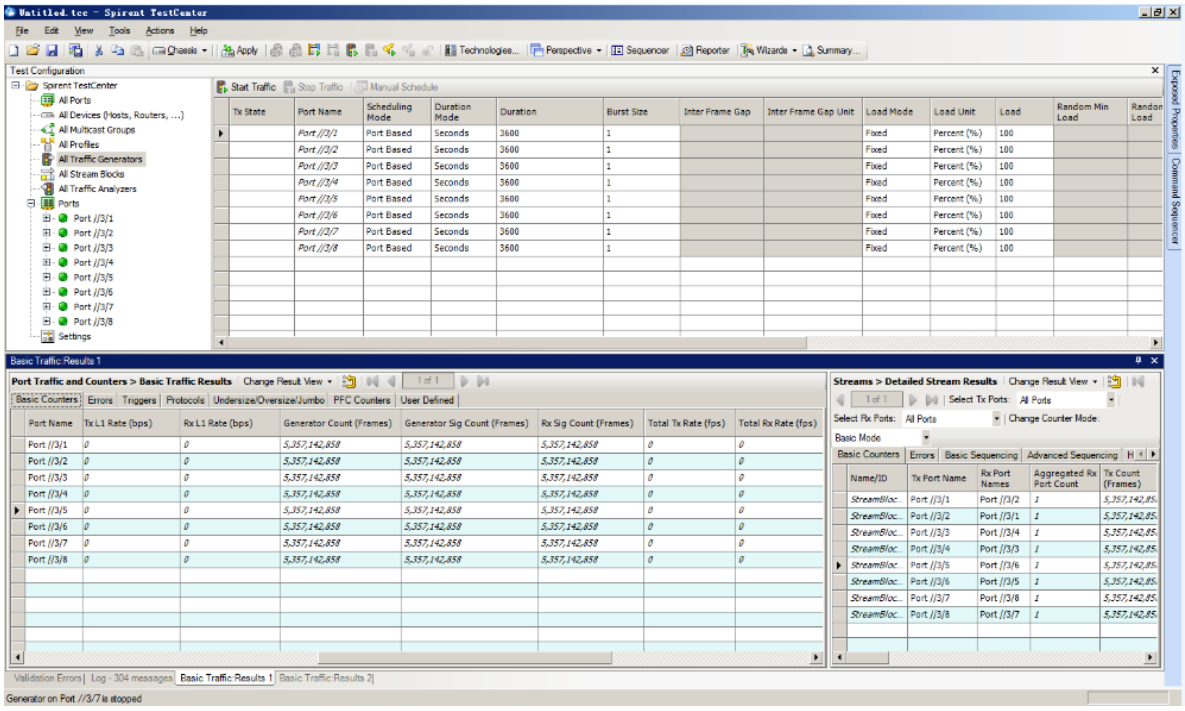
90V/63Hz



264V/47Hz



264V/63Hz



The result of CS-1008G-8P has no any error and packet loss.

2. PoE test

To verify the CS-1008G-8P can meet the 802.3 PD standards.

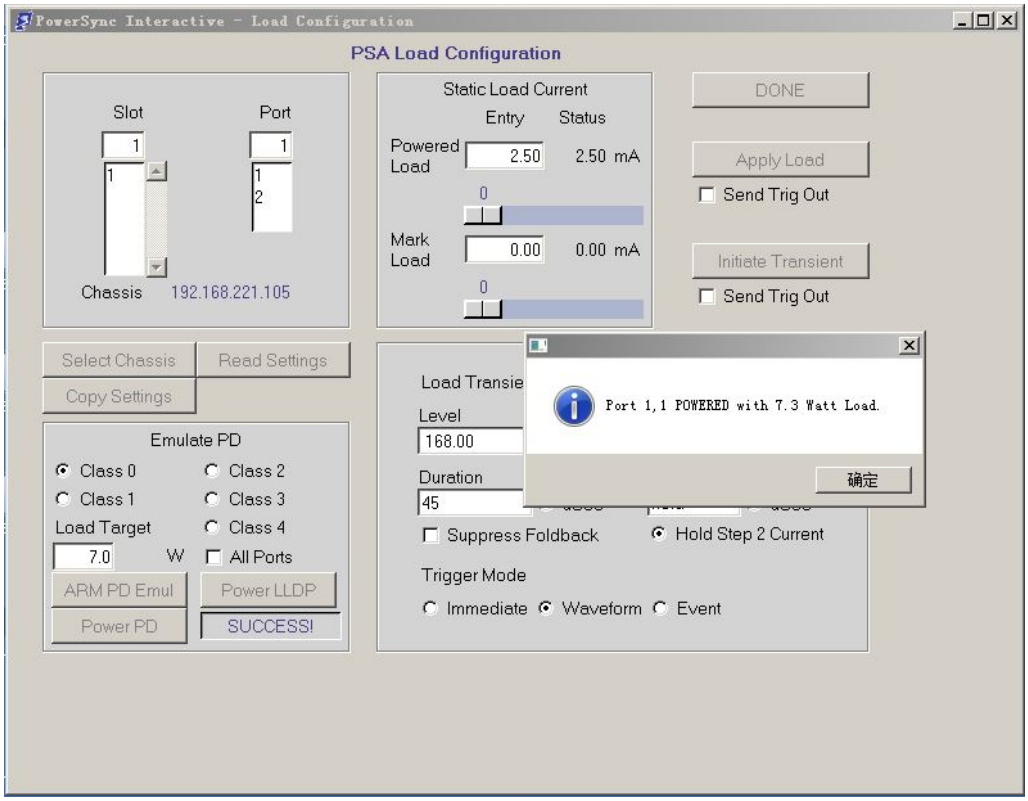
Test infrastructure

Test procedure:

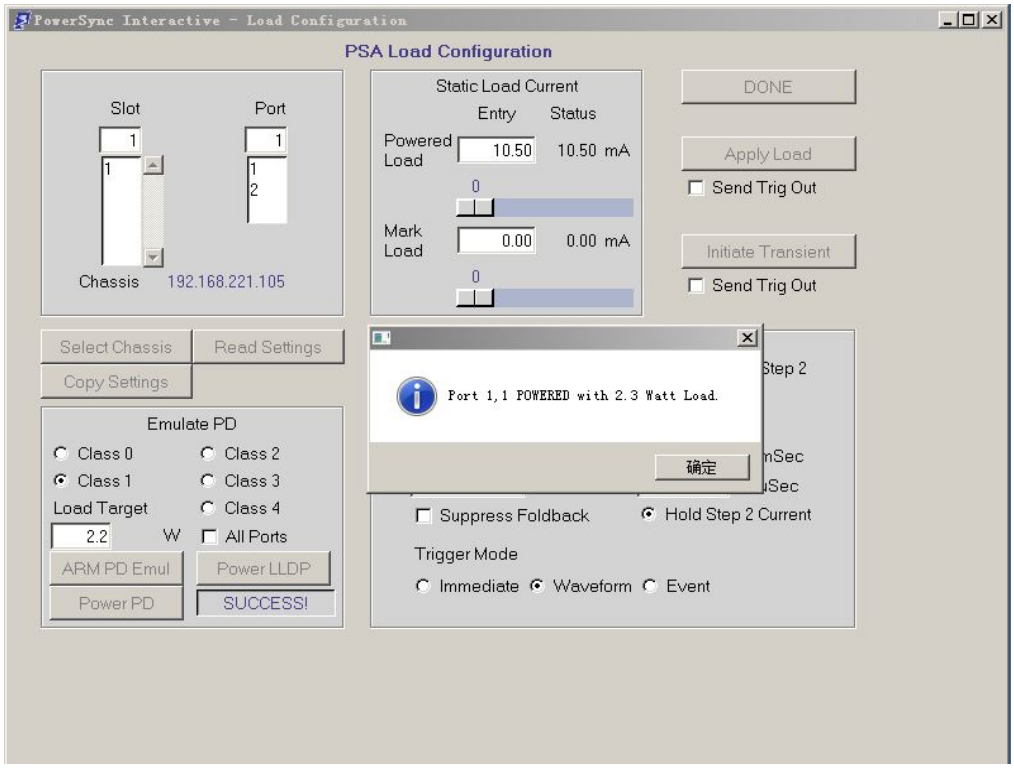
1. According to the setup connect the CS-1008G-8P.
2. Change the test Class, the Class 0 to Class 4.
3. Start to test and record the result.

Test result

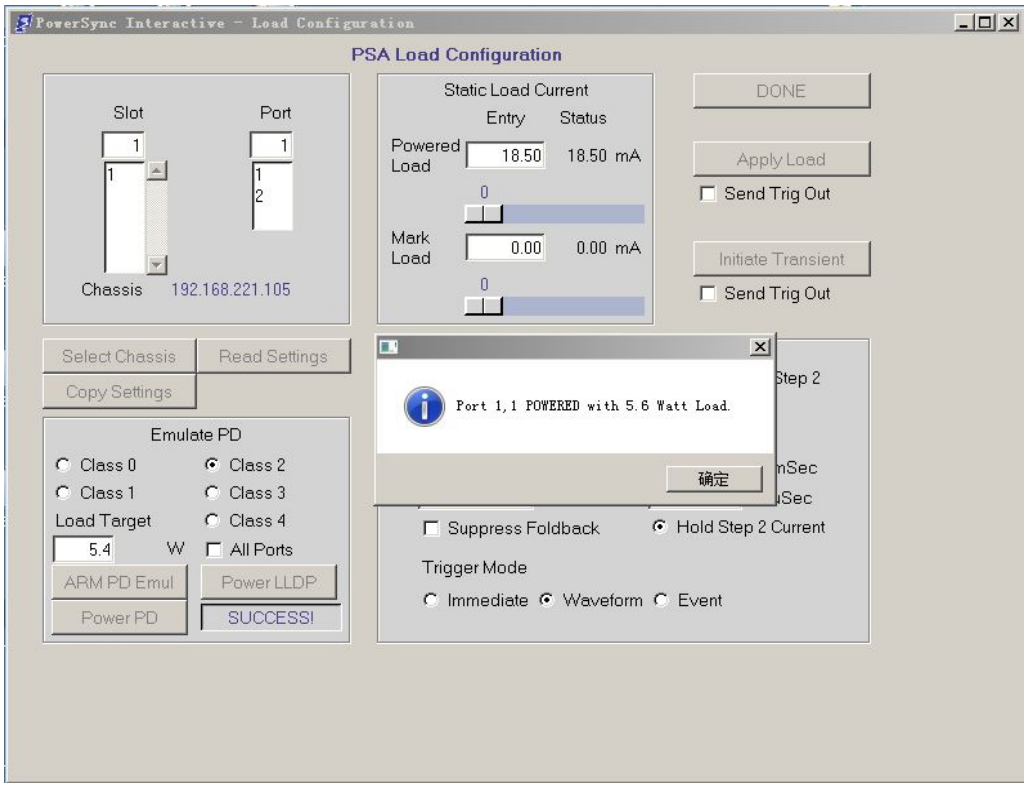
Class 0:



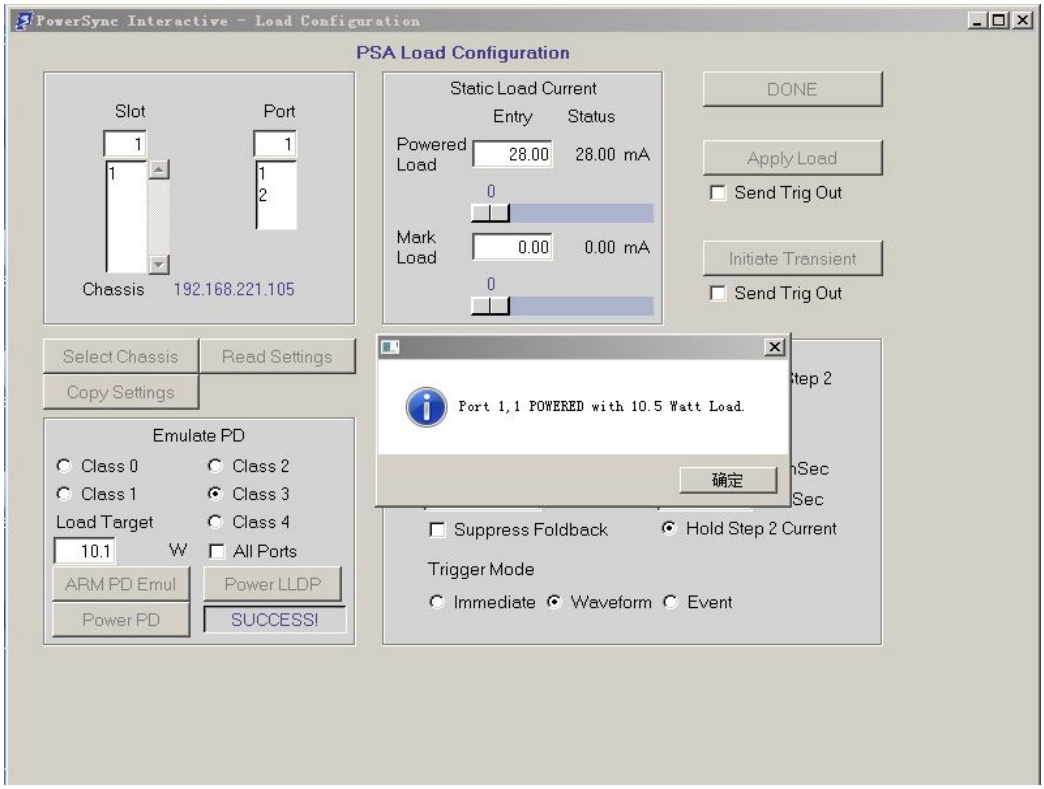
Class1 :



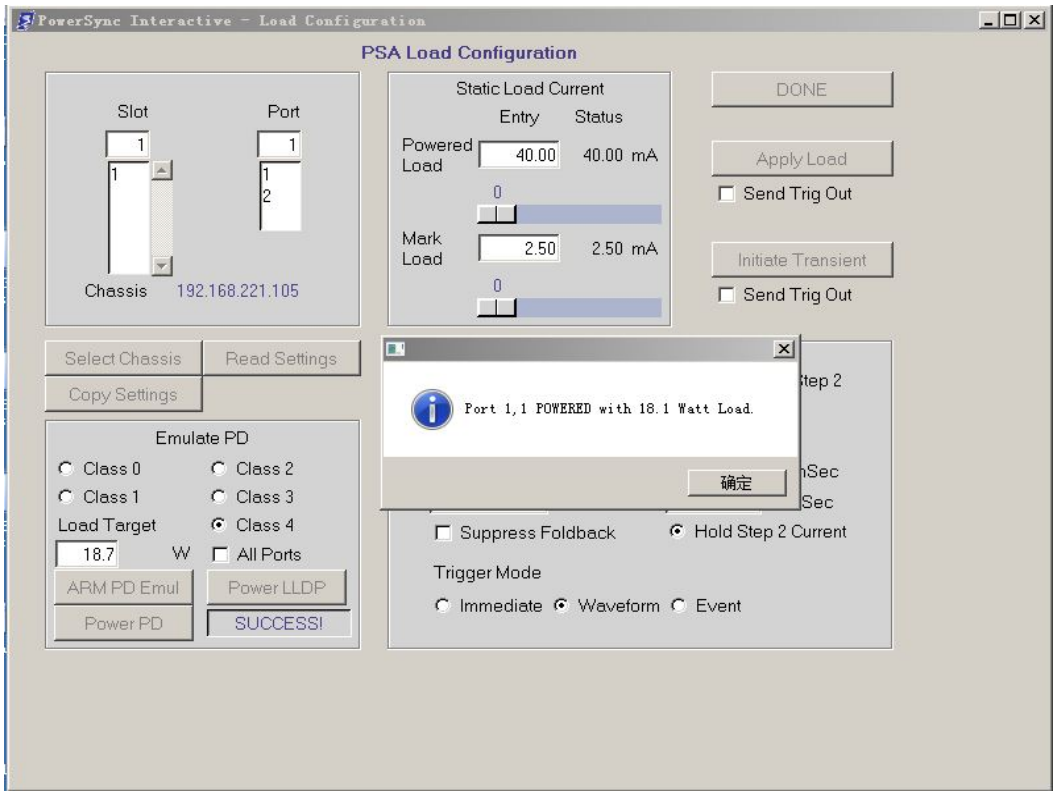
Class 2 :



Class 3 :



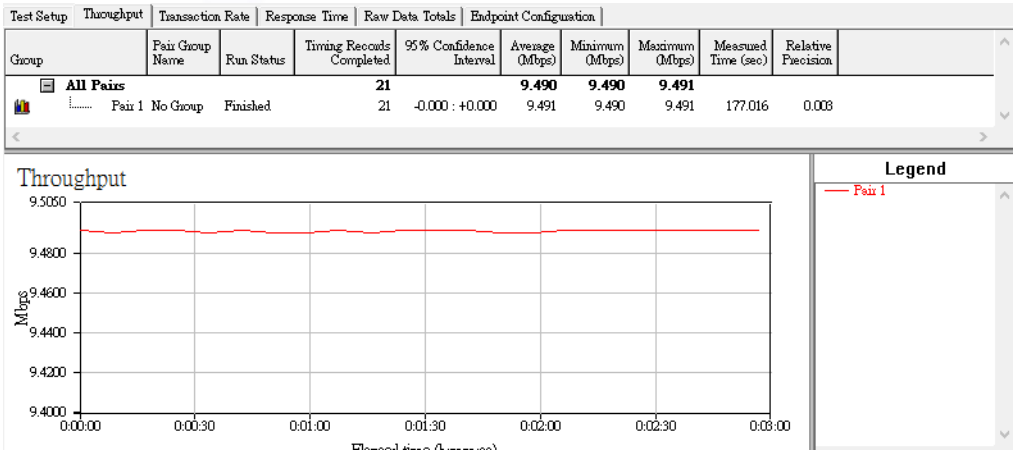
Class 4:



3. Change 10Mbps rate and test RJ-45 280M Cable

3.1 [RJ-45 280M Cable] Set 10Mbps Throughput and Stability test

When change to 10Mbps and used RJ-45 cable 280M test CS-1008G-8P throughput stability.

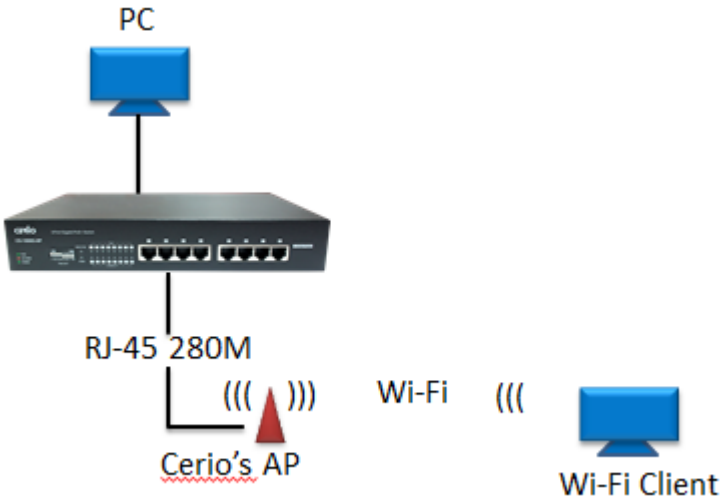


3.2 RJ-45 280M Cable connection Cerio's AP (application test) PoE + Data

Test description

1. Use RJ-45 280M cable (PoE + Data) connection Cerio's AP
2. CS-1008G-8P Ethernet Port change 10Mbpe in connection AP
3. Verify stability

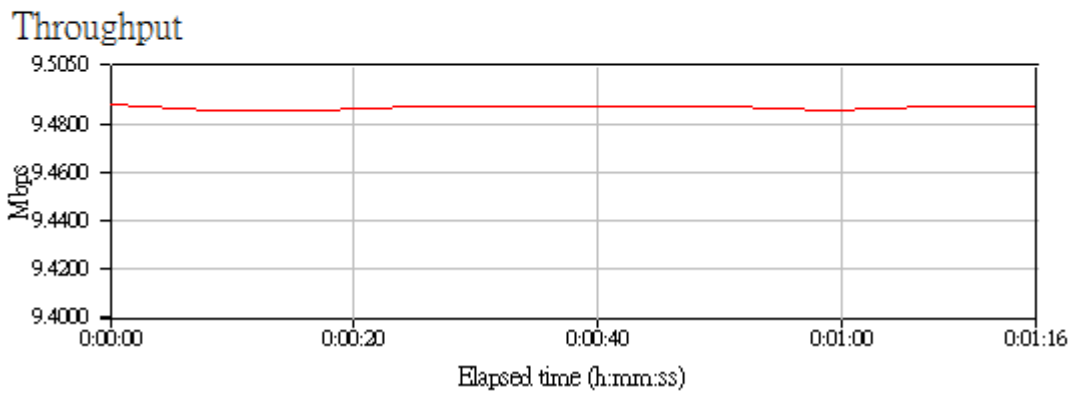
Test infrastructure, as follow



When Wi-Fi Client connection to Cerio's AP and send data to PC, test throughput and PoE via RJ-45 280M cable whether stable.

Test Setup | Throughput | Transaction Rate | Response Time | Raw Data Totals | Endpoint Configuration

Group	Pair Group Name	Run Status	Timing Records Completed	95% Confidence Interval	Average (Mbps)	Minimum (Mbps)	Maximum (Mbps)
All Pairs			**9**		**9.486**	**9.487**	**9.489**
Pair 1	No Group	Finished	9	-0.001 : +0.001	9.487	9.487	9.489



4. Summary

Speed	Giga	10M	10M
RJ-45 cable length	100M	280M	280M
Throughput	Average 868Mbps	Average 9.5Mbps	Average 9.5Mbps
Test type	Data	Data	Data + PoE
PoE(v)	Max. 55.3	Max. 54.3	Max. 54.3
Stability	Pass	Pass	Pass

The above data are the result prove, when CS-1008G-8P Port speed change to 10Mbps then RJ-45 cable can used Max to 280M length(PoE + data), Can break RJ-45 cable 100M limit. When used RJ-45 280M cable transmission PoE 802.3af/at power, the power is almost no attenuation, Showing the stability of CS-1008G-8P is perfect.