

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

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

RJ-45 cable material

- Use cat 6 cable and connector
- RJ-45 cable 280M * 1
- RJ-45 cable 100M * 1



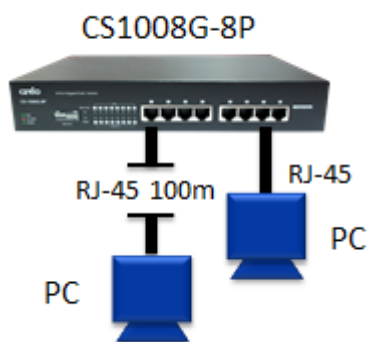
1. Stability test of throughput

- (1) Use Chariot software test CS-1008G-8P throughput
- (2) SPIREN detection device test CS-1008G-8P

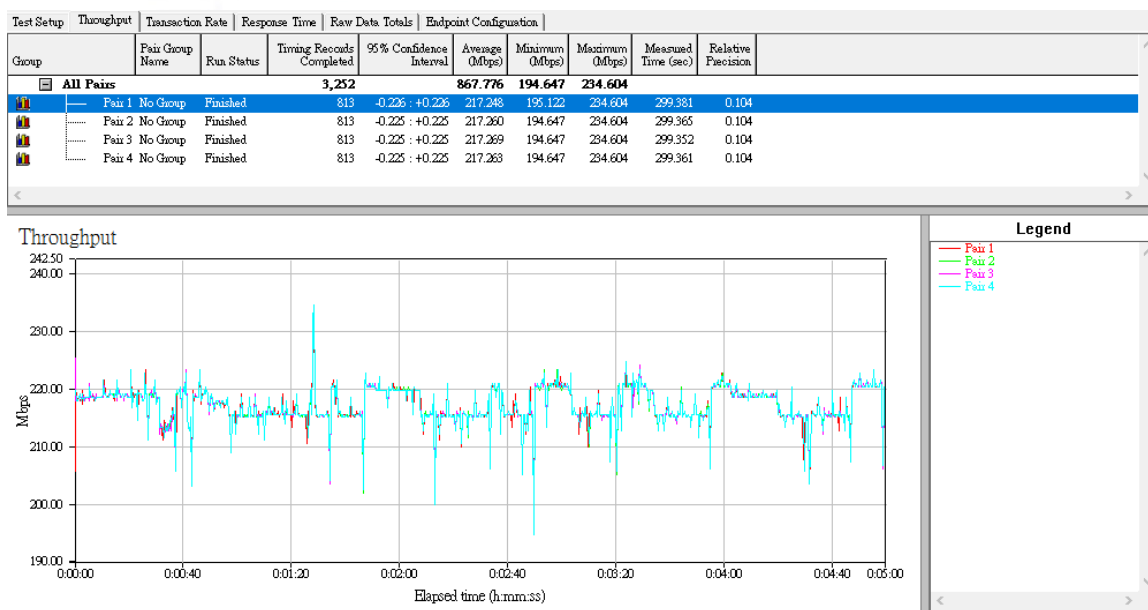
1.1 [RJ-45 100M Cable] Test Giga Throughput and Stability

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

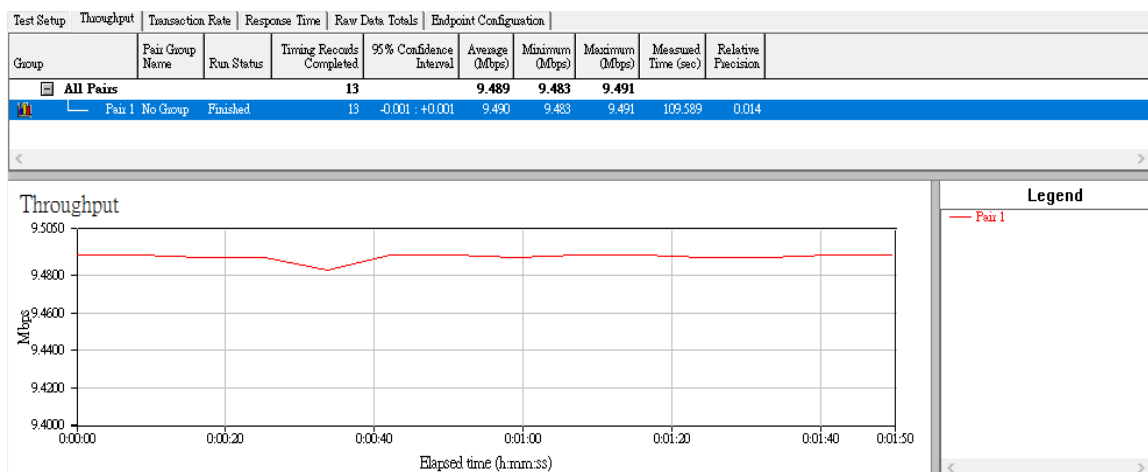
- a. Infrastructure test, as follow



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



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



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

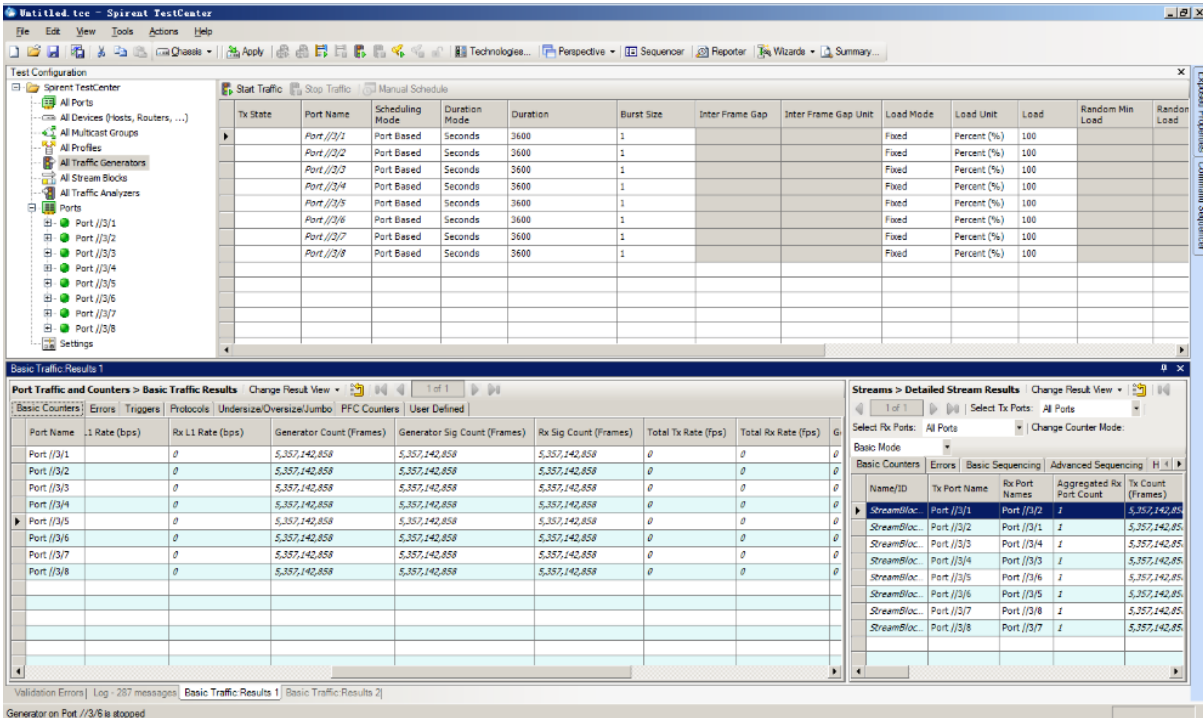
Test time: 1 hour (Change the condition, power off device then power on)

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



The screenshot displays the Spirent TestCenter software interface. The top section shows the 'Test Configuration' window with a tree view on the left and a table of test configurations on the right. The table includes columns for Tx State, Port Name, Scheduling Mode, Duration Mode, Duration, Burst Size, Inter Frame Gap, Inter Frame Gap Unit, Load Mode, Load Unit, Load, Random Min Load, and Random Load. The bottom section shows the 'Basic Traffic Results' window with a table of traffic statistics and a 'Streams > Detailed Stream Results' window on the right.

Tx State	Port Name	Scheduling Mode	Duration Mode	Duration	Burst Size	Inter Frame Gap	Inter Frame Gap Unit	Load Mode	Load Unit	Load	Random Min Load	Random Load
	Port //3/1	Port Based	Seconds	3600	1			Fixed	Percent (%)	100		
	Port //3/2	Port Based	Seconds	3600	1			Fixed	Percent (%)	100		
	Port //3/3	Port Based	Seconds	3600	1			Fixed	Percent (%)	100		
	Port //3/4	Port Based	Seconds	3600	1			Fixed	Percent (%)	100		
	Port //3/5	Port Based	Seconds	3600	1			Fixed	Percent (%)	100		
	Port //3/6	Port Based	Seconds	3600	1			Fixed	Percent (%)	100		
	Port //3/7	Port Based	Seconds	3600	1			Fixed	Percent (%)	100		
	Port //3/8	Port Based	Seconds	3600	1			Fixed	Percent (%)	100		

Port Name	1 Rate (bps)	Rx L1 Rate (bps)	Generator Count (Frames)	Generator Sig Count (Frames)	Rx Sig Count (Frames)	Total Tx Rate (fps)	Total Rx Rate (fps)	G
Port //3/1	0	5,357,142,858	5,357,142,858	5,357,142,858	5,357,142,858	0	0	0
Port //3/2	0	5,357,142,858	5,357,142,858	5,357,142,858	5,357,142,858	0	0	0
Port //3/3	0	5,357,142,858	5,357,142,858	5,357,142,858	5,357,142,858	0	0	0
Port //3/4	0	5,357,142,858	5,357,142,858	5,357,142,858	5,357,142,858	0	0	0
Port //3/5	0	5,357,142,858	5,357,142,858	5,357,142,858	5,357,142,858	0	0	0
Port //3/6	0	5,357,142,858	5,357,142,858	5,357,142,858	5,357,142,858	0	0	0
Port //3/7	0	5,357,142,858	5,357,142,858	5,357,142,858	5,357,142,858	0	0	0
Port //3/8	0	5,357,142,858	5,357,142,858	5,357,142,858	5,357,142,858	0	0	0

Name/ID	Tx Port Name	Rx Port Names	Aggregated Rx Port Count	Tx Count (Frames)
StreamBloc	Port //3/1	Port //3/2	1	5,357,142,858
StreamBloc	Port //3/2	Port //3/1	1	5,357,142,858
StreamBloc	Port //3/3	Port //3/4	1	5,357,142,858
StreamBloc	Port //3/4	Port //3/3	1	5,357,142,858
StreamBloc	Port //3/5	Port //3/6	1	5,357,142,858
StreamBloc	Port //3/6	Port //3/5	1	5,357,142,858
StreamBloc	Port //3/7	Port //3/8	1	5,357,142,858
StreamBloc	Port //3/8	Port //3/7	1	5,357,142,858

90V/63Hz

Test Configuration

Tx State	Port Name	Scheduling Mode	Duration Mode	Duration	Burst Size	Inter Frame Gap	Inter Frame Gap Unit	Load Mode	Load Unit	Load	Random Min Load	Random Load
▶	Port //2/1	Port Based	Seconds	3600	1			Fixed	Percent (%)	100		
	Port //2/2	Port Based	Seconds	3600	1			Fixed	Percent (%)	100		
	Port //2/3	Port Based	Seconds	3600	1			Fixed	Percent (%)	100		
	Port //2/4	Port Based	Seconds	3600	1			Fixed	Percent (%)	100		
	Port //2/5	Port Based	Seconds	3600	1			Fixed	Percent (%)	100		
	Port //2/6	Port Based	Seconds	3600	1			Fixed	Percent (%)	100		
	Port //2/7	Port Based	Seconds	3600	1			Fixed	Percent (%)	100		
	Port //2/8	Port Based	Seconds	3600	1			Fixed	Percent (%)	100		

Basic Traffic Results 1

Port Name	L1 Rate (bps)	Rx L1 Rate (bps)	Generator Count (Frames)	Generator Sig Count (Frames)	Rx Sig Count (Frames)	Total Tx Rate (Tps)	Total Rx Rate (Tps)	G
Port //3/1	0	5,357,142,858	5,357,142,858	5,357,142,858	5,357,142,858	0	0	0
Port //3/2	0	5,357,142,858	5,357,142,858	5,357,142,858	5,357,142,858	0	0	0
Port //3/3	0	5,357,142,858	5,357,142,858	5,357,142,858	5,357,142,858	0	0	0
Port //3/4	0	5,357,142,858	5,357,142,858	5,357,142,858	5,357,142,858	0	0	0
Port //3/5	0	5,357,142,858	5,357,142,858	5,357,142,858	5,357,142,858	0	0	0
Port //3/6	0	5,357,142,858	5,357,142,858	5,357,142,858	5,357,142,858	0	0	0
Port //3/7	0	5,357,142,858	5,357,142,858	5,357,142,858	5,357,142,858	0	0	0
Port //3/8	0	5,357,142,858	5,357,142,858	5,357,142,858	5,357,142,858	0	0	0

Streams > Detailed Stream Results

Name/ID	Tx Port Name	Rx Port Names	Aggregated Rx Port Count	Tx Count (Frames)
StreamBloc	Port //3/1	Port //3/2	1	5,357,142,858
StreamBloc	Port //3/2	Port //3/1	1	5,357,142,858
StreamBloc	Port //3/3	Port //3/4	1	5,357,142,858
StreamBloc	Port //3/4	Port //3/3	1	5,357,142,858
StreamBloc	Port //3/5	Port //3/6	1	5,357,142,858
StreamBloc	Port //3/6	Port //3/5	1	5,357,142,858
StreamBloc	Port //3/7	Port //3/8	1	5,357,142,858
StreamBloc	Port //3/8	Port //3/7	1	5,357,142,858

Generator on Port //3/6 is stopped

264V/47Hz

Test Configuration

Tx State	Port Name	Scheduling Mode	Duration Mode	Duration	Burst Size	Inter Frame Gap	Inter Frame Gap Unit	Load Mode	Load Unit	Load	Random Min Load	Random Load
▶	Port //2/1	Port Based	Seconds	3600	1			Fixed	Percent (%)	100		
	Port //2/2	Port Based	Seconds	3600	1			Fixed	Percent (%)	100		
	Port //2/3	Port Based	Seconds	3600	1			Fixed	Percent (%)	100		
	Port //2/4	Port Based	Seconds	3600	1			Fixed	Percent (%)	100		
	Port //2/5	Port Based	Seconds	3600	1			Fixed	Percent (%)	100		
	Port //2/6	Port Based	Seconds	3600	1			Fixed	Percent (%)	100		
	Port //2/7	Port Based	Seconds	3600	1			Fixed	Percent (%)	100		
	Port //2/8	Port Based	Seconds	3600	1			Fixed	Percent (%)	100		

Basic Traffic Results 1

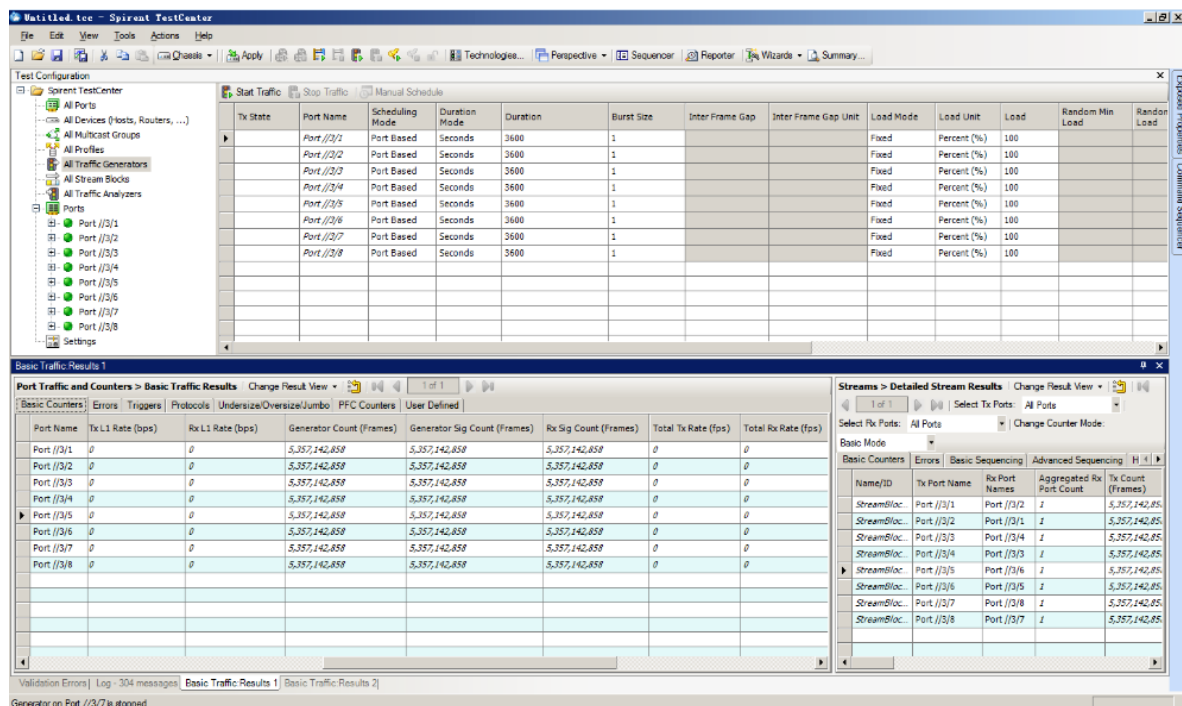
Port Name	L1 Rate (bps)	Rx L1 Rate (bps)	Generator Count (Frames)	Generator Sig Count (Frames)	Rx Sig Count (Frames)	Total Tx Rate (Tps)	Total Rx Rate (Tps)	G
Port //3/1	0	5,357,142,858	5,357,142,858	5,357,142,858	5,357,142,858	0	0	0
Port //3/2	0	5,357,142,858	5,357,142,858	5,357,142,858	5,357,142,858	0	0	0
Port //3/3	0	5,357,142,858	5,357,142,858	5,357,142,858	5,357,142,858	0	0	0
Port //3/4	0	5,357,142,858	5,357,142,858	5,357,142,858	5,357,142,858	0	0	0
Port //3/5	0	5,357,142,858	5,357,142,858	5,357,142,858	5,357,142,858	0	0	0
Port //3/6	0	5,357,142,858	5,357,142,858	5,357,142,858	5,357,142,858	0	0	0
Port //3/7	0	5,357,142,858	5,357,142,858	5,357,142,858	5,357,142,858	0	0	0
Port //3/8	0	5,357,142,858	5,357,142,858	5,357,142,858	5,357,142,858	0	0	0

Streams > Detailed Stream Results

Name/ID	Tx Port Name	Rx Port Names	Aggregated Rx Port Count	Tx Count (Frames)
StreamBloc	Port //3/1	Port //3/2	1	5,357,142,858
StreamBloc	Port //3/2	Port //3/1	1	5,357,142,858
StreamBloc	Port //3/3	Port //3/4	1	5,357,142,858
StreamBloc	Port //3/4	Port //3/3	1	5,357,142,858
StreamBloc	Port //3/5	Port //3/6	1	5,357,142,858
StreamBloc	Port //3/6	Port //3/5	1	5,357,142,858
StreamBloc	Port //3/7	Port //3/8	1	5,357,142,858
StreamBloc	Port //3/8	Port //3/7	1	5,357,142,858

Generator on Port //3/6 is stopped

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

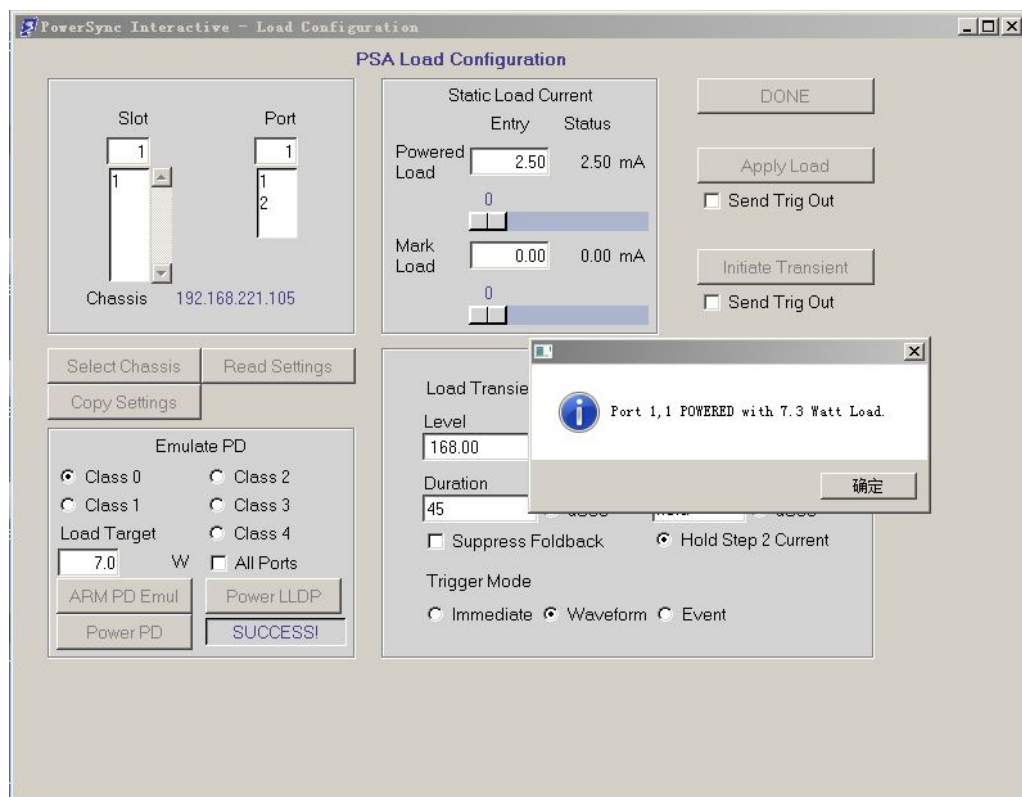


Test procedure:

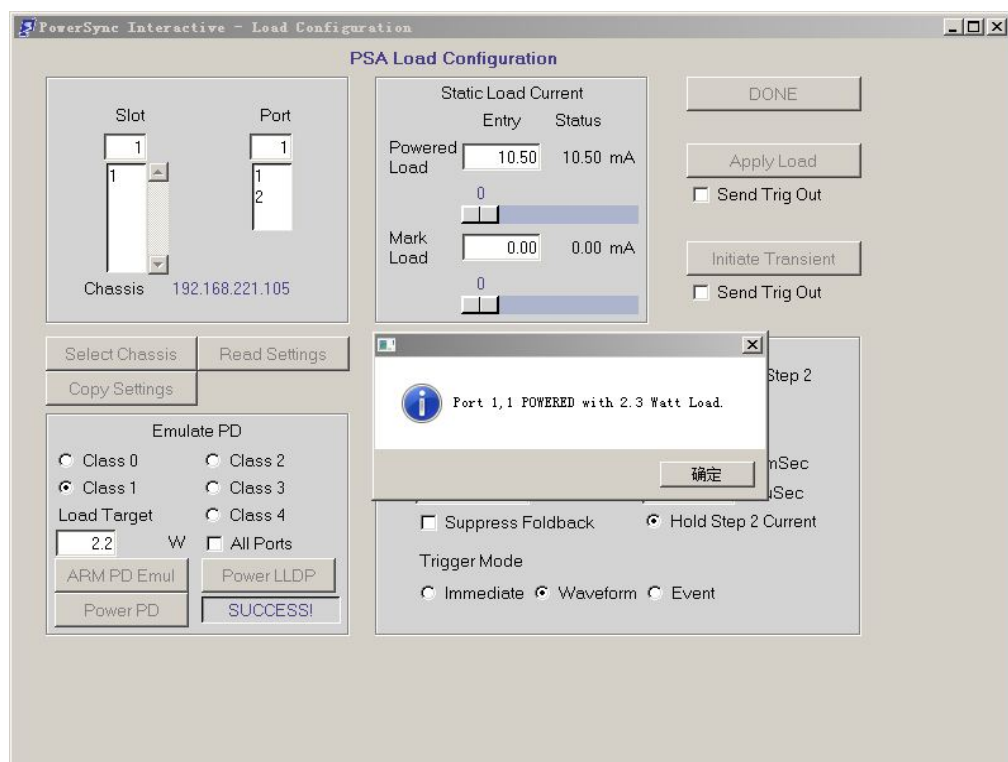
1. According to the setup connect the CS-1008G-8P.
2. Change the test Class, the Class 0 to Class 4.
3. Start to test and record the result.

Test result

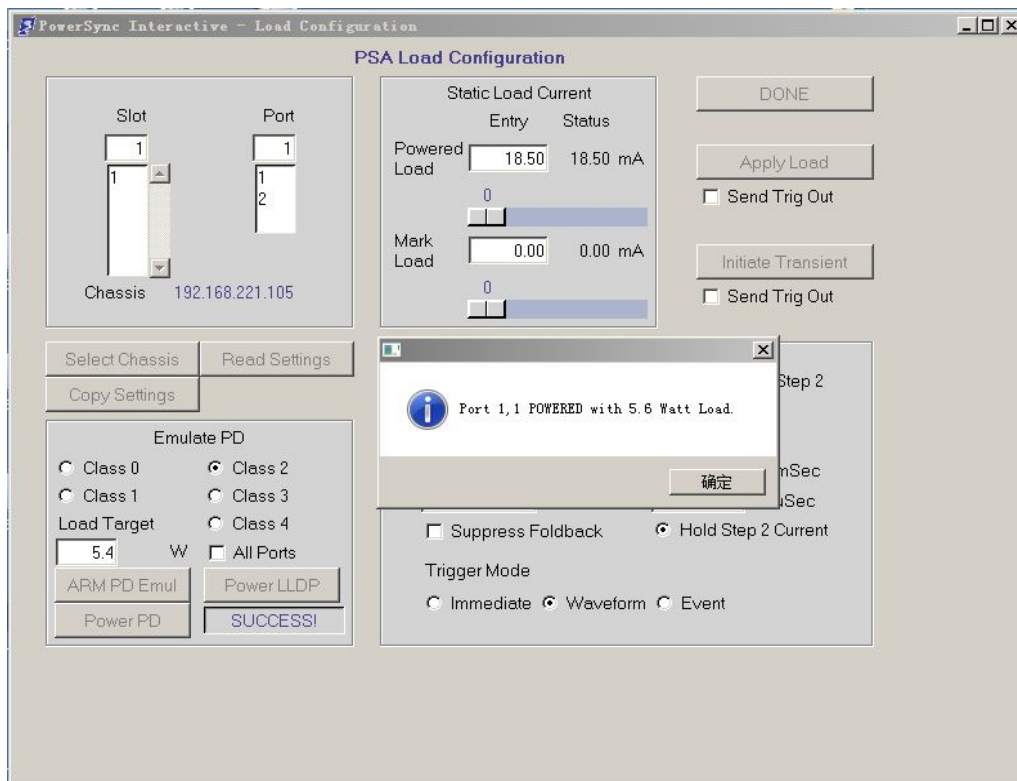
Class 0:



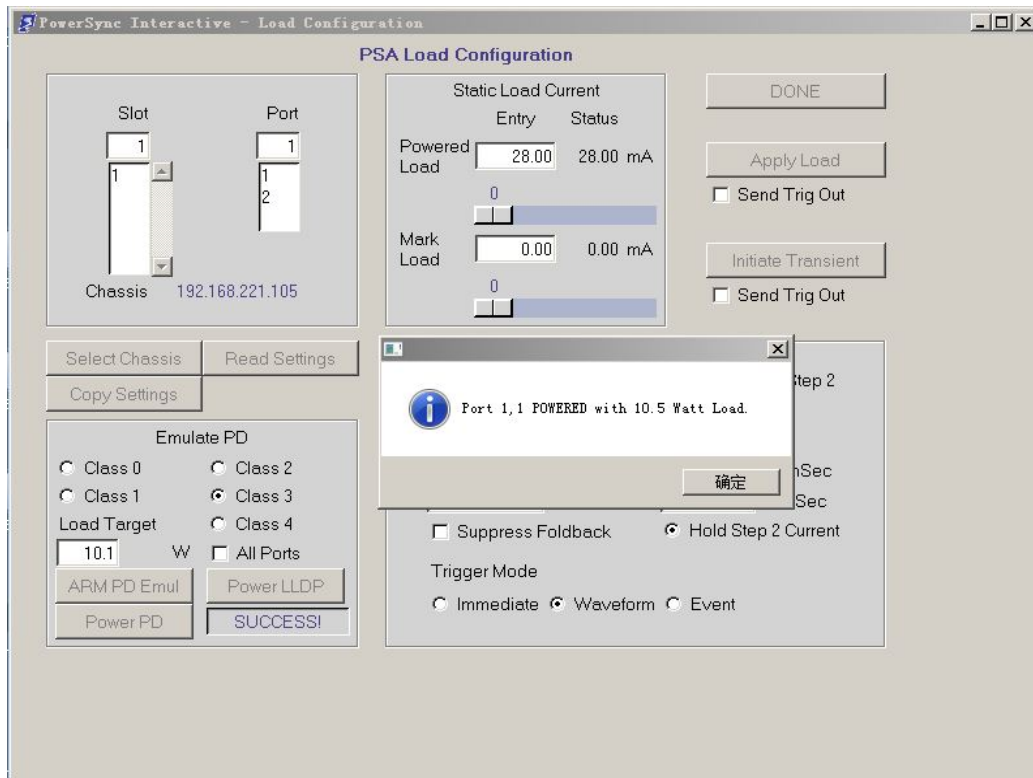
Class1 :



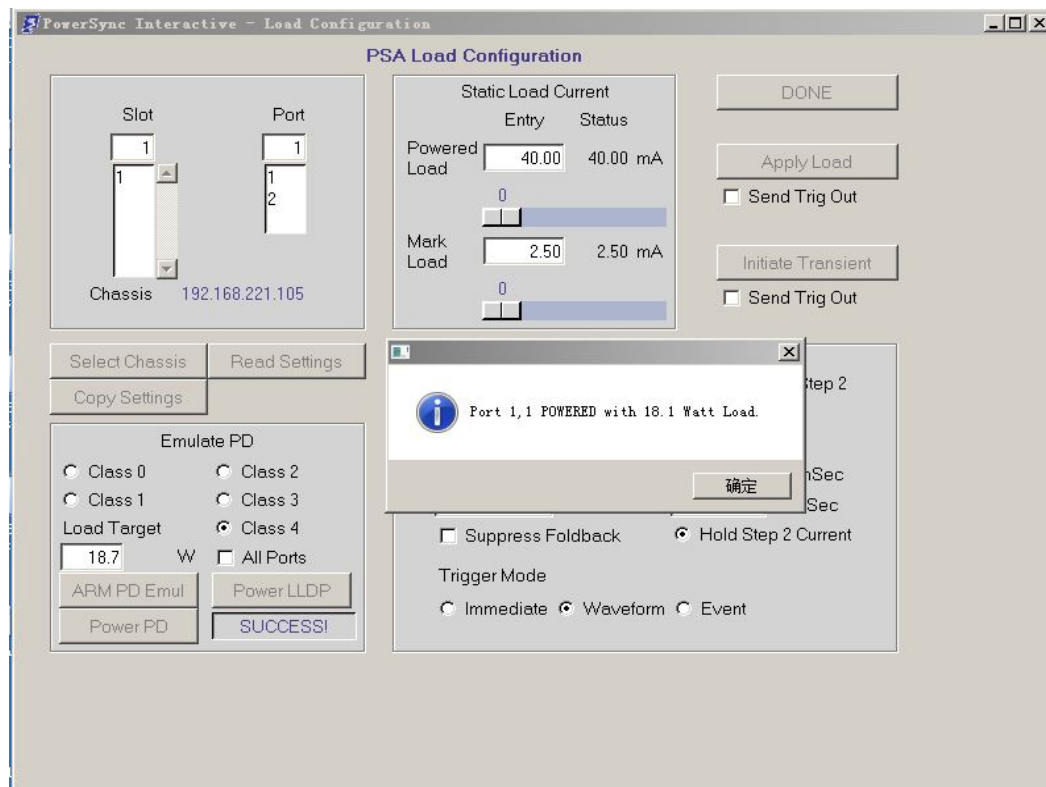
Class 2 :



Class 3 :



Class 4:

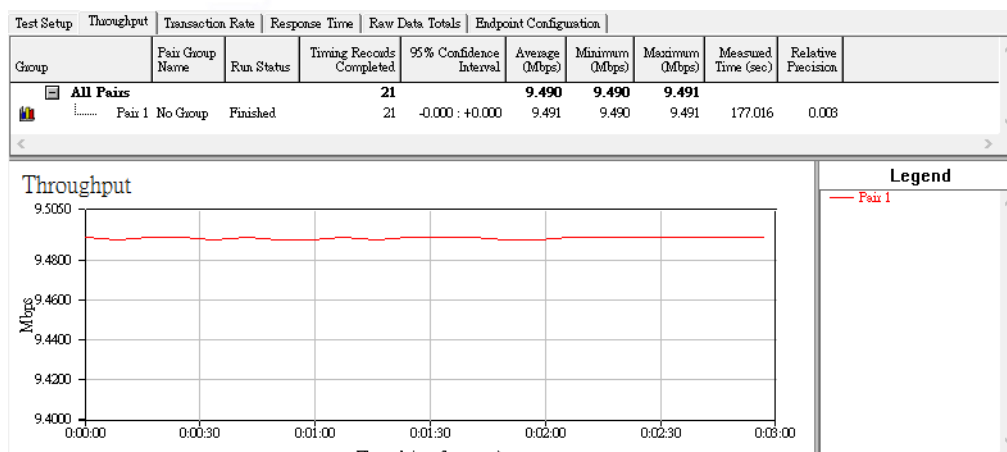


3. Change 10Mbps rate and test RJ-45 280M Cable

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.



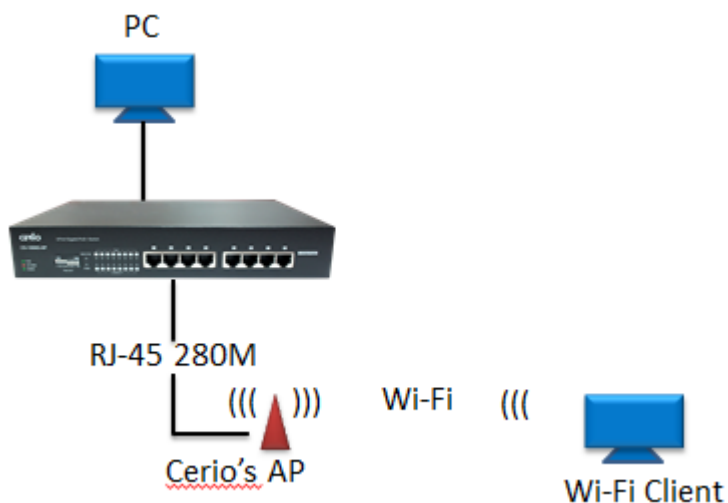


3.2 RJ-45 280M Cable connection Cerio's AP (application test) PoE + Data

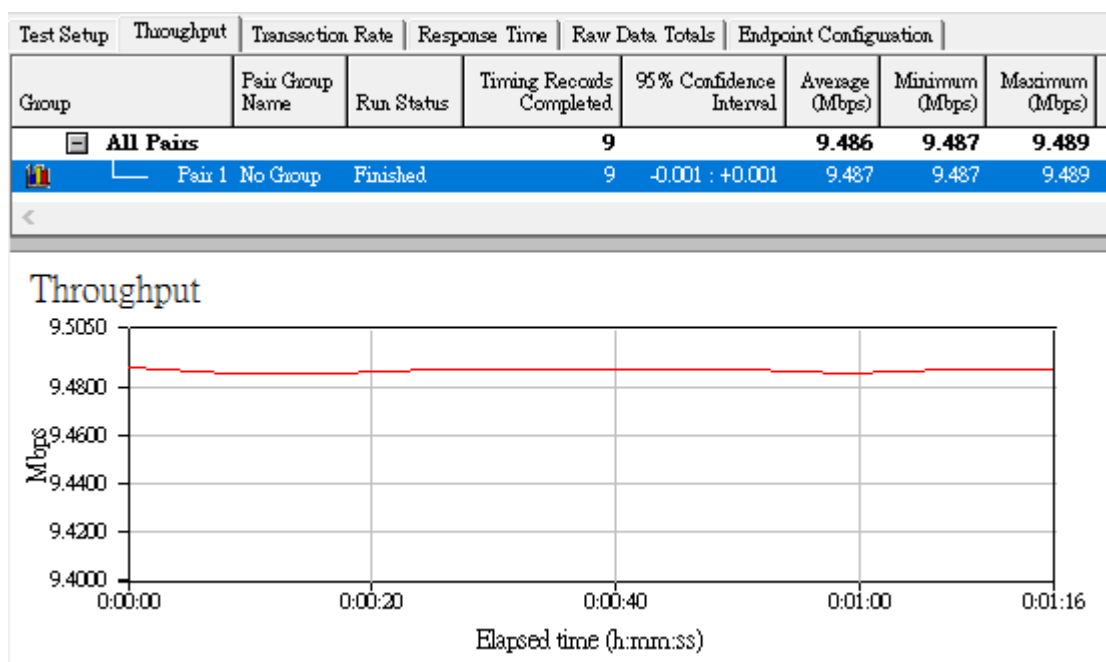
Test description

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.



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.