ADVANTECH
eAutomation

EKI-2728-AE

QA Test Report

8 10/100/1000T Industrial Switch

- **Hardware Version: EASM007740R V1.0**

Abstract:

This document describes the testing environment; configurations; procedures and schedules that QA LAB uses to test EKI-2728-AE**.**

The document Provides an overview of the kind testing which will be performed against this product.

This document consists of the sections described below:

section 1 : Product Features

section 2 : Testing Environment

section 3 : Capability Testing Item & Result

section 4 : Reliability Testing Item & Result

Test Period	2007/11/01~2007/11/14
Tested by	Bill S.W. Lai
QA Lab	Jim Chou
Project Leader	Gene
Final Approval	Gary Tsai

1. Product Features

Hardware Specification

Switch Architecture	Back-plane (Switching Fabric): 16Gbps Packet throughput ability (Full-Duplex): 23.8Mpps @64bytes
Transfer Rate	14,880pps for Ethernet port 148,800pps for Fast Ethernet port 1,488,000pps for Gigabit Fiber Ethernet port
Memory Buffer	136Kbits
MAC Address	8K MAC address table
Jumbo Frame	9Kbytes
Connector	10/100/1000T: 8 x RJ-45
Network Cable	10Base-T: 2-pair UTP/STP Cat. 3, 4, 5 cable EIA/TIA-568 100-ohm (100m) 100Base-TX: 2-pair UTP/STP Cat. 5 cable EIA/TIA-568 100-ohm (100m)
Protocol	CSMA/CD
LED	Per unit: Power 1 (Green), Power 2 (Green), Fault(Red) Per port: Link/Activity (Green), Speed (1000Mbps Green)
Reserve polarity protection	Present
Overload current protection	Present
Power Supply	12~48 VDC, Redundant power with polarity reverse protect function and removable terminal block
Power Consumption	7.79 Watts
Operating Humidity	5%~95% (Non-condensing)
Operating Temperature	Standard: -10℃~60℃；Wide Operating Temperature (-40℃~75℃)
Storage Temperature	-40℃~85℃
Case Dimension	Metal case. IP-30, 30mm (W) x 95mm (D) x 140mm (H)
Installation	DIN Rail and Wall Mount Design
EMI	FCC Class A, CE EN61000-4-2 (ESD), CE EN61000-4-3 (RS), CE EN-61000-4-4 (EFT), CE EN61000-4-5 (Surge), CE EN61000-4-6 (CS), CE EN61000-4-8, CE EN61000-4-11, CE EN61000-4-12, CE EN61000-6-2, CE EN61000-6-4
Safety	UL, cUL, CE/EN60950-1
Stability Testing	IEC60068-2-32 (Free fall), IEC60068-2-27 (Shock), IEC60068-2-6 (Vibration)

V1.03 12-Oct-2007 Issued By Product Dept.

2. Testing Environment

2.1 H/W REQUIREMENT

- Server
  - Netware 3.12：
    CPU = Pentium MMX 166 DRAM = 32MB
  - Window NT4.0：
    CPU = Pentium MMX 166 DRAM = 48MB
- Client3A-3D：
  CPU = Pentium - III 700 MHZ DRAM = 64MB
- Client 3E -3H：
  CPU = Pentium - III 700 MH DRAM = 64MB
- Client 5A-5B：
  CPU = PENTIUMⅣ 1.5GHz DRAM = 256MB
- Client 5C – 5D：
  CPU = PENTIUM III 933MHz DRAM = 128MB
- Client 5E-5H：
  CPU = AMD A462 1GHz DRAM = 256MB
- Switch HUB：

3Com Switch 3300	**FE-1601FM**
VIP Switch 2400	**Cisco System Catalyst 2900XL**
Max Switch II m	**Base Switch 2401F**
GFA2402M	**Flex Switch Hub 2400**
GF-24E2M	**FE-B2401F**
GF2402M	**HS-312M**

- Converter：

Fast Fiber Converter/SC	**CM-A1000L**
Module Fast Fiber Converter	
CM-B100L	

- ZyXEL PRESTIGE 600 series ADSL ROUTER
- IXIA 1600T Traffic Generator/Performance Analyzer
- WebCom EZTester-II
- Cables: Unshielded twisted-pair cable (Cat. 5E: 3m, 100m, 120m)
  Fiber cable multi mode : 3m,10m and 15m

2.2 S/W REQUIREMENT

- Novell NetWare Version 3.12
- LANtest program Version 1.61
- IxExplorer 4.10.250 Build 29
- IxScriptMate 5.20.SP3

2.3 TOPOLOGY

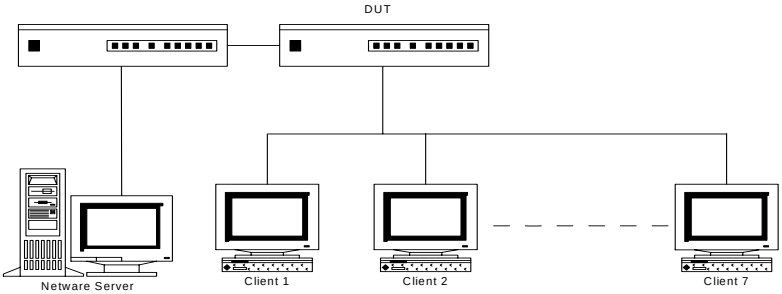


Fig 1. Compatibility and Uplink Test

[Uplink Cable can use Normal cable or Crossover cable.]

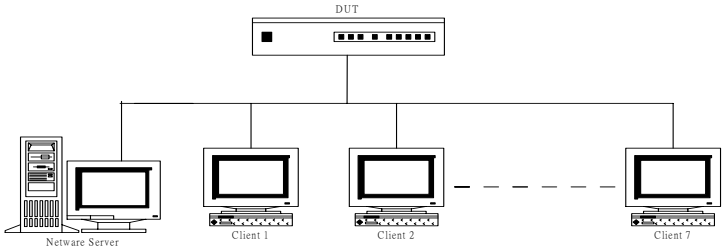


Fig 2. Performance Test

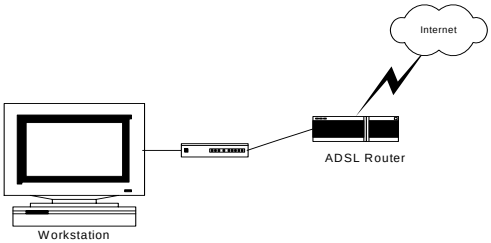


Fig 3. ADSL Test

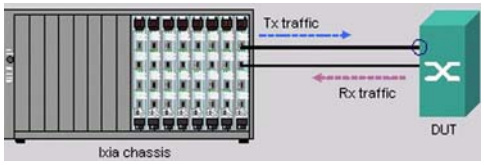


Fig 4. IXIA Test Environment

3. Capability Testing Item & Result

3.1 Test Item

◆ **EKI-2728-AE Capability Test**

- Basic Function Test
  - UTP PORT CONNECTION TEST
  - LED STATUS TEST
    - ◆ PWR1 ◆ PWR2 ◆ FAULT ◆ LNK/ACT
  - 10/100M/1000M with Full/Half Duplex Test
  - Uplink Test
  - Power Redundant Function and Polarity Reverse Protection Test

- Throughput Test
- Frame Loss Test
- Per Port TX/RX Function Test
- Architecture Verify
- Package/Panel Verify
- Manual Verify
- Eye Pattern
- Transmit Jitter
- Rise and Fall time
- Differential Output Voltage
- Clock Frequency Counter
- IC Input Voltage
- Peak Differential Output Voltage
- Maximum Output Droop

3.2 Testing Result:

Capability Test List (1)

Case	Describe	Item	Result		Comment
			OK	NG	
1	Basic Function Test	1. UTP PORT CONNECTION TEST	✓		
		2. LED STATUS TEST			
		● PWR1	✓		
		● PWR2	✓		
		● FAULT	✓		
		● LNK/ACT	✓		
		3. 10/100M/1000M with Full/Half Duplex Test	✓		
		4. UPLINK TEST	✓		
		5. Power Redundant Function and Polarity Reverse Protection	✓		
2	**Throughput Test**	Find the maximum rate of the DUT's forwarding packet.	✓		**Appendix 1A**
3	**Frame Loss Test**	Find percentage of frames not forwarding during a constant load.	✓		**Appendix 1B**
4	**Per Port Tx/Rx Function Test**	Test different Media type, to check any CRC and ERROR packet or not.	✓		**Appendix 1C I Appendix 1L**

Capability Test List (2)

Case	Describe	Item	Result		Comment
			OK	NG	
5	**Architecture Verify**	Check the assemblage of parts of the DUT.	✓		
6	**Package/Panel Verify**	Follow Manual's descriptions to check the DUT's attachments, package and panel.	✓		
7	**Manual Verify**	See manual to check it right or not.	✓		
8	**Eye Pattern**	The Red Line cannot locate on the hexagon zone more than 100 hits during 6500 waveform counts	✓		To measure the PHY' signal whether follow IEEE 802.3 standard
9	**Transmit Jitter**	The peak-to-peak transmit jitter shall not exceed 1.4 ns	✓		
10	**Rise and Fall time**	Rise and Fall Time Range: 3 ns ~ 5 ns, where peak-to-peak time≦0.5 ns	✓		
11	**Differential Output Voltage**	Vout+: 950 ~ 1050 mV ; Vout-: -1050 ~ -950 mV	✓		
12	**Clock Frequency Counter**	To measure the Clock Frequency in order to meet the standard of ±50 ppm	✓		
13	**IC Input Voltage**	To observe the ripple of IC Input Voltage	✓		
14	**Peak Differential Output Voltage**	To measure the Peak differential output voltage at the transmit pins of the RJ-45,on all four transmits channels.	✓		
15	**Maximum Output Droop**	To verify that the transmitter output level does not decay faster then the maximum specified rate	✓		

Appendix 1A

Tested by : IXIA - ixos 4.10.250.29 GA
IxRouter 4.10.10.3
IxScriptMate 5.20.SP3
Copyright ?1997 - 2005 IXIA
Product Name : EKI-2728-AE
Version Number : EASM007740 V1.0
Serial Number : 9626
User Name : BILL
Date & Time : 10/31/07 04:49:25 PM
Test Name/Type : RFC 2544 Throughput Test - Per Port Binary Search
Protocol : MAC(Ethernet Type 08 00)
Number of Trials : 1
Duration of each trial : 00:00:20 sec
Estimated Run Time : 00:00:44 sec
Chassis Chain : loopback
Chassis Id(s) : 1
Theoretical maximum Frame Rates (frames/second) for different frame sizes (bytes):

Speed	64	128	256	512	1024	1280	1518
10 Mbps	14881	8446	4529	2350	1198	962	813
100 Mbps	148810	84460	45290	23497	11973	9616	8128
1000 Mbps	1488096	844595	452899	234963	119732	96154	81275
10000 Mbps	14880952	8445946	4528986	2349625	1197318	961539	812744
155 Mbps (Oc-3)	288000	145116	72840	36491	18263	14614	12324
622 Mbps (Oc-12)	1152000	580465	291362	145965	73054	58454	49296
2488 Mbps (Oc-48)	4608000	2321860	1165447	583860	292215	233817	197182
9952 Mbps (Oc-192)	18432000	9287442	4661790	2335439	1168859	935270	788730

- Port Configuration - One-to-One

Name	TXchassis.card.port	Speed	Duplex	RXchassis.card.port	Speed	Duplex
Pair1	1.1.1	1000	FULL	1.1.2	1000	FULL
Pair2	1.1.2	1000	FULL	1.1.1	1000	FULL
Pair3	1.1.3	1000	FULL	1.1.4	1000	FULL
Pair4	1.1.4	1000	FULL	1.1.3	1000	FULL
Pair5	1.2.1	1000	FULL	1.2.2	1000	FULL
Pair6	1.2.2	1000	FULL	1.2.1	1000	FULL
Pair7	1.2.3	1000	FULL	1.2.4	1000	FULL
Pair8	1.2.4	1000	FULL	1.2.3	1000	FULL

Speed: 1000M Full

Frame Size	64	128	256	512	1024	1280	1518
%TxTput	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Speed: 100M Full

Frame Size	64	128	256	512	1024	1280	1518
%TxTput	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Speed: 10M Full

Frame Size	64	128	256	512	1024	1280	1518
%TxTput	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Speed: 100M Half

Frame Size	64	128	256	512	1024	1280	1518
%TxTput	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Speed: 10M Half

Frame Size	64	128	256	512	1024	1280	1518
%TxTput	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Appendix 1B

Tested by : IXIA - ixos 4.10.250.29 GA
IxRouter 4.10.10.3
IxScriptMate 5.20.SP3
Copyright ?1997 - 2005 IXIA
Product Name : EKI-2728-AE
Version Number : EASM007740 V1.0
Serial Number : 9626
User Name : BILL
Date & Time : 10/31/07 05:37:52 PM
Test Name/Type : RFC 2544 Frameless Test with coarse granularity
Protocol : MAC(Ethernet Type 08 00)
Number of Trials : 1
Estimated Run Time : 00:00:32 sec
Chassis Chain : loopback
Chassis Id(s) : 1
Theoretical maximum Frame Rates (frames/second) for different frame sizes (bytes):

Speed	64	128	256	512	1024	1280	1518
10 Mbps	14881	8446	4529	2350	1198	962	813
100 Mbps	148810	84460	45290	23497	11973	9616	8128
1000 Mbps	1488096	844595	452899	234963	119732	96154	81275
10000 Mbps	14880952	8445946	4528986	2349625	1197318	961539	812744
155 Mbps (Oc-3)	288000	145116	72840	36491	18263	14614	12324
622 Mbps (Oc-12)	1152000	580465	291362	145965	73054	58454	49296
2488 Mbps (Oc-48)	4608000	2321860	1165447	583860	292215	233817	197182
9952 Mbps (Oc-192)	18432000	9287442	4661790	2335439	1168859	935270	788730

- Port Configuration - One-to-One

Name	TXchassis.card.port	Speed	Duplex	RXchassis.card.port	Speed	Duplex
Pair1	1.1.1	1000	FULL	1.1.2	1000	FULL
Pair2	1.1.2	1000	FULL	1.1.1	1000	FULL
Pair3	1.1.3	1000	FULL	1.1.4	1000	FULL
Pair4	1.1.4	1000	FULL	1.1.3	1000	FULL
Pair5	1.2.1	1000	FULL	1.2.2	1000	FULL
Pair6	1.2.2	1000	FULL	1.2.1	1000	FULL
Pair7	1.2.3	1000	FULL	1.2.4	1000	FULL
Pair8	1.2.4	1000	FULL	1.2.3	1000	FULL

Speed: 1000M Full

Frame Size	64	128	256	512	1024	1280	1518
%Loss	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Speed: 100M Full

Frame Size	64	128	256	512	1024	1280	1518
%Loss	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Speed: 10M Full

Frame Size	64	128	256	512	1024	1280	1518
%Loss	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Speed: 100M Half

Frame Size	64	128	256	512	1024	1280	1518
%Loss	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Speed: 10M Half

Frame Size	64	128	256	512	1024	1280	1518
%Loss	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Appendix 1C

1000M Full Duplex Tx/Rx function test

Transmit Mode burst : 1,000,000,000 burst
Data Length:64 byte
Test pairs:1<->2,2<->3……,8<>1,

	10.0.0.1:01.01	10.0.0.1:01.02	10.0.0.1:01.03	10.0.0.1:01.04	10.0.0.1:02.01	10.0.0.1:02.02	10.0.0.1:02.03	10.0.0.1:02.04
Link State	Link Up	Link Up	Link Up	Link Up	Link Up	Link Up	Link Up	Link Up
Line Speed	1000 Mbps	1000 Mbps	1000 Mbps	1000 Mbps	1000 Mbps	1000 Mbps	1000 Mbps	1000 Mbps
Duplex Mode	Full	Full	Full	Full	Full	Full	Full	Full
Frames Sent	1000000000	1000000000	1000000000	1000000000	1000000000	1000000000	1000000000	1000000000
Frames Sent Rate	0	0	0	0	0	0	0	0
Valid Frames Received	1000000000	1000000000	1000000000	1000000000	1000000000	1000000000	1000000000	1000000000
Valid Frames Received Rate	0	0	0	0	0	0	0	0
Bytes Sent	64000000000	64000000000	64000000000	64000000000	64000000000	64000000000	64000000000	64000000000
Bytes Sent Rate	0	0	0	0	0	0	0	0
Bytes Received	64000000000	64000000000	64000000000	64000000000	64000000000	64000000000	64000000000	64000000000
Bytes Received Rate	0	0	0	0	0	0	0	0
Fragments	0	0	0	0	0	0	0	0
Undersize	0	0	0	0	0	0	0	0
Oversize and Good CRCs	0	0	0	0	0	0	0	0
CRC Errors	0	0	0	0	0	0	0	0
Vlan Tagged Frames	0	0	0	0	0	0	0	0
Flow Control Frames	0	0	0	0	0	0	0	0
Alignment Errors	0	0	0	0	0	0	0	0
Dribble Errors	0	0	0	0	0	0	0	0
Collisions	0	0	0	0	0	0	0	0
Late Collisions	0	0	0	0	0	0	0	0
Collision Frames	0	0	0	0	0	0	0	0
Excessive Collision Frames	0	0	0	0	0	0	0	0
Oversize and CRC Errors	0	0	0	0	0	0	0	0
User Defined Stat 1	0	0	0	0	0	0	0	0
User Defined Stat 2	0	0	0	0	0	0	0	0
Capture Trigger (UDS 3)	1000000000	1000000000	1000000000	1000000000	1000000000	1000000000	1000000000	1000000000
Capture Filter (UDS 4)	1000000000	1000000000	1000000000	1000000000	1000000000	1000000000	1000000000	1000000000
ProtocolServer Transmit	0	0	0	0	0	0	0	0
ProtocolServer Receive	0	0	0	0	0	0	0	0
Transmit Arp Reply	0	0	0	0	0	0	0	0
Transmit Arp Request	0	0	0	0	0	0	0	0
Transmit Ping Reply	0	0	0	0	0	0	0	0
Transmit Ping Request	0	0	0	0	0	0	0	0
Receive Arp Reply	0	0	0	0	0	0	0	0
Receive Arp Request	0	0	0	0	0	0	0	0
Receive Ping Reply	0	0	0	0	0	0	0	0
Receive Ping Request	0	0	0	0	0	0	0	0
Transmit Duration(Cleared on Start Tx)	11:12.0	11:12.0	11:12.0	11:12.0	11:12.0	11:12.0	11:12.0	11:12.0
Protocol Server Vlan Dropped Frames	0	0	0	0	0	0	0	0
Scheduled Frames Sent	1000000000	1000000000	1000000000	1000000000	1000000000	1000000000	1000000000	1000000000
Asynchronous Frames Sent	0	0	0	0	0	0	0	0
Port CPU Frames Sent	0	0	0	0	0	0	0	0
Scheduled Transmit Duration	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0
Bytes Sent / Transmit Duration	95238095	95238095	95238095	95238095	95238095	95238095	95238095	95238095
Bits Sent	5.12E+11	5.12E+11	5.12E+11	5.12E+11	5.12E+11	5.12E+11	5.12E+11	5.12E+11
Bits Sent Rate	0	0	0	0	0	0	0	0
Bits Received	5.12E+11	5.12E+11	5.12E+11	5.12E+11	5.12E+11	5.12E+11	5.12E+11	5.12E+11
Bits Received Rate	0	0	0	0	0	0	0	0
Port CPU Status	Ready	Ready	Ready	Ready	Ready	Ready	Ready	Ready
Port CPU DoD Status	Ready	Ready	Ready	Ready	Ready	Ready	Ready	Ready

Appendix 1D

100M Full Duplex + 1000M Full Duplex Tx/Rx function test

Transmit Mode:burst 100,000,000
Data Length:64 byte
Test pairs:1<->2,2<->3,3<->4,…., 8<->1

	10.0.0.1:01.01	10.0.0.1:01.02	10.0.0.1:01.03	10.0.0.1:01.04	10.0.0.1:02.01	10.0.0.1:02.02	10.0.0.1:02.03	10.0.0.1:02.04
Link State	Link Up	Link Up	Link Up	Link Up	Link Up	Link Up	Link Up	Link Up
Line Speed	1000 Mbps	100 Mbps	1000 Mbps	100 Mbps	1000 Mbps	100 Mbps	1000 Mbps	100 Mbps
Duplex Mode	Full	Full	Full	Full	Full	Full	Full	Full
Frames Sent	100000000	100000000	100000000	100000000	100000000	100000000	100000000	100000000
Frames Sent Rate	0	0	0	0	0	0	0	0
Valid Frames Received	114062474	100000000	114062474	100000000	114062474	100000000	114062474	100000000
Valid Frames Received Rate	0	0	0	0	0	0	0	0
Bytes Sent	6400000000	6400000000	6400000000	6400000000	6400000000	6400000000	6400000000	6400000000
Bytes Sent Rate	0	0	0	0	0	0	0	0
Bytes Received	7299998336	6400000000	7299998336	6400000000	7299998336	6400000000	7299998336	6400000000
Bytes Received Rate	0	0	0	0	0	0	0	0
Fragments	0	0	0	0	0	0	0	0
Undersize	0	0	0	0	0	0	0	0
Oversize	0	0	0	0	0	0	0	0
CRC Errors	0	0	0	0	0	0	0	0
Vlan Tagged Frames	0	0	0	0	0	0	0	0
Flow Control Frames	14062474	0	14062474	0	14062474	0	14062474	0
Alignment Errors	0	0	0	0	0	0	0	0
Dribble Errors	0	0	0	0	0	0	0	0
Collisions	0	0	0	0	0	0	0	0
Late Collisions	0	0	0	0	0	0	0	0
Collision Frames	0	0	0	0	0	0	0	0
Excessive Collision Frames	0	0	0	0	0	0	0	0
Oversize and CRC Errors	0	0	0	0	0	0	0	0
User Defined Stat 1	0	0	0	0	0	0	0	0
User Defined Stat 2	0	0	0	0	0	0	0	0
Capture Trigger (UDS 3)	114062474	100000000	114062474	100000000	114062474	100000000	114062474	100000000
Capture Filter (UDS 4)	114062474	100000000	114062474	100000000	114062474	100000000	114062474	100000000
ProtocolServer Transmit	0	0	0	0	0	0	0	0
ProtocolServer Receive	0	0	0	0	0	0	0	0
Transmit Arp Reply	0	0	0	0	0	0	0	0
Transmit Arp Request	0	0	0	0	0	0	0	0
Transmit Ping Reply	0	0	0	0	0	0	0	0
Transmit Ping Request	0	0	0	0	0	0	0	0
Receive Arp Reply	0	0	0	0	0	0	0	0
Receive Arp Request	0	0	0	0	0	0	0	0
Receive Ping Reply	0	0	0	0	0	0	0	0
Receive Ping Request	0	0	0	0	0	0	0	0
Transmit Duration(Cleared on Start Tx)	11:12.0	11:12.0	11:12.0	11:12.0	11:12.0	11:12.0	11:12.0	11:12.0
Protocol Server Vlan Dropped Frames	0	0	0	0	0	0	0	0
Scheduled Frames Sent	100000000	100000000	100000000	100000000	100000000	100000000	100000000	100000000
Asynchronous Frames Sent	0	0	0	0	0	0	0	0
Port CPU Frames Sent	0	0	0	0	0	0	0	0
Scheduled Transmit Duration	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0
Bytes Sent / Transmit Duration	9524049	9523809	9524049	9523809	9524049	9523809	9524049	9523809
Bits Sent	51200000000	51200000000	51200000000	51200000000	51200000000	51200000000	51200000000	51200000000
Bits Sent Rate	0	0	0	0	0	0	0	0
Bits Received	58399986688	51200000000	58399986688	51200000000	58399986688	51200000000	58399986688	51200000000
Bits Received Rate	0	0	0	0	0	0	0	0
Port CPU Status	Ready	Ready	Ready	Ready	Ready	Ready	Ready	Ready
Port CPU DoD Status	Ready	Ready	Ready	Ready	Ready	Ready	Ready	Ready

Appendix 1E

100M Full Duplex Tx/Rx function test

Transmit Mode:burst 100,000,000
Data Length:64 byte
Test pairs:1<->2,2<->3……,8<>1

	10.0.0.1:01.01	10.0.0.1:01.02	10.0.0.1:01.03	10.0.0.1:01.04	10.0.0.1:02.01	10.0.0.1:02.02	10.0.0.1:02.03	10.0.0.1:02.04
Link State	Link Up	Link Up	Link Up	Link Up	Link Up	Link Up	Link Up	Link Up
Line Speed	100 Mbps	100 Mbps	100 Mbps	100 Mbps	100 Mbps	100 Mbps	100 Mbps	100 Mbps
Duplex Mode	Full	Full	Full	Full	Full	Full	Full	Full
Frames Sent	100000000	100000000	100000000	100000000	100000000	100000000	100000000	100000000
Frames Sent Rate	0	0	0	0	0	0	0	0
Valid Frames Received	100000000	100000000	100000000	100000000	100000000	100000000	100000000	100000000
Valid Frames Received Rate	0	0	0	0	0	0	0	0
Bytes Sent	6400000000	6400000000	6400000000	6400000000	6400000000	6400000000	6400000000	6400000000
Bytes Sent Rate	0	0	0	0	0	0	0	0
Bytes Received	6400000000	6400000000	6400000000	6400000000	6400000000	6400000000	6400000000	6400000000
Bytes Received Rate	0	0	0	0	0	0	0	0
Fragments	0	0	0	0	0	0	0	0
Undersize	0	0	0	0	0	0	0	0
Oversize	0	0	0	0	0	0	0	0
CRC Errors	0	0	0	0	0	0	0	0
Vlan Tagged Frames	0	0	0	0	0	0	0	0
Flow Control Frames	0	0	0	0	0	0	0	0
Alignment Errors	0	0	0	0	0	0	0	0
Dribble Errors	0	0	0	0	0	0	0	0
Collisions	0	0	0	0	0	0	0	0
Late Collisions	0	0	0	0	0	0	0	0
Collision Frames	0	0	0	0	0	0	0	0
Excessive Collision Frames	0	0	0	0	0	0	0	0
Oversize and CRC Errors	0	0	0	0	0	0	0	0
User Defined Stat 1	0	0	0	0	0	0	0	0
User Defined Stat 2	0	0	0	0	0	0	0	0
Capture Trigger (UDS 3)	100000000	100000000	100000000	100000000	100000000	100000000	100000000	100000000
Capture Filter (UDS 4)	100000000	100000000	100000000	100000000	100000000	100000000	100000000	100000000
ProtocolServer Transmit	0	0	0	0	0	0	0	0
ProtocolServer Receive	0	0	0	0	0	0	0	0
Transmit Arp Reply	0	0	0	0	0	0	0	0
Transmit Arp Request	0	0	0	0	0	0	0	0
Transmit Ping Reply	0	0	0	0	0	0	0	0
Transmit Ping Request	0	0	0	0	0	0	0	0
Receive Arp Reply	0	0	0	0	0	0	0	0
Receive Arp Request	0	0	0	0	0	0	0	0
Receive Ping Reply	0	0	0	0	0	0	0	0
Receive Ping Request	0	0	0	0	0	0	0	0
Transmit Duration(Cleared on Start Tx)	11:12.0	11:12.0	11:12.0	11:12.0	11:12.0	11:12.0	11:12.0	11:12.0
Protocol Server Vlan Dropped Frames	0	0	0	0	0	0	0	0
Scheduled Frames Sent	100000000	100000000	100000000	100000000	100000000	100000000	100000000	100000000
Asynchronous Frames Sent	0	0	0	0	0	0	0	0
Port CPU Frames Sent	0	0	0	0	0	0	0	0
Scheduled Transmit Duration	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0
Bytes Sent / Transmit Duration	9523809	9523809	9523809	9523809	9523809	9523809	9523809	9523809
Bits Sent	51200000000	51200000000	51200000000	51200000000	51200000000	51200000000	51200000000	51200000000
Bits Sent Rate	0	0	0	0	0	0	0	0
Bits Received	51200000000	51200000000	51200000000	51200000000	51200000000	51200000000	51200000000	51200000000
Bits Received Rate	0	0	0	0	0	0	0	0
Port CPU Status	Ready	Ready	Ready	Ready	Ready	Ready	Ready	Ready
Port CPU DoD Status	Ready	Ready	Ready	Ready	Ready	Ready	Ready	Ready

Appendix 1F

100M Half Duplex Tx/Rx function test

Transmit Mode:burst 100,000,000
Data Length:64 byte
Test pairs:1<->2,2<->3……8<>1

	10.0.0.1:01.0	10.0.0.1:01.0	10.0.0.1:01.0	10.0.0.1:01.0	10.0.0.1:02.0	10.0.0.1:02.0	10.0.0.1:02.0	10.0.0.1:02.0
Link State	Link Up	Link Up	Link Up	Link Up	Link Up	Link Up	Link Up	Link Up
Line Speed	100 Mbps	100 Mbps	100 Mbps	100 Mbps	100 Mbps	100 Mbps	100 Mbps	100 Mbps
Duplex Mode	Half	Half	Half	Half	Half	Half	Half	Half
Frames Sent	99965030	99965287	99965167	99965242	99965166	99965422	99965110	99965275
Frames Sent Rate	0	0	0	0	0	0	0	0
Valid Frames Received	99965275	99965030	99965287	99965167	99965242	99965166	99965422	99965110
Valid Frames Received Rate	0	0	0	0	0	0	0	0
Bytes Sent	6409121006	6409122291	6409174056	6409109706	6408897283	6409164563	6409195609	6409220781
Bytes Sent Rate	0	0	0	0	0	0	0	0
Bytes Received	6413423538	6413093499	6413317318	6413330282	6413046284	6413354865	6413247838	6413188927
Bytes Received Rate	0	0	0	0	0	0	0	0
Fragments	1377854	1375657	1378209	1376238	1375613	1374968	1380422	1381150
Undersize	0	0	0	0	0	0	0	0
Oversize	0	0	0	0	0	0	0	0
CRC Errors	0	0	0	0	0	0	0	0
Vlan Tagged Frames	0	0	0	0	0	0	0	0
Flow Control Frames	0	0	0	0	0	0	0	0
Alignment Errors	0	0	0	0	0	0	0	0
Dribble Errors	0	0	0	0	0	0	0	0
Collisions	1377854	1375657	1378209	1376238	1375613	1374968	1380422	1381150
Late Collisions	0	0	0	0	0	0	0	0
Collision Frames	469784	466988	470419	468584	466548	467844	470990	471500
Excessive Collision Frames	34970	34713	34833	34758	34834	34578	34890	34725
Oversize and CRC Errors	0	0	0	0	0	0	0	0
User Defined Stat 1	0	0	0	0	0	0	0	0
User Defined Stat 2	0	0	0	0	0	0	0	0
Capture Trigger (UDS 3)	101343129	101340687	101343496	101341405	101340855	101340134	101345844	101346260
Capture Filter (UDS 4)	101343129	101340687	101343496	101341405	101340855	101340134	101345844	101346260
ProtocolServer Transmit	0	0	0	0	0	0	0	0
ProtocolServer Receive	0	0	0	0	0	0	0	0
Transmit Arp Reply	0	0	0	0	0	0	0	0
Transmit Arp Request	0	0	0	0	0	0	0	0
Transmit Ping Reply	0	0	0	0	0	0	0	0
Transmit Ping Request	0	0	0	0	0	0	0	0
Receive Arp Reply	0	0	0	0	0	0	0	0
Receive Arp Request	0	0	0	0	0	0	0	0
Receive Ping Reply	0	0	0	0	0	0	0	0
Receive Ping Request	0	0	0	0	0	0	0	0
Transmit Duration(Cleared on Start Tx)	26:11.0	26:13.0	26:12.2	26:09.3	26:12.5	26:10.7	26:13.4	26:11.6
Protocol Server Vlan Dropped Frames	0	0	0	0	0	0	0	0
Scheduled Frames Sent	99965030	99965287	99965167	99965242	99965166	99965422	99965110	99965275
Asynchronous Frames Sent	0	0	0	0	0	0	0	0
Port CPU Frames Sent	0	0	0	0	0	0	0	0
Scheduled Transmit Duration	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0
Bytes Sent / Transmit Duration	4079727	4074486	4076620	4084018	4075701	4080352	4073571	4078247
Bits Sent	5.1273E+10	5.1273E+10	5.1273E+10	5.1273E+10	5.1271E+10	5.1273E+10	5.1274E+10	5.1274E+10
Bits Sent Rate	0	0	0	0	0	0	0	0
Bits Received	5.1307E+10	5.1305E+10	5.1307E+10	5.1307E+10	5.1304E+10	5.1307E+10	5.1306E+10	5.1306E+10
Bits Received Rate	0	0	0	0	0	0	0	0
Port CPU Status	Ready	Ready	Ready	Ready	Ready	Ready	Ready	Ready
Port CPU DoD Status	Ready	Ready	Ready	Ready	Ready	Ready	Ready	Ready

Appendix 1G

10M Full Duplex Tx/Rx function test

Transmit Mode:burst 10,000,000
Data Length:64 byte
Test pairs:1<->2,2<->3……, 8<>1

	10.0.0.1:01.01	10.0.0.1:01.02	10.0.0.1:01.03	10.0.0.1:01.04	10.0.0.1:02.01	10.0.0.1:02.02	10.0.0.1:02.03	10.0.0.1:02.04
Link State	Link Up	Link Up	Link Up	Link Up	Link Up	Link Up	Link Up	Link Up
Line Speed	10 Mbps	10 Mbps	10 Mbps	10 Mbps	10 Mbps	10 Mbps	10 Mbps	10 Mbps
Duplex Mode	Full	Full	Full	Full	Full	Full	Full	Full
Frames Sent	10000000	10000000	10000000	10000000	10000000	10000000	10000000	10000000
Frames Sent Rate	0	0	0	0	0	0	0	0
Valid Frames Received	10000000	10000000	10000000	10000000	10000000	10000000	10000000	10000000
Valid Frames Received Rate	0	0	0	0	0	0	0	0
Bytes Sent	640000000	640000000	640000000	640000000	640000000	640000000	640000000	640000000
Bytes Sent Rate	0	0	0	0	0	0	0	0
Bytes Received	640000000	640000000	640000000	640000000	640000000	640000000	640000000	640000000
Bytes Received Rate	0	0	0	0	0	0	0	0
Fragments	0	0	0	0	0	0	0	0
Undersize	0	0	0	0	0	0	0	0
Oversize	0	0	0	0	0	0	0	0
CRC Errors	0	0	0	0	0	0	0	0
Vlan Tagged Frames	0	0	0	0	0	0	0	0
Flow Control Frames	0	0	0	0	0	0	0	0
Alignment Errors	0	0	0	0	0	0	0	0
Dribble Errors	0	0	0	0	0	0	0	0
Collisions	0	0	0	0	0	0	0	0
Late Collisions	0	0	0	0	0	0	0	0
Collision Frames	0	0	0	0	0	0	0	0
Excessive Collision Frames	0	0	0	0	0	0	0	0
Oversize and CRC Errors	0	0	0	0	0	0	0	0
User Defined Stat 1	0	0	0	0	0	0	0	0
User Defined Stat 2	0	0	0	0	0	0	0	0
Capture Trigger (UDS 3)	10000000	10000000	10000000	10000000	10000000	10000000	10000000	10000000
Capture Filter (UDS 4)	10000000	10000000	10000000	10000000	10000000	10000000	10000000	10000000
ProtocolServer Transmit	0	0	0	0	0	0	0	0
ProtocolServer Receive	0	0	0	0	0	0	0	0
Transmit Arp Reply	0	0	0	0	0	0	0	0
Transmit Arp Request	0	0	0	0	0	0	0	0
Transmit Ping Reply	0	0	0	0	0	0	0	0
Transmit Ping Request	0	0	0	0	0	0	0	0
Receive Arp Reply	0	0	0	0	0	0	0	0
Receive Arp Request	0	0	0	0	0	0	0	0
Receive Ping Reply	0	0	0	0	0	0	0	0
Receive Ping Request	0	0	0	0	0	0	0	0
Transmit Duration(Cleared on Start Tx)	11:12.0	11:12.0	11:12.0	11:12.0	11:12.0	11:12.0	11:12.0	11:12.0
Protocol Server Vlan Dropped Frames	0	0	0	0	0	0	0	0
Scheduled Frames Sent	10000000	10000000	10000000	10000000	10000000	10000000	10000000	10000000
Asynchronous Frames Sent	0	0	0	0	0	0	0	0
Port CPU Frames Sent	0	0	0	0	0	0	0	0
Scheduled Transmit Duration	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0
Bytes Sent / Transmit Duration	952380	952380	952380	952380	952380	952380	952380	952380
Bits Sent	5120000000	5120000000	5120000000	5120000000	5120000000	5120000000	5120000000	5120000000
Bits Sent Rate	0	0	0	0	0	0	0	0
Bits Received	5120000000	5120000000	5120000000	5120000000	5120000000	5120000000	5120000000	5120000000
Bits Received Rate	0	0	0	0	0	0	0	0
Port CPU Status	Ready	Ready	Ready	Ready	Ready	Ready	Ready	Ready
Port CPU DoD Status	Ready	Ready	Ready	Ready	Ready	Ready	Ready	Ready

Appendix 1H

10M Half Duplex Tx/Rx function test

Transmit Mode:burst 10,000,000
Data Length:64 byte
Test pairs:1<->2,2<->3……, 8<>1

	10.0.0.1:01.01	10.0.0.1:01.02	10.0.0.1:01.03	10.0.0.1:01.04	10.0.0.1:02.01	10.0.0.1:02.02	10.0.0.1:02.03	10.0.0.1:02.04
Link State	Link Up	Link Up	Link Up	Link Up	Link Up	Link Up	Link Up	Link Up
Line Speed	10 Mbps	10 Mbps	10 Mbps	10 Mbps	10 Mbps	10 Mbps	10 Mbps	10 Mbps
Duplex Mode	Half	Half	Half	Half	Half	Half	Half	Half
Frames Sent	9996633	9996533	9996521	9996527	9996573	9996512	9996602	9996532
Frames Sent Rate	0	0	0	0	0	0	0	0
Valid Frames Received	9996532	9996633	9996533	9996521	9996527	9996573	9996512	9996602
Valid Frames Received Rate	0	0	0	0	0	0	0	0
Bytes Sent	639828801	639820721	639821319	639821224	639823481	639820702	639824965	639819733
Bytes Sent Rate	0	0	0	0	0	0	0	0
Bytes Received	640397637	640408654	640408039	640401156	640396830	640406097	640401539	640400628
Bytes Received Rate	0	0	0	0	0	0	0	0
Fragments	135818	136901	138082	136859	136546	137207	137494	136493
Undersize	0	0	0	0	0	0	0	0
Oversize	0	0	0	0	0	0	0	0
CRC Errors	0	0	0	0	0	0	0	0
Vlan Tagged Frames	0	0	0	0	0	0	0	0
Flow Control Frames	0	0	0	0	0	0	0	0
Alignment Errors	0	0	0	0	0	0	0	0
Dribble Errors	0	0	0	0	0	0	0	0
Collisions	135818	136901	138082	136859	136546	137207	137494	136493
Late Collisions	0	0	0	0	0	0	0	0
Collision Frames	46675	46258	47143	46438	47073	46650	47643	46188
Excessive Collision Frames	3367	3467	3479	3473	3427	3488	3398	3468
Oversize and CRC Errors	0	0	0	0	0	0	0	0
User Defined Stat 1	0	0	0	0	0	0	0	0
User Defined Stat 2	0	0	0	0	0	0	0	0
Capture Trigger (UDS 3)	10132350	10133534	10134615	10133380	10133073	10133780	10134006	10133095
Capture Filter (UDS 4)	10132350	10133534	10134615	10133380	10133073	10133780	10134006	10133095
ProtocolServer Transmit	0	0	0	0	0	0	0	0
ProtocolServer Receive	0	0	0	0	0	0	0	0
Transmit Arp Reply	0	0	0	0	0	0	0	0
Transmit Arp Request	0	0	0	0	0	0	0	0
Transmit Ping Reply	0	0	0	0	0	0	0	0
Transmit Ping Request	0	0	0	0	0	0	0	0
Receive Arp Reply	0	0	0	0	0	0	0	0
Receive Arp Request	0	0	0	0	0	0	0	0
Receive Ping Reply	0	0	0	0	0	0	0	0
Receive Ping Request	0	0	0	0	0	0	0	0
Transmit Duration(Cleared on Start Tx)	25:46.9	26:08.8	26:06.0	26:10.8	25:49.3	26:05.1	25:46.6	26:06.9
Protocol Server Vlan Dropped Frames	0	0	0	0	0	0	0	0
Scheduled Frames Sent	9996633	9996533	9996521	9996527	9996573	9996512	9996602	9996532
Asynchronous Frames Sent	0	0	0	0	0	0	0	0
Port CPU Frames Sent	0	0	0	0	0	0	0	0
Scheduled Transmit Duration	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0
Bytes Sent / Transmit Duration	413611	407840	408583	407315	412981	408794	413701	408334
Bits Sent	5118630408	5118565768	5118570552	5118569792	5118587848	5118565616	5118599720	5118557864
Bits Sent Rate	0	0	0	0	0	0	0	0
Bits Received	5123181096	5123269232	5123264312	5123209248	5123174640	5123248776	5123212312	5123205024
Bits Received Rate	0	0	0	0	0	0	0	0
Port CPU Status	Ready	Ready	Ready	Ready	Ready	Ready	Ready	Ready
Port CPU DoD Status	Ready	Ready	Ready	Ready	Ready	Ready	Ready	Ready

Appendix 1I

10M Full Duplex + 100M Full Duplex Tx/Rx function test

Transmit Mode:burst 10,000,000
Data Length:64 byte
Test pairs:1<->2,2<->3……, 8<>1

	10.0.0.1:01.0	10.0.0.1:01.02	10.0.0.1:01.0	10.0.0.1:01.04	10.0.0.1:02.0	10.0.0.1:02.02	10.0.0.1:02.0	10.0.0.1:02.04
Link State	Link Up	Link Up	Link Up	Link Up	Link Up	Link Up	Link Up	Link Up
Line Speed	10 Mbps	100 Mbps	10 Mbps	100 Mbps	10 Mbps	100 Mbps	10 Mbps	100 Mbps
Duplex Mode	Full	Full	Full	Full	Full	Full	Full	Full
Frames Sent	10000000	10000000	10000000	10000000	10000000	10000000	10000000	10000000
Frames Sent Rate	0	0	0	0	0	0	0	0
Valid Frames Received	10000000	11406220	10000000	11406220	10000000	11406220	10000000	11406220
Valid Frames Received Rate	0	0	0	0	0	0	0	0
Bytes Sent	640000000	640000000	640000000	640000000	640000000	640000000	640000000	640000000
Bytes Sent Rate	0	0	0	0	0	0	0	0
Bytes Received	640000000	729998080	640000000	729998080	640000000	729998080	640000000	729998080
Bytes Received Rate	0	0	0	0	0	0	0	0
Fragments	0	0	0	0	0	0	0	0
Undersize	0	0	0	0	0	0	0	0
Oversize	0	0	0	0	0	0	0	0
CRC Errors	0	0	0	0	0	0	0	0
Vlan Tagged Frames	0	0	0	0	0	0	0	0
Flow Control Frames	0	1406220	0	1406220	0	1406220	0	1406220
Alignment Errors	0	0	0	0	0	0	0	0
Dribble Errors	0	0	0	0	0	0	0	0
Collisions	0	0	0	0	0	0	0	0
Late Collisions	0	0	0	0	0	0	0	0
Collision Frames	0	0	0	0	0	0	0	0
Excessive Collision Frames	0	0	0	0	0	0	0	0
Oversize and CRC Errors	0	0	0	0	0	0	0	0
User Defined Stat 1	0	0	0	0	0	0	0	0
User Defined Stat 2	0	0	0	0	0	0	0	0
Capture Trigger (UDS 3)	10000000	11406220	10000000	11406220	10000000	11406220	10000000	11406220
Capture Filter (UDS 4)	10000000	11406220	10000000	11406220	10000000	11406220	10000000	11406220
ProtocolServer Transmit	0	0	0	0	0	0	0	0
ProtocolServer Receive	0	0	0	0	0	0	0	0
Transmit Arp Reply	0	0	0	0	0	0	0	0
Transmit Arp Request	0	0	0	0	0	0	0	0
Transmit Ping Reply	0	0	0	0	0	0	0	0
Transmit Ping Request	0	0	0	0	0	0	0	0
Receive Arp Reply	0	0	0	0	0	0	0	0
Receive Arp Request	0	0	0	0	0	0	0	0
Receive Ping Reply	0	0	0	0	0	0	0	0
Receive Ping Request	0	0	0	0	0	0	0	0
Transmit Duration(Cleared on Start Tx)	11:12.0	11:12.0	11:12.0	11:12.0	11:12.0	11:12.0	11:12.0	11:12.0
Protocol Server Vlan Dropped Frames	0	0	0	0	0	0	0	0
Scheduled Frames Sent	10000000	10000000	10000000	10000000	10000000	10000000	10000000	10000000
Asynchronous Frames Sent	0	0	0	0	0	0	0	0
Port CPU Frames Sent	0	0	0	0	0	0	0	0
Scheduled Transmit Duration	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0
Bytes Sent / Transmit Duration	952380	952420	952380	952420	952380	952420	952380	952420
Bits Sent	5120000000	5120000000	5120000000	5120000000	5120000000	5120000000	5120000000	5120000000
Bits Sent Rate	0	0	0	0	0	0	0	0
Bits Received	5120000000	5839984640	5120000000	5839984640	5120000000	5839984640	5120000000	5839984640
Bits Received Rate	0	0	0	0	0	0	0	0
Port CPU Status	Ready	Ready	Ready	Ready	Ready	Ready	Ready	Ready
Port CPU DoD Status	Ready	Ready	Ready	Ready	Ready	Ready	Ready	Ready

Appendix 1J

10M Half Duplex + 100M Full Duplex Tx/Rx function test

Transmit Mode:burst 3,000,000
Data Length:64 byte
Test pairs:1<->2,2<->3……, 8<>1

	10.0.0.1:01.01	10.0.0.1:01.02	10.0.0.1:01.03	10.0.0.1:01.04	10.0.0.1:02.01	10.0.0.1:02.02	10.0.0.1:02.03	10.0.0.1:02.04
Link State	Link Up	Link Up	Link Up	Link Up	Link Up	Link Up	Link Up	Link Up
Line Speed	10 Mbps	100 Mbps	10 Mbps	100 Mbps	10 Mbps	100 Mbps	10 Mbps	100 Mbps
Duplex Mode	Half	Full	Half	Full	Half	Full	Half	Full
Frames Sent	2998894	3000000	2998904	3000000	2998906	3000000	2998910	3000000
Frames Sent Rate	0	0	0	0	0	0	0	0
Valid Frames Received	3000000	3674131	3000000	3669772	3000000	3658683	3000000	3669509
Valid Frames Received Rate	0	0	0	0	0	0	0	0
Bytes Sent	191930995	192000000	191931449	192000000	191931528	192000000	191932000	192000000
Bytes Sent Rate	0	0	0	0	0	0	0	0
Bytes Received	192148882	235144384	192148645	234865408	192146998	234155712	192145895	234848576
Bytes Received Rate	0	0	0	0	0	0	0	0
Fragments	31684	0	31672	0	31389	0	30900	0
Undersize	0	0	0	0	0	0	0	0
Oversize	0	0	0	0	0	0	0	0
CRC Errors	0	0	0	0	0	0	0	0
Vlan Tagged Frames	0	0	0	0	0	0	0	0
Flow Control Frames	0	675237	0	670868	0	659777	0	670599
Alignment Errors	0	0	0	0	0	0	0	0
Dribble Errors	0	0	0	0	0	0	0	0
Collisions	31684	0	31672	0	31389	0	30900	0
Late Collisions	0	0	0	0	0	0	0	0
Collision Frames	13659	0	13862	0	13616	0	13184	0
Excessive Collision Frames	1106	0	1096	0	1094	0	1090	0
Oversize and CRC Errors	0	0	0	0	0	0	0	0
User Defined Stat 1	0	0	0	0	0	0	0	0
User Defined Stat 2	0	0	0	0	0	0	0	0
Capture Trigger (UDS 3)	3031684	3674131	3031672	3669772	3031389	3658683	3030900	3669509
Capture Filter (UDS 4)	3031684	3674131	3031672	3669772	3031389	3658683	3030900	3669509
ProtocolServer Transmit	0	0	0	0	0	0	0	0
ProtocolServer Receive	0	0	0	0	0	0	0	0
Transmit Arp Reply	0	0	0	0	0	0	0	0
Transmit Arp Request	0	0	0	0	0	0	0	0
Transmit Ping Reply	0	0	0	0	0	0	0	0
Transmit Ping Request	0	0	0	0	0	0	0	0
Receive Arp Reply	0	0	0	0	0	0	0	0
Receive Arp Request	0	0	0	0	0	0	0	0
Receive Ping Reply	0	0	0	0	0	0	0	0
Receive Ping Request	0	0	0	0	0	0	0	0
Transmit Duration(Cleared on Start Tx)	06:44.5	06:08.3	06:44.5	06:05.4	06:44.5	05:58.2	06:44.5	06:05.3
Protocol Server Vlan Dropped Frames	0	0	0	0	0	0	0	0
Scheduled Frames Sent	2998894	3000000	2998904	3000000	2998906	3000000	2998910	3000000
Asynchronous Frames Sent	0	0	0	0	0	0	0	0
Port CPU Frames Sent	0	0	0	0	0	0	0	0
Scheduled Transmit Duration	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0
Bytes Sent / Transmit Duration	474489	521303	474520	525404	474533	536078	474522	525648
Bits Sent	1535447960	1536000000	1535451592	1536000000	1535452224	1536000000	1535456000	1536000000
Bits Sent Rate	0	0	0	0	0	0	0	0
Bits Received	1537191056	1881155072	1537189160	1878923264	1537175984	1873245696	1537167160	1878788608
Bits Received Rate	0	0	0	0	0	0	0	0
Port CPU Status	Ready	Ready	Ready	Ready	Ready	Ready	Ready	Ready
Port CPU DoD Status	Ready	Ready	Ready	Ready	Ready	Ready	Ready	Ready

Appendix 1K

10M Half Duplex + 100M Half Duplex Tx/Rx function test

Transmit Mode:burst 3,000,000
Data Length:64 byte
Test pairs:1<->2,2<->3……, 8<>1

	10.0.0.1:01.01	10.0.0.1:01.02	10.0.0.1:01.03	10.0.0.1:01.04	10.0.0.1:02.01	10.0.0.1:02.02	10.0.0.1:02.03	10.0.0.1:02.04
Link State	Link Up	Link Up	Link Up	Link Up	Link Up	Link Up	Link Up	Link Up
Line Speed	10 Mbps	100 Mbps	10 Mbps	100 Mbps	10 Mbps	100 Mbps	10 Mbps	100 Mbps
Duplex Mode	Half	Half	Half	Half	Half	Half	Half	Half
Frames Sent	2998906	2991129	2998914	2991210	2998910	2991330	2998904	2991402
Frames Sent Rate	0	0	0	0	0	0	0	0
Valid Frames Received	2991402	2998906	2991129	2998914	2991210	2998910	2991330	2998904
Valid Frames Received Rate	0	0	0	0	0	0	0	0
Bytes Sent	191931616	204097121	191932196	204021991	191932005	204083912	191931484	203965298
Bytes Sent Rate	0	0	0	0	0	0	0	0
Bytes Received	191596756	195777996	191580982	195761509	191585070	195807440	191593278	195728266
Bytes Received Rate	0	0	0	0	0	0	0	0
Fragments	31242	823835	31751	818294	31600	824579	31481	813370
Undersize	0	0	0	0	0	0	0	0
Oversize	0	0	0	0	0	0	0	0
CRC Errors	0	0	0	0	0	0	0	0
Vlan Tagged Frames	0	0	0	0	0	0	0	0
Flow Control Frames	0	0	0	0	0	0	0	0
Alignment Errors	0	0	0	0	0	0	0	0
Dribble Errors	0	0	0	0	0	0	0	0
Collisions	31242	823835	31751	818294	31600	824579	31481	813370
Late Collisions	0	0	0	0	0	0	0	0
Collision Frames	13530	218380	14024	215230	13910	222309	13665	213839
Excessive Collision Frames	1094	8871	1086	8790	1090	8670	1096	8598
Oversize and CRC Errors	0	0	0	0	0	0	0	0
User Defined Stat 1	0	0	0	0	0	0	0	0
User Defined Stat 2	0	0	0	0	0	0	0	0
Capture Trigger (UDS 3)	3022644	3822741	3022880	3817208	3022810	3823489	3022811	3812274
Capture Filter (UDS 4)	3022644	3822741	3022880	3817208	3022810	3823489	3022811	3812274
ProtocolServer Transmit	0	0	0	0	0	0	0	0
ProtocolServer Receive	0	0	0	0	0	0	0	0
Transmit Arp Reply	0	0	0	0	0	0	0	0
Transmit Arp Request	0	0	0	0	0	0	0	0
Transmit Ping Reply	0	0	0	0	0	0	0	0
Transmit Ping Request	0	0	0	0	0	0	0	0
Receive Arp Reply	0	0	0	0	0	0	0	0
Receive Arp Request	0	0	0	0	0	0	0	0
Receive Ping Reply	0	0	0	0	0	0	0	0
Receive Ping Request	0	0	0	0	0	0	0	0
Transmit Duration(Cleared on Start Tx)	06:43.9	06:09.3	06:43.9	06:07.9	06:43.9	06:05.3	06:43.9	06:04.2
Protocol Server Vlan Dropped Frames	0	0	0	0	0	0	0	0
Scheduled Frames Sent	2998906	2991129	2998914	2991210	2998910	2991330	2998904	2991402
Asynchronous Frames Sent	0	0	0	0	0	0	0	0
Port CPU Frames Sent	0	0	0	0	0	0	0	0
Scheduled Transmit Duration	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0
Bytes Sent / Transmit Duration	475220	552724	475169	554557	475212	558681	475213	560029
Bits Sent	1535452928	1632776968	1535457568	1632175928	1535456040	1632671296	1535451872	1631722384
Bits Sent Rate	0	0	0	0	0	0	0	0
Bits Received	1532774048	1566223968	1532647856	1566092072	1532680560	1566459520	1532746224	1565826128
Bits Received Rate	0	0	0	0	0	0	0	0
Port CPU Status	Ready	Ready	Ready	Ready	Ready	Ready	Ready	Ready
Port CPU DoD Status	Ready	Ready	Ready	Ready	Ready	Ready	Ready	Ready

Appendix 1L

Backbone test 1000M Full Duplex Tx/Rx function test (DUT1 port 8 uplinked with DUT2 port 8)

Transmit time 48 HR

Data Length: Random byte

Test pairs:1<->2 ,2<->3……,14<>1

	10.0.0.1:03.01	10.0.0.1:03.02	10.0.0.1:03.03	10.0.0.1:03.04	10.0.0.1:04.01	10.0.0.1:04.02
Link State	Link Up	Link Up	Link Up	Link Up	Link Up	Link Up
Line Speed	1000 Mbps	1000 Mbps	1000 Mbps	1000 Mbps	1000 Mbps	1000 Mbps
Duplex Mode	Full	Full	Full	Full	Full	Full
Frames Sent	3804950891	3804947512	3804952168	3804948528	3804949583	3804945384
Frames Sent Rate	0	0	0	0	0	0
Valid Frames Received	7414197889	7415047020	7414016441	7413673362	7415728489	7414033622
Valid Frames Received Rate	0	0	0	0	0	0
Bytes Sent	3.00971E+12	3.00974E+12	3.00973E+12	3.00975E+12	3.00971E+12	3.0097E+12
Bytes Sent Rate	0	0	0	0	0	0
Bytes Received	3.24073E+12	3.24076E+12	3.24072E+12	3.24069E+12	3.24084E+12	3.24069E+12
Bytes Received Rate	0	0	0	0	0	0
Fragments	0	0	0	0	0	0
Undersize	0	0	0	0	0	0
Oversize	0	0	0	0	0	0
CRC Errors	0	0	0	0	0	0
Vlan Tagged Frames	0	0	0	0	0	0
Flow Control Frames	3609262488	3610096129	3609068929	3608721194	3610779961	3609084039
Alignment Errors	0	0	0	0	0	0
Dribble Errors	0	0	0	0	0	0
Collisions	0	0	0	0	0	0
Late Collisions	0	0	0	0	0	0
Collision Frames	0	0	0	0	0	0
Excessive Collision Frames	0	0	0	0	0	0
Oversize and CRC Errors	0	0	0	0	0	0
User Defined Stat 1	0	0	0	0	0	0
User Defined Stat 2	0	0	0	0	0	0
Capture Trigger (UDS 3)	7414197889	7415047020	7414016441	7413673362	7415728489	7414033622
Capture Filter (UDS 4)	7414197889	7415047020	7414016441	7413673362	7415728489	7414033622
ProtocolServer Transmit	0	0	0	0	0	0
ProtocolServer Receive	0	0	0	0	0	0
Transmit Arp Reply	0	0	0	0	0	0
Transmit Arp Request	0	0	0	0	0	0
Transmit Ping Reply	0	0	0	0	0	0
Transmit Ping Request	0	0	0	0	0	0
Receive Arp Reply	0	0	0	0	0	0
Receive Arp Request	0	0	0	0	0	0
Receive Ping Reply	0	0	0	0	0	0
Receive Ping Request	0	0	0	0	0	0
Transmit Duration(Cleared on Start Tx)	00:00.6	00:00.6	00:00.6	00:00.6	00:00.5	00:00.5
Protocol Server Vlan Dropped Frames	0	0	0	0	0	0
Scheduled Frames Sent	3804950891	3804947512	3804952168	3804948528	3804949583	3804945384
Asynchronous Frames Sent	0	0	0	0	0	0
Port CPU Frames Sent	0	0	0	0	0	0
Scheduled Transmit Duration	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0
Bytes Sent / Transmit Duration	17417261	17417400	17417369	17417470	17417253	17417190
Bits Sent	2.40777E+13	2.40779E+13	2.40779E+13	2.4078E+13	2.40777E+13	2.40776E+13
Bits Sent Rate	0	0	0	0	0	0
Bits Received	2.59258E+13	2.59261E+13	2.59257E+13	2.59255E+13	2.59267E+13	2.59255E+13
Bits Received Rate	0	0	0	0	0	0
Port CPU Status	Ready	Ready	Ready	Ready	Ready	Ready
Port CPU DoD Status	Ready	Ready	Ready	Ready	Ready	Ready

10.0.0.1:04.03	10.0.0.1:04.04	10.0.0.1:05.01	10.0.0.1:05.02	10.0.0.1:05.03	10.0.0.1:05.04	10.0.0.1:06.01	10.0.0.1:06.02
Link Up	Link Up	Link Up	Link Up	Link Up	Link Up	Link Up	Link Up
1000 Mbps	1000 Mbps	1000 Mbps	1000 Mbps	1000 Mbps	1000 Mbps	1000 Mbps	1000 Mbps
Full	Full	Full	Full	Full	Full	Full	Full
3804949123	3804944245	3804946467	3804942076	3804946216	3804941864	3804939542	3804935401
0	0	0	0	0	0	0	0
7416025907	7415001799	7415400219	7415063679	7414924017	7415414909	7415085673	7414182514
0	0	0	0	0	0	0	0
3.00972E+12	3.00969E+12	3.00972E+12	3.0097E+12	3.00971E+12	3.0097E+12	3.0097E+12	3.00973E+12
0	0	0	0	0	0	0	0
3.24081E+12	3.24076E+12	3.24076E+12	3.24077E+12	3.24074E+12	3.24078E+12	3.24075E+12	3.24069E+12
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
3611080523	3610052676	3610455974	3610117212	3609981941	3610468693	3610143809	3609242972
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
7416025907	7415001799	7415400219	7415063679	7414924015	7415414909	7415085673	7414182514
7416025907	7415001799	7415400219	7415063679	7414924015	7415414909	7415085673	7414182514
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
00:00.5	00:00.5	00:00.5	00:00.5	00:00.5	00:00.5	00:00.2	00:00.2
0	0	0	0	0	0	0	0
3804949123	3804944245	3804946467	3804942076	3804946216	3804941864	3804939542	3804935401
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0
17417312	17417127	17417333	17417197	17417235	17417212	17417240	17417414
2.40778E+13	2.40775E+13	2.40778E+13	2.40776E+13	2.40776E+13	2.40776E+13	2.40776E+13	2.40779E+13
0	0	0	0	0	0	0	0
2.59265E+13	2.59261E+13	2.59261E+13	2.59262E+13	2.59259E+13	2.59262E+13	2.5926E+13	2.59256E+13
0	0	0	0	0	0	0	0
Ready	Ready	Ready	Ready	Ready	Ready	Ready	Ready
Ready	Ready	Ready	Ready	Ready	Ready	Ready	Ready

4 Reliability Testing Item & Result

4.1 Test Item

- Thermal/Humidity Cycle Test
- Cold Start Test
- Component Temperature Test

Reliability Test List (1)

Case	Describe	Item	Result		Comment
			OK	NG	
1.	**Thermal/Humidity Test**	Temperature & humidity cycle testing (scope: Temperature -40 ℃ ~ 80 ℃ , humidity 0%~95%RH)	✓		**Appendix 2A**
2.	**Cold Start Test**	Test Condition: Power off Test temperature: -40℃ Test Duration: 4 hours (after 3 hours then power on)	✓		**Appendix 2B**
3.	**Component Temperature Test**	Keep DUT with full loading in room temperature environment for 2Hrs, then measure the surface temperature of main components within DUT	✓		**Appendix 2C**

Appendix 2A

● Thermal/Humidity Cycle Test

Test Equipment :

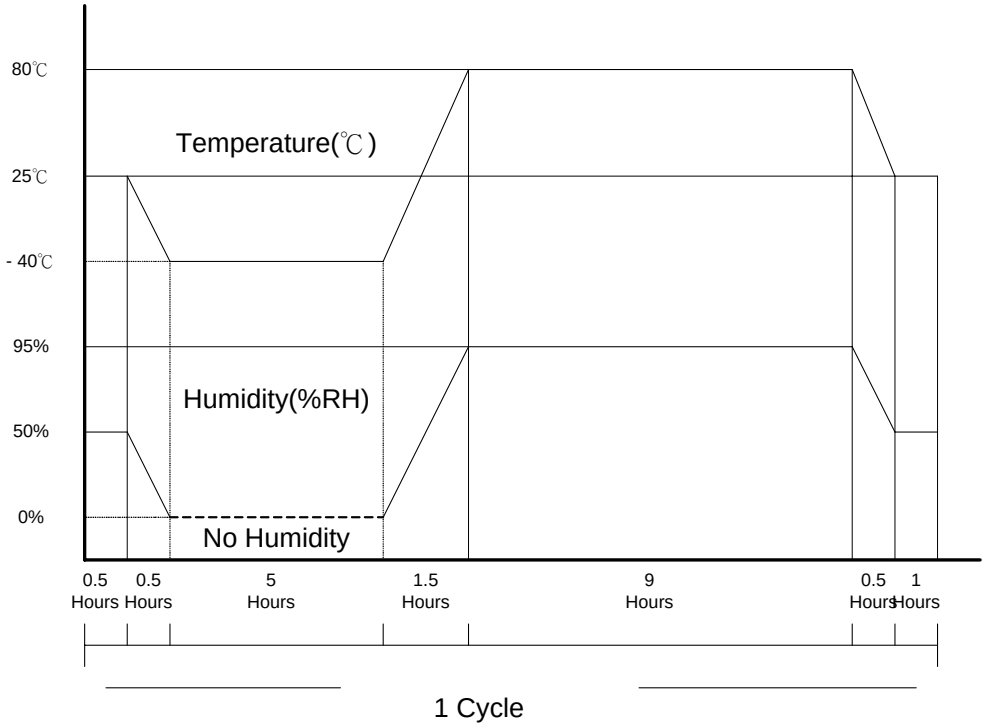
Client = IXIA 1600T

Switch: EKI-2728-AE

KSON Programmable Temperature & Humidity Chamber: THS-A4H+100

Thermal/Humidity Test Curve :

- Test Duration: 3 Cycles (Total of 52.5 hour).
- Operating temperature And humidity test range:
- temperature -40℃ to 80℃
- Humidity 0%~95%RH



Test Method :

Run IXIA 1600T to inject packets for Thermal/Humidity 3 Cycles.

Test Result: Passed

1000M Full Duplex Tx/Rx function test (input 12V DC power from PWR1)

- Transmit Mode:burst 52.5 HR
- Data Length:Random byte
- Test pairs:1<->2,2<->3……,8<->1

	10.0.0.1:03.01	10.0.0.1:03.02	10.0.0.1:03.03	10.0.0.1:03.04	10.0.0.1:04.01	10.0.0.1:04.02	10.0.0.1:04.03	10.0.0.1:04.04
Link State	Link Up	Link Up	Link Up	Link Up	Link Up	Link Up	Link Up	Link Up
Line Speed	1000 Mbps	1000 Mbps	1000 Mbps	1000 Mbps	1000 Mbps	1000 Mbps	1000 Mbps	1000 Mbps
Duplex Mode	Full	Full	Full	Full	Full	Full	Full	Full
Frames Sent	29125518249	29125248334	29125263554	29125350093	29125438680	29125331985	29125495749	29125523257
Frames Sent Rate	0	0	0	0	0	0	0	0
Valid Frames Received	29125523257	29125518249	29125248334	29125263554	29125350093	29125438680	29125331985	29125495749
Valid Frames Received Rate	0	0	0	0	0	0	0	0
Bytes Sent	2.30382E+13	2.30382E+13	2.30382E+13	2.30382E+13	2.30382E+13	2.30382E+13	2.30382E+13	2.30382E+13
Bytes Sent Rate	0	0	0	0	0	0	0	0
Bytes Received	2.30382E+13	2.30382E+13	2.30382E+13	2.30382E+13	2.30382E+13	2.30382E+13	2.30382E+13	2.30382E+13
Bytes Received Rate	0	0	0	0	0	0	0	0
Fragments	0	0	0	0	0	0	0	0
Undersize	0	0	0	0	0	0	0	0
Oversize and Good CRCs	0	0	0	0	0	0	0	0
CRC Errors	0	0	0	0	0	0	0	0
Vlan Tagged Frames	0	0	0	0	0	0	0	0
Flow Control Frames	0	0	0	0	0	0	0	0
Alignment Errors	0	0	0	0	0	0	0	0
Dribble Errors	0	0	0	0	0	0	0	0
Collisions	0	0	0	0	0	0	0	0
Late Collisions	0	0	0	0	0	0	0	0
Collision Frames	0	0	0	0	0	0	0	0
Excessive Collision Frames	0	0	0	0	0	0	0	0
Oversize and CRC Errors	0	0	0	0	0	0	0	0
User Defined Stat 1	0	0	0	0	0	0	0	0
User Defined Stat 2	0	0	0	0	0	0	0	0
Capture Trigger (UDS 3)	29125523257	29125518249	29125248334	29125263554	29125350093	29125438680	29125331985	29125495749
Capture Filter (UDS 4)	29125523257	29125518249	29125248334	29125263554	29125350093	29125438680	29125331985	29125495749
ProtocolServer Transmit	0	0	0	0	0	0	0	0
ProtocolServer Receive	0	0	0	0	0	0	0	0
Transmit Arp Reply	0	0	0	0	0	0	0	0
Transmit Arp Request	0	0	0	0	0	0	0	0
Transmit Ping Reply	0	0	0	0	0	0	0	0
Transmit Ping Request	0	0	0	0	0	0	0	0
Receive Arp Reply	0	0	0	0	0	0	0	0
Receive Arp Request	0	0	0	0	0	0	0	0
Receive Ping Reply	0	0	0	0	0	0	0	0
Receive Ping Request	0	0	0	0	0	0	0	0
Transmit Duration(Cleared on Start Tx)	30:00.2	30:00.2	30:00.2	30:00.2	30:00.3	30:00.3	30:00.2	30:00.2
Protocol Server Vlan Dropped Frames	0	0	0	0	0	0	0	0
Scheduled Frames Sent	29125518249	29125248334	29125263554	29125350093	29125438680	29125331985	29125495749	29125523257
Asynchronous Frames Sent	0	0	0	0	0	0	0	0
Port CPU Frames Sent	0	0	0	0	0	0	0	0
Scheduled Transmit Duration	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0
Bytes Sent / Transmit Duration	121894994	121895129	121895096	121895250	121895257	121894944	121895147	121894862
Bits Sent	1.84E+14	1.84E+14	1.84E+14	1.84E+14	1.84E+14	1.84E+14	1.84E+14	1.84E+14
Bits Sent Rate	0	0	0	0	0	0	0	0
Bits Received	1.84E+14	1.84E+14	1.84E+14	1.84E+14	1.84E+14	1.84E+14	1.84E+14	1.84E+14
Bits Received Rate	0	0	0	0	0	0	0	0
Port CPU Status	Ready	Ready	Ready	Ready	Ready	Ready	Ready	Ready
Port CPU DoD Status	Ready	Ready	Ready	Ready	Ready	Ready	Ready	Ready

Appendix 2B

● Cold Start Test

Test Equipment:

Client = IXIA 1600T

Switch: EKI-2728-AE

KSON Programmable Temperature & Humidity Chamber: THS-A4H+100

Test Conditions:

1. Test Condition: Power off
2. Test temperature: -40℃
3. Test Duration: 4 hours (after 3 hours then power on)

Procedure:

1. After 3 hours then power on.
2. Use IXIA 1600T to inject 500,000,000 packet into DUT.
3. To observe having or not error packet and packet loss.

Expectation:

After stress test, using IXIA 1600T to perform traffic test, there are no CRC errors, Alignment errors, Oversize and packets loss.

Test Result: Passed

1000M Full Duplex Tx/Rx function test (input 11V DC power from PWR1)

- Transmit Mode burst 500,000,000 burst
- Data Length: Random byte
- Test pairs:1<->2,2<->3……,8<->1

	10.0.0.1:03.01	10.0.0.1:03.02	10.0.0.1:03.03	10.0.0.1:03.04	10.0.0.1:04.01	10.0.0.1:04.02	10.0.0.1:04.03	10.0.0.1:04.04
Link State	Link Up	Link Up	Link Up	Link Up	Link Up	Link Up	Link Up	Link Up
Line Speed	1000 Mbps	1000 Mbps	1000 Mbps	1000 Mbps	1000 Mbps	1000 Mbps	1000 Mbps	1000 Mbps
Duplex Mode	Full	Full	Full	Full	Full	Full	Full	Full
Frames Sent	500000000	500000000	500000000	500000000	500000000	500000000	500000000	500000000
Frames Sent Rate	0	0	0	0	0	0	0	0
Valid Frames Received	500000000	500000000	500000000	500000000	500000000	500000000	500000000	500000000
Valid Frames Received Rate	0	0	0	0	0	0	0	0
Bytes Sent	3.95502E+11	3.95496E+11	3.95497E+11	3.95497E+11	3.95508E+11	3.95492E+11	3.95494E+11	3.95505E+11
Bytes Sent Rate	0	0	0	0	0	0	0	0
Bytes Received	3.95505E+11	3.95502E+11	3.95496E+11	3.95497E+11	3.95497E+11	3.95508E+11	3.95492E+11	3.95494E+11
Bytes Received Rate	0	0	0	0	0	0	0	0
Fragments	0	0	0	0	0	0	0	0
Undersize	0	0	0	0	0	0	0	0
Oversize and Good CRCs	0	0	0	0	0	0	0	0
CRC Errors	0	0	0	0	0	0	0	0
Vlan Tagged Frames	0	0	0	0	0	0	0	0
Flow Control Frames	0	0	0	0	0	0	0	0
Alignment Errors	0	0	0	0	0	0	0	0
Dribble Errors	0	0	0	0	0	0	0	0
Collisions	0	0	0	0	0	0	0	0
Late Collisions	0	0	0	0	0	0	0	0
Collision Frames	0	0	0	0	0	0	0	0
Excessive Collision Frames	0	0	0	0	0	0	0	0
Oversize and CRC Errors	0	0	0	0	0	0	0	0
User Defined Stat 1	0	0	0	0	0	0	0	0
User Defined Stat 2	0	0	0	0	0	0	0	0
Capture Trigger (UDS 3)	500000000	500000000	500000000	500000000	500000000	500000000	500000000	500000000
Capture Filter (UDS 4)	500000000	500000000	500000000	500000000	500000000	500000000	500000000	500000000
ProtocolServer Transmit	0	0	0	0	0	0	0	0
ProtocolServer Receive	0	0	0	0	0	0	0	0
Transmit Arp Reply	0	0	0	0	0	0	0	0
Transmit Arp Request	0	0	0	0	0	0	0	0
Transmit Ping Reply	0	0	0	0	0	0	0	0
Transmit Ping Request	0	0	0	0	0	0	0	0
Receive Arp Reply	0	0	0	0	0	0	0	0
Receive Arp Request	0	0	0	0	0	0	0	0
Receive Ping Reply	0	0	0	0	0	0	0	0
Receive Ping Request	0	0	0	0	0	0	0	0
Transmit Duration(Cleared on Start Tx)	54:04.6	54:04.6	54:04.6	54:04.6	54:04.6	54:04.5	54:04.6	54:04.6
Protocol Server Vlan Dropped Frames	0	0	0	0	0	0	0	0
Scheduled Frames Sent	500000000	500000000	500000000	500000000	500000000	500000000	500000000	500000000
Asynchronous Frames Sent	0	0	0	0	0	0	0	0
Port CPU Frames Sent	0	0	0	0	0	0	0	0
Scheduled Transmit Duration	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0	00:00.0
Bytes Sent / Transmit Duration	121894934	121893973	121894809	121895266	121895483	121894296	121894576	121895100
Bits Sent	3.16402E+12	3.16397E+12	3.16398E+12	3.16397E+12	3.16406E+12	3.16393E+12	3.16395E+12	3.16404E+12
Bits Sent Rate	0	0	0	0	0	0	0	0
Bits Received	3.16404E+12	3.16402E+12	3.16397E+12	3.16398E+12	3.16397E+12	3.16406E+12	3.16393E+12	3.16395E+12
Bits Received Rate	0	0	0	0	0	0	0	0
Port CPU Status	Ready	Ready	Ready	Ready	Ready	Ready	Ready	Ready
Port CPU DoD Status	Ready	Ready	Ready	Ready	Ready	Ready	Ready	Ready

Appendix 2C

● Component Temperature Test

Location	Component Name	Radiator	Temperature（25℃）		
			DC 48V	DC 24V	DC 12V
D3	KBL406G	No	47.0℃	48.1℃	53.0℃
D5	KBL406G	No	47.8℃	50.1℃	58.0℃
U5	E-L4973D	No	70.3℃	63.4℃	64.1℃
C20	E/C 100uF/63V	No	55.1℃	54.7℃	58.2℃
C25	E/C 100uF/63V	No	49.4℃	49.8℃	53.2℃
F1	PTC 60V	No	50.6℃	52.1℃	59.2℃
D1	FM560	No	65.1℃	63.1℃	63.2℃
L2	COIL	No	65.2℃	63.5℃	63.6℃
U6	VITESSE 7398	Yes	71.3℃	71.0℃	71.5℃
L1	COIL	No	65.2℃	65.2℃	65.6℃
U2	MVPG31	No	68.0℃	68.0℃	68.3℃
Y1	OSC 25M	No	59.9℃	60.2℃	60.4℃
Case top			37.4℃	38.0℃	38.6℃
Case bottom			48.7℃	48.8℃	49.7℃
Test Environment Temperature			24.4℃	24.8℃	25.2℃

Test Result: **Passed**