

🚦 Introduction.

This document specifies the details to validate DUT Ethernet performance.
This test will use Iperf3.1.3/Ethtool Test tool and Control NB.

1.1. Auto Negotiation Test

🚦 Test Environment

- Configure the test setup as shown in block diagram below

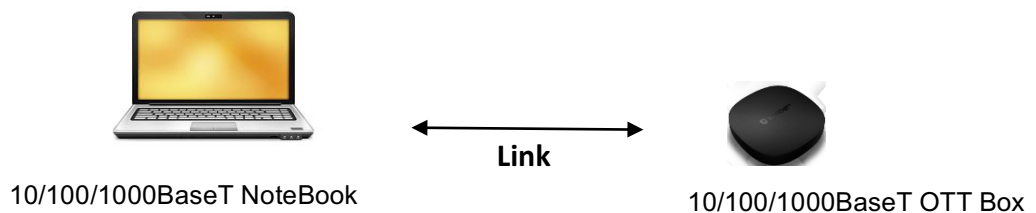


Figure 1: Auto Negotiation Test

Purpose: Verify the DUT responds to management by transmitting the appropriate link signaling.

The performance specified in following paragraphs shall be guaranteed under the following conditions:

🧩 Test Result :

HW Version: 2154001662-01S1 , SW Version:						
Items #	Description	DUT1	DUT2	DUT3	DUT4	DUT5
1	1000BaseT – Full duplex	PASS	PASS	PASS	PASS	PASS
2	1000BaseT – Half duplex	PASS	PASS	PASS	PASS	PASS
3	100BaseT – Full duplex	PASS	PASS	PASS	PASS	PASS
4	100BaseT - Half duplex	PASS	PASS	PASS	PASS	PASS
5	10BaseT – Full duplex	PASS	PASS	PASS	PASS	PASS
6	10BaseT - Half duplex	PASS	PASS	PASS	PASS	PASS

1.2. CRC Error Test

Test Environment

- Configure the test setup as shown in block diagram below

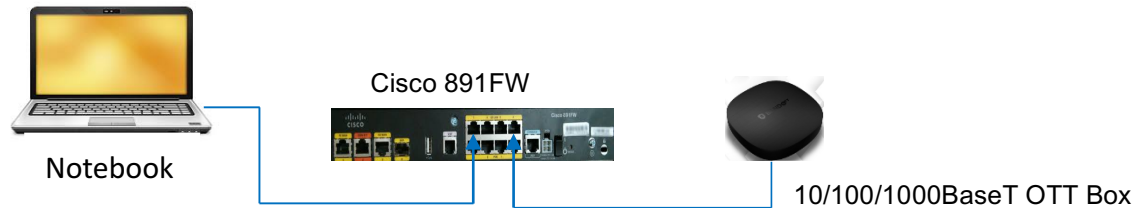


Figure 2: CRC Error Test

The performance specified in following paragraphs shall be guaranteed under the following conditions:

Test Result :

Items #	Description	DUT1	DUT2	DUT3	DUT4	DUT5
1	1000BaseT – Full duplex	PASS	PASS	PASS	PASS	PASS
2	100BaseT – Full duplex	PASS	PASS	PASS	PASS	PASS
3	10BaseT – Full duplex	PASS	PASS	PASS	PASS	PASS

Purpose: Verify the DUT can detect accidental changes to raw data.

1000BaseT :

1. NB:

To run this test , we will open our command processor and input the following information.

“ iperf3.exe -c 192.168.1.2 -t 3600 -w 90k” or

“ iperf3.exe -c 192.168.1.2 -t 3600 -w 1m”

This should look like the following :

```
C:\Users\user\Downloads\iperf-3.1.3-win64>iperf3.exe -c 192.168.1.2 -t 3600 -w 90k
Connecting to host 192.168.1.2, port 5201
[ 4] local 192.168.1.5 port 49391 connected to 192.168.1.2 port 5201
[ ID] Interval           Transfer             Bandwidth
[ 4] 0.00-1.01 sec      58.9 MBytes        487 Mbits/sec
[ 4] 1.01-2.01 sec      72.5 MBytes        609 Mbits/sec
[ 4] 2.01-3.01 sec      80.2 MBytes        674 Mbits/sec
[ 4] 3.01-4.01 sec      75.7 MBytes        636 Mbits/sec
[ 4] 4.01-5.01 sec      71.8 MBytes        603 Mbits/sec
[ 4] 5.01-6.01 sec      82.6 MBytes        694 Mbits/sec
[ 4] 6.01-7.00 sec      84.8 MBytes        713 Mbits/sec
[ 4] 7.00-8.00 sec      76.3 MBytes        641 Mbits/sec
[ 4] 8.00-9.00 sec      73.7 MBytes        620 Mbits/sec
[ 4] 9.00-10.02 sec     76.9 MBytes        636 Mbits/sec
[ 4] 10.02-11.01 sec    74.9 MBytes        629 Mbits/sec
[ 4] 11.01-12.01 sec    65.5 MBytes        550 Mbits/sec
[ 4] 12.01-13.01 sec    71.5 MBytes        601 Mbits/sec
[ 4] 13.01-14.01 sec    72.9 MBytes        612 Mbits/sec
[ 4] 14.01-15.01 sec    75.1 MBytes        631 Mbits/sec
```

```
[ 5] 1256.00-1257.00 sec 112 MBytes 939 Mbits/sec
[ 5] 1257.00-1258.00 sec 112 MBytes 940 Mbits/sec
[ 5] 1258.00-1259.00 sec 112 MBytes 938 Mbits/sec
[ 5] 1259.00-1260.00 sec 112 MBytes 941 Mbits/sec
[ 5] 1260.00-1261.00 sec 112 MBytes 941 Mbits/sec 1m
```

2. DUT:

This command will run a iperf test two hours.

“iperf3.exe -s &”

```
[ 6] 36.00-37.00 sec 73.1 MBytes 613 Mbits/sec
[ 6] 37.00-38.00 sec 74.9 MBytes 629 Mbits/sec
[ 6] 37.00-38.00 sec 74.9 MBytes 629 Mbits/sec
-----
```

The test results are as follows :

```
console:/ #
console:/ # [ 5] 1481.00-1482.00 sec 110 MBytes 922 Mbits/sec
console:/ # ethtool -S eth0 | grep crc
mmc_rx_crc_error: 0
rx_crc: 0
console:/ # [ 5] 1482.00-1483.00 sec 110 MBytes 924 Mbits/sec
```

■ 100MBaseT :

1. NB:

To run this test , we will open our command processor and input the following information.

“iperf3.exe -c 192.168.1.2 -t 3600 -w 20k”

DUT:

The test results are as follows :

```
console:/ # ethtool -S eth0 | grep crc
mmc_rx_crc_error: 0
rx_crc: 0
```

■ 10MBaseT :

1. NB:

To run this test , we will open our command processor and input the following information.

“iperf3.exe -c 192.168.1.2 -t 3600 -w 10k”

DUT:

The test results are as follows :

```
console:/ # ethtool -S eth0 | grep crc
mmc_rx_crc_error: 0
rx_crc: 0
```

1.3. DUT Information :

#	HW Version	SW Version	MAC
DUT1	2154001662-01S1	Eagle AOSP	ec:5c:68:1d:bd:53
DUT2	2154001662-01S1	Eagle AOSP	ec:5c:68:1d:bd:64
DUT3	2154001662-01S1	Eagle AOSP	ec:5c:68:1d:bd:49
DUT4	2154001662-01S1	Eagle AOSP	ec:5c:68:1d:bd:53
DUT5	2154001662-01S1	Eagle AOSP	ec:5c:68:1d:bd:1a