



聯傑國際股份有限公司(DAVICOM Semiconductor, Inc.)

DAVICOM DM9000A Performance Report

for SIGMA DESIGNS EM8511 Platform

- Test Environment

Device 1. :

Main-chip : EM8511
LAN chip : DM9000A E6
O.S. : 2.4.17-uc0 (uClinux)
LAN driver version : version: 3.01
IP : 192.168.11.111

Device 2. PC

Hp Compaq d330 uT
CPU : Pentium 4 2.80GHz
RAM : 512MB
LAN chip : Broadcom NetXtreme Gigabit Ethernet
O.S. : Microsoft Windows XP Professional version 2002
IP : 192.168.11.100

Device 3. PCI FX-035A switch hub

- TCP Packets Performance

When we want to measure TX performance, device1 acts client and device2 acts server. When we want to measure RX performance, device2 acts client and device1 acts server.

Table 1 shows TX performance

Server : #iperf -s -w 64k

Client : #iperf -c \$IP -w \$TCP_WINDOW_SIZE -t 60

Table 2 shows RX performance

Server : #iperf -s -w \$IP -w \$TCP_WINDOW_SIZE

Client : #iperf -c -t 60



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Unite : Mbits/sec

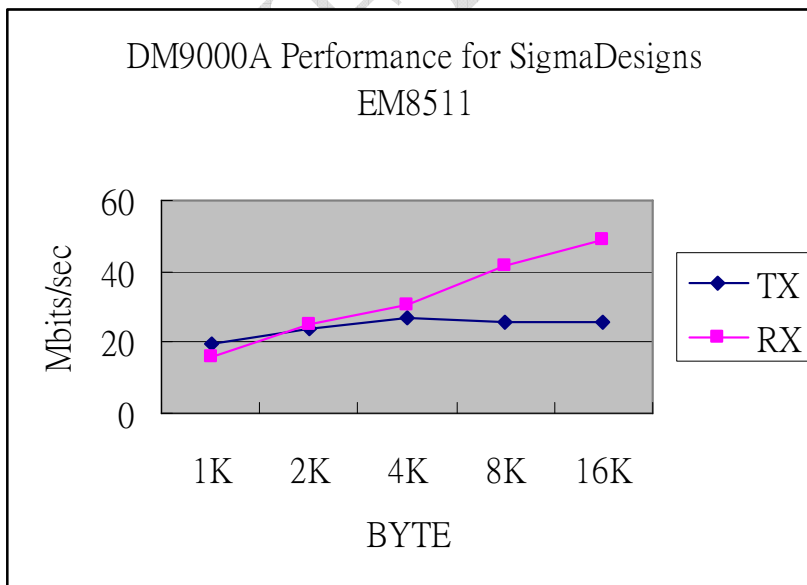
TCP_WINDOW_SIZE	1K	2K	4K	8K	16K
Times					
1	19.7	24.6	26.0	25.9	26.0
2	19.4	23.7	26.6	25.9	26.0
3	19.3	23.1	26.9	26.1	25.8
4	19.4	24.6	26.9	25.9	26.2
5	19.5	24.8	26.8	25.8	26.1
Average	19.46	24.16	26.64	25.92	26.02

Table 1. TX Performance

Unite : Mbits/sec

TCP_WINDOW_SIZE	1K	2K	4K	8K	16K
Times					
1	15.9	25.1	30.6	41.9	49.0
2	16.0	25.2	30.4	41.9	49.1
3	15.6	25.3	30.4	41.4	49.0
4	15.8	24.8	30.6	41.5	49.0
5	15.8	24.9	30.5	41.0	48.9
Average	15.82	25.06	30.5	41.54	49.0

Table 2. RX Performance





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● UDP Packets Performance

Server : Device 2

iperf - s -u

Client : Device 1

Iperf - c \$IP - u - b \$(Bandwidth)

\$(Bandwidth)	Bandwidth (Mbits/sec)	Jitter (ms)	Lost/Total Datagrams
20M	21.0	2.034	0/17859 (0%)
22M	23.1	1.313	0/19648 (0%)
24M	25.1	0.634	0/21415 (0%)
25M	26.2	1.384	0/22323 (0%)
26M	27.2	1.848	0/23203 (0%)
27M	28.3	1.562	0/24098 (0%)
28M	29.4	1.137	0/25002 (0%)
30M	31.5	1.228	0/26811 (0%)
31M	32.4	0.937	113/23217 (0.49%)