FIC KN-6000 PCI SYSTEM BOARD
BENCHMARKING REPORT

Revision 1.2

Update: 23-Jan-1997

1.0 Introduction

To evaluate the KN-6000's performance and to ensure its compatibility with a complete range of the most popular operating systems and software applications, FIC's Motherboard R&D Team conducted a comprehensive suite of benchmark tests on the board in a variety of hardware configurations, including a full selection of Intel Pentium II 233/266MHz processors as well as EDO DRAM types. The performance of the board running some of the most popular VGA adapter cards was also tested.

In order to demonstrate realistic business application performance, Winstone 97 under Windows 95 was chosen as the primary benchmarking tool for FIC's tests. Winstone 97 Version 1.0 was developed by the Ziff-Davis Publishing Company to provide a tool for accurate and realistic measurement of system performance of personal computers running popular business-oriented applications in the Microsoft Windows 95 operating system environment. To demonstrate the performance of the KN-6000 in the Windows NT operating system environment, tests were also run using the Winstone 97 for Windows NT 4.0 benchmarking tool.
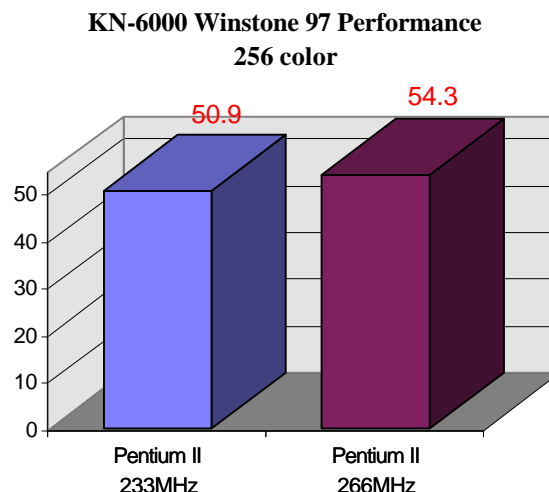
System Tests Configuration :

Main Board	FIC KN-6000
System Core Logic	Intel Natoma 440FX
System BIOS	AMI BIOS Version 626HA12
Cache Size	512k Pipeline Burst SRAM
VGA	Matrox Mystique 4MB SGRAM
VGA Driver	Mystique Windows 95 Driver Version 4.03.00.3220
	Mystique Windows NT Driver Version 2.33,4.0.013
IDE Driver	Windows 95 PCI Master Driver
IDE HDD	Quantum Fireball 1.2GB PIO Mode 4 or DMA mode 2 (FB-1280AT)
Memory	64MB EDO DRAM
Operating System	Microsoft Windows 95 (4.00.950 B)
	Microsoft WindowsNT 4.0 Workstation (build in:1381)

2.0 System Benchmarks Performance Summary

a) Benchmarks Performance for Windows 95:

The chart below illustrates the Winstone 97 under Windows 95 performance processor benchmark with the KN-6000 using Intel Pentium II 233/266MHz processors. The following is a sample of the results using 512KB Pipeline Burst SRAM, 64MB EDO DRAM, with a Matrox Mystique 4MB SGRAM PCI VGA card in 1024 x 768 x 256/High colors, resolution refresh rate of 75Hz, small font.

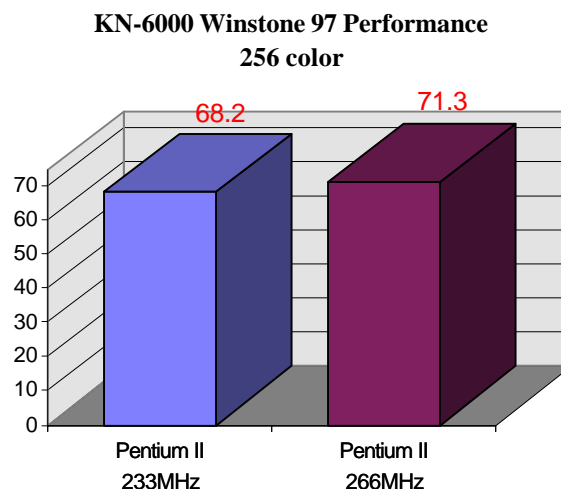**KN-6000 Winstone 97 Performance**
256 color

The table below provides more detailed benchmark testing data about the KN-6000 using different speed Intel Pentium processors. The board was configured with 512KB Pipeline Burst SRAM and 64MB EDO DRAM.

Benchmarks	Weighted Suite	Pentium II-233Mhz		Pentium II-266MHz	
		256 color	*High color*	*256 color*	*High color*
WinStone 96	Overall Winstone 96	**107.3**	**104.5**	**115.6**	**111.4**
	Business Graphics	10.8	10.9	11.6	11.5
	Database	12.5	12.2	13.4	13.0
	Spreadsheet	9.6	9.1	10.4	9.7
	Word Processor	10.8	10.5	11.6	11.3
WinBench96	CPUmark 16	470	470	537	537
	CPUmark 32	*619*	*611*	*705*	*702*
	Disk WinMark96	**1280**	**1230**	**1360**	**1190**
	Graphics WinMark96	**46.0**	**36.6**	**50.6**	**39.3**
WinStone 97	Business Winstone 97	**50.9**	**50.6**	**54.3**	**52.6**
	High/End Winstone97	**26.3**	**27.1**	**28.8**	**28.8**
WinBench97	Business Disk WinMark 97	892	889	928	904
	H/E Disk WinMark 97	**3350**	**2960**	**3120**	**2930**
	CPUMark 16	470	470	536	537
	CPUMark 32	**620**	**616**	**701**	**705**
	Business Graphics WinMark 97	89.9	72.4	98.1	78.4
	H/E Graphics WinMark 97	**44.2**	**35.3**	**49.1**	**39.1**

b) Benchmarks Performance for Windows NT 4.0 :

The chart below illustrates the Winstone 97 under Windows NT 4.0 performance processor benchmark with the KN-6000 using Intel Pentium II 233/266MHz processors. The following is a sample of the results using 512KB Pipeline Burst SRAM, 64MB EDO DRAM, with a Matrox Mystique 4MB SGRAM PCI VGA card in 1024 x 768 x 256 colors, resolution refresh rate of 75Hz, small font.

KN-6000 Winstone 97 Performance
256 color

The table below provides more detailed benchmark testing data about the KN-6000 using different speed Intel Pentium processors. The board was configured with 512KB Pipeline Burst SRAM and 64MB EDO DRAM.

Benchmarks	Weighted Suite	Pentium II - 233MHz	Pentium II - 266MHz
WinStone 97	Business Winstone 97	**68.2**	**71.3**
	High/End Winstone97	**29.9**	**31.9**
WinBench97	Business Disk WinMark 97	659	687
	H/E Disk WinMark 97	**2370**	**2330**
	CPUMark 16	462	526
	CPUMark 32	**626**	**715**
	Business Graphics WinMark 97	109	121.1
	H/E Graphics WinMark 97	**45.1**	**50.1**