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Nouveau Linux 3.4 Mesa 8.1-devel

NVIDIA GeForce Linux graphics card benchmarking with the GeForce 8500GT, 8600GTS, 8800GT, 9500GT, 9600GSO, 9800GT, 9800GTX, GT 220, GT 240, GTX 460, and GTX 550 Ti graphics cards. Benchmarking under Ubuntu 12.04 LTS x86_64 with the proprietary NVIDIA 295.33 Linux driver and compared to the open-source Nouveau Gallium3D Linux graphics driver. Nouveau testing was with the latest Linux 3.4 kernel and Mesa 8.1-devel from Git as of early April 2012. This benchmarking is by Michael Larabel for a future article on Phoronix.com.

Automated Executive Summary

NVIDIA: GeForce GTX 460 had the most wins, coming in first place for 37% of the tests.

Based on the geometric mean of all complete results, the fastest (NVIDIA: GeForce GTX 460) was 4.907x the speed of the slowest (Nouveau: GeForce GTX 460).

The results with the greatest spread from best to worst included:

VDrift (Resolution: 1920 x 1080) at 39.12x
Xonotic (Resolution: 1920 x 1080 - Effects Quality: High) at 31.79x
Lightsmark (Resolution: 1920 x 1080) at 25x
Reaction Quake 3 (Resolution: 1920 x 1080) at 18.836x
OpenArena (Resolution: 1920 x 1080) at 15.563x
World of Padman (Resolution: 1920 x 1080) at 11.547x

Xonotic (Resolution: 1920 x 1080 - Effects Quality: Low) at 8.69x
Cairo Performance Demos (Demo: Gears) at 7.497x
Xonotic (Resolution: 1280 x 1024 - Effects Quality: Low) at 6.13x
Urban Terror (Resolution: 1920 x 1080) at 6.102x.

Test Systems:

Nouveau: GeForce 8500GT

Processor: AMD FX-8150 Eight-Core @ 3.60GHz (8 Cores), Motherboard: ASUS Crosshair V Formula, Chipset: AMD ATI RD890, Memory: 16384MB, Disk: 240GB OCZ VERTEX3, Graphics: NVIDIA GeForce 8500 GT 256MB (499/399MHz), Audio: Realtek ALC889, Monitor: DELL P2210H, Network: Intel 82583V Gigabit Connection

OS: Ubuntu 12.04, Kernel: 3.4.0-999-generic (x86_64), Desktop: Unity 5.8.0, Display Server: X Server 1.11.3, Display Driver: nouveau 0.0.16, OpenGL: 2.1 Mesa 8.1-devel (git-c653287) Gallium 0.4, Compiler: GCC 4.6, File-System: ext4, Screen Resolution: 1920x1080

Nouveau: GeForce 8600GTS

Processor: AMD FX-8150 Eight-Core @ 3.60GHz (8 Cores), Motherboard: ASUS Crosshair V Formula, Chipset: AMD ATI RD890, Memory: 16384MB, Disk: 240GB OCZ VERTEX3, Graphics: NVIDIA GeForce 8600 GTS 256MB (675/1008MHz), Audio: Realtek ALC889, Monitor: DELL P2210H, Network: Intel 82583V Gigabit Connection

OS: Ubuntu 12.04, Kernel: 3.4.0-999-generic (x86_64), Desktop: Unity 5.8.0, Display Server: X Server 1.11.3, Display Driver: nouveau 0.0.16, OpenGL: 2.1 Mesa 8.1-devel (git-c653287) Gallium 0.4, Compiler: GCC 4.6, File-System: ext4, Screen Resolution: 1920x1080

Nouveau: GeForce 8800GT

Processor: AMD FX-8150 Eight-Core @ 3.60GHz (8 Cores), Motherboard: ASUS Crosshair V Formula, Chipset: AMD ATI RD890, Memory: 16384MB, Disk: 240GB OCZ VERTEX3, Graphics: NVIDIA GeForce 8800 GT 256MB (399/399MHz), Audio: Realtek ALC889, Monitor: DELL P2210H, Network: Intel 82583V Gigabit Connection

OS: Ubuntu 12.04, Kernel: 3.4.0-999-generic (x86_64), Desktop: Unity 5.8.0, Display Server: X Server 1.11.3, Display Driver: nouveau 0.0.16, OpenGL: 2.1 Mesa 8.1-devel (git-c653287) Gallium 0.4, Compiler: GCC 4.6, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-werror --enable-checking=release --enable-clocale=gnu --enable-gnu-unique-object --enable-languages=c,c++,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-nls --enable-objc-gc --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --target=x86_64-linux-gnu --with-arch-32=i686 --with-tune=generic -v
Graphics Notes: EXA
System Notes: Compiz was running on this system.

Nouveau: GeForce 9500GT

Processor: AMD FX-8150 Eight-Core @ 3.60GHz (8 Cores), Motherboard: ASUS Crosshair V Formula, Chipset: AMD ATI RD890, Memory: 16384MB, Disk: 240GB OCZ VERTEX3, Graphics: NVIDIA GeForce 9500 GT 1024MB (550/399MHz), Audio: Realtek ALC889, Monitor: DELL P2210H, Network: Intel 82583V Gigabit Connection

OS: Ubuntu 12.04, Kernel: 3.4.0-999-generic (x86_64), Desktop: Unity 5.8.0, Display Server: X Server 1.11.3, Display Driver: nouveau 0.0.16, OpenGL: 2.1 Mesa 8.1-devel (git-c653287) Gallium 0.4, Compiler: GCC 4.6, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-werror --enable-checking=release --enable-clocale=gnu --enable-gnu-unique-object --enable-languages=c,c++,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-nls --enable-objc-gc --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --target=x86_64-linux-gnu --with-arch-32=i686 --with-tune=generic -v
Graphics Notes: EXA
System Notes: Compiz was running on this system.

Nouveau: GeForce 9600GSO

Processor: AMD FX-8150 Eight-Core @ 3.60GHz (8 Cores), Motherboard: ASUS Crosshair V Formula, Chipset: AMD ATI RD890, Memory: 16384MB, Disk: 240GB OCZ VERTEX3, Graphics: NVIDIA GeForce 9600 GSO 512MB (399/399MHz), Audio: Realtek ALC889, Monitor: DELL P2210H, Network: Intel 82583V Gigabit Connection

OS: Ubuntu 12.04, Kernel: 3.4.0-999-generic (x86_64), Desktop: Unity 5.8.0, Display Server: X Server 1.11.3, Display Driver: nouveau 0.0.16, OpenGL: 2.1 Mesa 8.1-devel (git-c653287) Gallium 0.4, Compiler: GCC 4.6, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-werror --enable-checking=release --enable-clocale=gnu --enable-gnu-unique-object --enable-languages=c,c++,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-nls --enable-objc-gc --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --target=x86_64-linux-gnu --with-arch-32=i686 --with-tune=generic -v
Graphics Notes: EXA
System Notes: Compiz was running on this system.

Nouveau: GeForce 9800GT

Processor: AMD FX-8150 Eight-Core @ 3.60GHz (8 Cores), Motherboard: ASUS Crosshair V Formula, Chipset: AMD ATI RD890, Memory: 16384MB, Disk: 240GB OCZ VERTEX3, Graphics: NVIDIA GeForce 9800 GT 512MB (399/399MHz), Audio: Realtek ALC889, Monitor: DELL P2210H, Network: Intel 82583V Gigabit Connection

OS: Ubuntu 12.04, Kernel: 3.4.0-999-generic (x86_64), Desktop: Unity 5.8.0, Display Server: X Server 1.11.3, Display Driver: nouveau 0.0.16, OpenGL: 2.1 Mesa 8.1-devel (git-c653287) Gallium 0.4, Compiler: GCC 4.6, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-werror --enable-checking=release --enable-clocale=gnu --enable-gnu-unique-object --enable-languages=c,c++,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-nls --enable-objc-gc --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --target=x86_64-linux-gnu --with-arch-32=i686 --with-tune=generic -v
Graphics Notes: EXA
System Notes: Compiz was running on this system.

Nouveau: GeForce 9800GTX

Processor: AMD FX-8150 Eight-Core @ 3.60GHz (8 Cores), Motherboard: ASUS Crosshair V Formula, Chipset: AMD ATI RD890, Memory: 16384MB, Disk: 240GB OCZ VERTEX3, Graphics: NVIDIA GeForce 9800 GTX 512MB (675/1101MHz), Audio: Realtek ALC889, Monitor: DELL P2210H, Network: Intel 82583V Gigabit Connection

OS: Ubuntu 12.04, Kernel: 3.4.0-999-generic (x86_64), Desktop: Unity 5.8.0, Display Server: X Server 1.11.3, Display Driver: nouveau 0.0.16, OpenGL: 2.1 Mesa 8.1-devel (git-c653287) Gallium 0.4, Compiler: GCC 4.6, File-System: ext4, Screen Resolution: 1920x1080

Nouveau: GeForce GT 220

Processor: AMD FX-8150 Eight-Core @ 3.60GHz (8 Cores), Motherboard: ASUS Crosshair V Formula, Chipset: AMD ATI RD890, Memory: 16384MB, Disk: 240GB OCZ VERTEX3, Graphics: NVIDIA GeForce GT 220 1024MB (625/405MHz), Audio: Realtek ALC889, Monitor: DELL P2210H, Network: Intel 82583V Gigabit Connection

OS: Ubuntu 12.04, Kernel: 3.4.0-999-generic (x86_64), Desktop: Unity 5.8.0, Display Server: X Server 1.11.3, Display Driver: nouveau 0.0.16, OpenGL: 2.1 Mesa 8.1-devel (git-c653287) Gallium 0.4, Compiler: GCC 4.6, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-werror --enable-checking=release --enable-clocale=gnu --enable-gnu-unique-object --enable-languages=c,c++,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-nls --enable-objc-gc --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --target=x86_64-linux-gnu --with-arch-32=i686 --with-tune=generic -v
Graphics Notes: EXA
System Notes: Compiz was running on this system.

Nouveau: GeForce GTX 460

Processor: AMD FX-8150 Eight-Core @ 3.60GHz (8 Cores), Motherboard: ASUS Crosshair V Formula, Chipset: AMD ATI RD890, Memory: 16384MB, Disk: 240GB OCZ VERTEX3, Graphics: NVIDIA GeForce GTX 460 768MB (675/135MHz), Audio: Realtek ALC889, Monitor: DELL P2210H, Network: Intel 82583V Gigabit Connection

OS: Ubuntu 12.04, Kernel: 3.4.0-999-generic (x86_64), Desktop: Unity 5.8.0, Display Server: X Server 1.11.3, Display Driver: nouveau 0.0.16, OpenGL: 3.0 Mesa 8.1-devel (git-c653287) Gallium 0.4, Compiler: GCC 4.6, File-System: ext4, Screen Resolution: 1920x1080

Nouveau: GeForce GTX 550 Ti

Processor: AMD FX-8150 Eight-Core @ 3.60GHz (8 Cores), Motherboard: ASUS Crosshair V Formula, Chipset: AMD ATI RD890, Memory: 16384MB, Disk: 240GB OCZ VERTEX3, Graphics: NVIDIA GeForce GTX 550 Ti 1024MB (951/324MHz), Audio: Realtek ALC889, Monitor: DELL P2210H, Network: Intel 82583V Gigabit Connection

OS: Ubuntu 12.04, Kernel: 3.4.0-999-generic (x86_64), Desktop: Unity 5.8.0, Display Server: X Server 1.11.3, Display Driver: nouveau 0.0.16, OpenGL: 3.0 Mesa 8.1-devel (git-c653287) Gallium 0.4, Compiler: GCC 4.6, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-werror --enable-checking=release --enable-clocale=gnu --enable-gnu-unique-object --enable-languages=c,c++,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-nls --enable-objc-gc --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --target=x86_64-linux-gnu --with-arch-32=i686 --with-tune=generic -v
Graphics Notes: EXA
System Notes: Compiz was running on this system.

NVIDIA: GeForce 8500GT

Processor: AMD FX-8150 Eight-Core @ 3.60GHz (8 Cores), Motherboard: ASUS Crosshair V Formula, Chipset: AMD ATI RD890, Memory: 16384MB, Disk: 240GB OCZ VERTEX3, Graphics: NVIDIA GeForce 8500 GT 512MB (500/400MHz), Audio: Realtek ALC889, Network: Intel 82583V Gigabit Connection

OS: Ubuntu 12.04, Kernel: 3.2.0-22-generic (x86_64), Desktop: Unity 5.8.0, Display Server: X Server 1.11.3, Display Driver: NVIDIA 295.33, OpenGL: 3.3.0 NVIDIA 295.33, Compiler: GCC 4.6, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-werror --enable-checking=release --enable-clocale=gnu --enable-gnu-unique-object --enable-languages=c,c++,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-nls --enable-objc-gc --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --target=x86_64-linux-gnu --with-arch-32=i686 --with-tune=generic -v

System Notes: Compiz was running on this system.

NVIDIA: GeForce 8600GTS

Processor: AMD FX-8150 Eight-Core @ 3.60GHz (8 Cores), Motherboard: ASUS Crosshair V Formula, Chipset: AMD ATI RD890, Memory: 16384MB, Disk: 240GB OCZ VERTEX3, Graphics: NVIDIA GeForce 8600 GTS 256MB (675/1008MHz), Audio: Realtek ALC889, Network: Intel 82583V Gigabit Connection

OS: Ubuntu 12.04, Kernel: 3.2.0-22-generic (x86_64), Desktop: Unity 5.8.0, Display Server: X Server 1.11.3, Display Driver: NVIDIA 295.33, OpenGL: 3.3.0 NVIDIA 295.33, Compiler: GCC 4.6, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-werror --enable-checking=release --enable-clocale=gnu --enable-gnu-unique-object --enable-languages=c,c++,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-nls --enable-objc-gc --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --target=x86_64-linux-gnu --with-arch-32=i686 --with-tune=generic -v
System Notes: Compiz was running on this system.

NVIDIA: GeForce 8800GT

Processor: AMD FX-8150 Eight-Core @ 3.60GHz (8 Cores), Motherboard: ASUS Crosshair V Formula, Chipset: AMD ATI RD890, Memory: 16384MB, Disk: 240GB OCZ VERTEX3, Graphics: NVIDIA GeForce 8800 GT 256MB (600/700MHz), Audio: Realtek ALC889, Network: Intel 82583V Gigabit Connection

OS: Ubuntu 12.04, Kernel: 3.2.0-22-generic (x86_64), Desktop: Unity 5.8.0, Display Server: X Server 1.11.3, Display Driver: NVIDIA 295.33, OpenGL: 3.3.0 NVIDIA 295.33, Compiler: GCC 4.6, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-werror --enable-checking=release --enable-clocale=gnu --enable-gnu-unique-object --enable-languages=c,c++,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-nls --enable-objc-gc --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --target=x86_64-linux-gnu --with-arch-32=i686 --with-tune=generic -v
System Notes: Compiz was running on this system.

NVIDIA: GeForce 9500GT

Processor: AMD FX-8150 Eight-Core @ 3.60GHz (8 Cores), Motherboard: ASUS Crosshair V Formula, Chipset: AMD ATI RD890, Memory: 16384MB, Disk: 240GB OCZ VERTEX3, Graphics: NVIDIA GeForce 9500 GT 1024MB (550/400MHz), Audio: Realtek ALC889, Network: Intel 82583V Gigabit Connection

OS: Ubuntu 12.04, Kernel: 3.2.0-22-generic (x86_64), Desktop: Unity 5.8.0, Display Server: X Server 1.11.3, Display Driver: NVIDIA 295.33, OpenGL: 3.3.0 NVIDIA 295.33, Compiler: GCC 4.6, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-werror --enable-checking=release --enable-clocale=gnu --enable-gnu-unique-object --enable-languages=c,c++,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-nls --enable-objc-gc --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --target=x86_64-linux-gnu --with-arch-32=i686 --with-tune=generic -v
System Notes: Compiz was running on this system.

NVIDIA: GeForce 9600GSO

Processor: AMD FX-8150 Eight-Core @ 3.60GHz (8 Cores), Motherboard: ASUS Crosshair V Formula, Chipset: AMD ATI RD890, Memory: 16384MB, Disk: 240GB OCZ VERTEX3, Graphics: NVIDIA GeForce 9600 GSO 1024MB (500/900MHz), Audio: Realtek ALC889, Network: Intel 82583V Gigabit Connection

OS: Ubuntu 12.04, Kernel: 3.2.0-22-generic (x86_64), Desktop: Unity 5.8.0, Display Server: X Server 1.11.3, Display Driver: NVIDIA 295.33, OpenGL: 3.3.0 NVIDIA 295.33, Compiler: GCC 4.6, File-System: ext4, Screen Resolution:

1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-werror --enable-checking=release --enable-clocale=gnu --enable-gnu-unique-object --enable-languages=c,c++,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-nls --enable-objc-gc --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --target=x86_64-linux-gnu --with-arch-32=i686 --with-tune=generic -v
System Notes: Compiz was running on this system.

NVIDIA: GeForce 9800GT

Processor: AMD FX-8150 Eight-Core @ 3.60GHz (8 Cores), Motherboard: ASUS Crosshair V Formula, Chipset: AMD ATI RD890, Memory: 16384MB, Disk: 240GB OCZ VERTEX3, Graphics: NVIDIA GeForce 9800 GT 512MB (660/950MHz), Audio: Realtek ALC889, Network: Intel 82583V Gigabit Connection

OS: Ubuntu 12.04, Kernel: 3.2.0-22-generic (x86_64), Desktop: Unity 5.8.0, Display Server: X Server 1.11.3, Display Driver: NVIDIA 295.33, OpenGL: 3.3.0 NVIDIA 295.33, Compiler: GCC 4.6, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-werror --enable-checking=release --enable-clocale=gnu --enable-gnu-unique-object --enable-languages=c,c++,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-nls --enable-objc-gc --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --target=x86_64-linux-gnu --with-arch-32=i686 --with-tune=generic -v
System Notes: Compiz was running on this system.

NVIDIA: GeForce 9800GTX

Processor: AMD FX-8150 Eight-Core @ 3.60GHz (8 Cores), Motherboard: ASUS Crosshair V Formula, Chipset: AMD ATI RD890, Memory: 16384MB, Disk: 240GB OCZ VERTEX3, Graphics: NVIDIA GeForce 9800 GTX/9800 GTX+ 512MB (675/1100MHz), Audio: Realtek ALC889, Network: Intel 82583V Gigabit Connection

OS: Ubuntu 12.04, Kernel: 3.2.0-22-generic (x86_64), Desktop: Unity 5.8.0, Display Server: X Server 1.11.3, Display Driver: NVIDIA 295.33, OpenGL: 3.3.0 NVIDIA 295.33, Compiler: GCC 4.6, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-werror --enable-checking=release --enable-clocale=gnu --enable-gnu-unique-object --enable-languages=c,c++,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-nls --enable-objc-gc --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --target=x86_64-linux-gnu --with-arch-32=i686 --with-tune=generic -v
System Notes: Compiz was running on this system.

NVIDIA: GeForce GT 220

Processor: AMD FX-8150 Eight-Core @ 3.60GHz (8 Cores), Motherboard: ASUS Crosshair V Formula, Chipset: AMD ATI RD890, Memory: 16384MB, Disk: 240GB OCZ VERTEX3, Graphics: NVIDIA GeForce GT 220 1024MB (625/400MHz), Audio: Realtek ALC889, Network: Intel 82583V Gigabit Connection

OS: Ubuntu 12.04, Kernel: 3.2.0-22-generic (x86_64), Desktop: Unity 5.8.0, Display Server: X Server 1.11.3, Display Driver: NVIDIA 295.33, OpenGL: 3.3.0 NVIDIA 295.33, Compiler: GCC 4.6, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-werror --enable-checking=release --enable-clocale=gnu --enable-gnu-unique-object --enable-languages=c,c++,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-nls --enable-objc-gc --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --target=x86_64-linux-gnu --with-arch-32=i686 --with-tune=generic -v
System Notes: Compiz was running on this system.

NVIDIA: GeForce GTX 460

Processor: AMD FX-8150 Eight-Core @ 3.60GHz (8 Cores), Motherboard: ASUS Crosshair V Formula, Chipset: AMD ATI RD890, Memory: 16384MB, Disk: 240GB OCZ VERTEX3, Graphics: NVIDIA GeForce GTX 460 768MB (675/1800MHz), Audio: Realtek ALC889, Network: Intel 82583V Gigabit Connection

OS: Ubuntu 12.04, Kernel: 3.2.0-22-generic (x86_64), Desktop: Unity 5.8.0, Display Server: X Server 1.11.3, Display Driver: NVIDIA 295.33, OpenGL: 4.2.0 NVIDIA 295.33, Compiler: GCC 4.6, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-werror --enable-checking=release --enable-clocale=gnu --enable-gnu-unique-object --enable-languages=c,c++,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-nls --enable-objc-gc --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --target=x86_64-linux-gnu --with-arch-32=i686 --with-tune=generic -v
System Notes: Compiz was running on this system.

NVIDIA: GeForce GTX 550 Ti

Processor: AMD FX-8150 Eight-Core @ 3.60GHz (8 Cores), Motherboard: ASUS Crosshair V Formula, Chipset: AMD ATI RD890, Memory: 16384MB, Disk: 240GB OCZ VERTEX3, Graphics: NVIDIA GeForce GTX 550 Ti 1024MB (951/2178MHz), Audio: Realtek ALC889, Network: Intel 82583V Gigabit Connection

OS: Ubuntu 12.04, Kernel: 3.2.0-22-generic (x86_64), Desktop: Unity 5.8.0, Display Server: X Server 1.11.3, Display Driver: NVIDIA 295.33, OpenGL: 4.2.0 NVIDIA 295.33, Compiler: GCC 4.6, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-werror --enable-checking=release --enable-clocale=gnu --enable-gnu-unique-object --enable-languages=c,c++,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-nls --enable-objc-gc --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --target=x86_64-linux-gnu --with-arch-32=i686 --with-tune=generic -v
System Notes: Compiz was running on this system.

	Nouveau: GeForce 8500GT	Nouveau: GeForce 8600GTS	Nouveau: GeForce 8800GT	Nouveau: GeForce 9500GT	Nouveau: GeForce 9600GSO	Nouveau: GeForce 9800GT	Nouveau: GeForce 9800GTX	Nouveau: GeForce GT 220	Nouveau: GeForce GTX 460	Nouveau: GeForce GTX 550 Ti	NVIDIA: GeForce 8500GT	NVIDIA: GeForce 8600GTS	NVIDIA: GeForce 8800GT	NVIDIA: GeForce 9500GT	NVIDIA: GeForce 9600GSO	NVIDIA: GeForce 9800GT	NVIDIA: GeForce 9800GTX	NVIDIA: GeForce GT 220	NVIDIA: GeForce GTX 460	NVIDIA: GeForce GTX 550 Ti
Xonotic - 1920 x 1080 - Low (FPS)	120.36	104.62	98.89	76.98	117.92	126.31	104.93	**32.76**	88.79	67.26	117.21	267.36	95.13	123.36	280.05	283.17	104.89	**284.68**	284.13
Normalized	42.28%	36.75%	34.74%	27.04%	41.42%	44.37%	36.86%	11.51%	31.19%	23.63%	41.17%	93.92%	33.42%	43.33%	98.37%	99.47%	36.84%	100%	99.81%
Standard Deviation	0.8%	0.3%	0.1%	0.1%	0.2%	0.4%	0.3%	0%	0.1%	0.1%	0.3%	0.4%	0.2%	0.1%	0.1%	0.3%	0.2%	0.3%	0.3%

Nouveau Linux 3.4 Mesa 8.1-devel

Cairo Performance Demos - Gears (FPS)	35.93	41.35	28.66	38.48	28.17	38.38	41.65	38.55	30.50	39.16	40.89	66.02	65.50	49.58	34.77	71.19	73.65	115.01	209.84	211.19
Normalized	17.01%	19.58%	13.57%	18.22%	13.34%	18.17%	19.72%	18.25%	14.44%	18.54%	19.36%	31.26%	31.01%	23.48%	16.46%	33.71%	34.87%	54.46%	99.36%	100%
Standard Deviation	0.8%	0.4%	0.2%	0.9%	0.6%	0.4%	0.3%	1.5%	0.3%	0.7%	0.2%	0.1%	0.4%	0.1%	0.2%	0.3%	0.3%	0.6%	1.2%	0.8%
Xonotic - 1280 x 1024 - Low (FPS)		129.21	133.55	130.26	105.71	132.18	134.60	132.73	47.91	123.90	107.00	250.91	288.90	154.43	186.79	293.70	293.58	150.22	292.30	293.63
Normalized		43.99%	45.47%	44.35%	35.99%	45.01%	45.83%	45.19%	16.31%	42.19%	36.43%	85.43%	98.37%	52.58%	63.6%	100%	99.96%	51.15%	99.52%	99.98%
Standard Deviation		0.6%	1.1%	0.6%	0%	1.7%	2.7%	0.8%	0.1%	0.4%	0.1%	0.2%	0.3%	0.2%	0.3%	0.2%	0.6%	0.1%	0.3%	0.6%
Urban Terror - 1920 x 1080 (FPS)		74.67	75.07	72.60	69.17	76.63	78.90	74.57	30.60	69.10	52.13	117.47	144.93	103.40	129.07	186.73	185.60	104.93	184.87	186.33
Normalized		39.99%	40.2%	38.88%	37.04%	41.04%	42.25%	39.93%	16.39%	37.01%	27.92%	62.91%	77.61%	55.37%	69.12%	100%	99.39%	56.19%	99%	99.79%
Standard Deviation		0.7%	0.8%	0.6%	0.2%	0.9%	0.5%	0.4%	0%	0.1%	0.4%	2.7%	1.4%	0.3%	0.3%	0.3%	0.5%	0.1%	1%	0.3%
Doom 3 - 1920 x 1080 - Low (FPS)	14.80	36.50	23.40	23.10	16.60	33.73	54.00	26.53	10.90	24.27										
Normalized	27.41%	67.59%	43.33%	42.78%	30.74%	62.46%	100%	49.13%	20.19%	44.94%										
Standard Deviation	6.6%	0.3%	0%	0%	0%	0.2%	1.1%	3.2%	0%	0.2%										
Xonotic - 1024 x 768 - Low (FPS)		123.91	134.68	132.59	133.41	130.53	132.13	134.23	72.93	132.85	152.56	284.19	292.35	218.31	252.24	293.65	295.05	217.50	291.25	292.51
Normalized		42%	45.65%	44.94%	45.22%	44.24%	44.78%	45.49%	24.72%	45.03%	51.71%	96.32%	99.08%	73.99%	85.49%	99.53%	100%	73.72%	98.71%	99.14%
Standard Deviation		0.9%	2.5%	2%	1%	1.7%	1%	0.7%	0.2%	0.8%	0.2%	0.7%	0.9%	0.1%	0.2%	0.3%	0.1%	0.1%	0.9%	0.4%
VDrift - 1920 x 1080 (FPS)		98.15	89.13	55.79	43.54	82.08	133.40	56.41	17.35	46.27	3.41	6.22	10.74	8.83	11.15	33.99	38.19	10.63	53.27	44.51
Normalized		73.58%	66.81%	41.82%	32.64%	61.53%	100%	42.29%	13.01%	34.69%	2.56%	4.66%	8.05%	6.62%	8.36%	25.48%	28.63%	7.97%	39.93%	33.37%
Standard Deviation		0.1%	48.9%	0.1%	0.1%	0.1%	1%	0.1%	0.1%	0.1%	1.7%	5.5%	0.5%	0.1%	0.1%	0.1%	0.1%	0.1%	0.3%	0.2%

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Xonotic - 1920 x 1080 - High			6.20	35.83	29.94	54.16	91.19	41.85	14.64	38.49	24.17	44.22	100.70	38.78	49.71	147.88	165.55	43.33	197.10	188.48
Normalized			3.15%	18.18%	15.19%	27.48%	46.27%	21.23%	7.43%	19.53%	12.26%	22.44%	51.09%	19.68%	25.22%	75.03%	83.99%	21.98%	100%	95.63%
Standard Deviation			0.1%	0.1%	0.1%	0.1%	0.9%	0.2%	0.1%	0.3%	0.2%	18.1%	1.1%	0.1%	0%	0.4%	0.3%	0.2%	0.6%	0.4%
Doom 3 - 1280 x 1024 - Low (FPS)	21.90	47.80	30.70	31.77	22.70	44.07	55.37	35.50	17.80	36.53										
Normalized	39.55%	86.33%	55.45%	57.38%	41%	79.59%	100%	64.11%	32.15%	65.97%										
Standard Deviation	0%	0.6%	0%	0.2%	0%	0.1%	0.9%	0%	0%	0.2%										
Lightsmark - 1920 x 1080 (FPS)	15.91	41.58	32.29	27.95	24.06	43.75	80.10	37.36	20.03	45.61	28.74	84.47	166.85	60.16	78.84	223.15	257.02	62.06	397.75	333.84
Normalized	4%	10.45%	8.12%	7.03%	6.05%	11%	20.14%	9.39%	5.04%	11.47%	7.23%	21.24%	41.95%	15.13%	19.82%	56.1%	64.62%	15.6%	100%	83.93%
Standard Deviation	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.3%	0.4%	0.2%	3.3%	2.3%	4.9%	1.6%	0.4%	1.3%	0.9%	0.7%	0.4%	0.8%
Smokin Guns - 1920 x 1080 (FPS)		84.50	85.73	82.47	77.97	88.77	89.60	84.20	32.27	76.97										
Normalized		94.31%	95.68%	92.04%	87.02%	99.07%	100%	93.97%	36.02%	85.9%										
Standard Deviation		0.8%	0.8%	0.3%	0.1%	1.1%	1.9%	0.2%	0.2%	0.2%										
Reaction Quake 3 - 1920 x 1080 (FPS)		58.37	13.17	35.53	30.23	50.27	90.63	36.80	13.60	35.07	18.73	20.63	33.97	48.90	55.17	147.77	166.90	47.03	248.07	220.30
Normalized		23.53%	5.31%	14.32%	12.19%	20.26%	36.53%	14.83%	5.48%	14.14%	7.55%	8.32%	13.69%	19.71%	22.24%	59.57%	67.28%	18.96%	100%	88.81%
Standard Deviation		0.7%	0.4%	0.2%	0.2%	0.1%	0.3%	0.3%	0%	0.2%	0.3%	0.3%	0.3%	0.2%	0.6%	2.5%	1.9%	0.1%	6.9%	1.6%
OpenArena - 1920 x 1080 (FPS)	69.33	131.73	108.13	101.20	75.07	119.47	142.87	104.20	29.93	80.70	48.07	176.93	305.37	95.50	119.17	363.07	402.03	99.27	465.80	432.17
Normalized	14.88%	28.28%	23.21%	21.73%	16.12%	25.65%	30.67%	22.37%	6.43%	17.33%	10.32%	37.98%	65.56%	20.5%	25.58%	77.95%	86.31%	21.31%	100%	92.78%
Standard Deviation	0.1%	1%	0.2%	1.6%	0.1%	0.5%	2.7%	0.5%	3.2%	0%	0.1%	1.5%	0.2%	0.8%	0.8%	0.1%	2.3%	0.3%	1%	2.6%

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World of Padman - 1920 x 1080 (FPS)	112.43	99.33	100.73	79.10	112.53	120.00	102.20	**35.80**	86.70	52.90	113.30	148.47	102.13	129.07	359.67	375.77	101.77	**413.37**	410.97
Normalized	27.2%	24.03%	24.37%	19.14%	27.22%	29.03%	24.72%	8.66%	20.97%	12.8%	27.41%	35.92%	24.71%	31.22%	87.01%	90.9%	24.62%	100%	99.42%
Standard Deviation	0.3%	0.6%	0.2%	0.1%	0.1%	0.8%	0.7%	0%	0%	2%	3.4%	1.8%	0.1%	0.2%	1.3%	0.6%	0.2%	0.8%	0.4%
Doom 3 - 1024 x 768 - Low (FPS)	30.90	54.63	37.47	43.90	29.53	51.17	**55.93**	45.73	**28.43**	49.67									
Normalized	55.25%	97.68%	66.99%	78.49%	52.8%	91.49%	100%	81.76%	50.83%	88.81%									
Standard Deviation	0%	0.2%	0.2%	0.4%	0.2%	0.5%	1.2%	0.3%	0.2%	0.4%									
Cairo Performance Demos - Fish (FPS)	0.80	0.83	**0.51**	0.82	**0.51**	0.81	0.84	0.82	0.76	0.82	0.71	0.94	0.96	0.95	0.69	**0.97**	**0.97**	0.90	0.90	0.90
Normalized	82.47%	85.57%	52.58%	84.54%	52.58%	83.51%	86.6%	84.54%	78.35%	84.54%	73.2%	96.91%	98.97%	97.94%	71.13%	100%	100%	92.78%	92.78%	92.78%
Standard Deviation	0.7%	0.7%	0%	0.7%	1.1%	0%	1.2%	0.7%	0.8%	0%	13.8%	0.6%	0%	0%	0%	0.6%	1%	8%	2.6%	0.6%
Cairo Performance Demos - Charts (FPS)	7.75	7.83	7.37	7.92	**7.30**	7.85	7.80	7.85	7.62	7.93	9.00	9.52	9.54	9.28	8.74	9.68	9.64	10.45	8.61	**10.69**
Normalized	72.5%	73.25%	68.94%	74.09%	68.29%	73.43%	72.97%	73.43%	71.28%	74.18%	84.19%	89.06%	89.24%	86.81%	81.76%	90.55%	90.18%	97.75%	80.54%	100%
Standard Deviation	0.8%	0.2%	0.5%	1.8%	1%	0.3%	1%	0.5%	1.1%	0.4%	0.1%	0.8%	1.3%	0.2%	0.6%	0.7%	1.2%	1.7%	0.1%	0.4%

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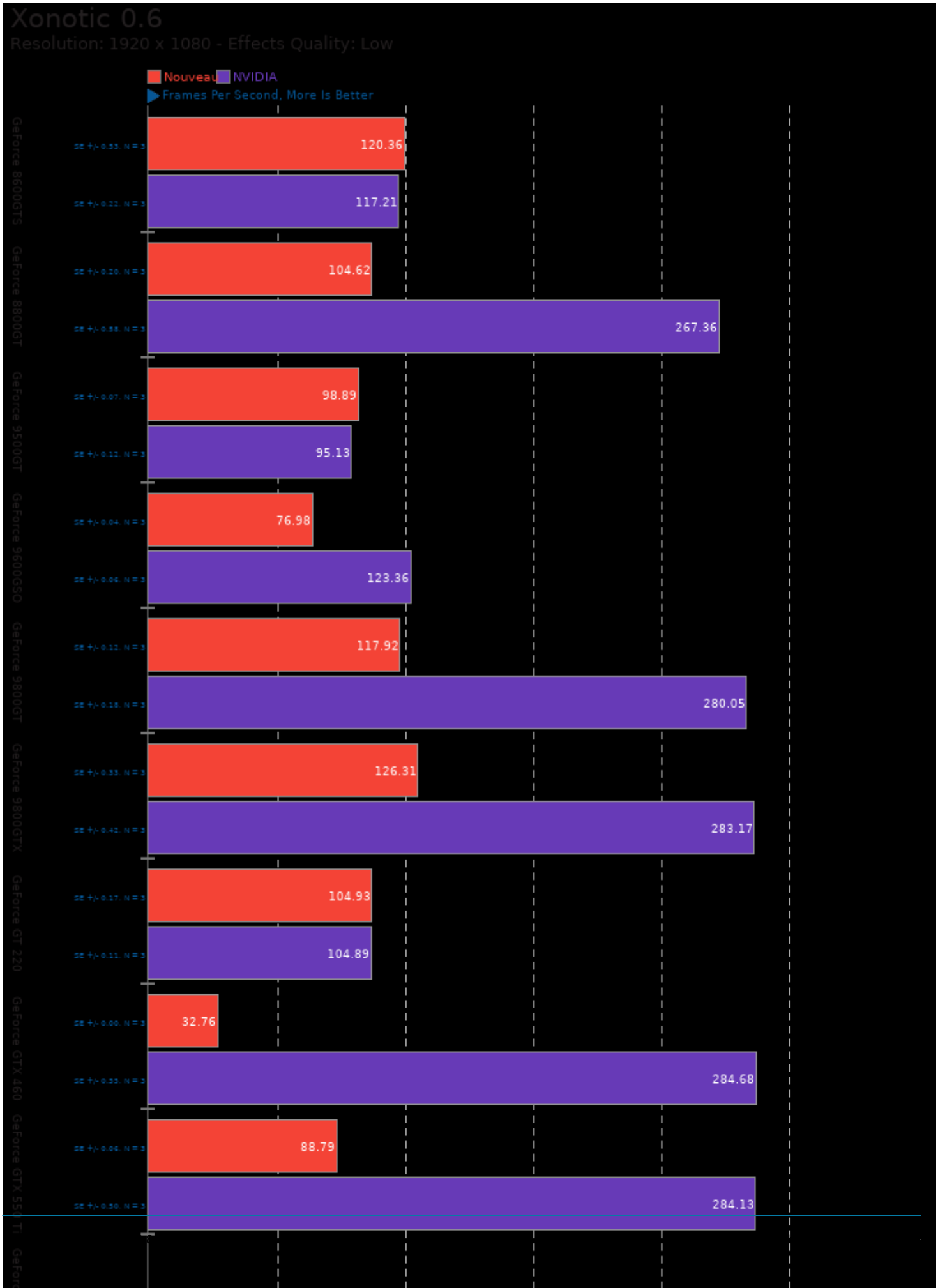
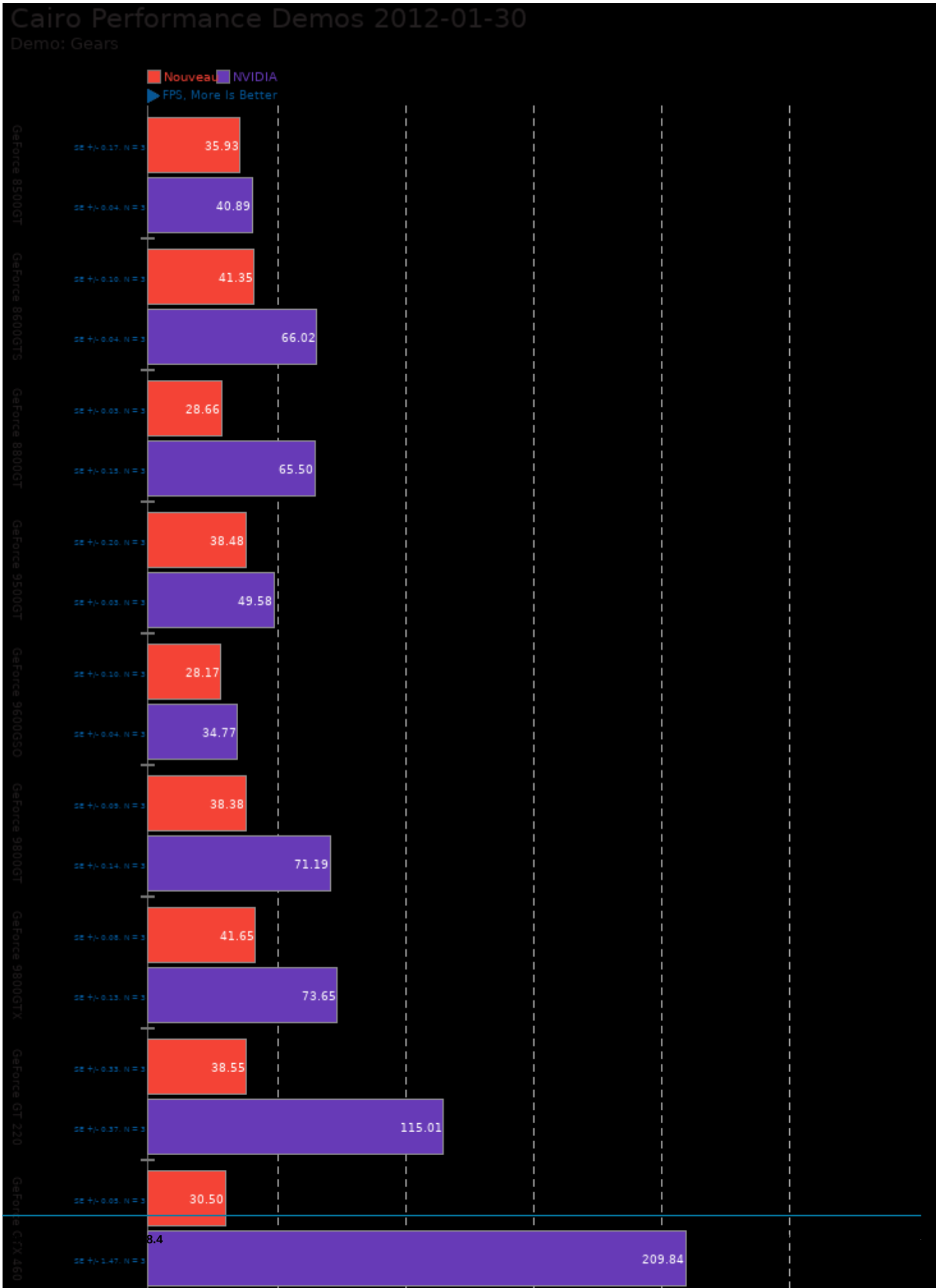
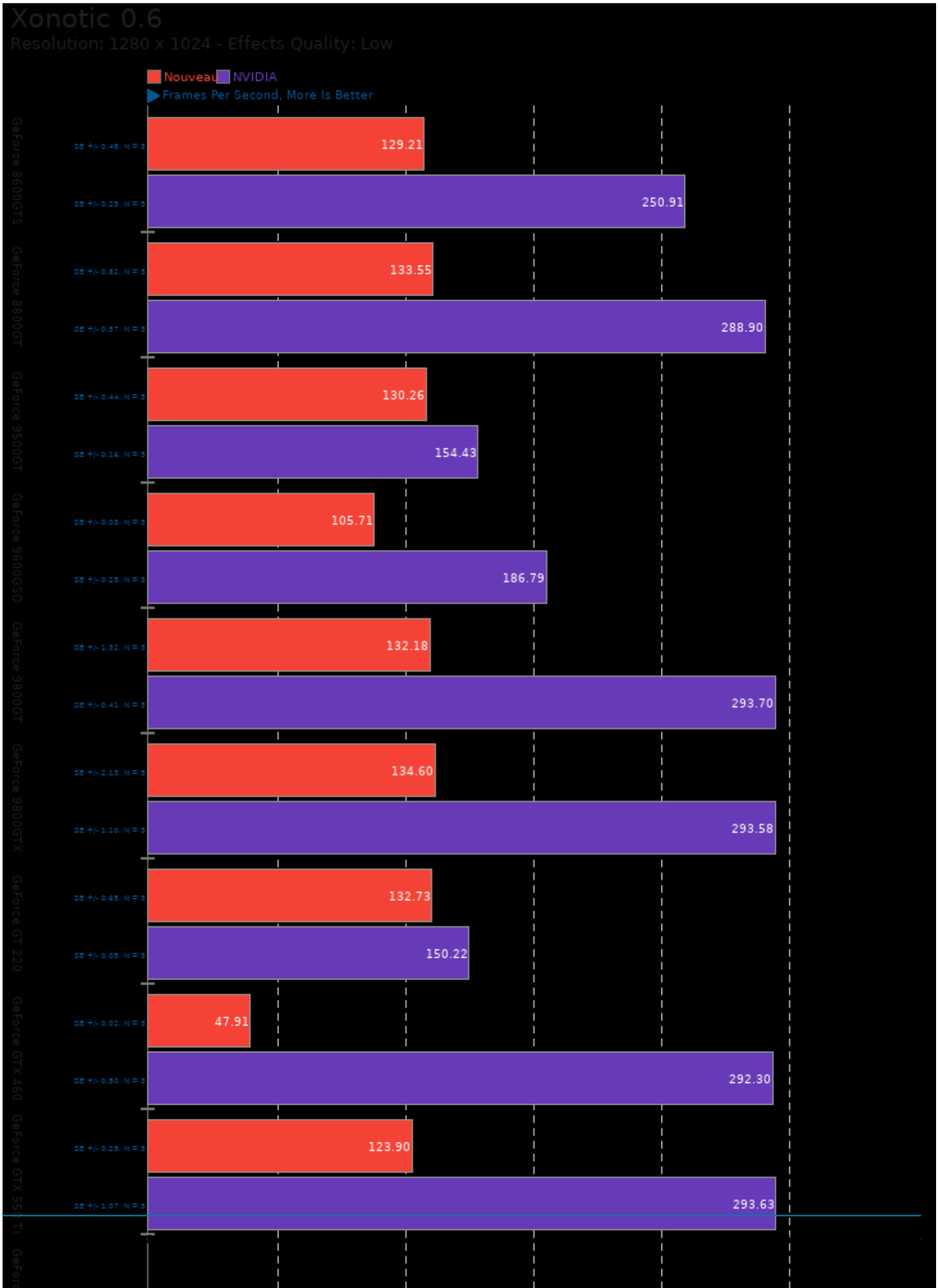
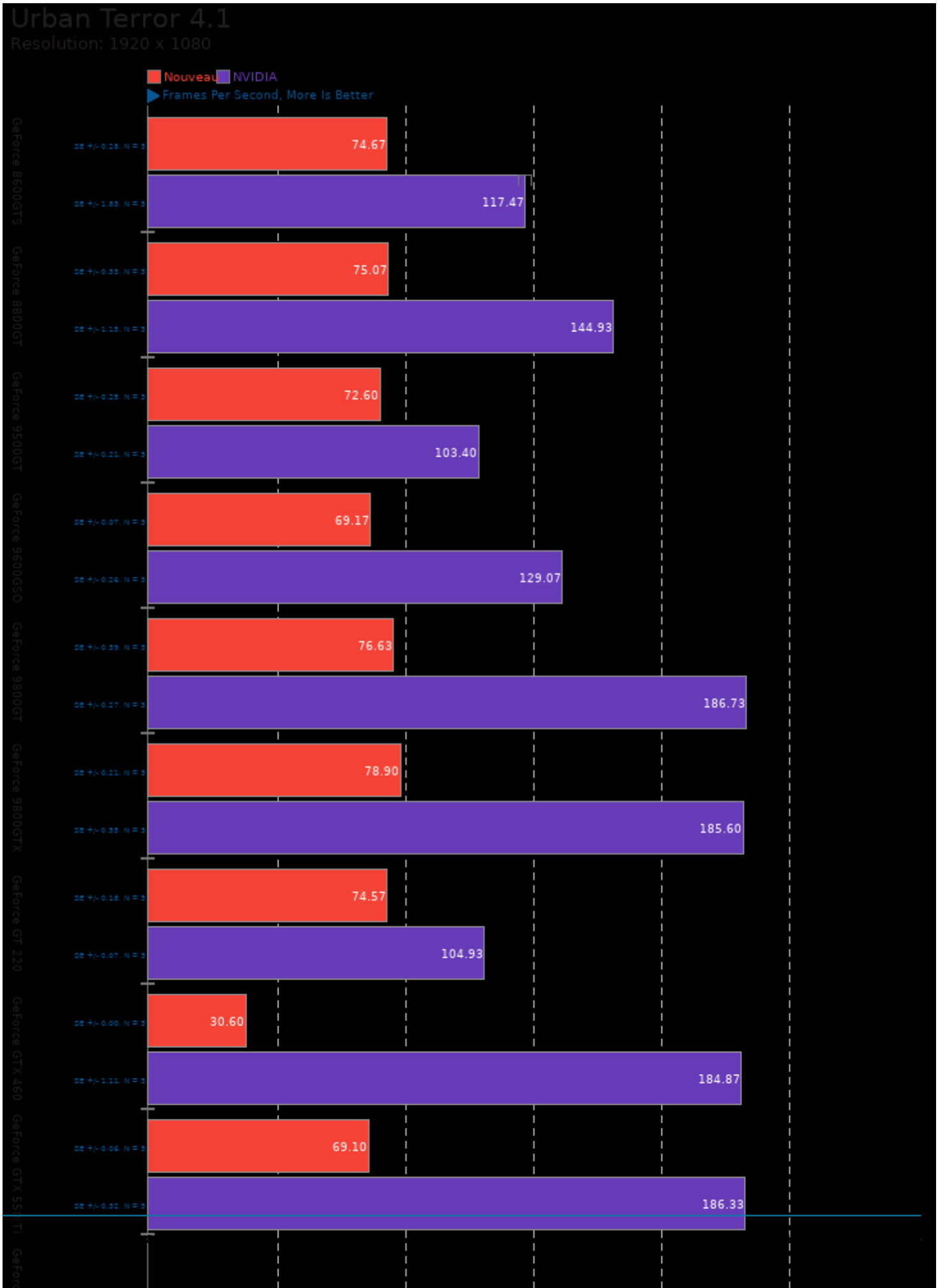
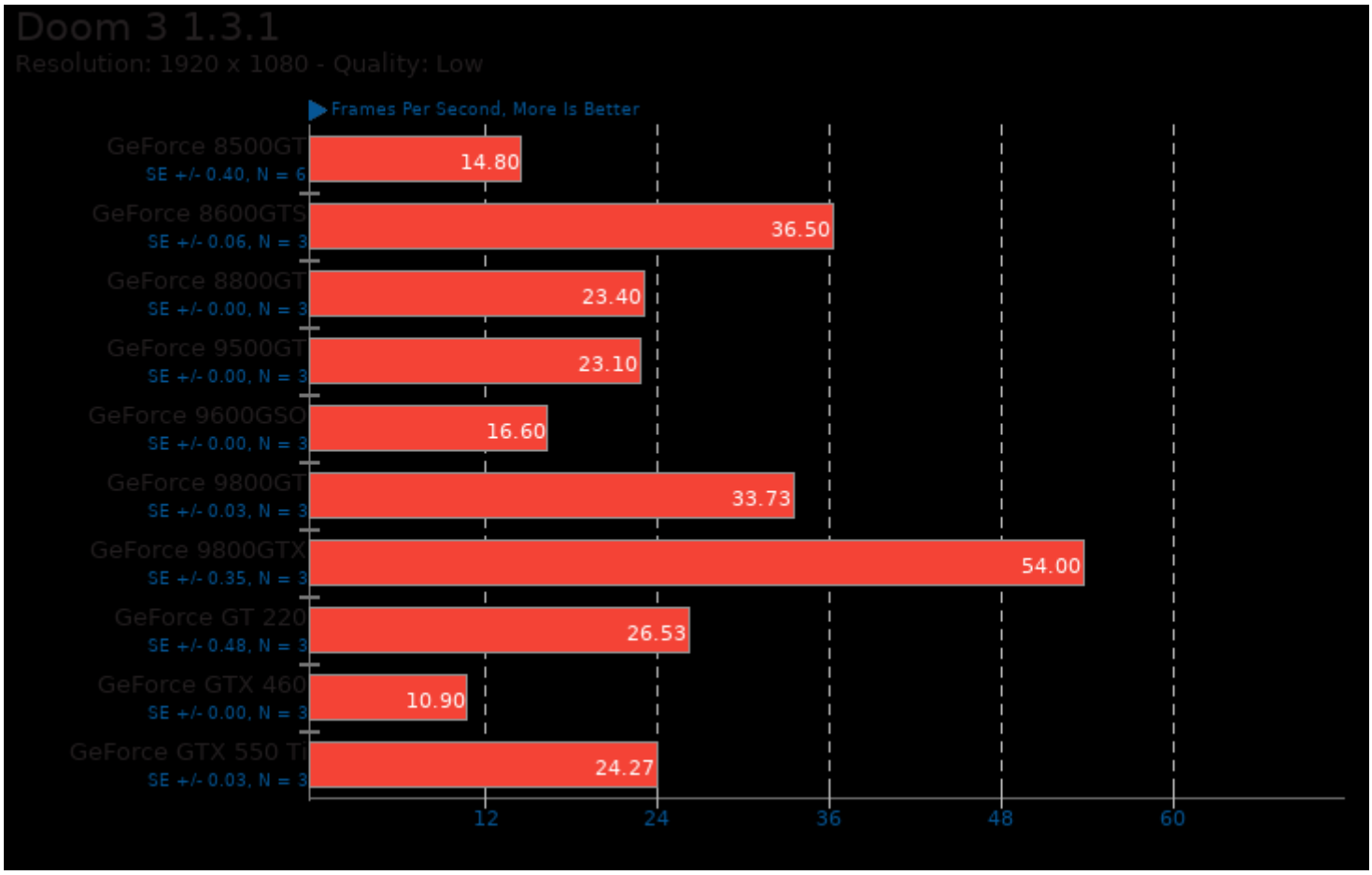

Xonotic 0.6
Resolution: 1920 x 1080 - Effects Quality: Low
Nouveau
NVIDIA
Frames Per Second, More Is Better
GeForce 8600GTS
120.36
117.21
GeForce 8800GT
104.62
267.36
GeForce 9500GT
98.89
95.13
GeForce 9600GSO
76.98
123.36
GeForce 9800GT
117.92
280.05
GeForce 9800GTX
126.31
283.17
GeForce GT 220
104.93
104.89
GeForce GTX 460
32.76
284.68
GeForce GTX 555 Ti
88.79
284.13

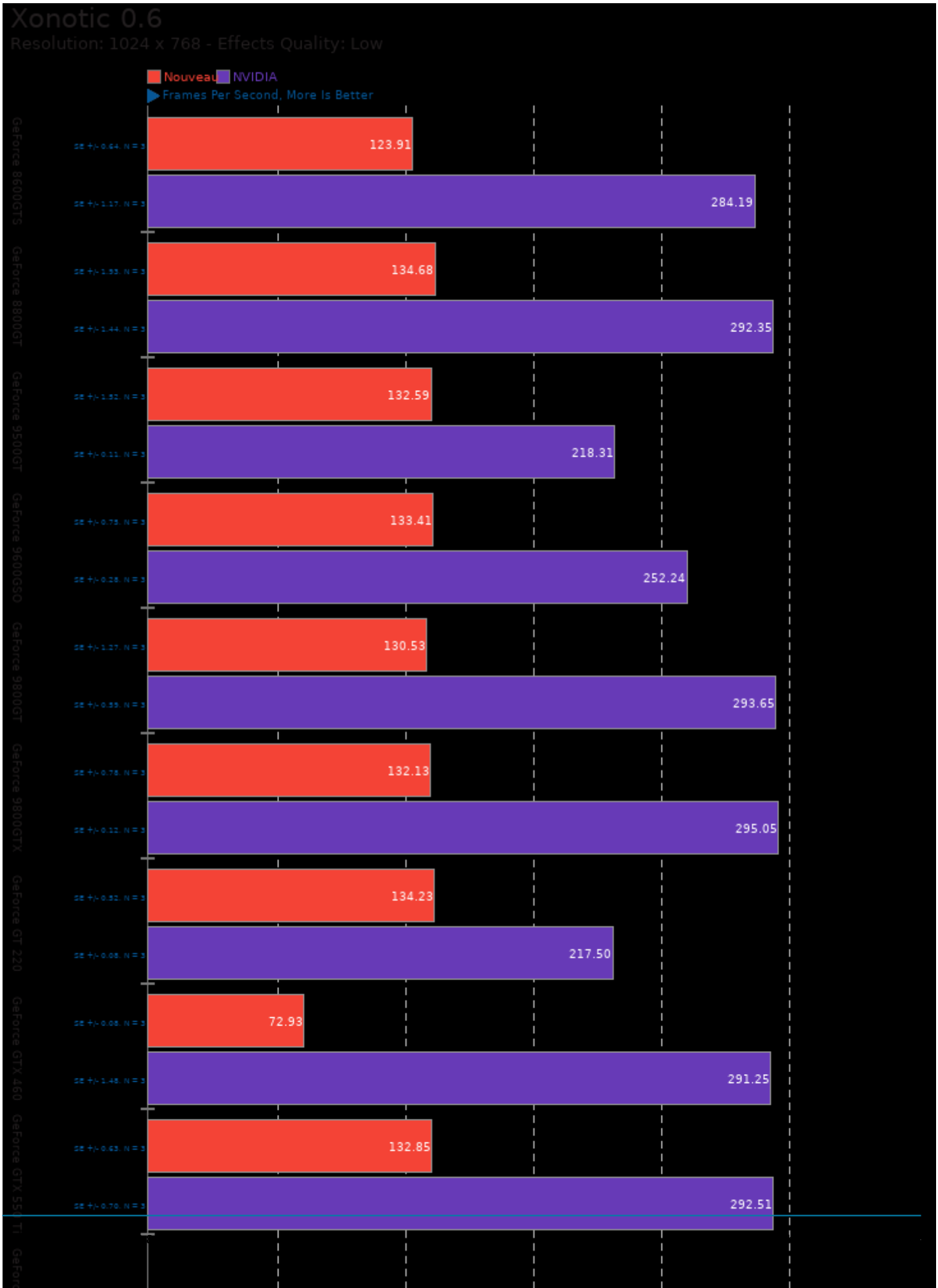

Cairo Performance Demos 2012-01-30
Demo: Gears
Nouveau
NVIDIA
FPS, More Is Better
GeForce 8500GT
GeForce 8600GTS
GeForce 8800GT
GeForce 9500GT
GeForce 9600GSO
GeForce 9800GT
GeForce 9800GTX
GeForce GT 220
GeForce GTX 460
35.93
40.89
41.35
66.02
28.66
65.50
38.48
49.58
28.17
34.77
38.38
71.19
41.65
73.65
38.55
115.01
30.50
8.4
209.84

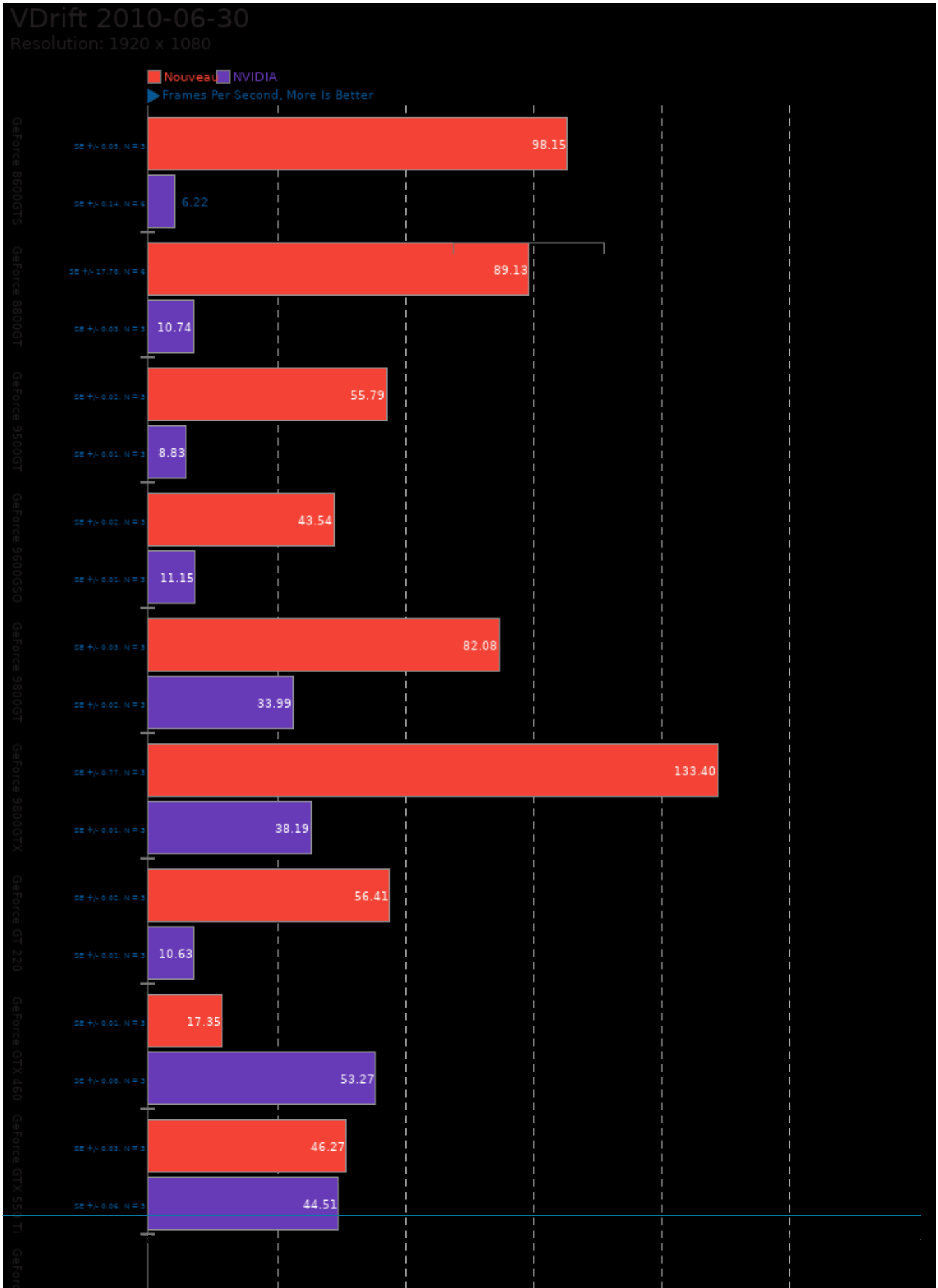

Xonotic 0.6
Resolution: 1280 x 1024 - Effects Quality: Low
Nouveau
NVIDIA
Frames Per Second, More Is Better
GeForce 8600GTS
129.21
250.91
GeForce 8800GT
133.55
288.90
GeForce 9500GT
130.26
154.43
GeForce 9600GSO
105.71
186.79
GeForce 9800GT
132.18
293.70
GeForce 9800GTX
134.60
293.58
GeForce GT 220
132.73
150.22
GeForce GTX 460
47.91
292.30
GeForce GTX 555 Ti
123.90
293.63

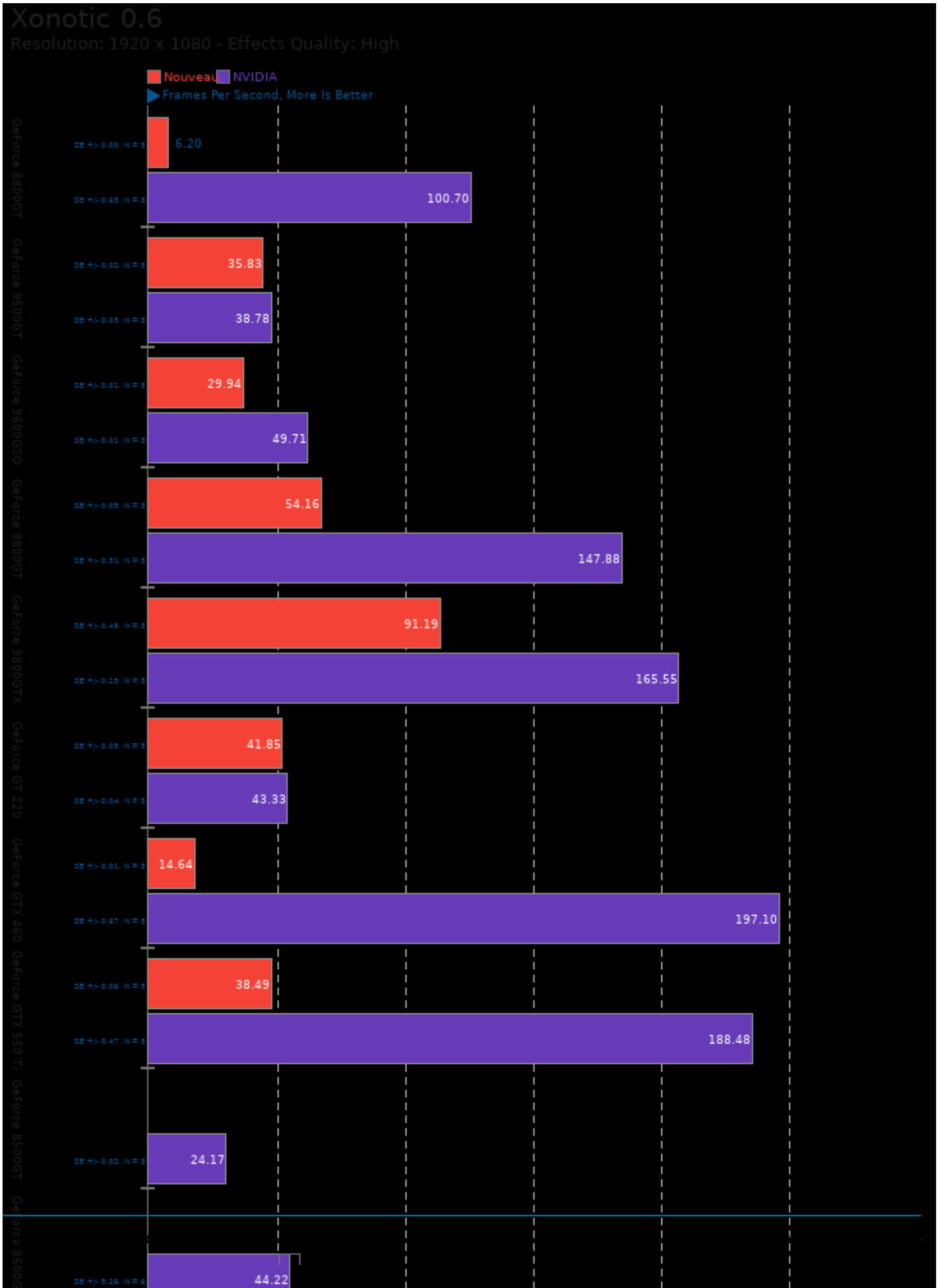

Urban Terror 4.1
Resolution: 1920 x 1080
Nouveau
NVIDIA
Frames Per Second, More Is Better
GeForce 8600GTS
74.67
117.47
GeForce 8800GT
75.07
144.93
GeForce 9500GT
72.60
103.40
GeForce 9600GSO
69.17
129.07
GeForce 9800GT
76.63
186.73
GeForce 9800GTX
78.90
185.60
GeForce GT 220
74.57
104.93
GeForce GTX 460
30.60
184.87
GeForce GTX 555 Ti
69.10
186.33

Nouveau Linux 3.4 Mesa 8.1-devel

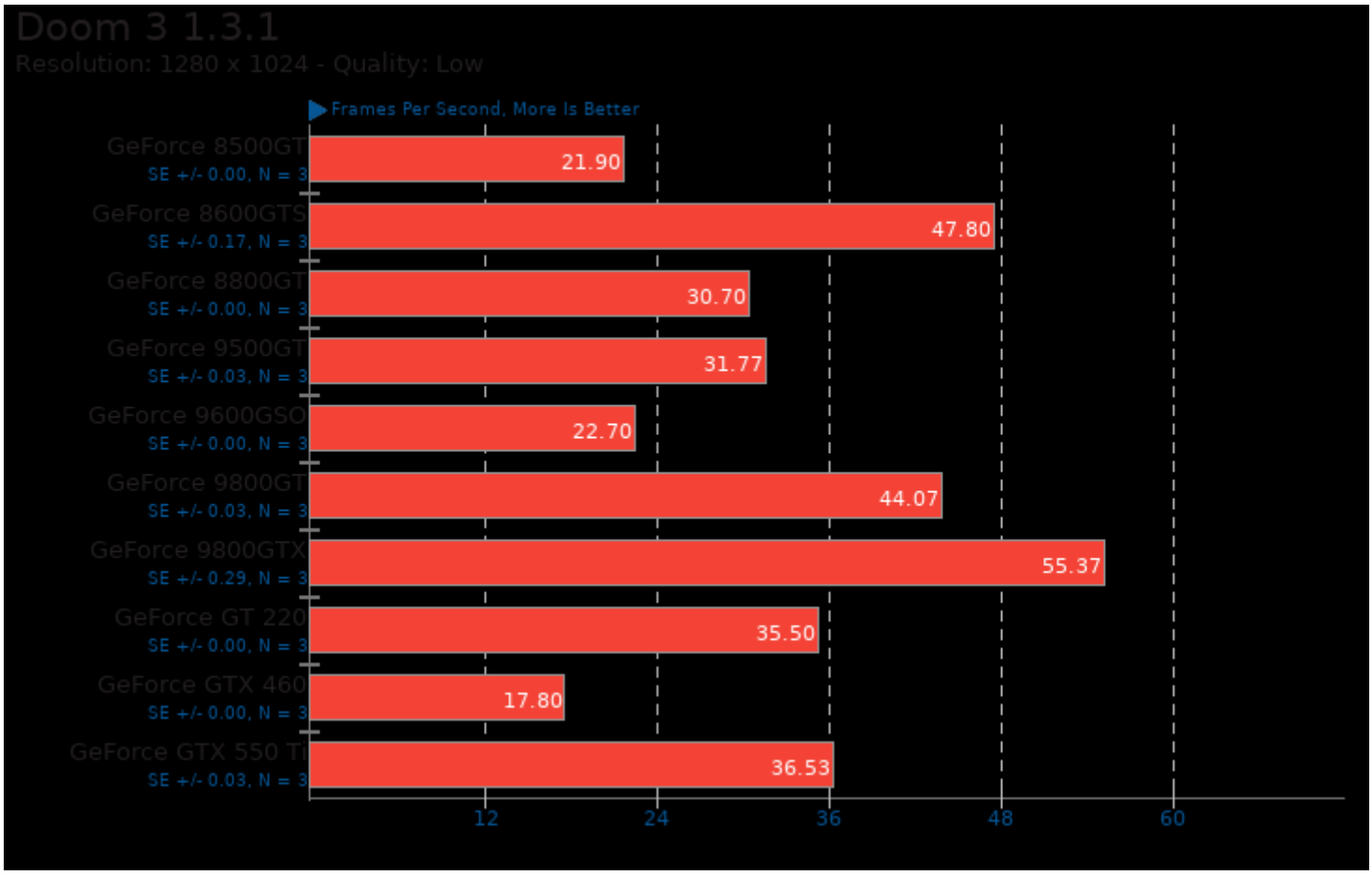



Xonotic 0.6
Resolution: 1024 x 768 - Effects Quality: Low
Nouveau
NVIDIA
Frames Per Second, More Is Better
GeForce 8600GTS
123.91
284.19
GeForce 8800GT
134.68
292.35
GeForce 9500GT
132.59
218.31
GeForce 9600GSO
133.41
252.24
GeForce 9800GT
130.53
293.65
GeForce 9800GTX
132.13
295.05
GeForce GT 220
134.23
217.50
GeForce GTX 460
72.93
291.25
GeForce GTX 555 Ti
132.85
292.51

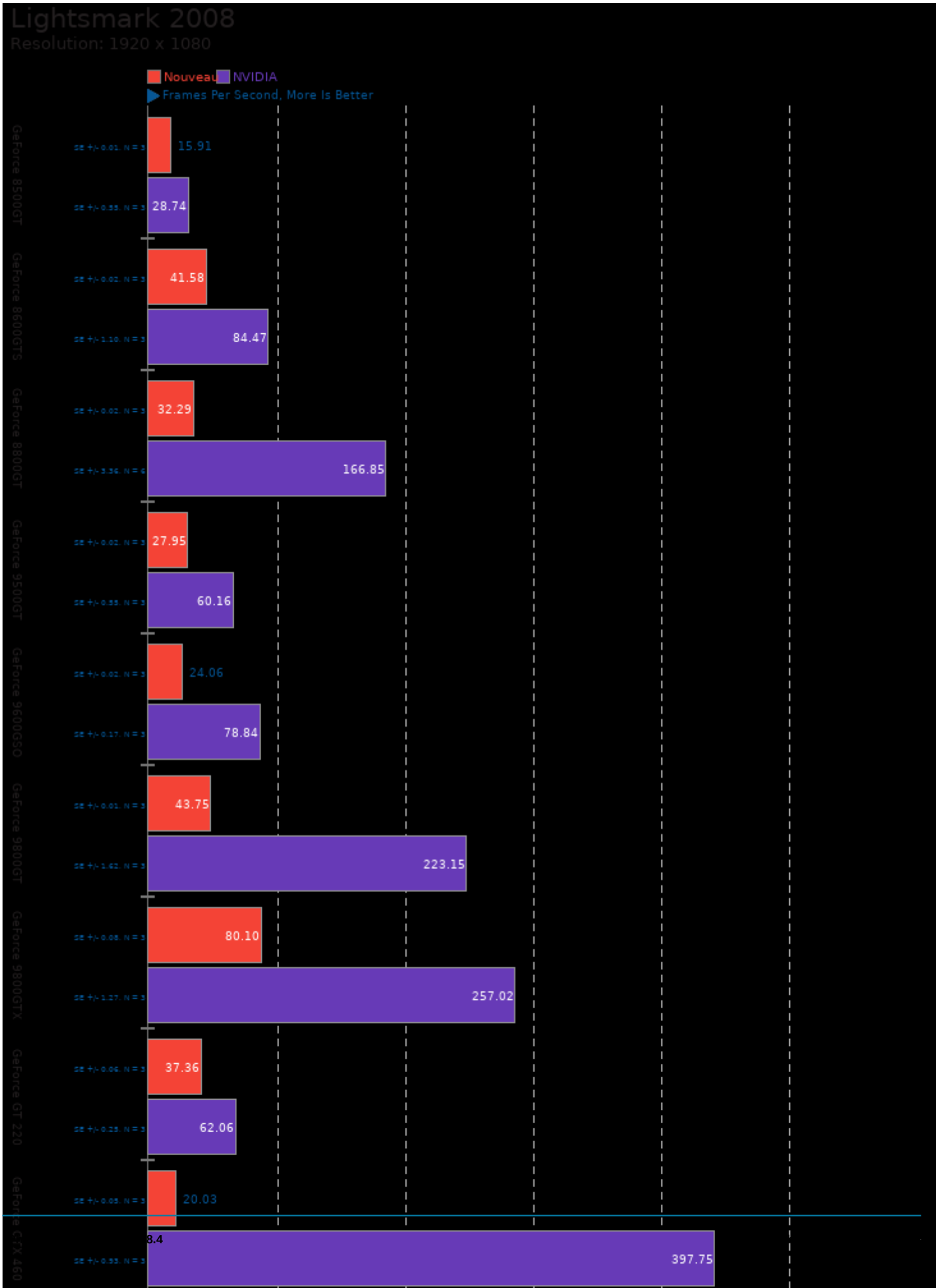

VDrift 2010-06-30
Resolution: 1920 x 1080
Nouveau
NVIDIA
Frames Per Second, More Is Better
GeForce 8600GTS
GeForce 8800GT
GeForce 9500GT
GeForce 9600GSO
GeForce 9800GT
GeForce 9800GTX
GeForce GT 220
GeForce GTX 460
98.15
6.22
89.13
10.74
55.79
8.83
43.54
11.15
82.08
33.99
133.40
38.19
56.41
10.63
17.35
53.27
46.27
44.51


Xonotic 0.6
Resolution: 1920 x 1080 - Effects Quality: High
Nouveau
NVIDIA
Frames Per Second, More Is Better
GeForce 8800GT
GeForce 9500GT
GeForce 9600GSO
GeForce 9800GT
GeForce 9800GTX
GeForce GT 220
GeForce GTX 460
GeForce GTX 550 Ti
GeForce 8500GT
GeForce 8600G
6.20
100.70
35.83
38.78
29.94
49.71
54.16
147.88
91.19
165.55
41.85
43.33
14.64
197.10
38.49
188.48
24.17
44.22

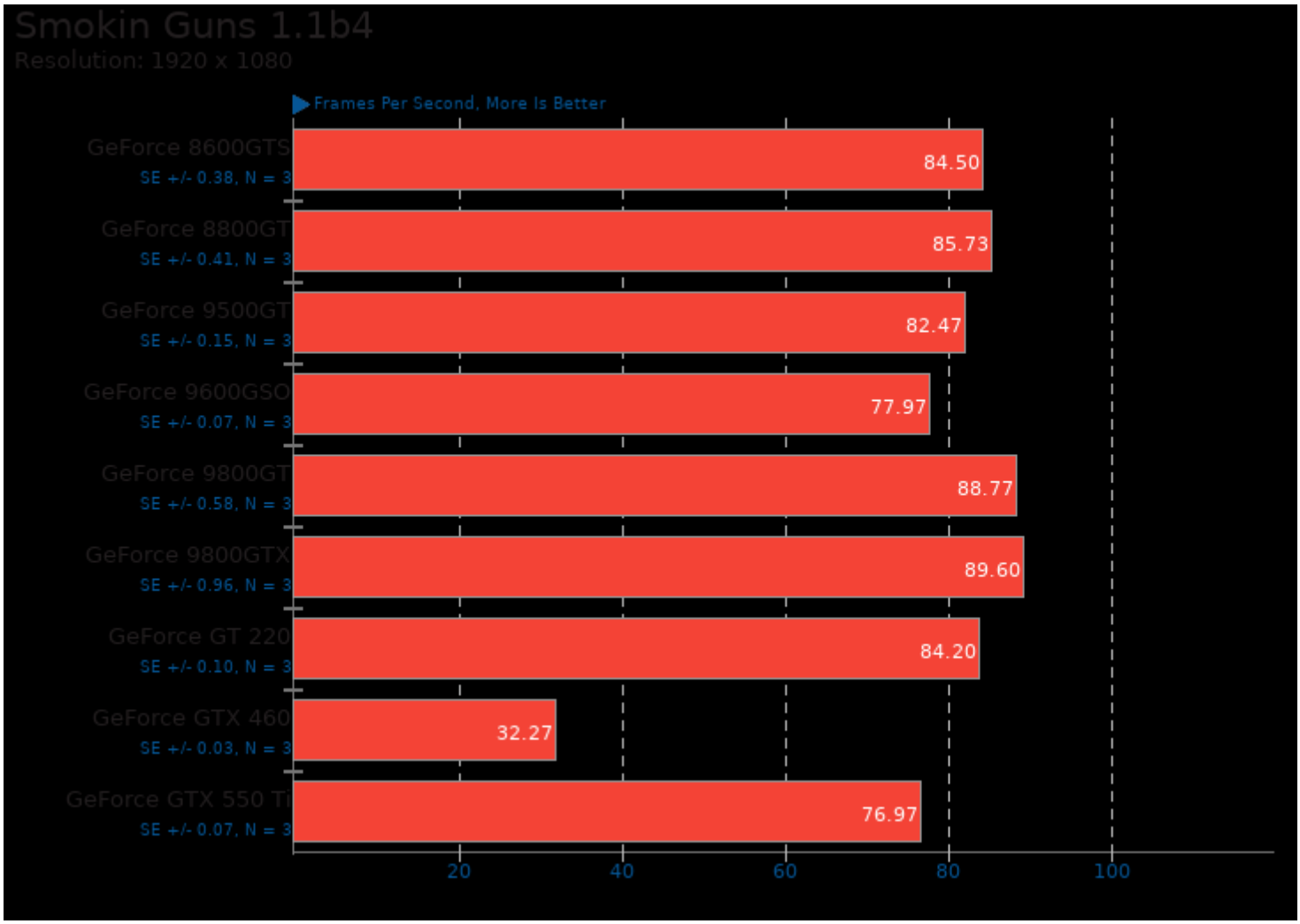
Nouveau Linux 3.4 Mesa 8.1-devel

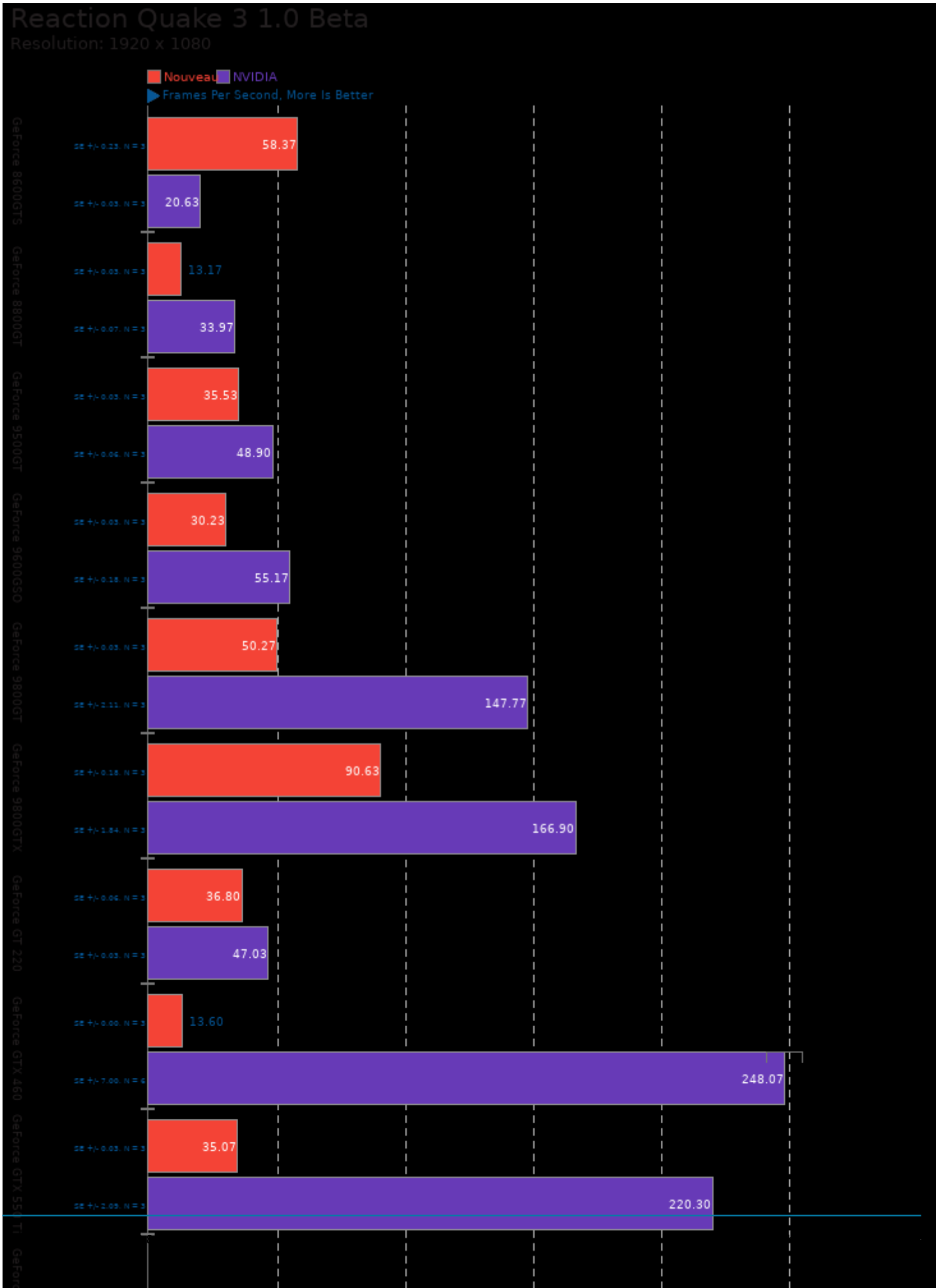


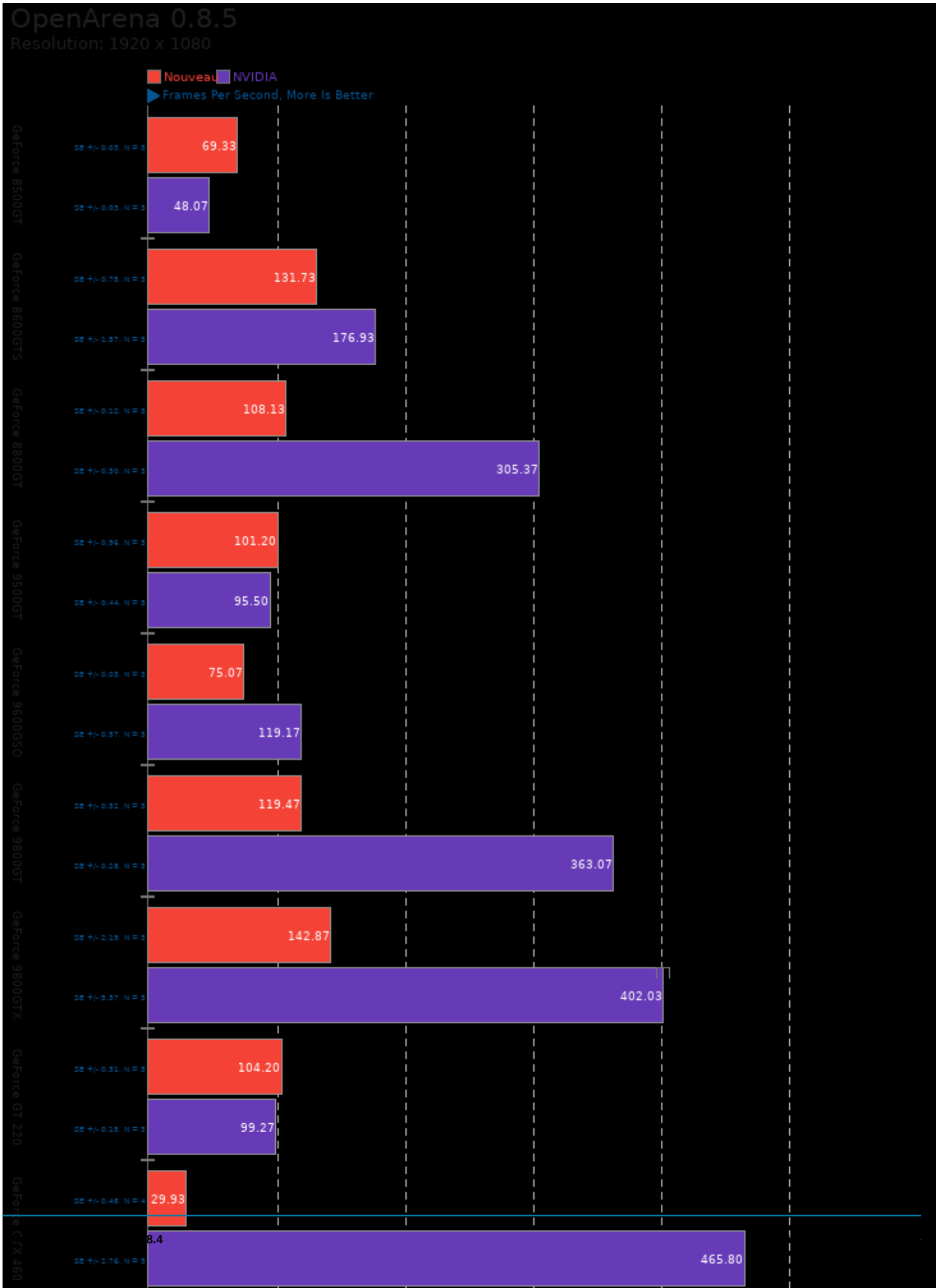
Nouveau Linux 3.4 Mesa 8.1-devel

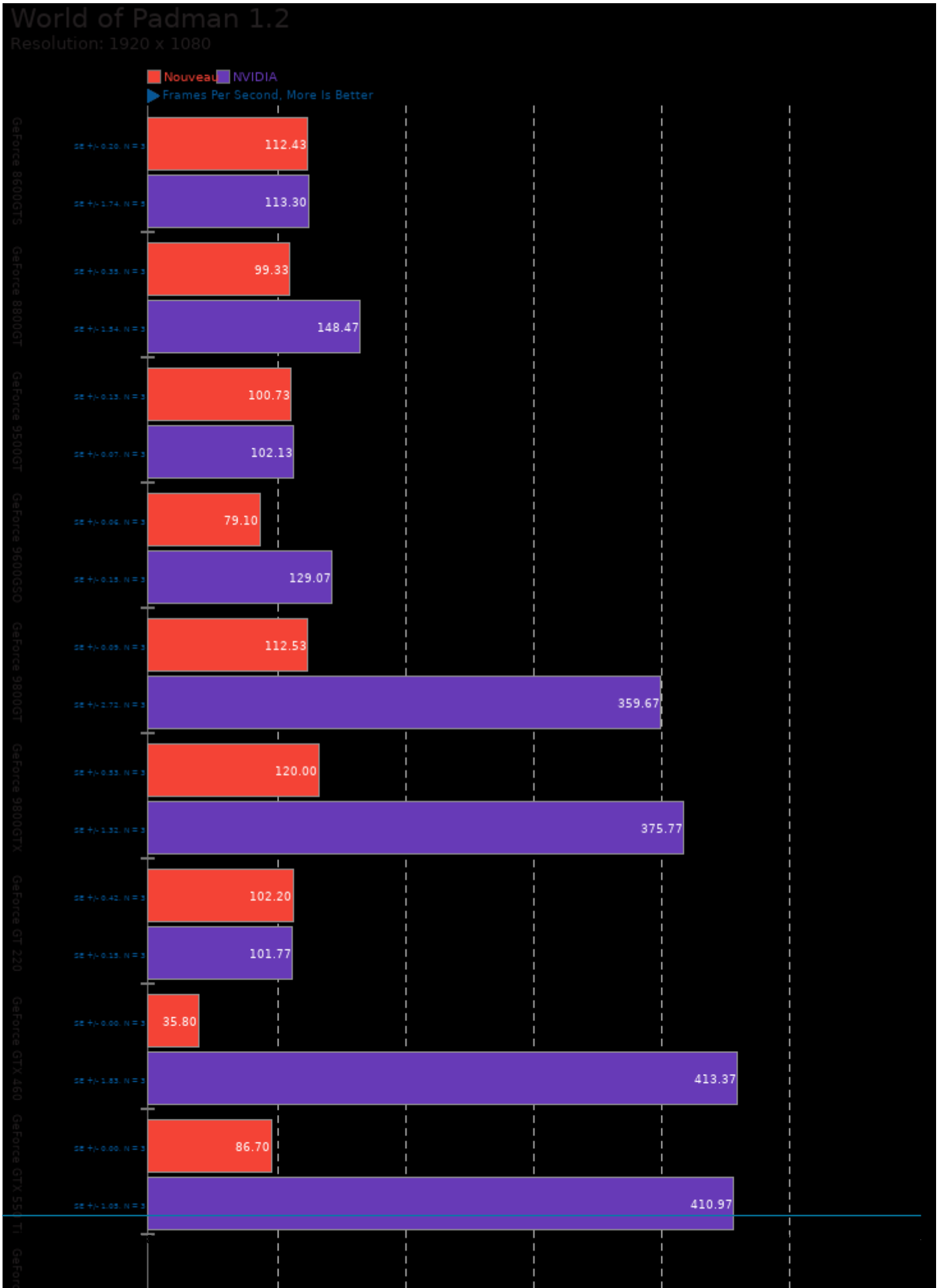


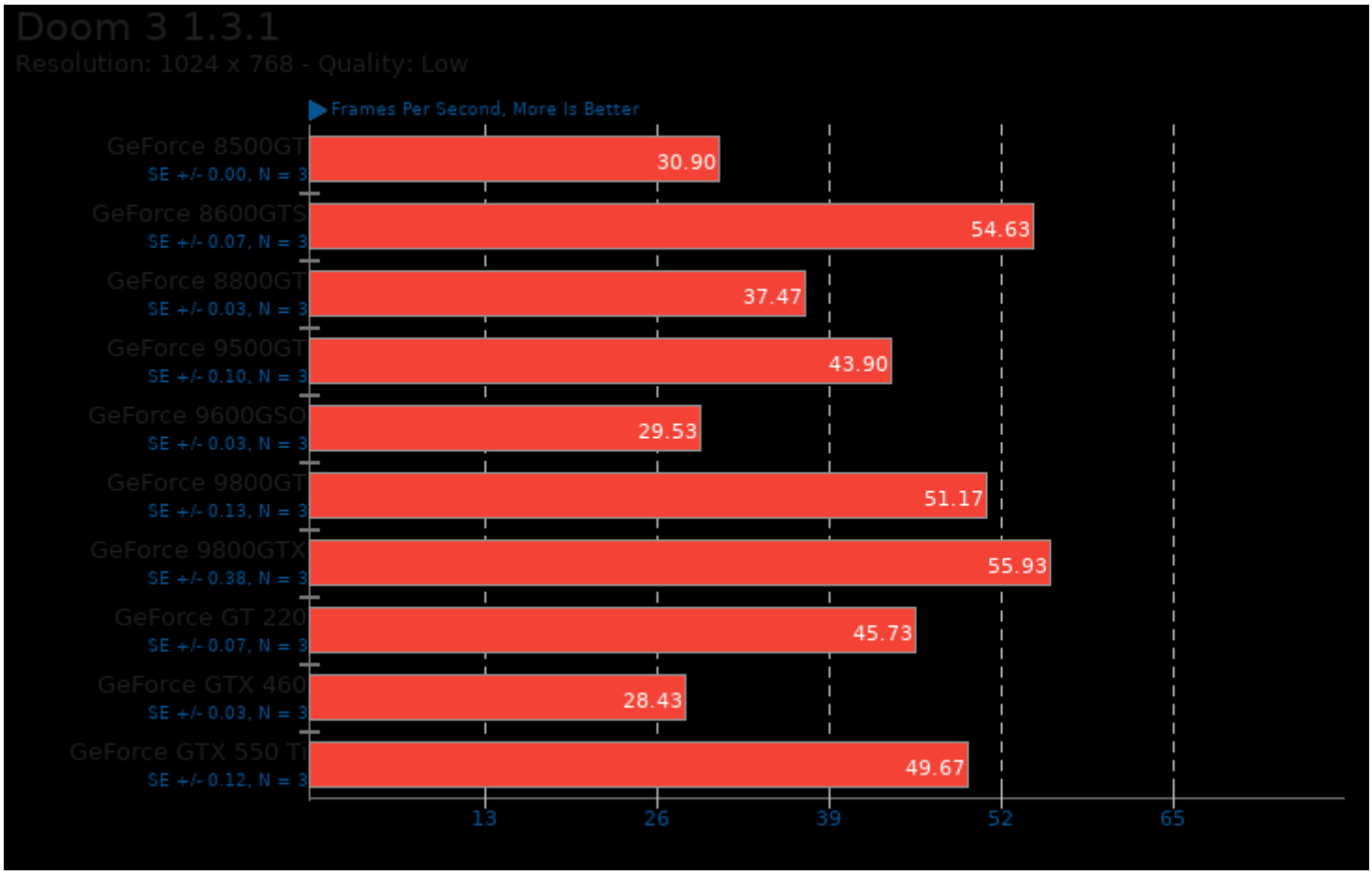
Nouveau Linux 3.4 Mesa 8.1-devel

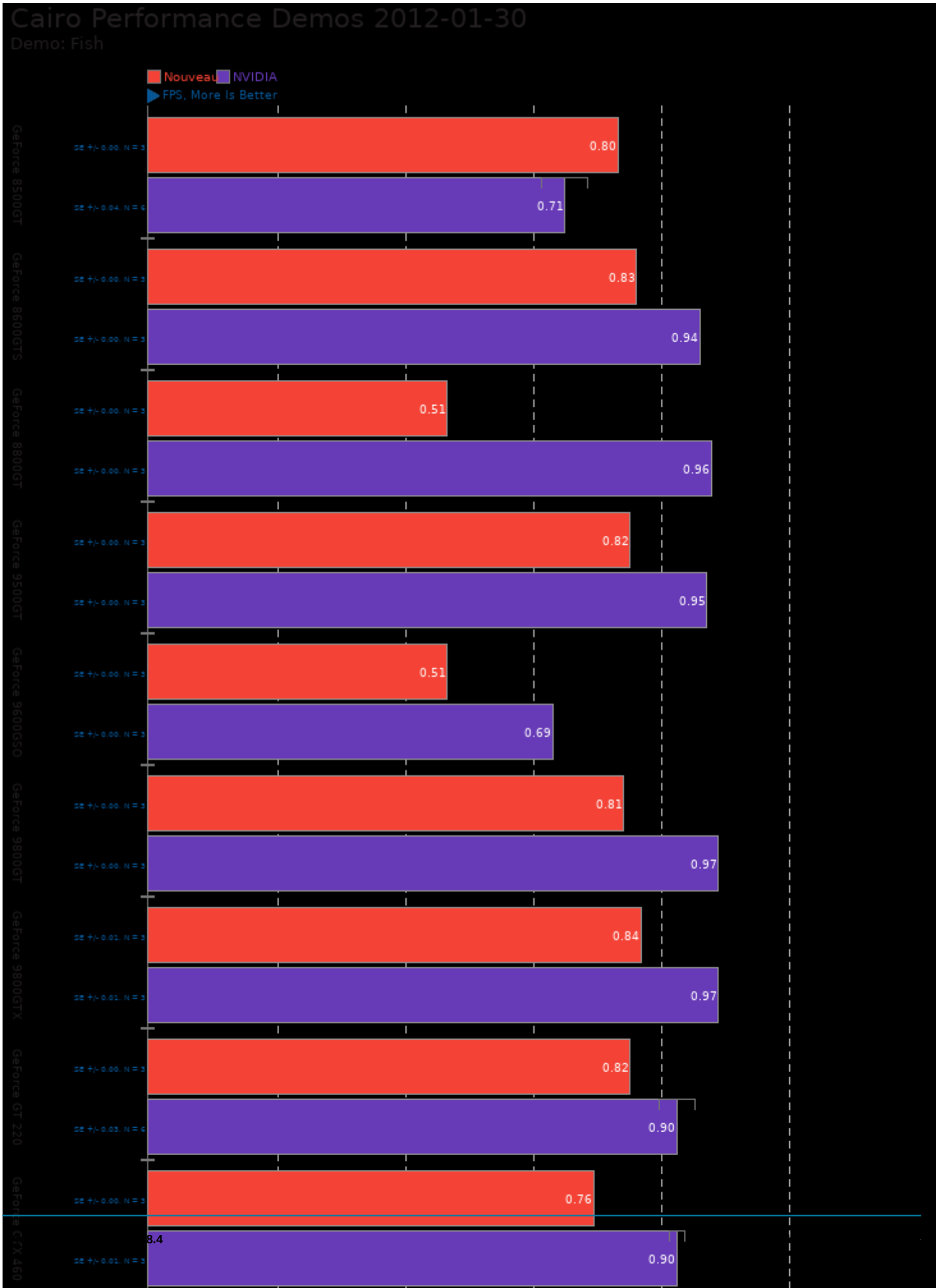


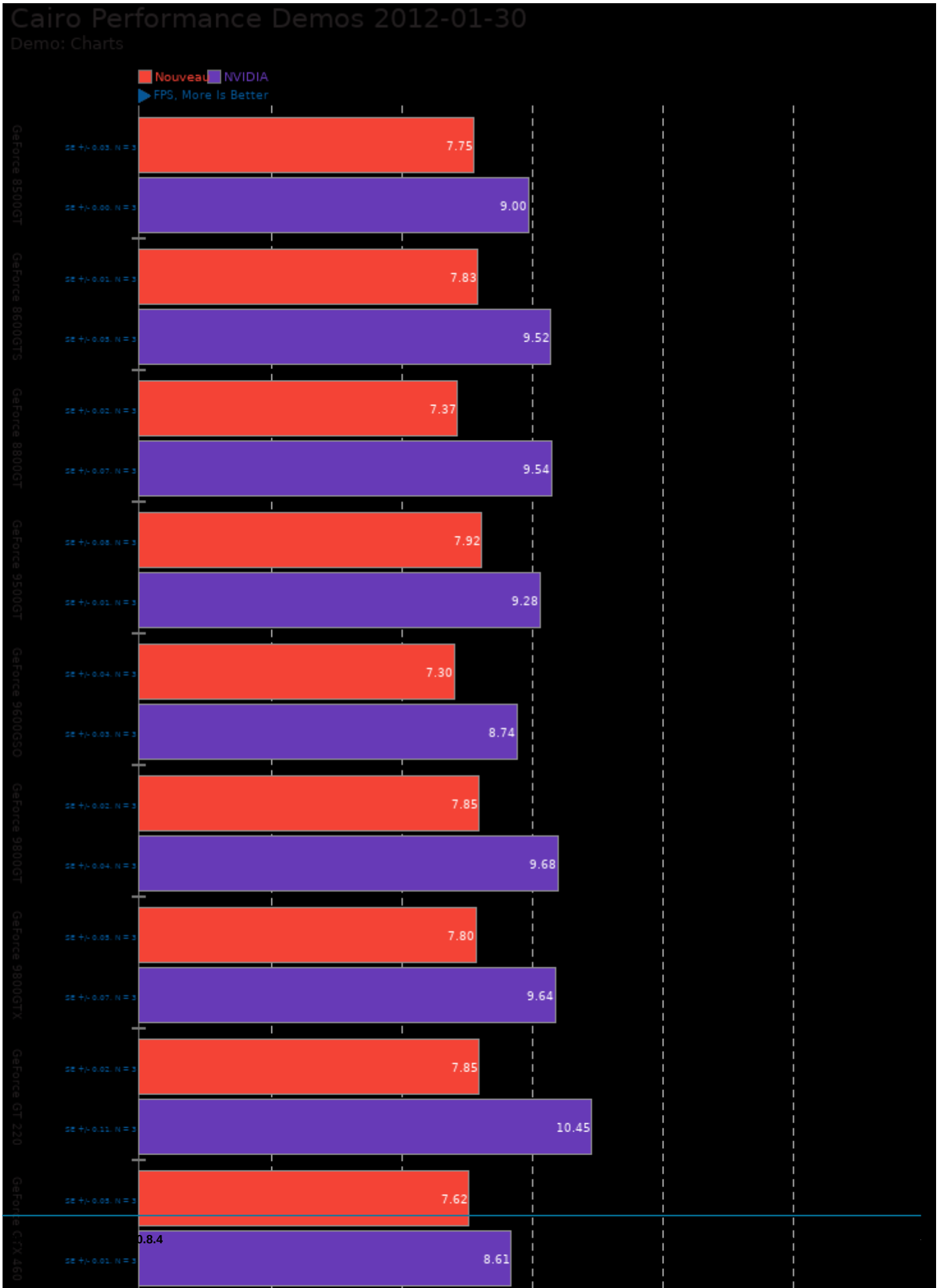

Reaction Quake 3 1.0 Beta
Resolution: 1920 x 1080
Nouveau
NVIDIA
Frames Per Second, More Is Better
GeForce 8600GTS
GeForce 8800GT
GeForce 9500GT
GeForce 9600GSO
GeForce 9800GT
GeForce 9800GTX
GeForce GT 220
GeForce GTX 460
58.37
20.63
13.17
33.97
35.53
48.90
30.23
55.17
50.27
147.77
90.63
166.90
36.80
47.03
13.60
248.07
35.07
220.30


OpenArena 0.8.5
Resolution: 1920 x 1080
Nouveau
NVIDIA
Frames Per Second, More Is Better
GeForce 8500GT
GeForce 8600GTS
GeForce 8800GT
GeForce 9500GT
GeForce 9600GSO
GeForce 9800GT
GeForce 9800GTX
GeForce GT 220
GeForce GTX 460
69.33
48.07
131.73
176.93
108.13
305.37
101.20
95.50
75.07
119.17
119.47
363.07
142.87
402.03
104.20
99.27
29.93
8.4
465.80


World of Padman 1.2
Resolution: 1920 x 1080
Nouveau
NVIDIA
Frames Per Second, More Is Better
GeForce 8600GTS
GeForce 8800GT
GeForce 9500GT
GeForce 9600GSO
GeForce 9800GT
GeForce 9800GTX
GeForce GT 220
GeForce GTX 460
GeForce GTX 55
112.43
113.30
99.33
148.47
100.73
102.13
79.10
129.07
112.53
359.67
120.00
375.77
102.20
101.77
35.80
413.37
86.70
410.97


Doom 3 1.3.1
Resolution: 1024 x 768 - Quality: Low
Frames Per Second, More Is Better
GeForce 8500GT
SE +/- 0.00, N = 3
30.90
GeForce 8600GTS
SE +/- 0.07, N = 3
54.63
GeForce 8800GT
SE +/- 0.03, N = 3
37.47
GeForce 9500GT
SE +/- 0.10, N = 3
43.90
GeForce 9600GSO
SE +/- 0.03, N = 3
29.53
GeForce 9800GT
SE +/- 0.13, N = 3
51.17
GeForce 9800GTX
SE +/- 0.38, N = 3
55.93
GeForce GT 220
SE +/- 0.07, N = 3
45.73
GeForce GTX 460
SE +/- 0.03, N = 3
28.43
GeForce GTX 550 Ti
SE +/- 0.12, N = 3
49.67
13
26
39
52
65


Cairo Performance Demos 2012-01-30
Demo: Fish
Nouveau
NVIDIA
FPS, More Is Better
GeForce 8500GT
GeForce 8600GTS
GeForce 8800GT
GeForce 9500GT
GeForce 9600GSO
GeForce 9800GT
GeForce 9800GTX
GeForce GT 220
GeForce GTX 460
0.80
0.71
0.83
0.94
0.51
0.96
0.82
0.95
0.51
0.69
0.81
0.97
0.84
0.97
0.82
0.90
0.76
0.90


Cairo Performance Demos 2012-01-30
Demo: Charts
Nouveau
NVIDIA
FPS, More Is Better
GeForce 8500GT
GeForce 8600GTS
GeForce 8800GT
GeForce 9500GT
GeForce 9600GSO
GeForce 9800GT
GeForce 9800GTX
GeForce GT 220
GeForce GTX 460
7.75
9.00
7.83
9.52
7.37
9.54
7.92
9.28
7.30
8.74
7.85
9.68
7.80
9.64
7.85
10.45
7.62
8.61

Nouveau Linux 3.4 Mesa 8.1-devel

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