
**www.phoronix-test-suite.com**

# Atom E3930 Logic Supply Karbon 300 Benchmarks

Tests for a future article on Phoronix.

**Automated Executive Summary**

*NUC5i3RYB had the most wins, coming in first place for 53% of the tests.*

*Based on the geometric mean of all complete results, the fastest (Fitlet2) was 1.5x the speed of the slowest (DN2820FYK). NUC5i3RYB was 0.961x the speed of Fitlet2, Karbon 300 was 0.924x the speed of NUC5i3RYB, DN2820FYK was 0.751x the speed of Karbon 300.*

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

*Go Benchmarks (CPU Power Consumption Monitor) at 28.667x*
*DaCapo Benchmark (CPU Power Consumption Monitor) at 26.29x*
*Go Benchmarks (CPU Power Consumption Monitor) at 24.471x*
*Stress-NG (CPU Power Consumption Monitor) at 19.485x*
*Perl Benchmarks (CPU Power Consumption Monitor) at 15.676x*
*PyBench (CPU Power Consumption Monitor) at 14.8x*
*ctx_clock (CPU Power Consumption Monitor) at 11.306x*
*FS-Mark (CPU Power Consumption Monitor) at 9.645x*
*GIMP (CPU Power Consumption Monitor) at 9.588x*

*PHPBench (CPU Power Consumption Monitor) at 8.355x.*

# Test Systems:

## DN2820FYK

Processor: Intel Celeron N2820 @ 2.40GHz (2 Cores), Motherboard: Intel DN2820FYK (FYBYT10H.86A.0050.2015.0326.1731 BIOS), Chipset: Intel Atom Z36xxx/Z37xxx, Memory: 8192MB, Disk: 60GB OCZ VERTEX2, Graphics: Intel Bay Trail 2GB (756MHz), Audio: Realtek ALC283, Monitor: Acer B286HK, Network: Realtek RTL8111/8168/8411 + Intel 7260

OS: Ubuntu 18.04, Kernel: 4.18.0-20-generic (x86_64), Desktop: GNOME Shell 3.28.3, Display Server: X Server 1.20.1, Display Driver: modesetting 1.20.1, OpenGL: 4.2 Mesa 18.2.8, Compiler: GCC 7.4.0, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib --with-tune=generic --without-cuda-driver -v
Disk Notes: CFQ / errors=remount-ro,relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave
Java Notes: OpenJDK Runtime Environment (build 11.0.3+7-Ubuntu-1ubuntu218.04.1)
Python Notes: Python 2.7.15rc1 + Python 3.6.7
Security Notes: l1tf: Not affected + mds: Vulnerable: Clear buffers attempted no microcode; SMT disabled + meltdown: Mitigation of PTI + spec_store_bypass: Not affected + spectre_v1: Mitigation of __user pointer sanitization + spectre_v2: Mitigation of Full generic retpoline STIBP: disabled RSB filling

## NUC5i3RYB

Processor: Intel Core i3-5010U @ 2.00GHz (2 Cores / 4 Threads), Motherboard: Intel NUC5i3RYB (RYBDWi35.86A.0130.2014.1203.1639 BIOS), Chipset: Intel Broadwell-U-OPI, Memory: 8192MB, Disk: 256GB TS256GSSD370 + 16GB Voyager 3.0, Graphics: Intel HD 5500 (900MHz), Audio: Intel Broadwell-U Audio, Monitor: Acer B286HK, Network: Intel I218-V + Intel 7265

OS: Ubuntu 18.04, Kernel: 4.18.0-20-generic (x86_64), Desktop: GNOME Shell 3.28.3, Display Server: X Server 1.20.1, Display Driver: modesetting 1.20.1, OpenGL: 4.5 Mesa 18.2.8, Compiler: GCC 7.4.0, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib --with-tune=generic --without-cuda-driver -v
Disk Notes: CFQ / errors=remount-ro,relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave
Java Notes: OpenJDK Runtime Environment (build 11.0.3+7-Ubuntu-1ubuntu218.04.1)
Python Notes: Python 2.7.15rc1 + Python 3.6.7
Security Notes: l1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT vulnerable + mds: Mitigation of Clear buffers; SMT vulnerable + meltdown: Mitigation of PTI + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of __user pointer sanitization + spectre_v2: Mitigation of Full generic retpoline IBPB: conditional IBRS_FW STIBP: conditional RSB filling

## Fitlet2

Processor: Intel Celeron J3455 @ 2.30GHz (4 Cores), Motherboard: Compulab fitlet2 v1.1 (FLT2.0.38.01.00 BIOS), Chipset: Intel Celeron N3350/Pentium, Memory: 8192MB, Disk: 127GB NT-128, Graphics: inteldrmfb (750MHz), Audio:

Realtek ALC1150, Monitor: Acer B286HK, Network: 2 x Intel I211 + Intel 8260

OS: Ubuntu 18.04, Kernel: 4.18.0-20-generic (x86_64), Desktop: GNOME Shell 3.28.3, Display Server: X Server 1.20.1, Display Driver: modesetting 1.20.1, OpenGL: 4.5 Mesa 18.2.8, Compiler: GCC 7.4.0, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib --with-tune=generic --without-cuda-driver -v
Disk Notes: CFQ / errors=remount-ro,relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave
Java Notes: OpenJDK Runtime Environment (build 11.0.3+7-Ubuntu-1ubuntu218.04.1)
Python Notes: Python 2.7.15rc1 + Python 3.6.7
Security Notes: l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Not affected + spectre_v1: Mitigation of __user pointer sanitization + spectre_v2: Mitigation of Full generic retpoline IBPB: conditional IBRS_FW STIBP: disabled RSB filling

## Karbon 300

Processor: Intel Atom E3930 @ 1.80GHz (2 Cores), Motherboard: MiTAC NeonPoint (D8000X08 BIOS), Chipset: Intel Celeron N3350/Pentium, Memory: 4096MB, Disk: 256GB TS256GMTE510T, Graphics: inteldrmfb (550MHz), Audio: Realtek ALC233, Monitor: Acer B286HK, Network: 3 x Intel I210

OS: Ubuntu 18.04, Kernel: 4.15.0-50-generic (x86_64), Desktop: GNOME Shell 3.28.3, Display Server: X Server 1.19.6, Display Driver: modesetting 1.19.6, OpenGL: 4.5 Mesa 18.2.8, Compiler: GCC 7.4.0, File-System: ext4, Screen Resolution: 1920x1080

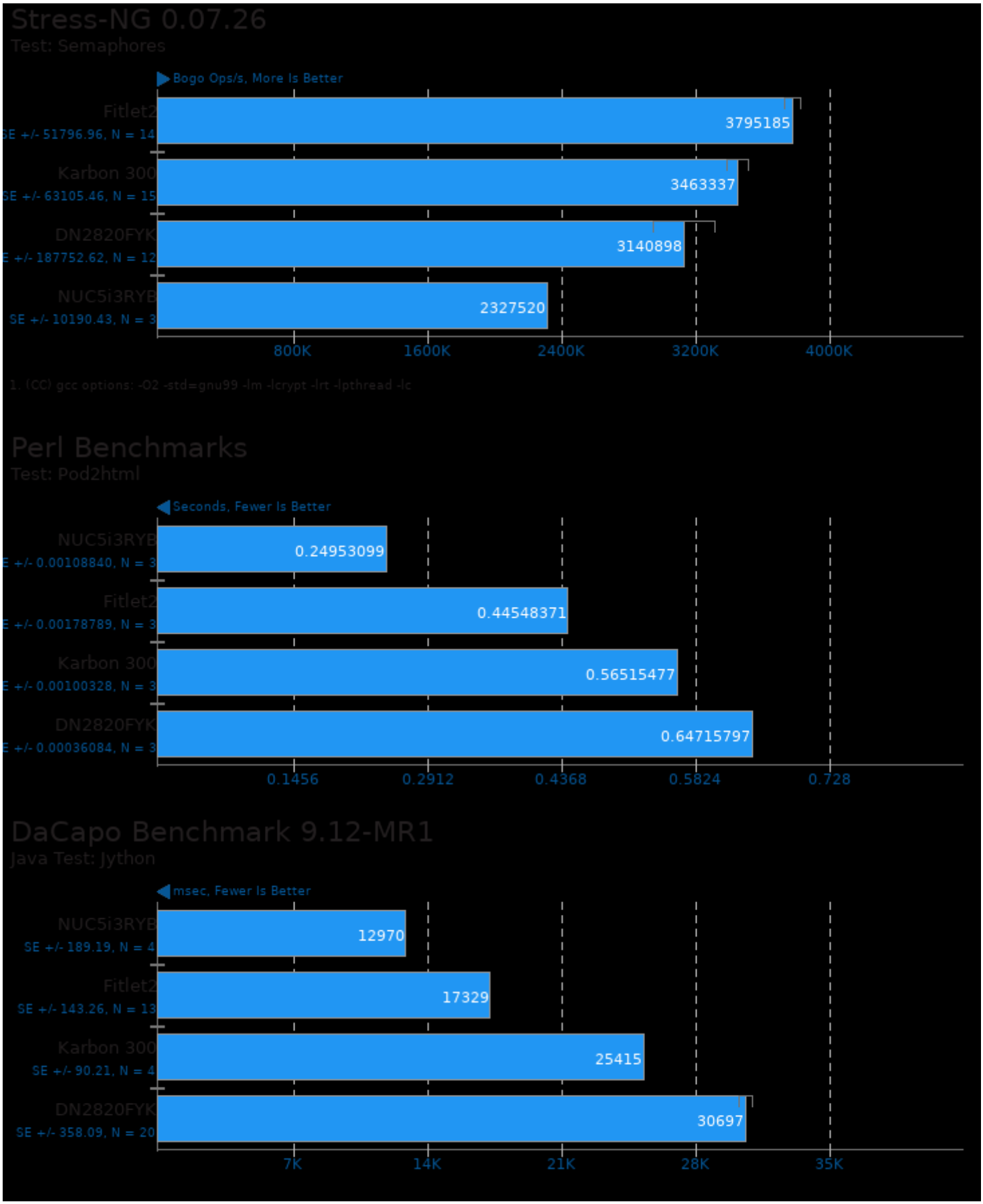
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib --with-tune=generic --without-cuda-driver -v
Disk Notes: NONE / data=ordered,errors=remount-ro,relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave
Java Notes: OpenJDK Runtime Environment (build 11.0.3+7-Ubuntu-1ubuntu218.04.1)
Python Notes: Python 2.7.15rc1 + Python 3.6.7
Security Notes: l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Not affected + spectre_v1: Mitigation of __user pointer sanitization + spectre_v2: Mitigation of Full generic retpoline IBPB: conditional IBRS_FW STIBP: disabled RSB filling

| | DN2820FYK | NUC5i3RYB | Fitlet2 | Karbon 300 |
|---|---|---|---|---|
| **Stress-NG - Semaphores (Bogo** | 3140898 | 2327520 | 3795185 | 3463337 |
| **Normalized** | 82.76% | 61.33% | 100% | 91.26% |
| **Standard Deviation** | 20.7% | 0.8% | 5.1% | 7.1% |
| **Perl Benchmarks - Pod2html (sec)** | 0.64715797 | 0.24953099 | 0.44548371 | 0.56515477 |
| **Normalized** | 38.56% | 100% | 56.01% | 44.15% |
| **Standard Deviation** | 0.1% | 0.8% | 0.7% | 0.3% |
| **DaCapo Benchmark - Jython (msec)** | 30697 | 12970 | 17329 | 25415 |
| **Normalized** | 42.25% | 100% | 74.85% | 51.03% |
| **Standard Deviation** | 5.2% | 2.9% | 3% | 0.7% |
| **PyBench - T.F.A.T.T (Milliseconds)** | 5047 | 2314 | 3864 | 4944 |
| **Normalized** | 45.85% | 100% | 59.89% | 46.8% |
| **Standard Deviation** | 0.2% | 0.3% | 0.3% | 0.7% |
| **SQLite - T.S.I (sec)** | 21.80 | 64.17 | 66.90 | 14.50 |
| **Normalized** | 66.51% | 22.6% | 21.67% | 100% |

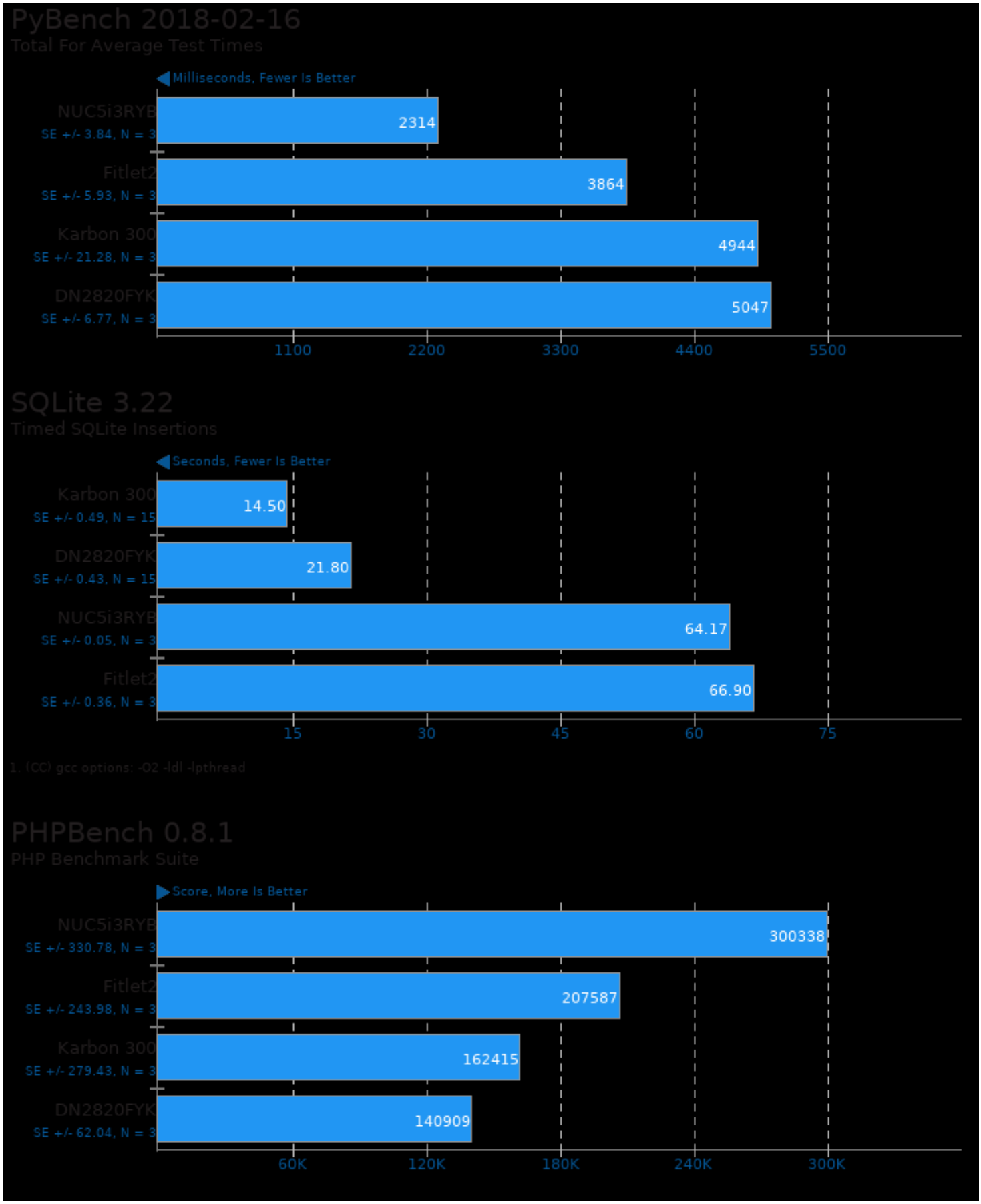
# Atom E3930 Logic Supply Karbon 300 Benchmarks

| | | | | |
|---|---|---|---|---|
| **Standard Deviation** | 7.7% | 0.1% | 0.9% | 13.2% |
| **PHPBench - P.B.S (Score)** | **140909** | **300338** | 207587 | 162415 |
| **Normalized** | 46.92% | 100% | 69.12% | 54.08% |
| **Standard Deviation** | 0.1% | 0.2% | 0.2% | 0.3% |
| **GIMP - rotate (sec)** | **66.47** | **40.16** | 44.29 | 59.52 |
| **Normalized** | 60.42% | 100% | 90.68% | 67.47% |
| **Standard Deviation** | 0.2% | 0.2% | 0.1% | 0.7% |
| **GIMP - auto-levels (sec)** | **62.33** | **36.65** | 43.30 | 60.00 |
| **Normalized** | 58.8% | 100% | 84.64% | 61.08% |
| **Standard Deviation** | 0% | 0.2% | 0.2% | 0.8% |
| **GIMP - resize (sec)** | **31.14** | **17.30** | 19.76 | 26.40 |
| **Normalized** | 55.56% | 100% | 87.55% | 65.53% |
| **Standard Deviation** | 0.7% | 1.3% | 1.4% | 1.3% |
| **Go Benchmarks - garbage (ns/op)** | **26028519** | 10340128 | **9845733** | 23206617 |
| **Normalized** | 37.83% | 95.22% | 100% | 42.43% |
| **Standard Deviation** | 0.8% | 0.4% | 0.4% | 0.5% |
| **FS-Mark - 1.F.1.S (Files/s)** | 119.77 | **87.00** | 95.43 | **230.93** |
| **Normalized** | 51.86% | 37.67% | 41.32% | 100% |
| **Standard Deviation** | 0.8% | 2.8% | 0.4% | 2.9% |
| **Go Benchmarks - json (ns/op)** | **135245445** | 50249917 | **43916330** | 106948955 |
| **Normalized** | 32.47% | 87.4% | 100% | 41.06% |
| **Standard Deviation** | 0.3% | 0.3% | 0.5% | 0.4% |
| **ctx_clock - C.S.T (Clocks)** | 859 | **1341** | **191** | 211 |
| **Normalized** | 22.24% | 14.24% | 100% | 90.52% |
| **Standard Deviation** | 1.1% | 0.2% | 0.6% | |
| **Meta Performance Per Watt - P.P.W (Performance/Watt)** | 3629 | **4452** | **3399** | |
| **Normalized** | 81.5% | 100% | 76.35% | |
| **PHPBench - P.B.S (Score/Watt)** | **17304** | 29917 | **30038** | 18160 |
| **Normalized** | 57.61% | 99.6% | 100% | 60.46% |
| **Stress-NG - Semaphores (Bogo Ops/s/Watt)** | 383292 | **207522** | **405743** | 370166 |
| **Normalized** | 94.47% | 51.15% | 100% | 91.23% |
| **FS-Mark - 1.F.1.S (Files/s/Watt)** | 15.03 | **9.92** | 16.49 | **25.80** |
| **Normalized** | 58.26% | 38.45% | 63.91% | 100% |

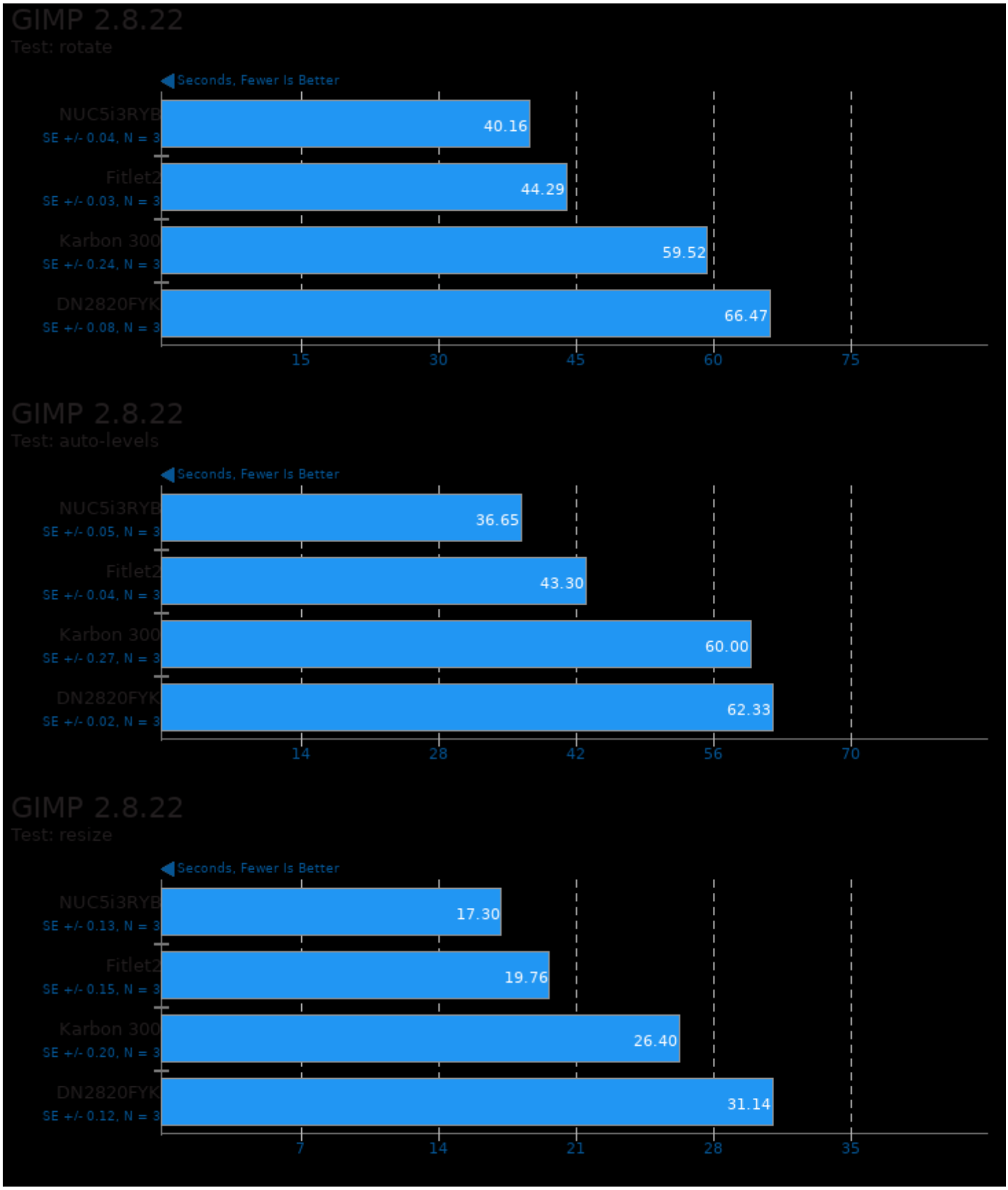
# Atom E3930 Logic Supply Karbon 300 Benchmarks



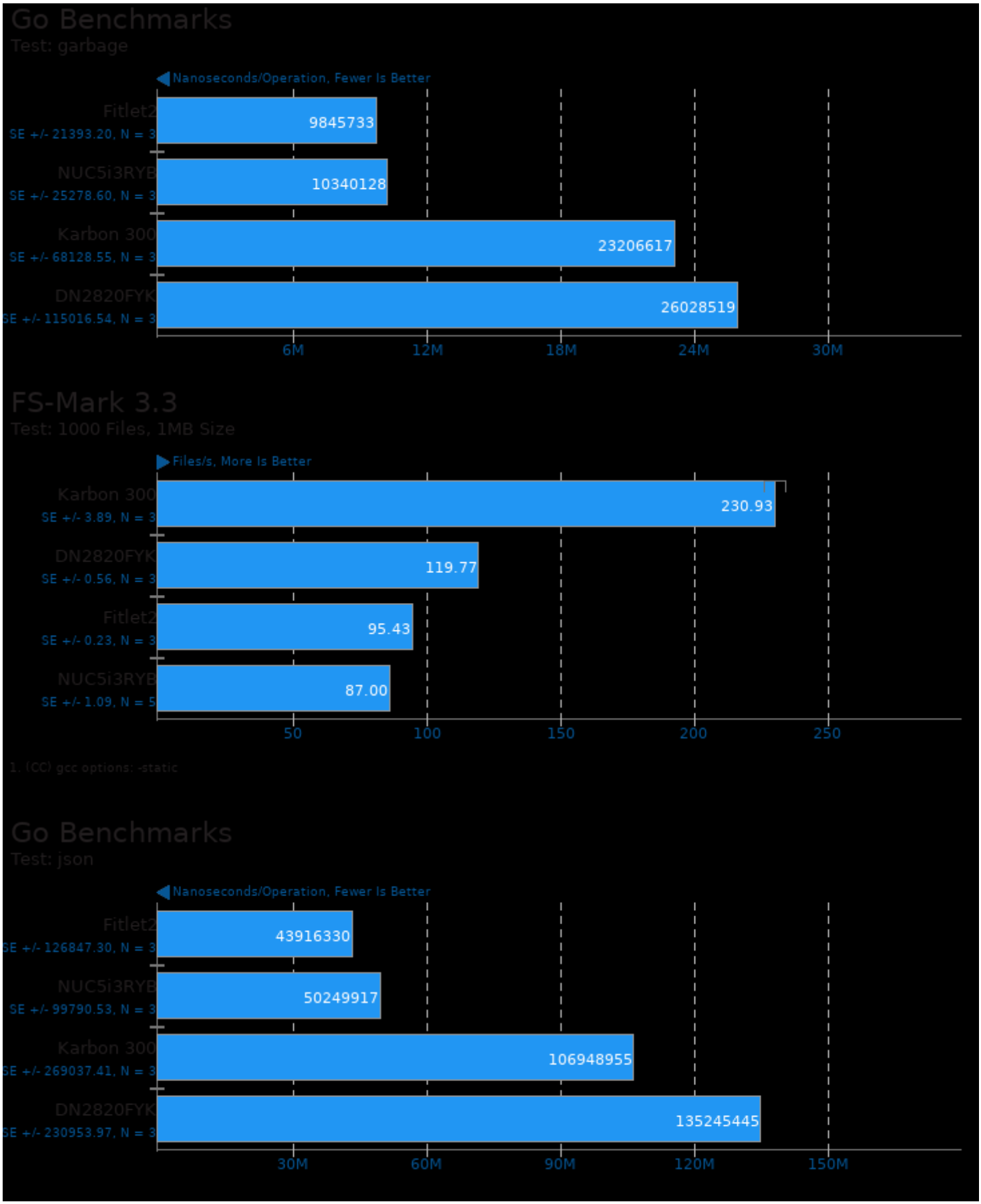
# Atom E3930 Logic Supply Karbon 300 Benchmarks



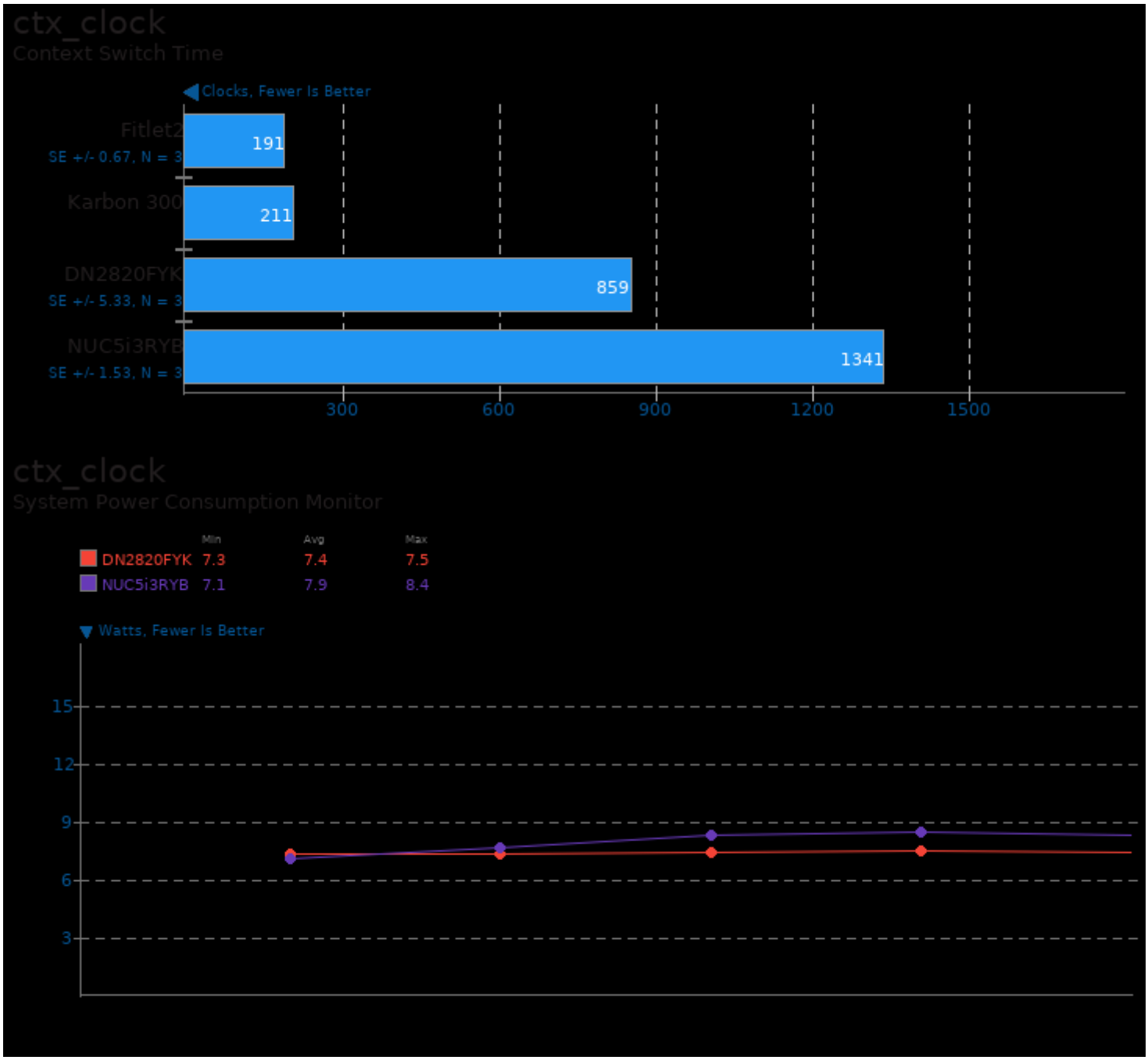
# Atom E3930 Logic Supply Karbon 300 Benchmarks



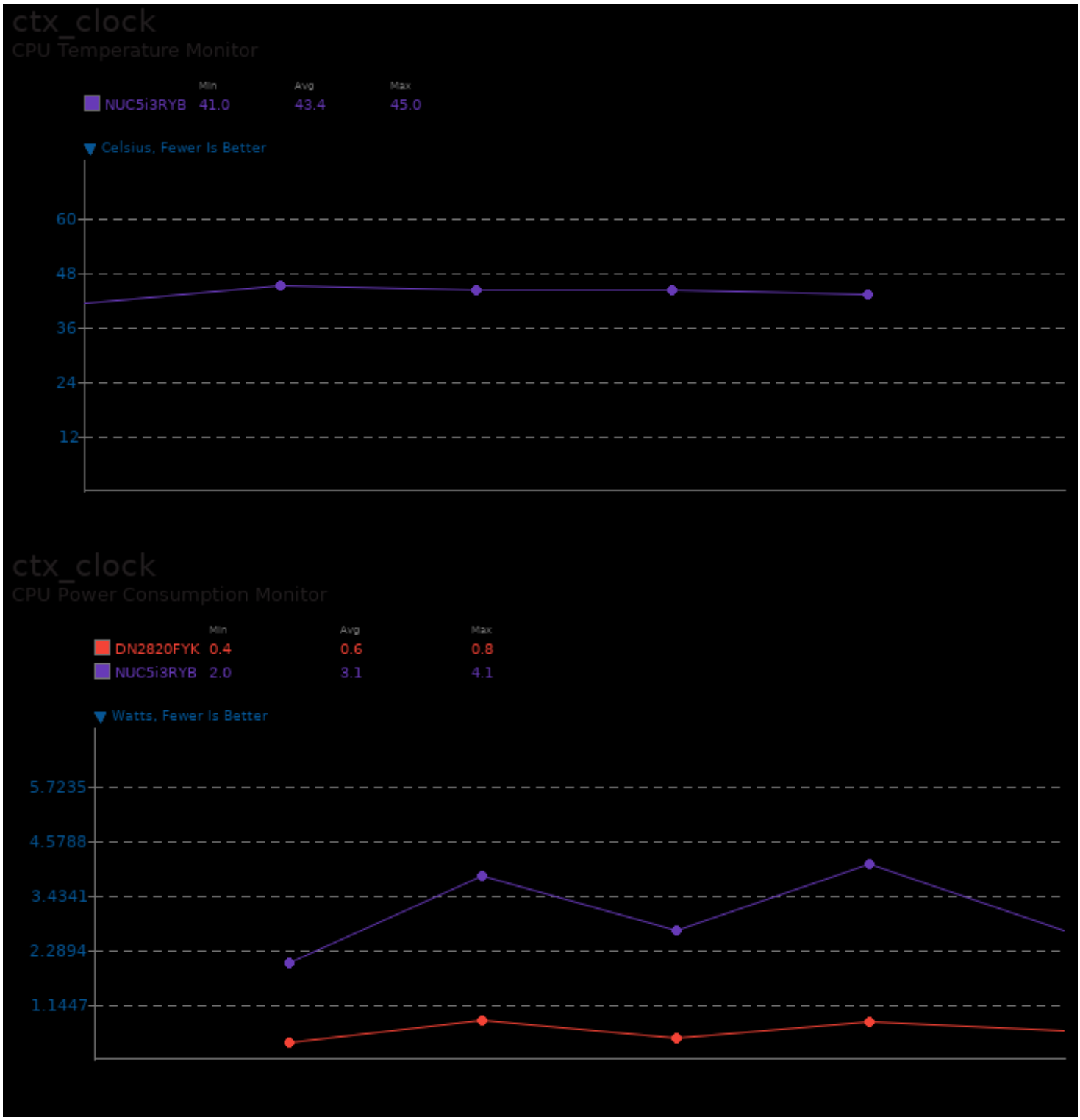
# Atom E3930 Logic Supply Karbon 300 Benchmarks



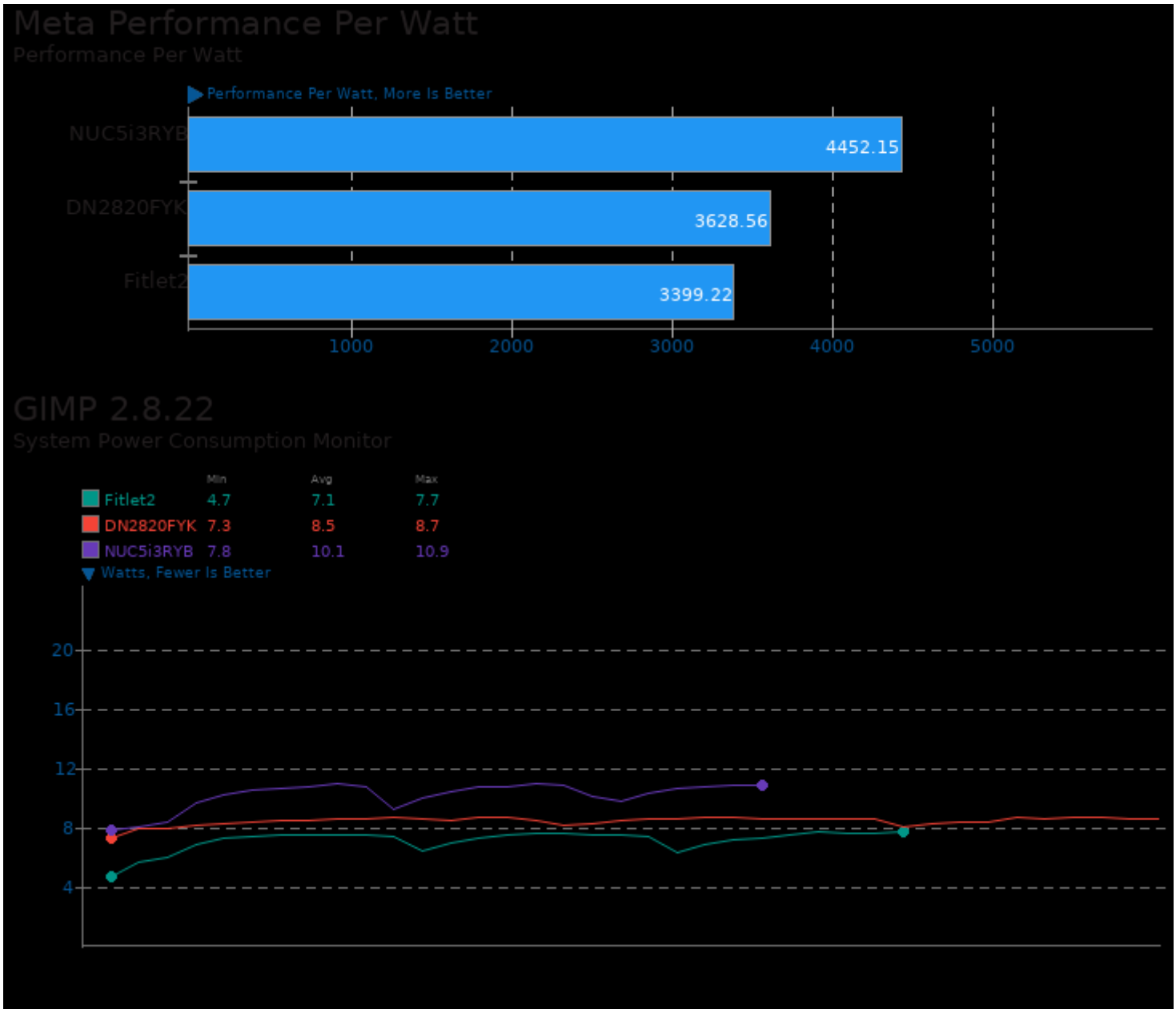
# Atom E3930 Logic Supply Karbon 300 Benchmarks



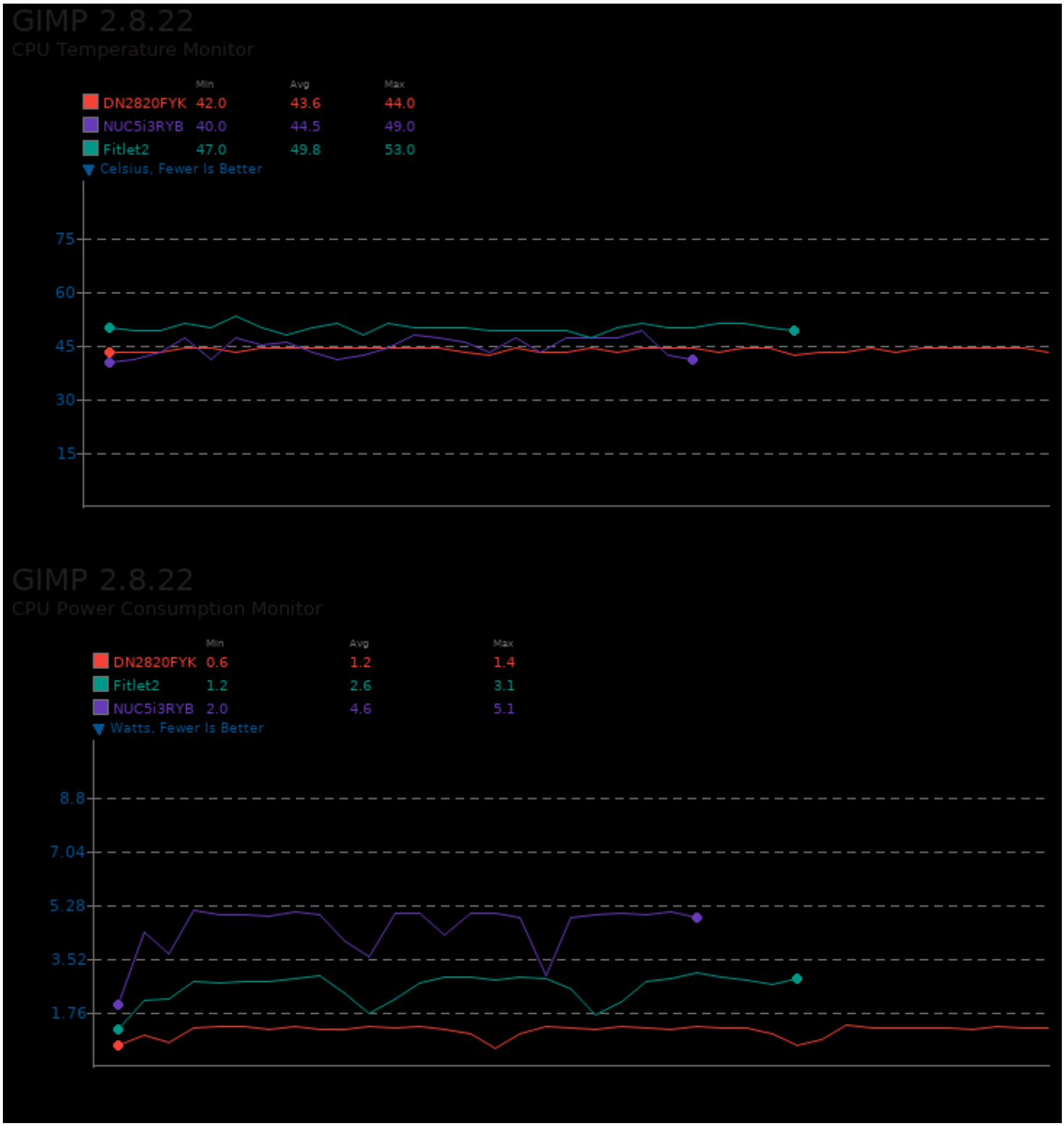
# Atom E3930 Logic Supply Karbon 300 Benchmarks



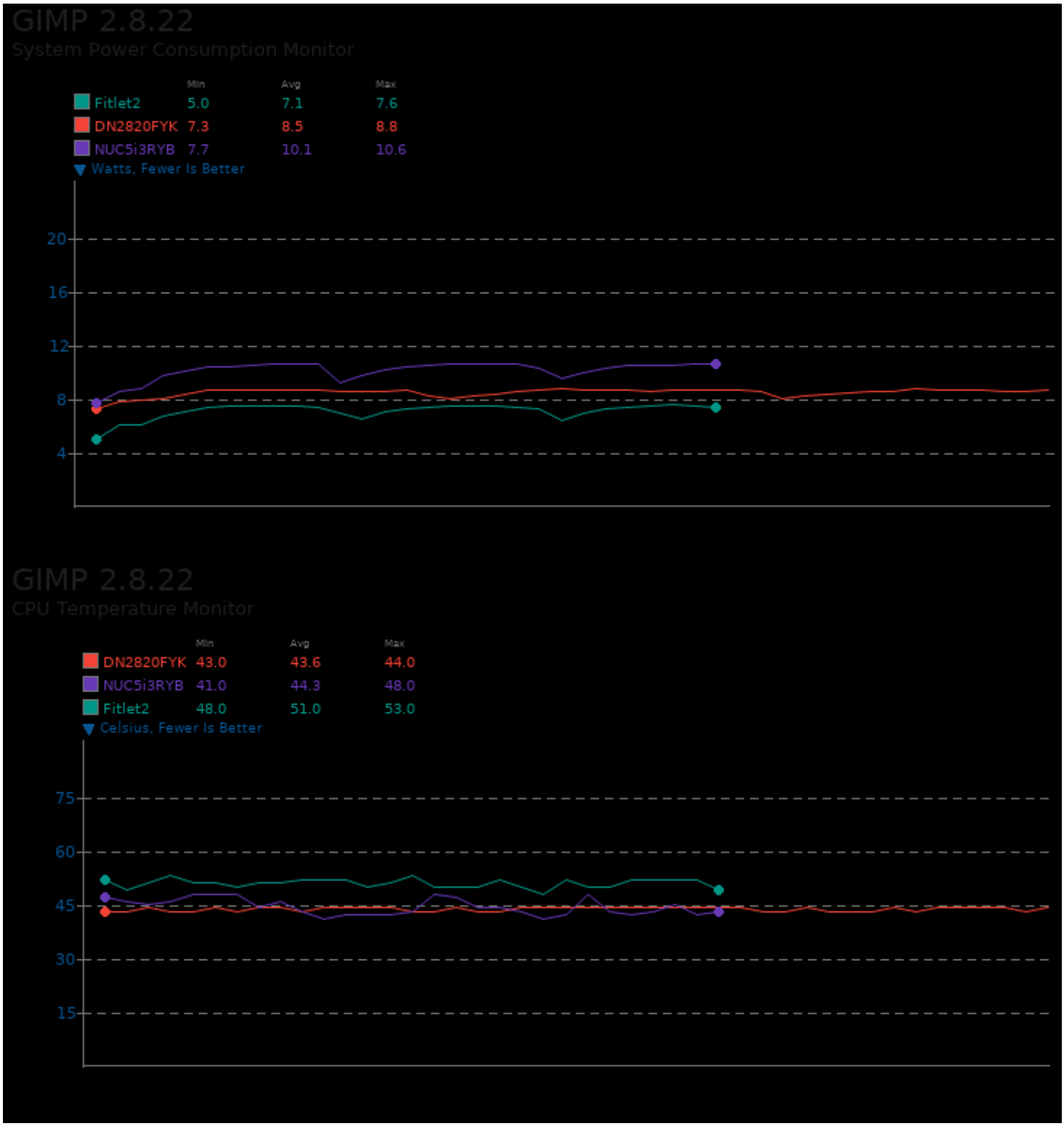
# Atom E3930 Logic Supply Karbon 300 Benchmarks



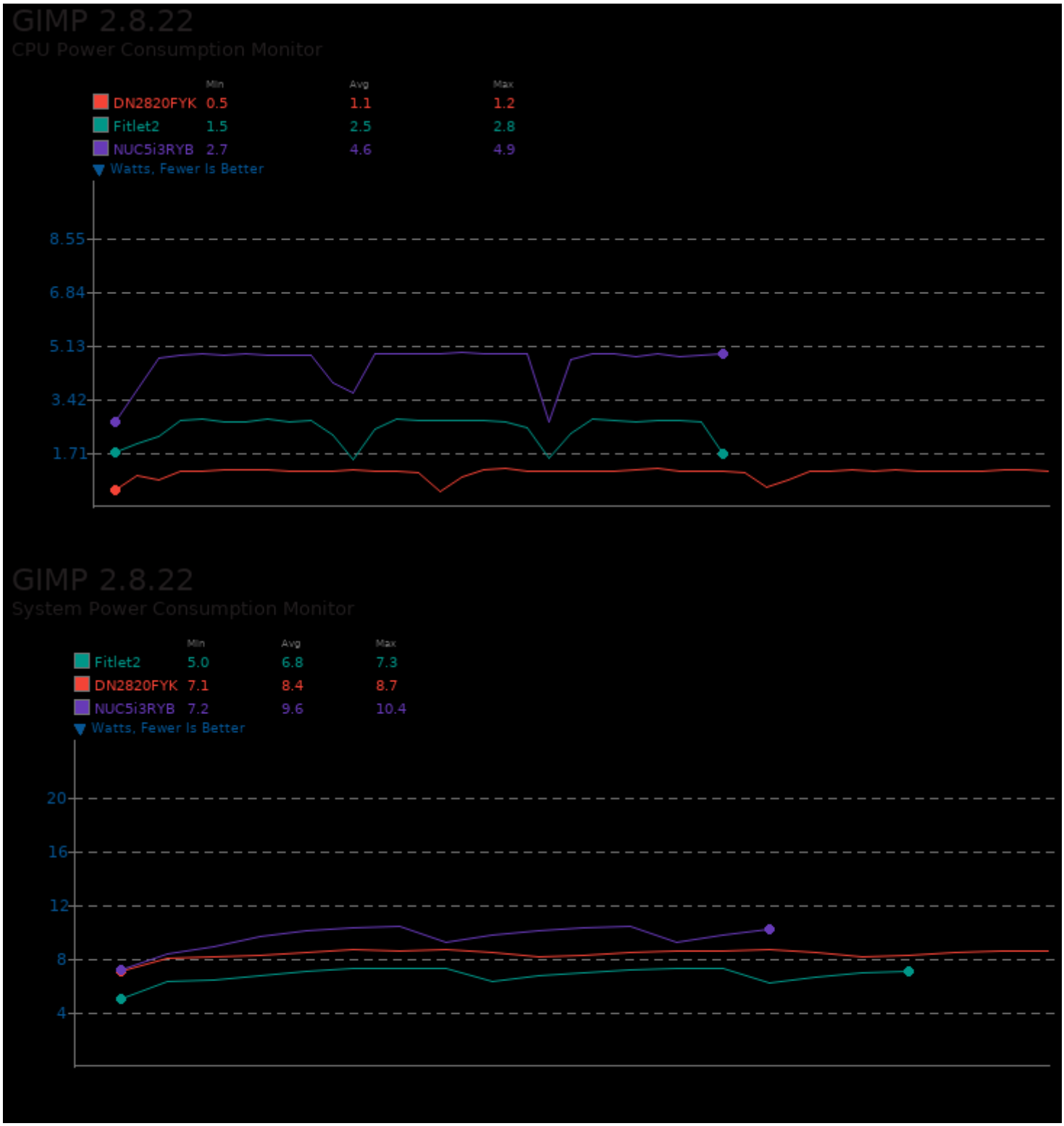
# Atom E3930 Logic Supply Karbon 300 Benchmarks



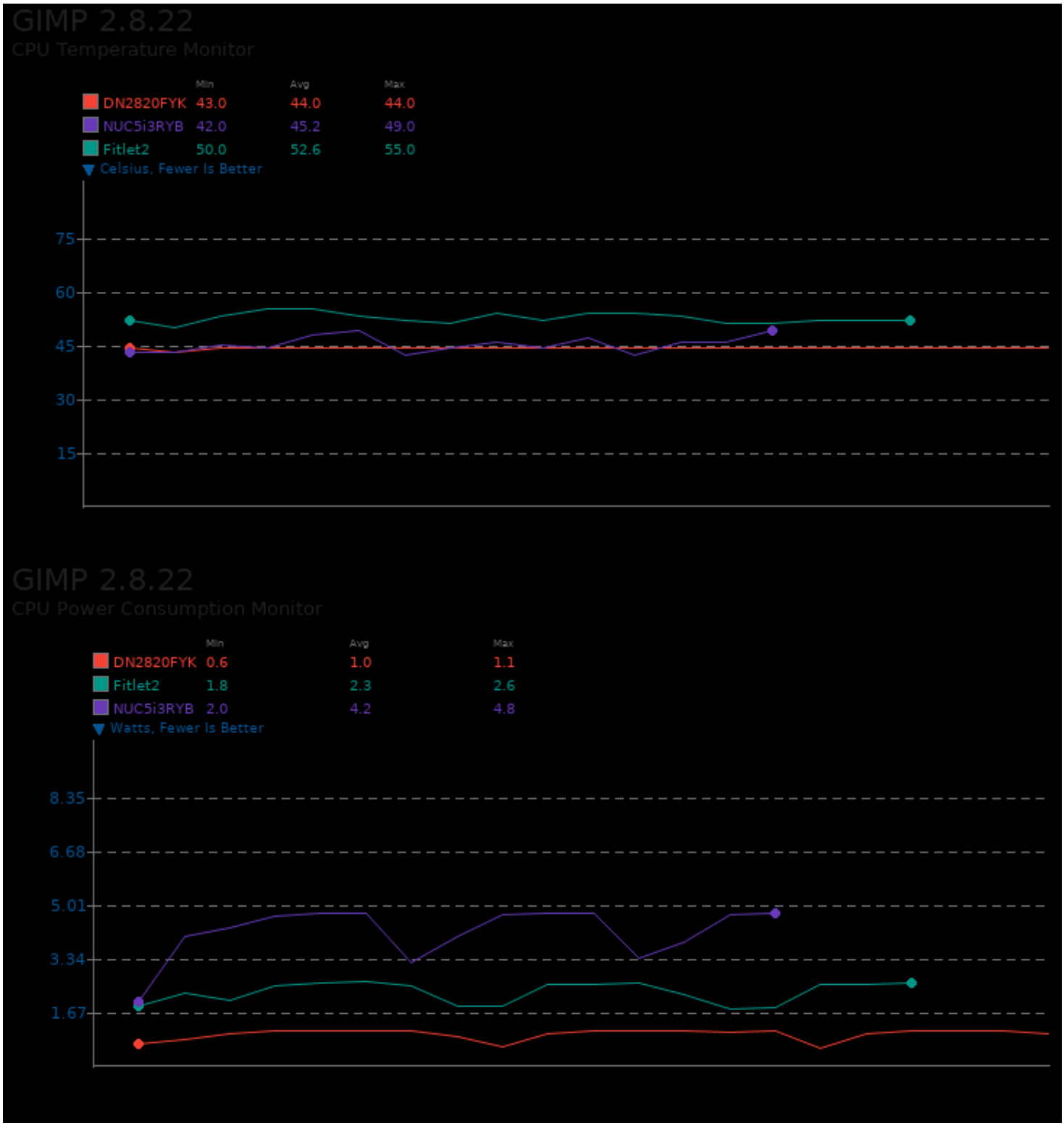
# Atom E3930 Logic Supply Karbon 300 Benchmarks



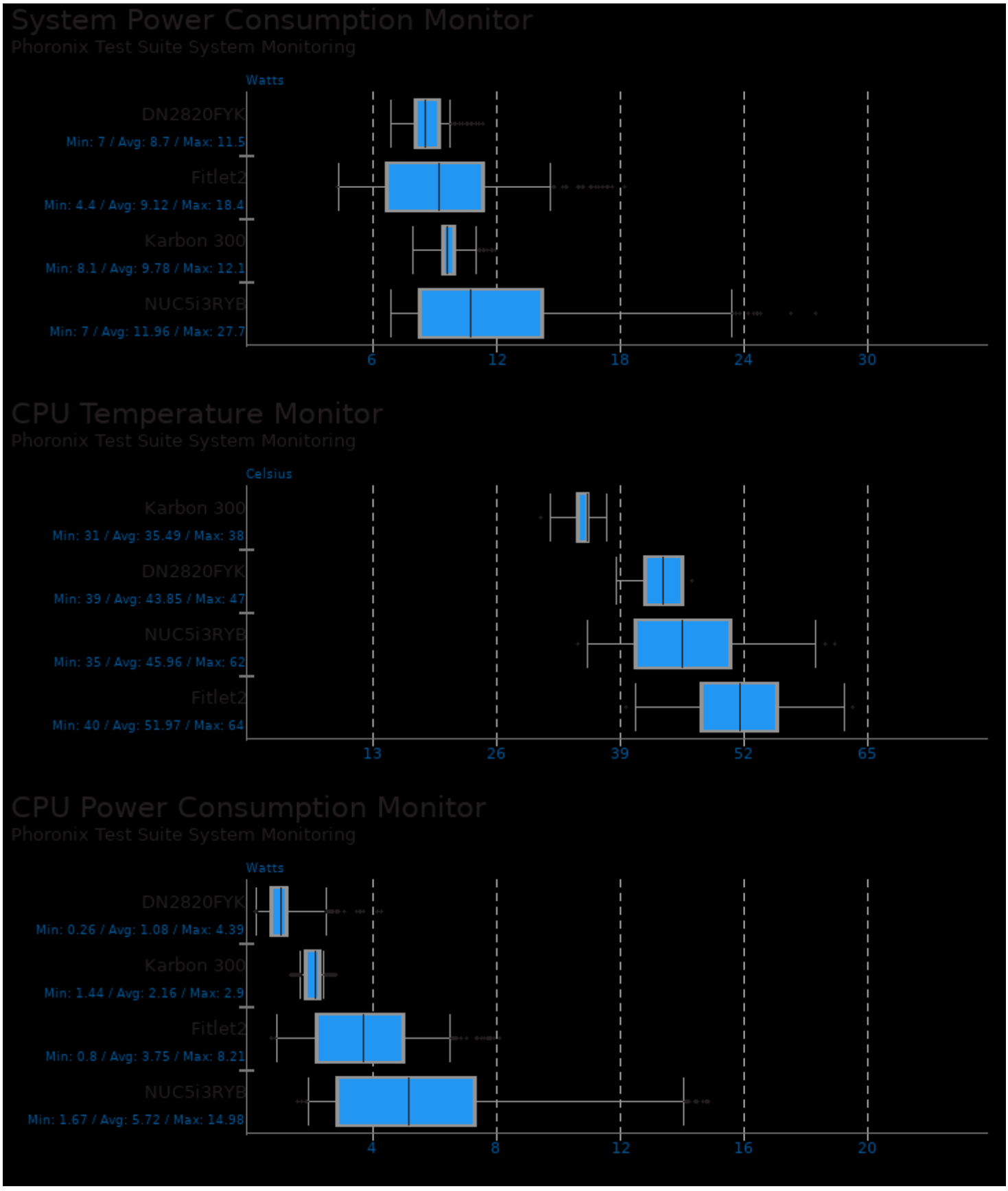
# Atom E3930 Logic Supply Karbon 300 Benchmarks



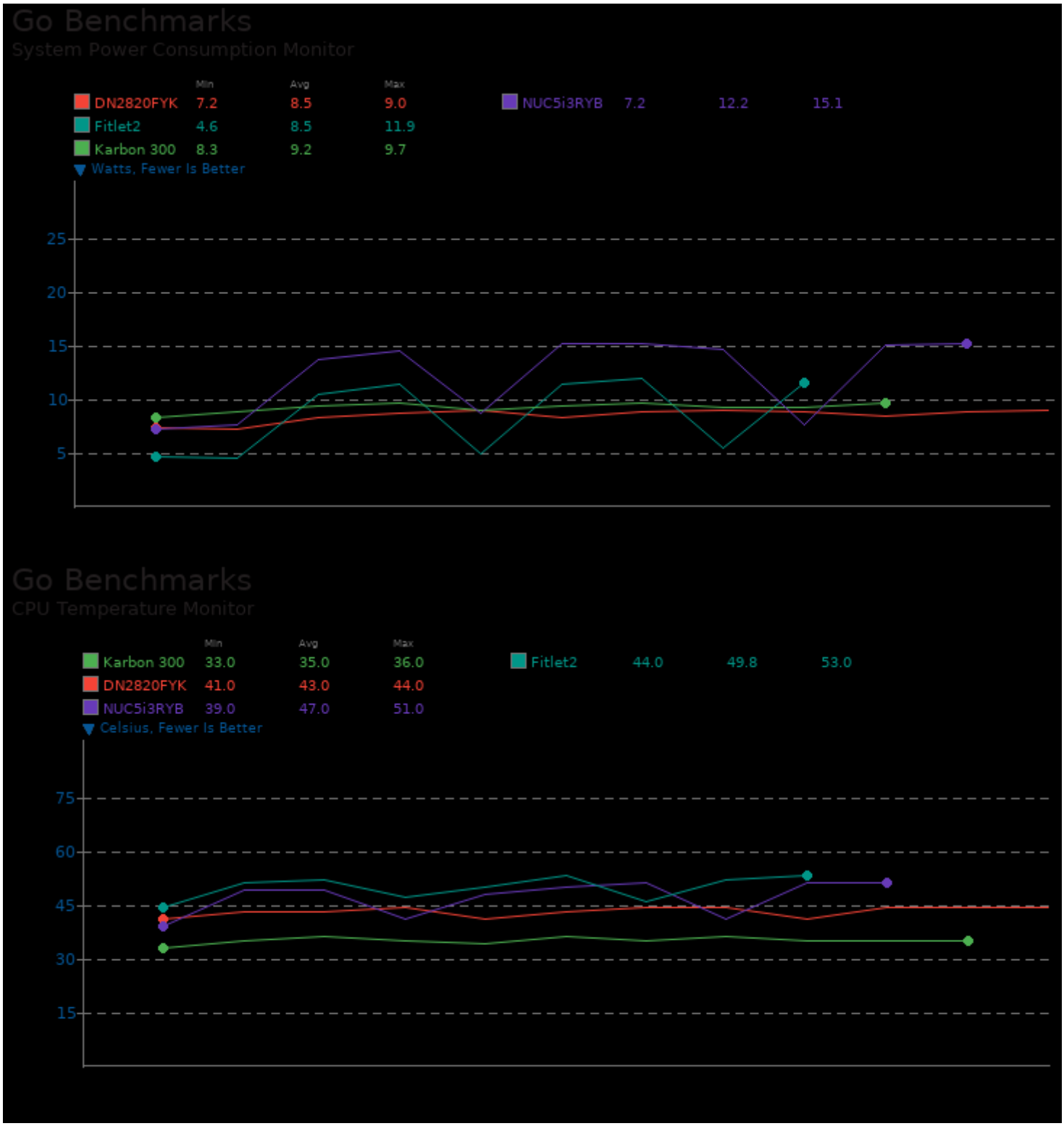
# Atom E3930 Logic Supply Karbon 300 Benchmarks



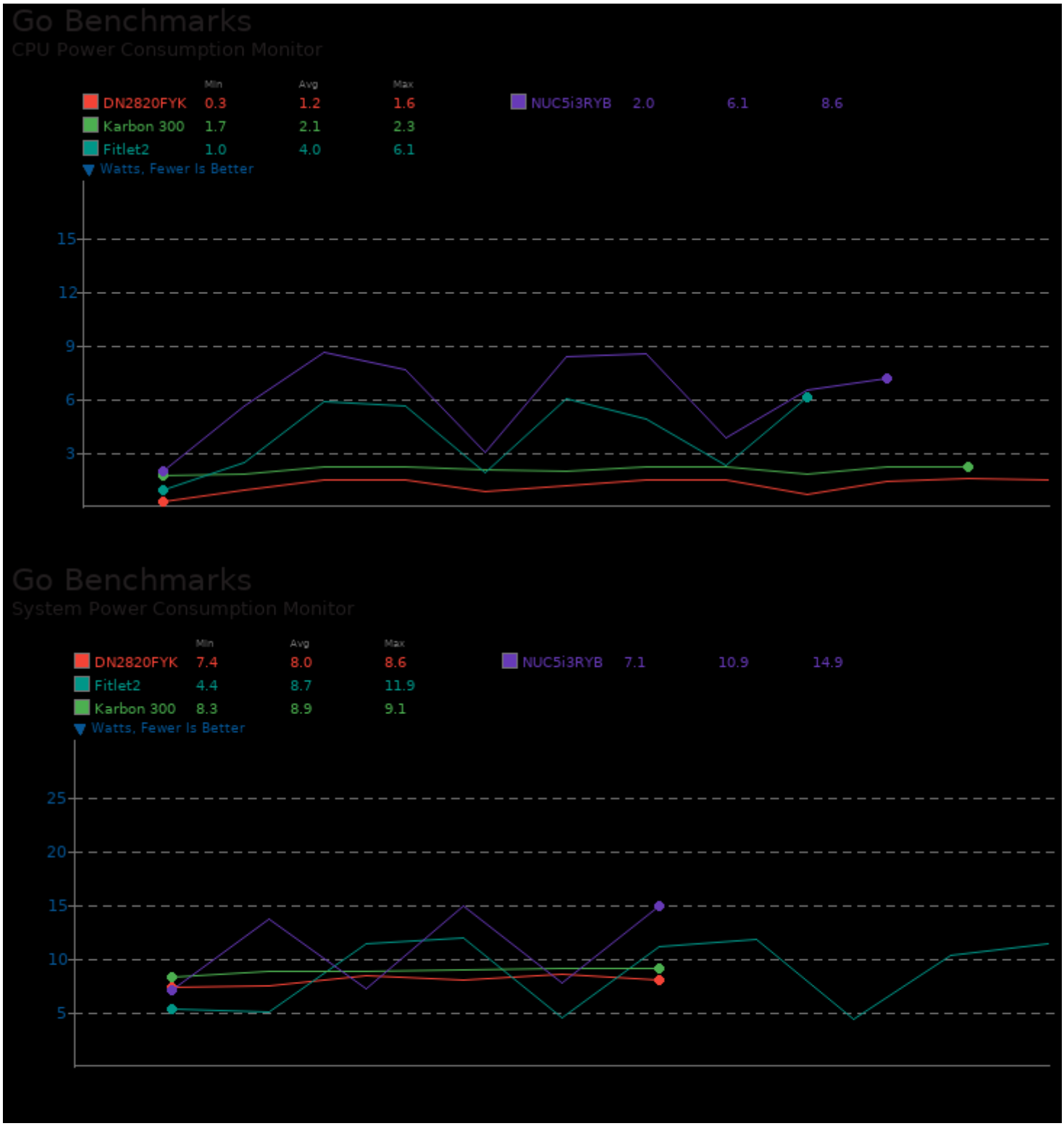
# Atom E3930 Logic Supply Karbon 300 Benchmarks



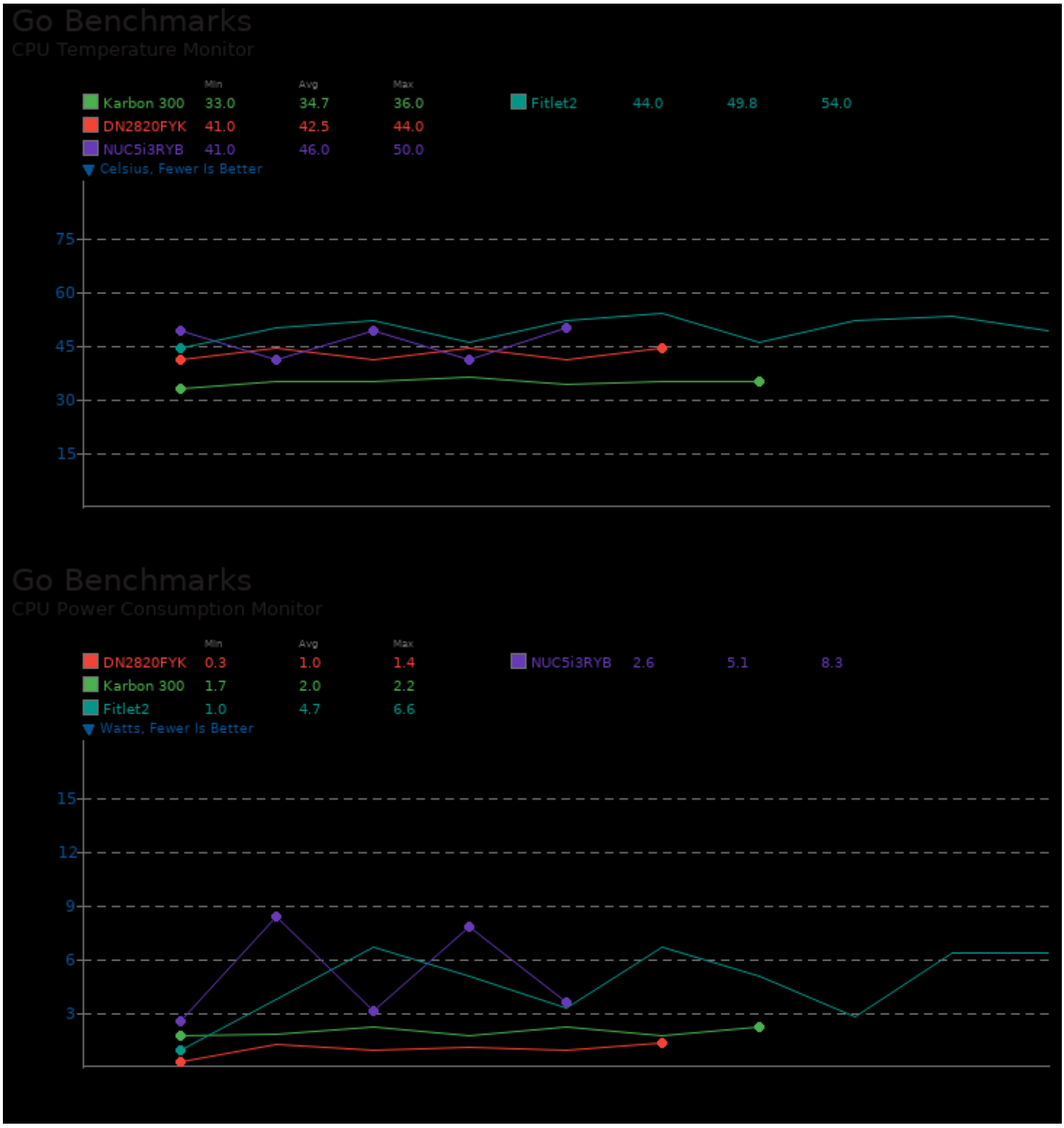
# Atom E3930 Logic Supply Karbon 300 Benchmarks



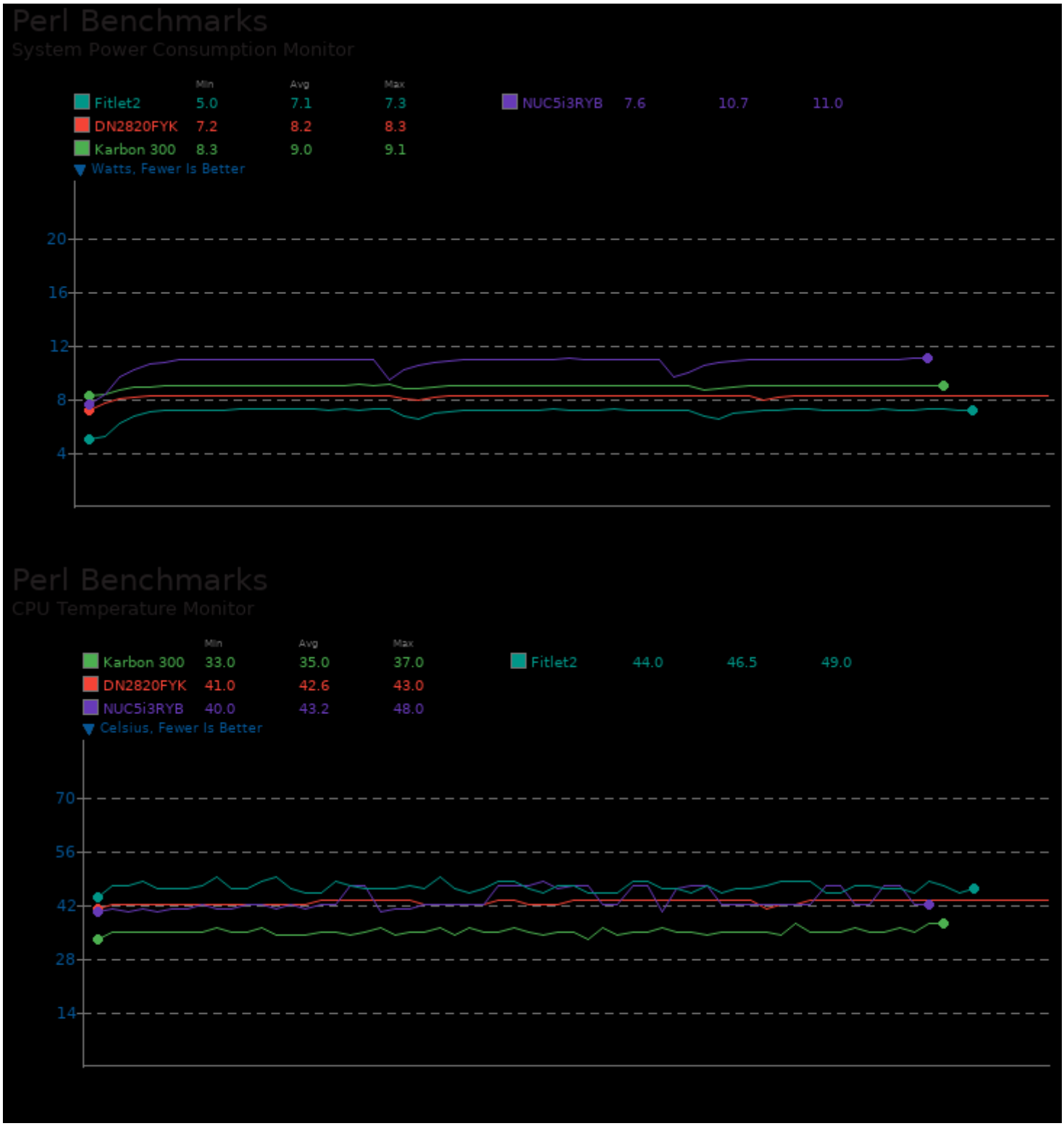
# Atom E3930 Logic Supply Karbon 300 Benchmarks



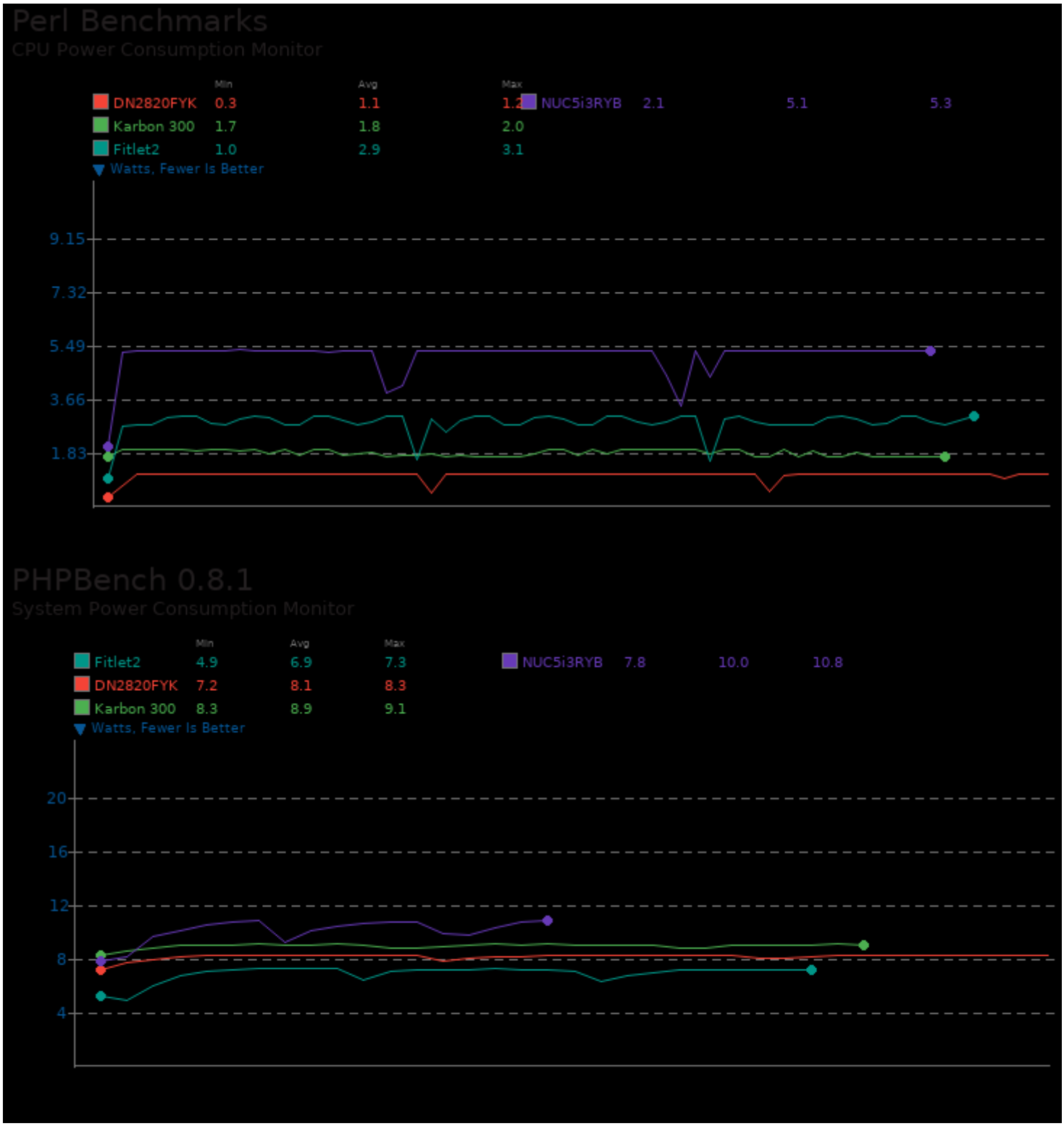
# Atom E3930 Logic Supply Karbon 300 Benchmarks



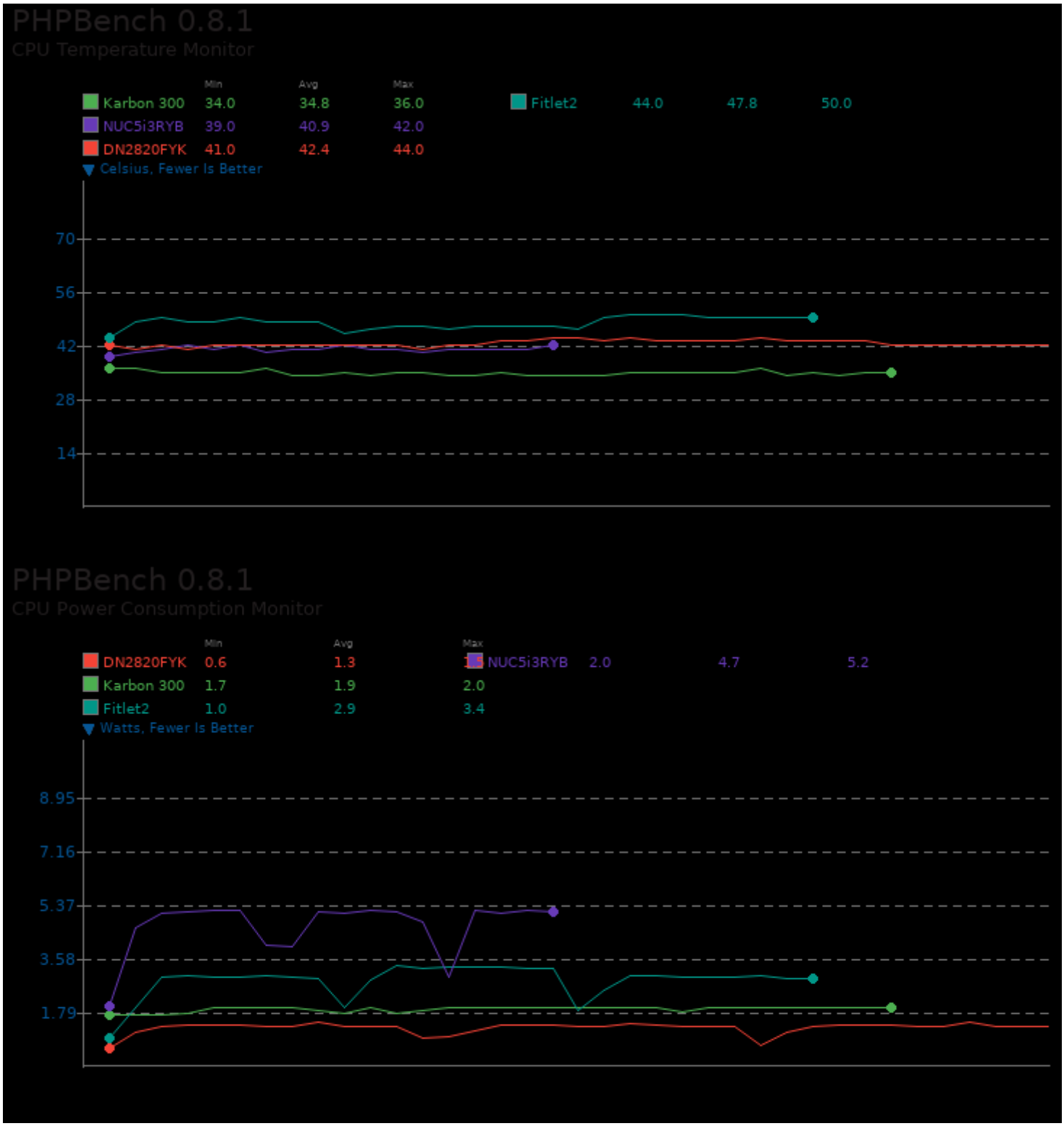
# Atom E3930 Logic Supply Karbon 300 Benchmarks



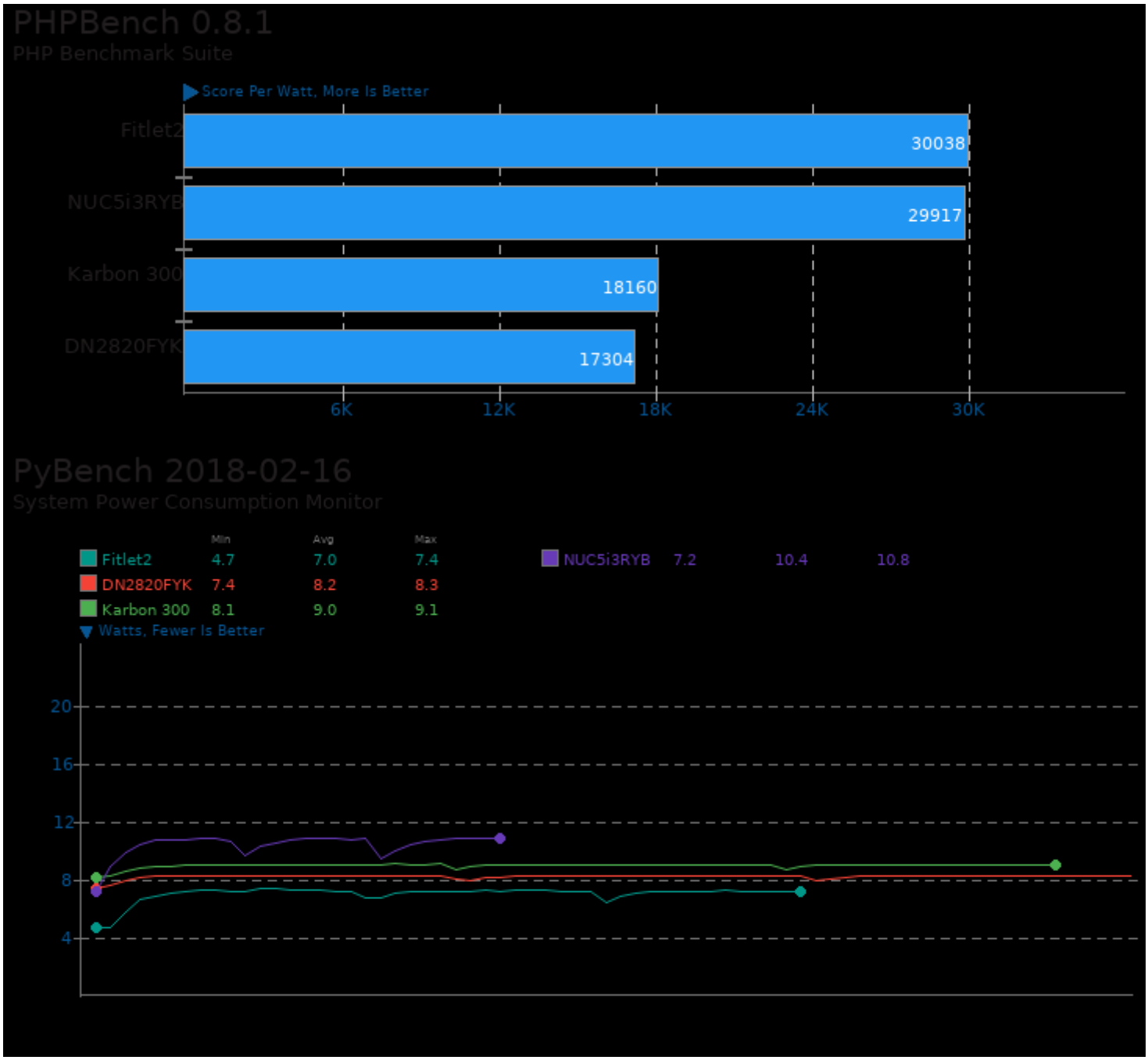
# Atom E3930 Logic Supply Karbon 300 Benchmarks



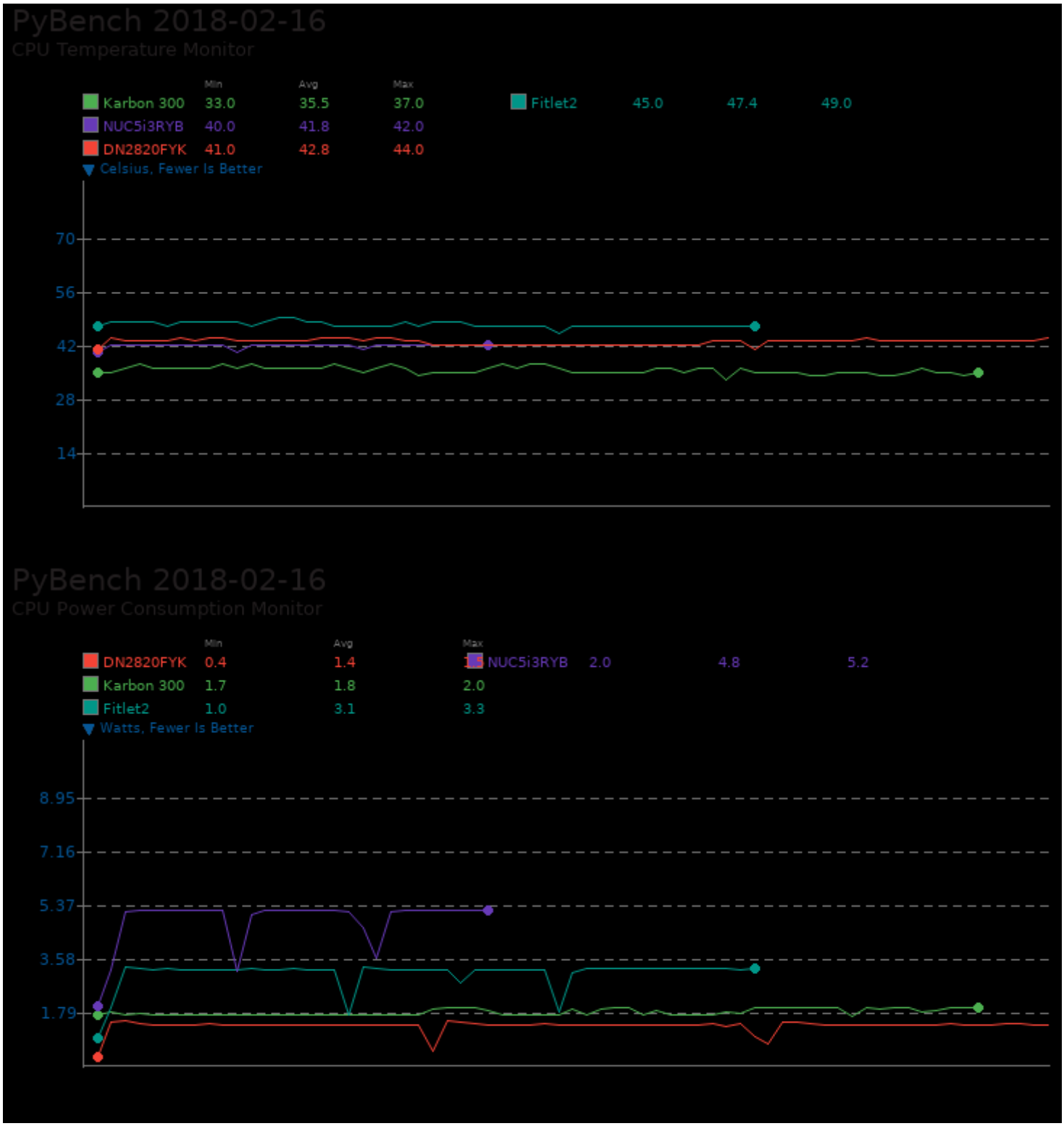
# Atom E3930 Logic Supply Karbon 300 Benchmarks



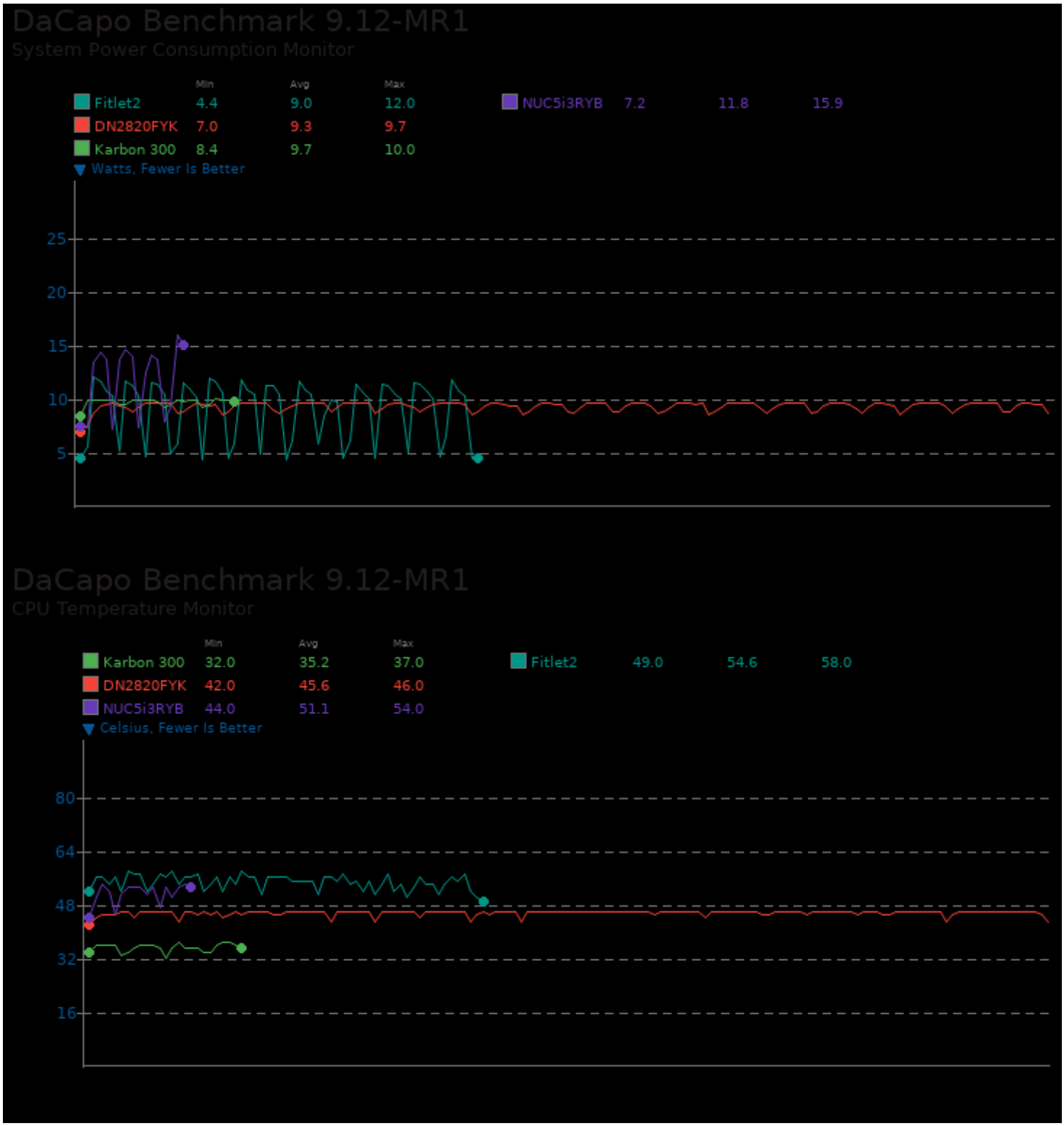
# Atom E3930 Logic Supply Karbon 300 Benchmarks



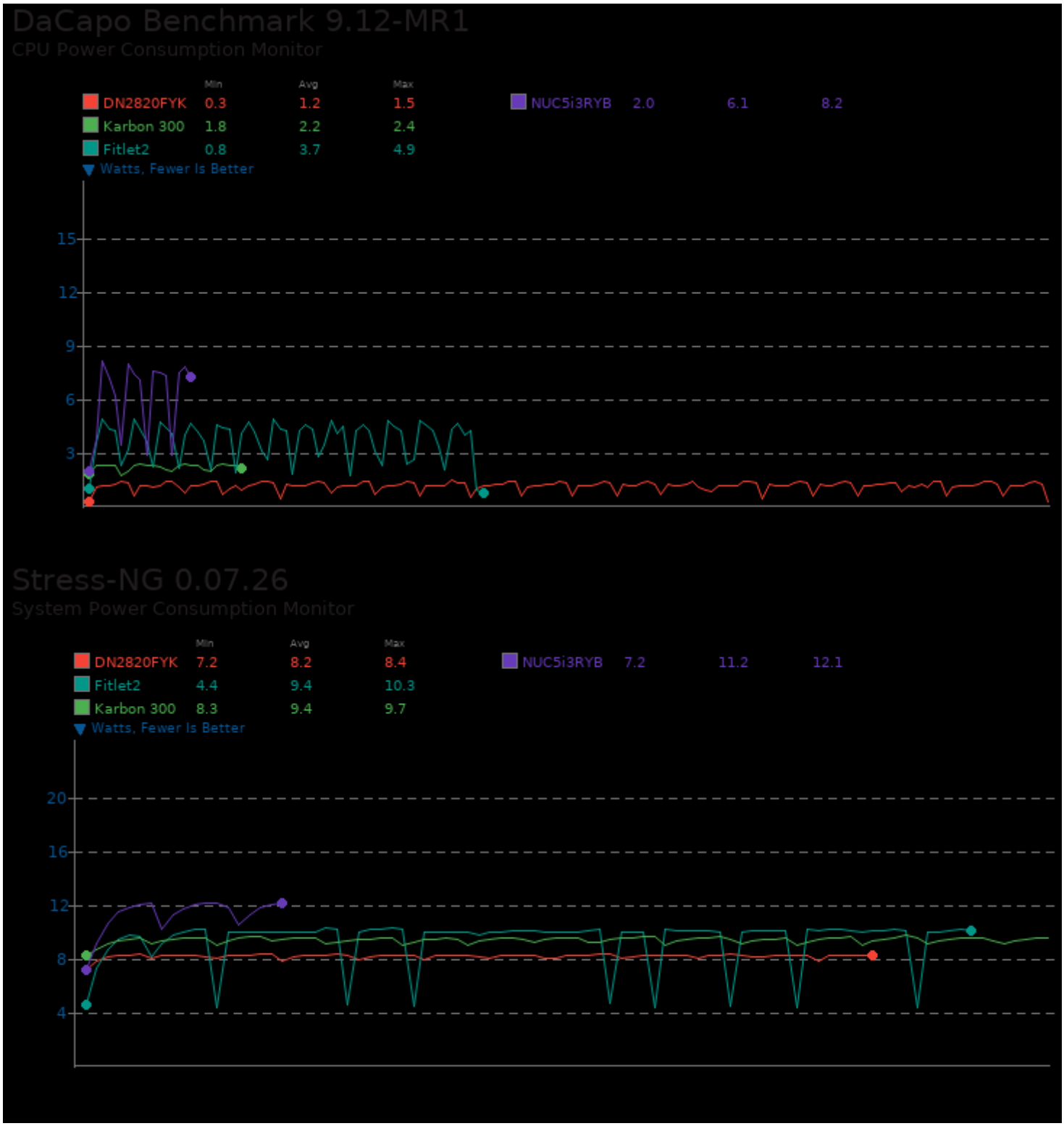
# Atom E3930 Logic Supply Karbon 300 Benchmarks



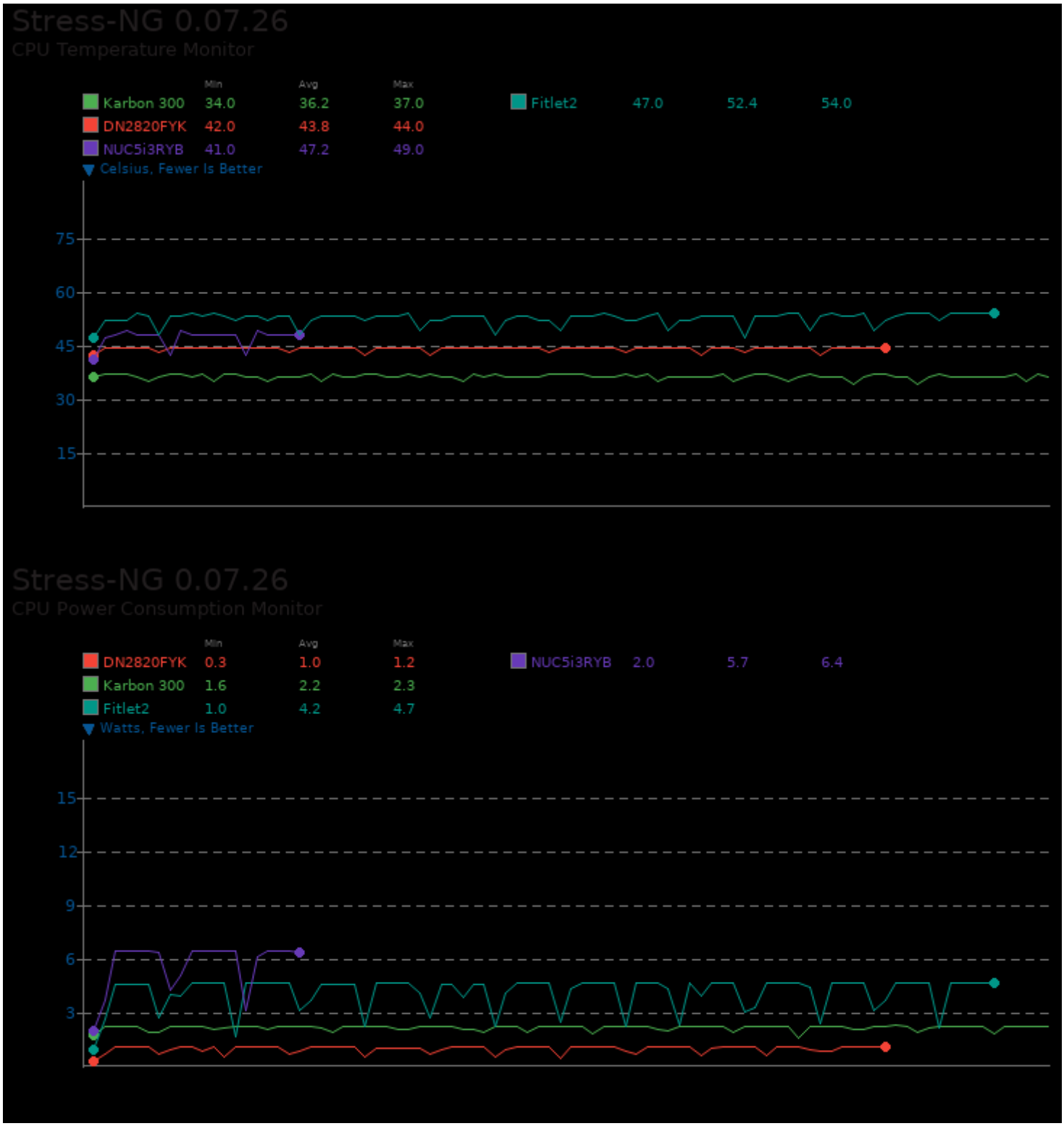
# Atom E3930 Logic Supply Karbon 300 Benchmarks



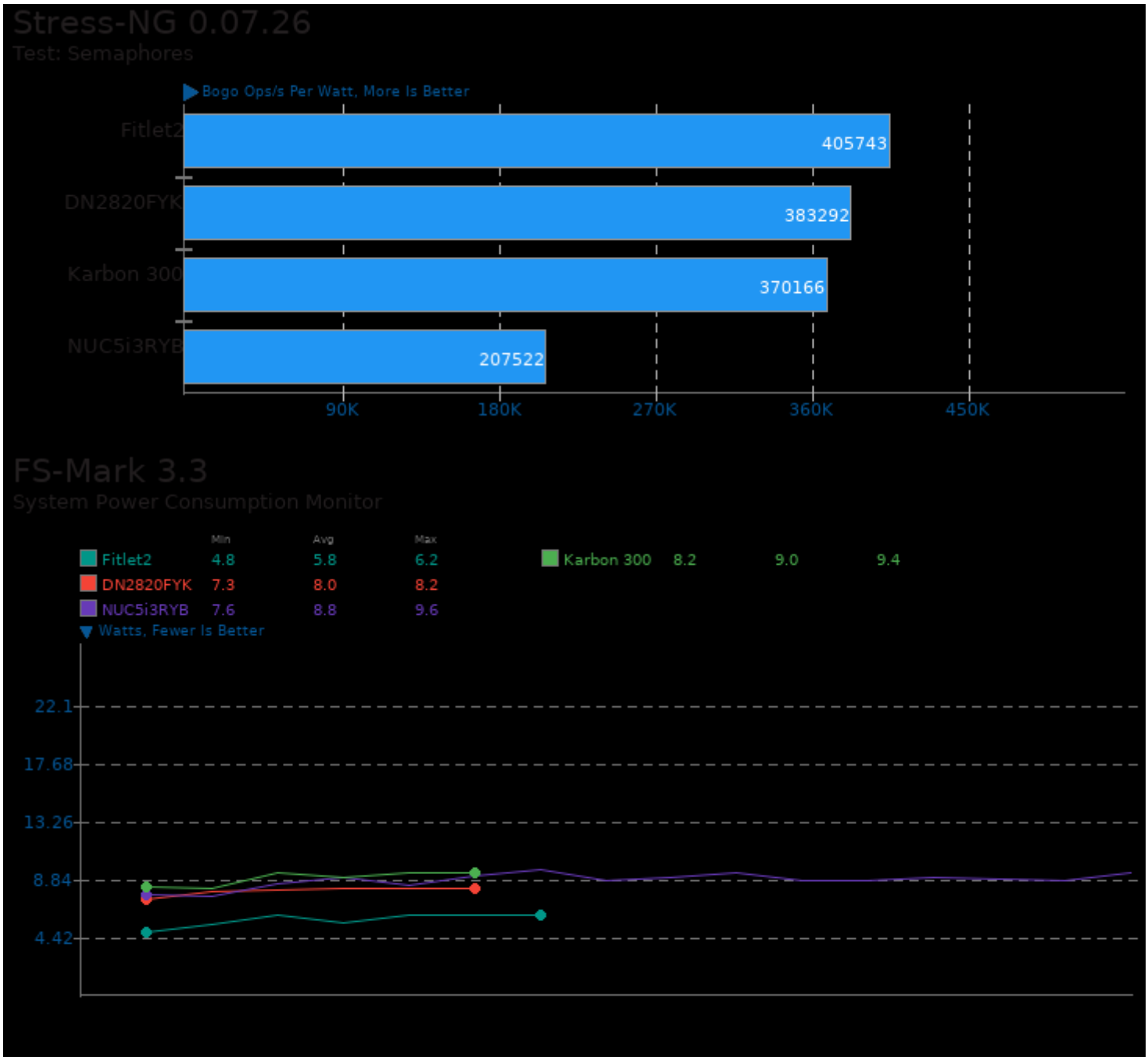
# Atom E3930 Logic Supply Karbon 300 Benchmarks



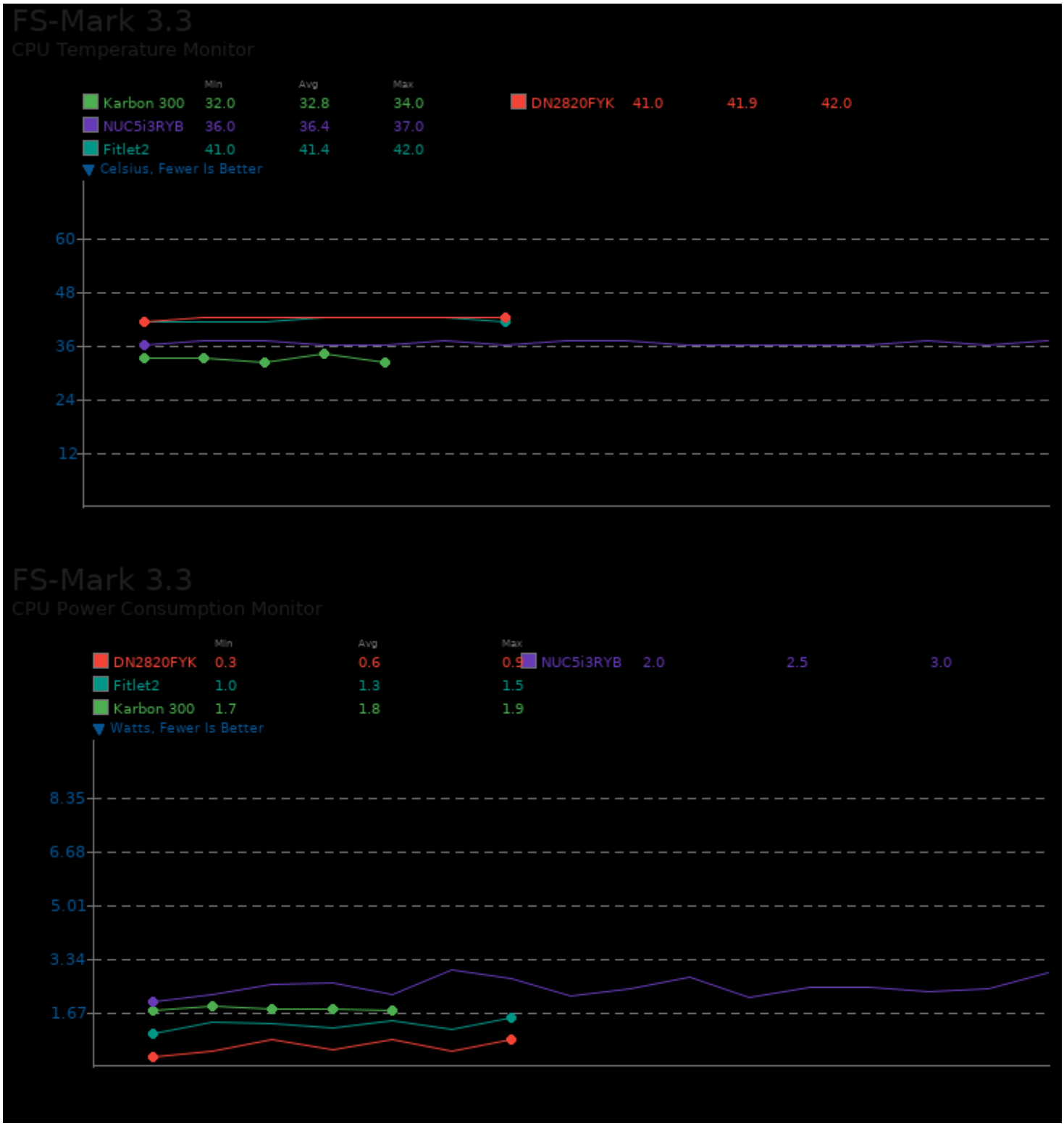
# Atom E3930 Logic Supply Karbon 300 Benchmarks



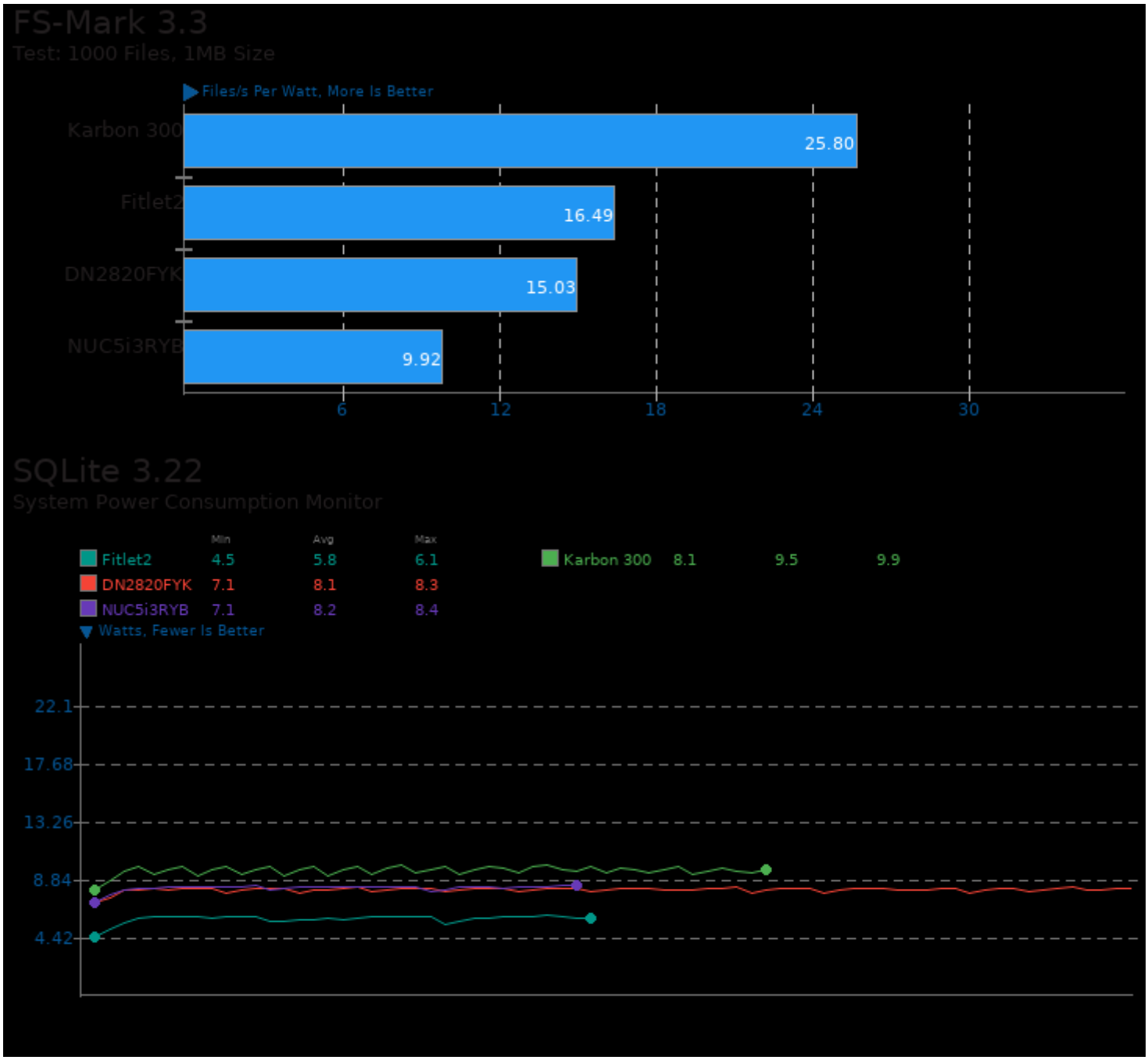
# Atom E3930 Logic Supply Karbon 300 Benchmarks



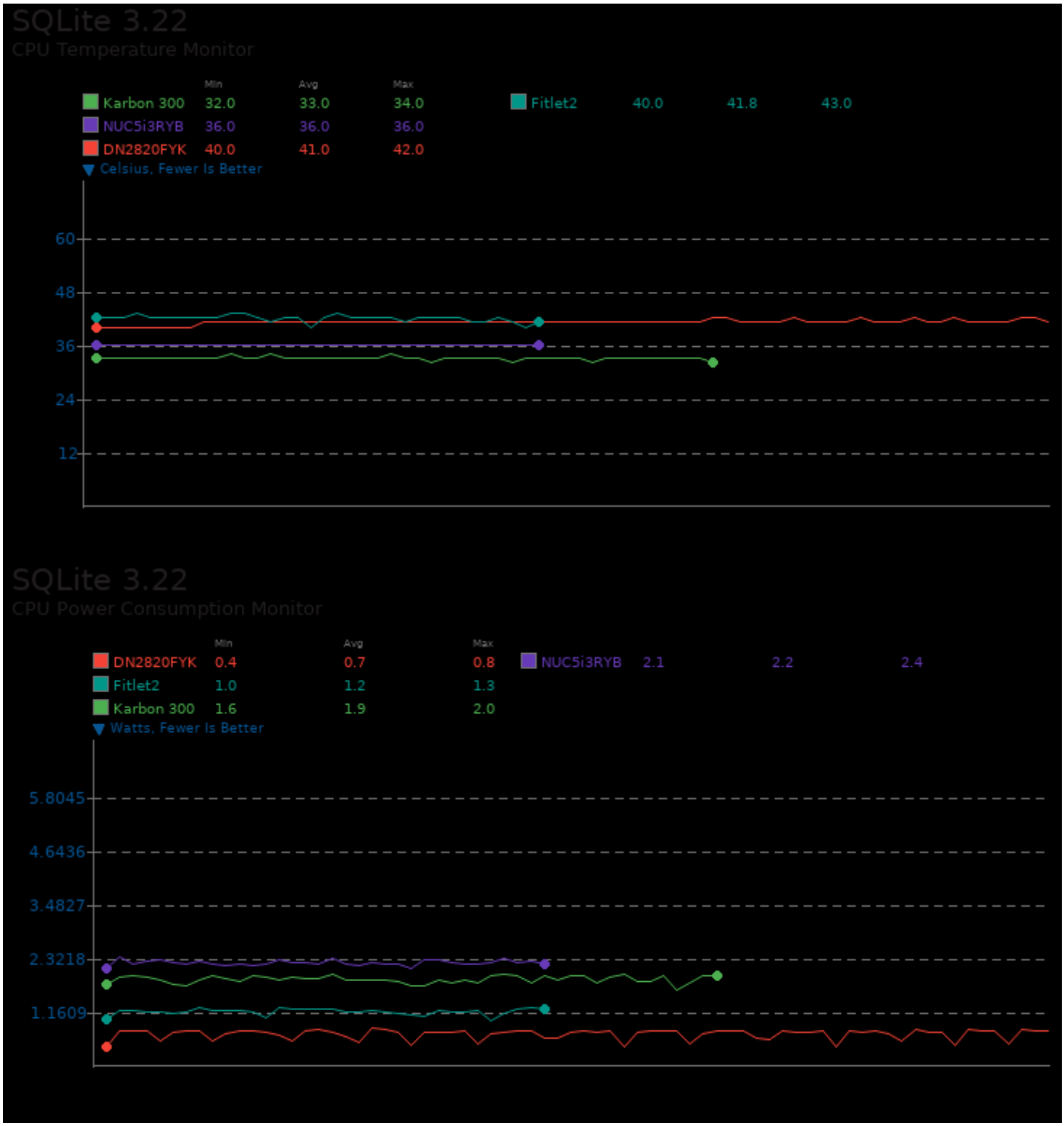
# Atom E3930 Logic Supply Karbon 300 Benchmarks



# Atom E3930 Logic Supply Karbon 300 Benchmarks

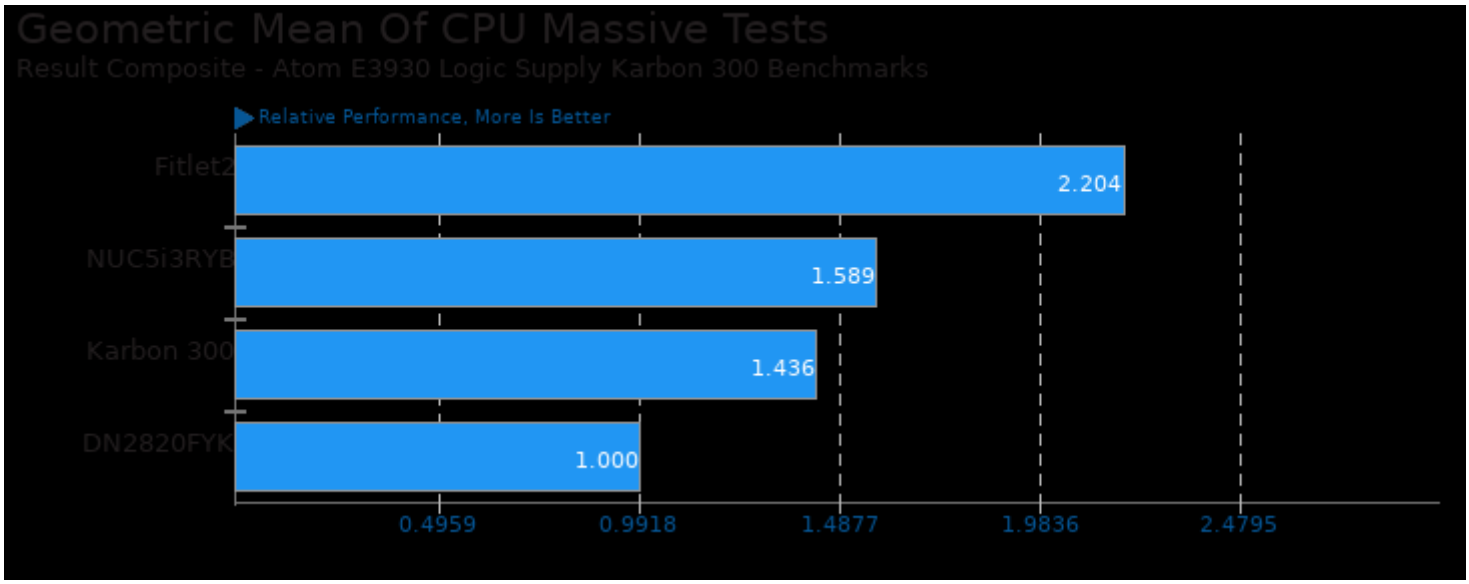


# Atom E3930 Logic Supply Karbon 300 Benchmarks

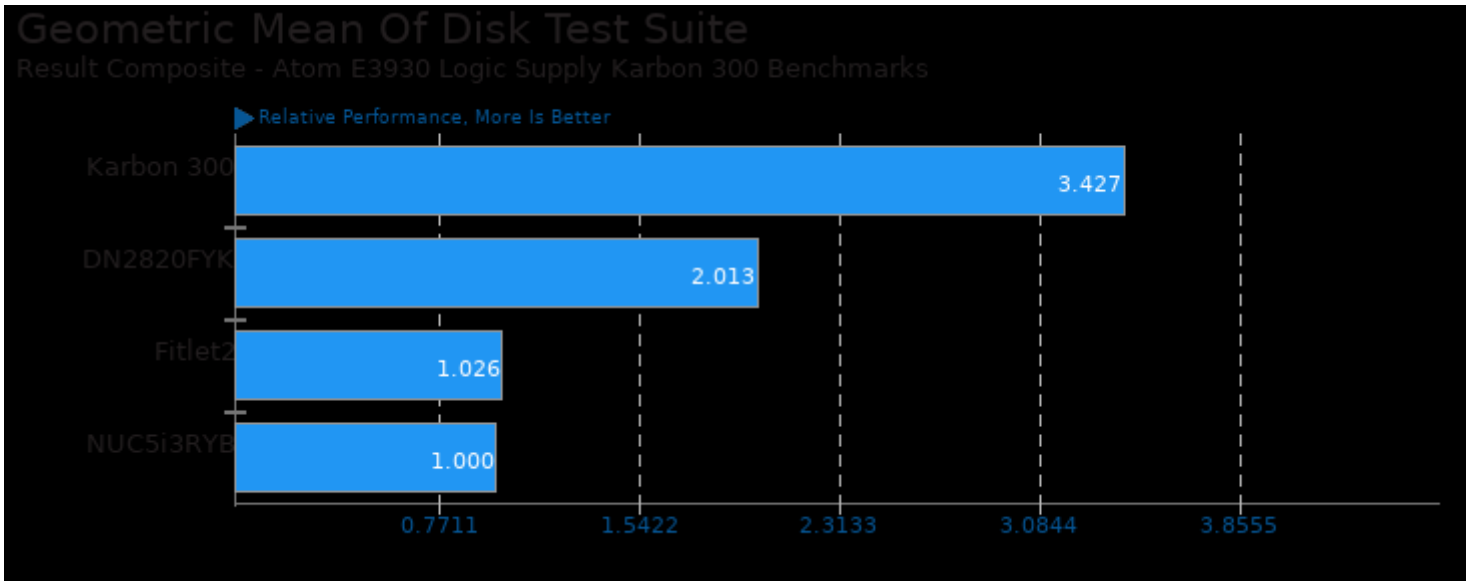


# Atom E3930 Logic Supply Karbon 300 Benchmarks

These geometric means are based upon test groupings / test suites for this result file.

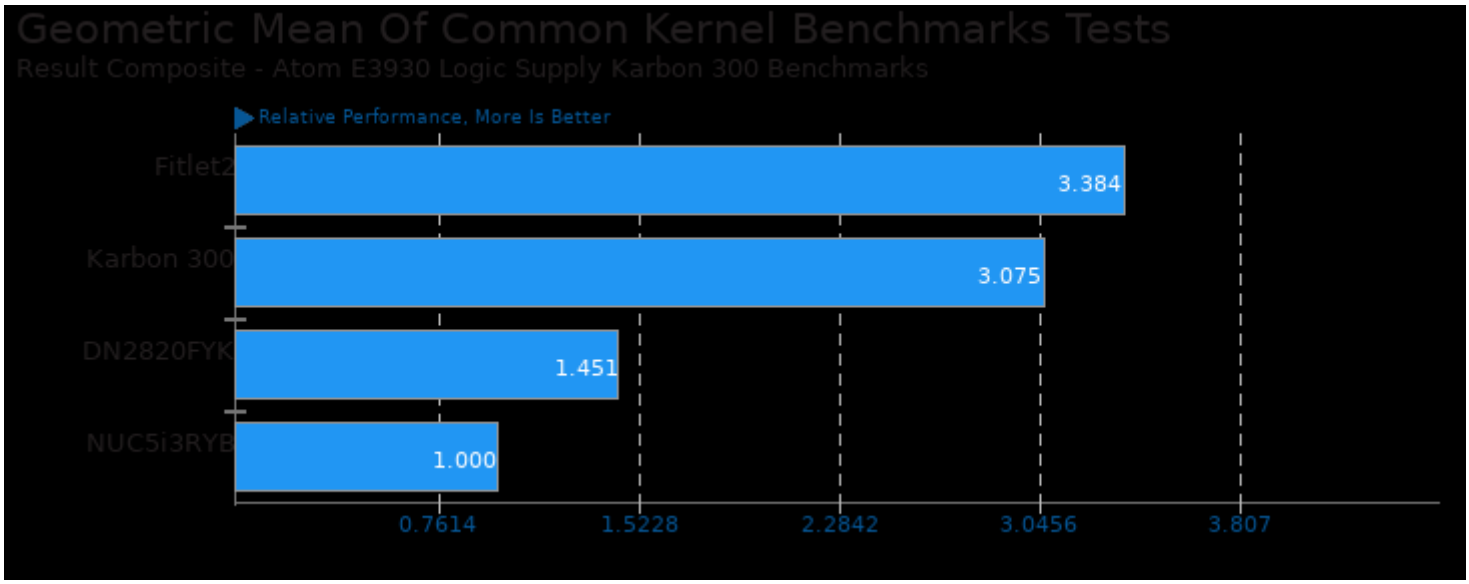



Geometric mean based upon tests: pts/ctx-clock, pts/dacapobench, pts/go-benchmark, pts/phpbench and pts/stress-ng

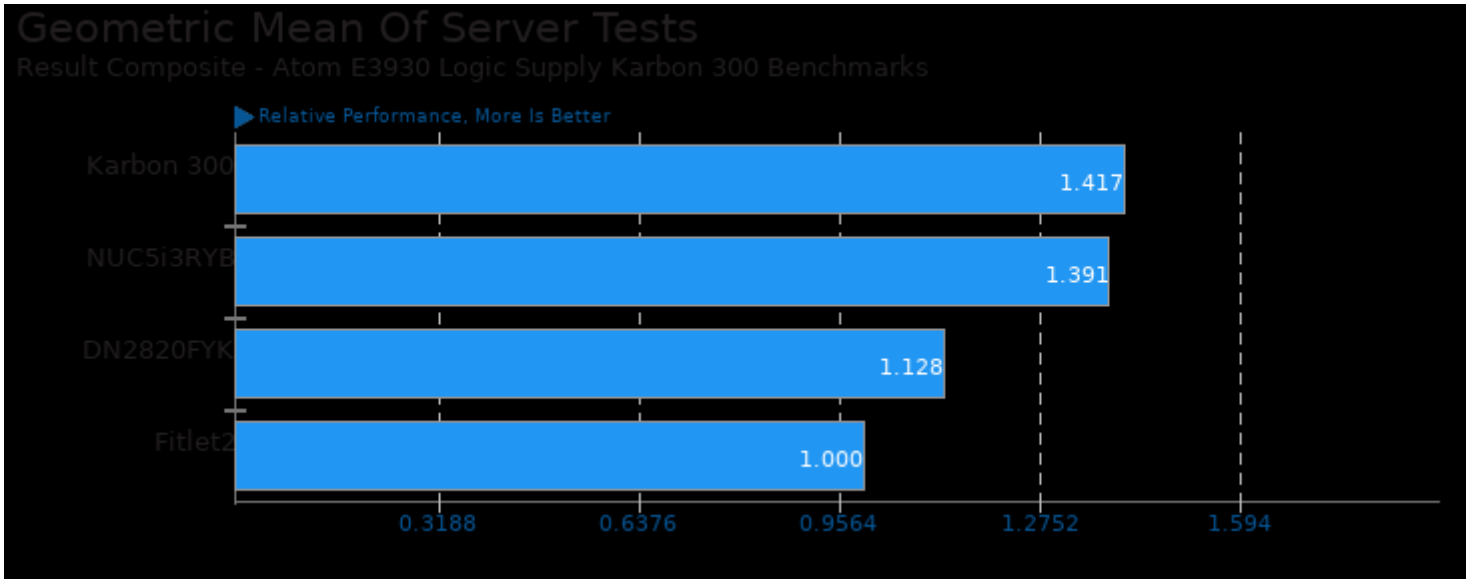



Geometric mean based upon tests: pts/sqlite and pts/fs-mark

# Atom E3930 Logic Supply Karbon 300 Benchmarks

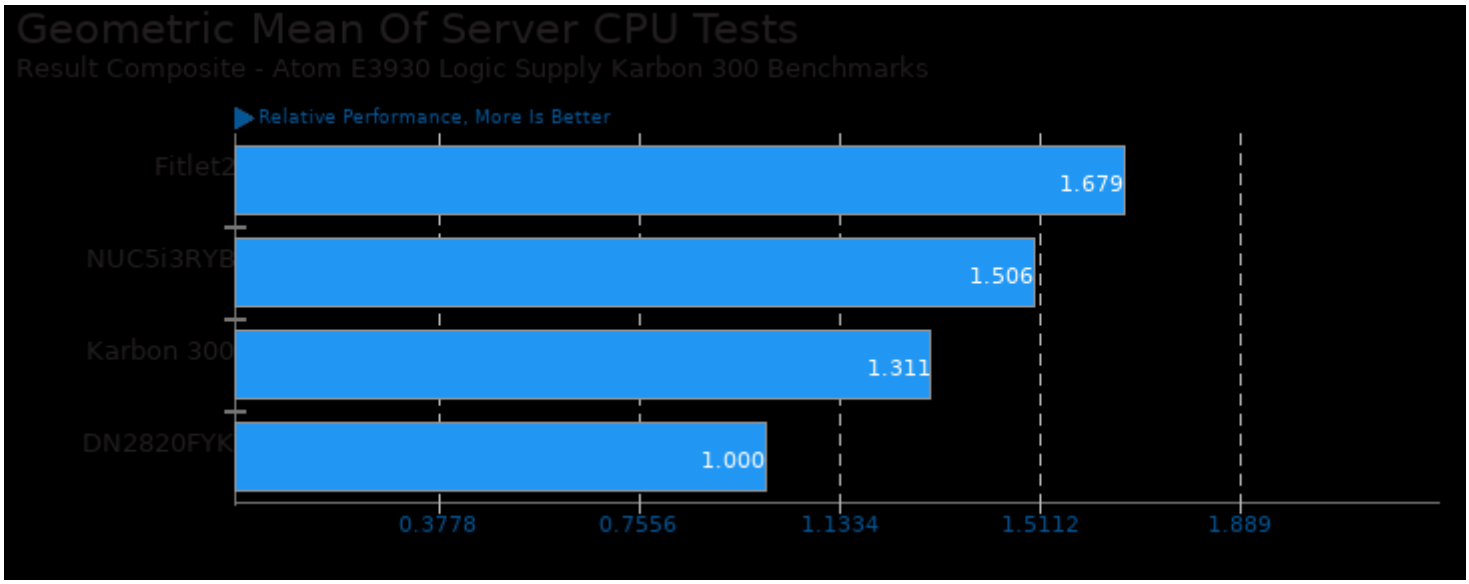



Geometric mean based upon tests: pts/ctx-clock and pts/stress-ng

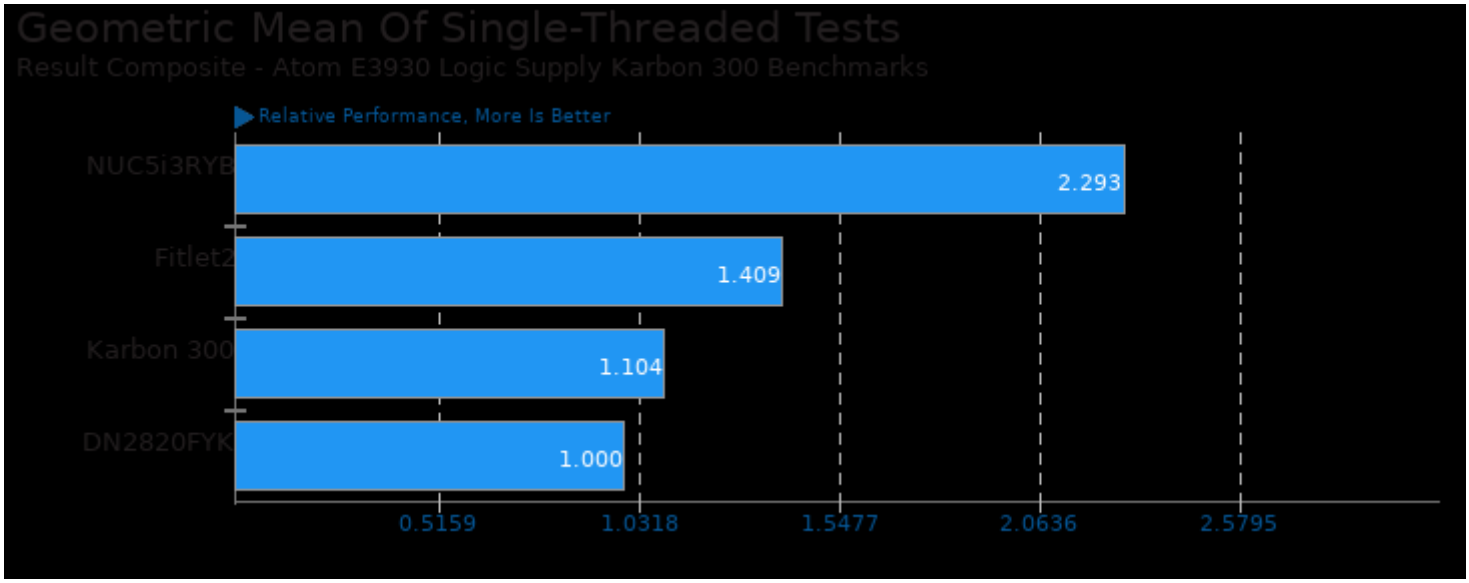



Geometric mean based upon tests: pts/phpbench, pts/perl-benchmark and pts/sqlite

# Atom E3930 Logic Supply Karbon 300 Benchmarks




Geometric mean based upon tests: pts/dacapobench, system/gimp, pts/stress-ng, pts/ctx-clock, pts/pybench and pts/phpbench




Geometric mean based upon tests: pts/perl-benchmark, pts/pybench and pts/phpbench

*This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 09:09.*