

LG NUCLEON SoC and General Mobile CPU Trends

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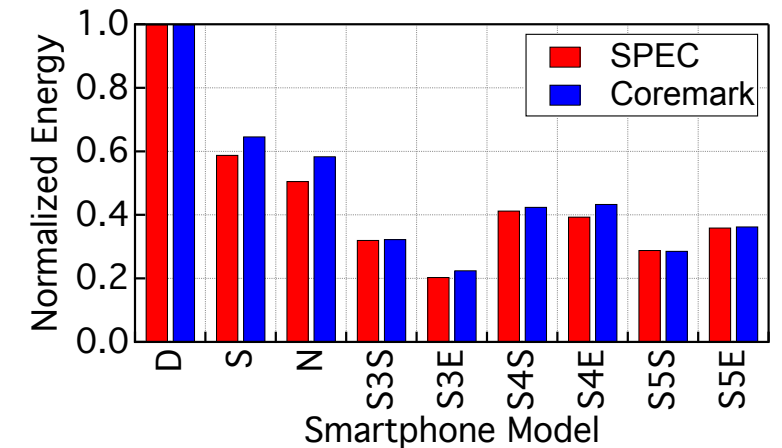
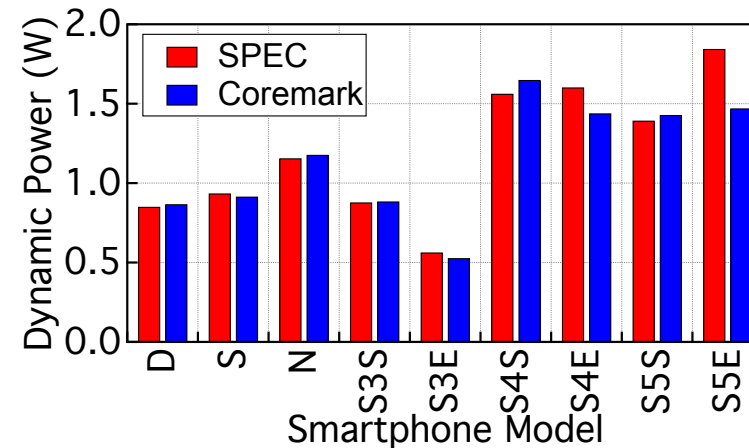
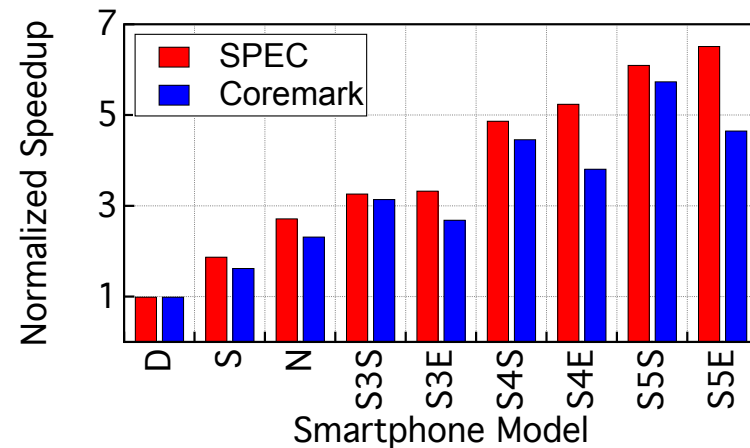
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LG NUCLUN SoC

- **Octo-core ARM big.LITTLE CPU**
 - 1.5 GHz Quad-core Cortex-A15
 - 1.2 GHz Quad-core Cortex-A7
- **Found in LG G3 Screen Phablet (right)**
- **Trend of in-house SoC “design”**
 - Apple A*
 - Samsung Exynos
- **Saturated SoC market**
 - Qualcomm Snapdragon
 - Nvidia Tegra
 - HiSilicon
 - Mediatek
 - TI OMAP



LG NUCLUN CPU compared to current Mobile CPU Power, Performance and Energy Trends

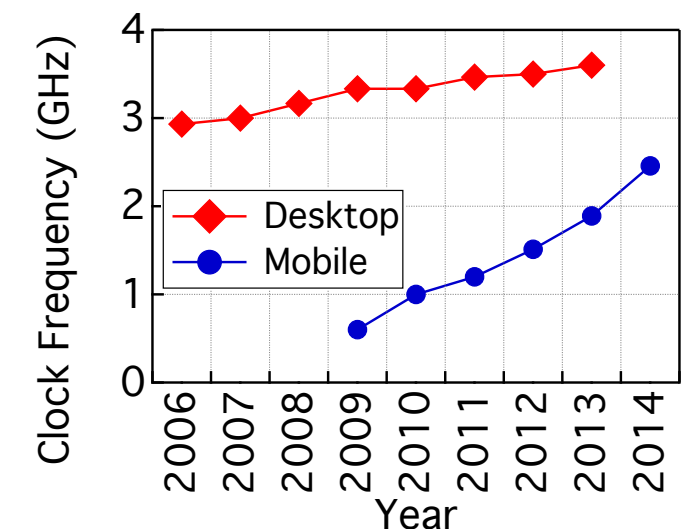
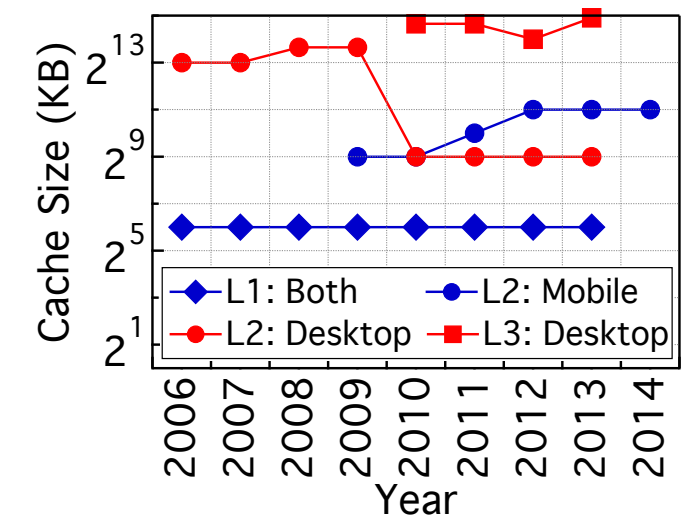
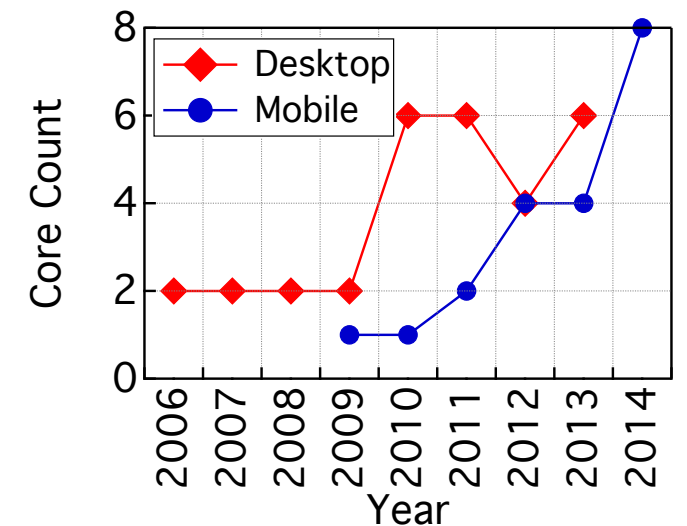
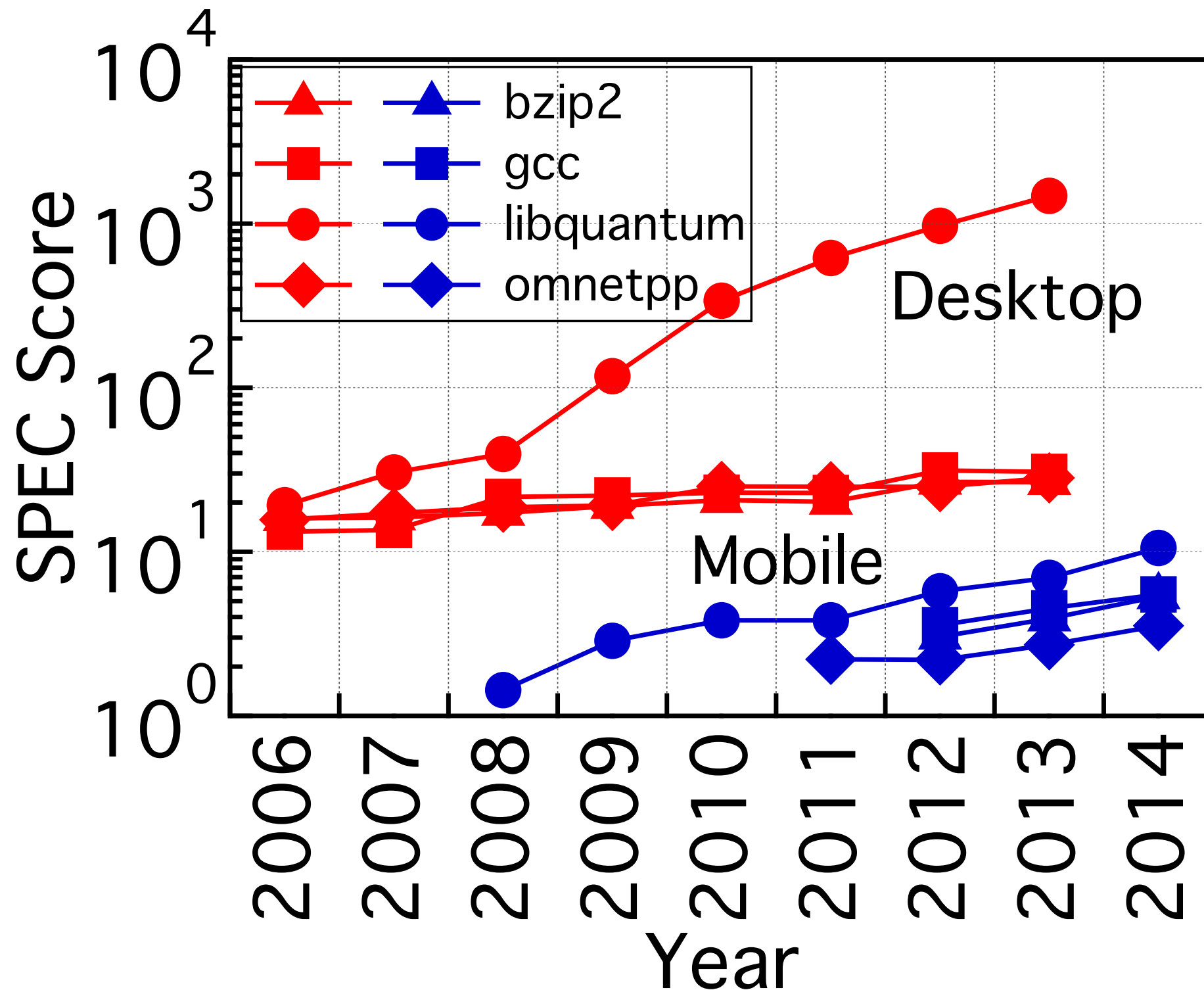


Year	Smartphone Model (Key)	System-on-Chip	CPU	RAM	Process	OS Version
2009	Motorola Droid (D)	Texas Instruments OMAP 3430	600 MHz Single-core ARM A8	256 MB	65 nm	2.2.3
2010	Samsung Galaxy S (S)	Samsung Exynos 3110	1 GHz Single-core ARM A8	512 MB	45 nm	2.2.1
2011	Samsung Galaxy Nexus (N)	Texas Instruments OMAP 4460	1.2 GHz Dual-core ARM A9	1 GB	45 nm	4.2.0
2012	Samsung Galaxy S3 (S3S)	Samsung Exynos 4412	1.4 Ghz Quad-core ARM A9	1 GB	32 nm	4.0.4
	Samsung Galaxy S3 (S3Q)	Qualcomm Snapdragon MSM8960	1.5 Ghz Dual-core Krait	2 GB	28 nm LP	4.1.2
2013	Samsung Galaxy S4 (S4S)	Samsung Exynos 5410	1.6 GHz Quad-core ARM A15 or 1.2 GHz Quad-core ARM A7	2 GB	28 nm	4.2.2
	Samsung Galaxy S4 (S4Q)	Qualcomm Snapdragon APQ8064T	1.9 GHz Quad-core Krait 300	2 GB	28 nm LP	4.2.2
2014	Samsung Galaxy S5 (S5S)	Samsung Exynos 5410	2.1 GHz Quad-core ARM A15 and 1.5 GHz Quad-core ARM A7	2 GB	28 nm HKMG	4.4.2
	Samsung Galaxy S5 (S5Q)	Qualcomm Snapdragon 8930AB	2.5 GHz Quad-core Krait 400	2 GB	28 nm HPm	4.4.2

Most comparable to LG NUCLUN CPU

Mobile CPU Design Trends

(w/ bonus desktop comparison)



References

- [1] “LG to Release Octa-Core “Nuclun” SoC in the LG G3 Screen.” [Online]. Available: <http://www.xda-developers.com/android/lg-nuclun-soc-g3-screen/>
- [2] “Standard Performance Evaluation Corporation (SPEC). SPEC CPU2006 results.” [Online]. Available: <http://www.spec.org/cpu2006/results>