UK-based ARM reveals two processor cores for use in the smartphones, tablets and even servers of the near future-- the Cortex-A53 and Cortex A57.

Both carry the 64-bit ARMv8 architecture launched back in October 2011, and are compatible with 32-bit ARM applications.

ARM calls the A53 "the smallest" 64-bit chip yet, as well as the most power-efficient ARM application processor. Meanwhile the A57 is the "most advanced" applications processor from the company.

Like the earlier Cortex-A15 and Cortex-A7, vendors can link the two processors in what ARM calls big.LITTLE configuration-- with the weaker A53 handling most task before the A57 takes over heavy-duty workloads, in order to increase power efficiency.

The company already names AMD, Broadcom, Calxeda, HiSilicon, Samsung and STMicroelectronics as licensees of the new series, and expects the processor designs will appear in actual devices by around 2014.

Go ARM Launches Cortex-A50 Series