Intel Inside

PC Components & Mini-PCs For Work, Play & Everything In Between

Your PC helps you do an awful lot, from working and filing your taxes to editing video, organizing photos, and mowing down waves of zombies. In most if not all of these cases, giving your PC the right tools to do the job can make a profound difference. A fast, efficient processor and an SSD can translate directly to a more responsive system, which in turn means you'll complete tasks more quickly and enjoy your leisure time all the more.

To that end, we present several products from Intel that are designed to help your PC perform as well as it can: Intel's Core i7 and Core i5 processors, and Intel SSDs. We'll also take a look at the Intel NUC and Intel Compute Stick, as they can handle a variety of computing tasks and take up very little space.

Core i7-5960X

Intel's Extreme Edition CPUs have been the benchmark for high-performance PCs for many years, and the Core i7-5960X is no exception. Formerly code-named "Haswell-E," this eight-core monster runs at 3GHz (with a Max Turbo frequency of 3.5GHz) and has a massive 20MB Intel Smart Cache. Thanks to Intel's Hyper-Threading technology, the processor is capable of handling a whopping 16 threads of instructions simultaneously, and does so with a TDP of just 140W.

The Core i7-5960X is also paired with Intel's X99 chipset and was from the first family of consumer CPUs to support today's fastest system memory, DDR4. This and other refinements add up to the fastest CPU on the market today, hands down, and its unlocked multiplier means that you can very easily make it even faster through overclocking. Simply pair it with a capable CPU cooler, such as Intel's own TS13X, and you are free to explore the 5960X's ample headroom.

Intel Core i7-5960X

More Haswell-E

If the X99 platform and the Haswell-E architecture appeals to you but you are on a somewhat tighter budget, Intel's Core i7-5930K and Core i7-5820K are options to keep in mind. These six-core, 12-thread CPUs have somewhat smaller amounts of Intel Smart Cache but also run at higher stock and Turbo frequencies. Both provide a wealth of computing power as well as support for the same quad-channel DDR4 memory that you'd pair with the Extreme Edition.

Intel Core i7-6700K

Core i7-6700K

Intel recently introduced its 6th Generation Core processors, code-named "Skylake." The flagship of this new family is the Core i7-6700K. This quad-core chip is the first consumer CPU built on a 14nm process, and the result is exceptional performance and unrivaled efficiency (the 6700K's TDP is a stingy 91 watts). Intel Hyper-Threading enables the chip to run up to eight concurrent instruction threads, and its 8MB Intel Smart Cache and 4GHz base frequency (4.2GHz Turbo) keep moving at blazing speeds.

The Core i7-6700K is designed to work hand-in-hand with Intel's newest motherboard chipset, Z170, and this means that the CPU is also the first non-Extreme Edition chip to support DDR4 memory, the fastest PC system memory available today. The Core i7-6700K and Z170 also provide support for the latest storage standards, including M.2, SATA Express, and U.2, so system builders can include the fastest SSDs on the market today (more on this in a moment).

Skylake Jr.

As with most Intel CPU families, the 6th Generation Core series of processors includes a more budget-friendly option in the form of the Core i5-6600K, a quad-core CPU that still benefits from Intel's new 14nm architecture and the Z170 chipset. This speedy processor runs at 3.5GHz (3.9GHz Turbo), and like the Core i7-6700K it has a fully unlocked multiplier, so overclocking is a snap.

SSD 750 Series

When building a system with one of the world's fastest processors and using the fastest available system memory, it really makes sense

to also include the fastest storage medium available. That means adding an SSD that utilizes the NVMe host interface and four lanes of PCIe 3.0, like Intel's SSD 750 Series.

These lightning-fast drives are available in two form factors, as a PCIe add-in card and as a 2.5-inch drive that connects to your PC via the U.2 interface. Regardless of which form factor you choose, you can get an Intel SSD 750 Series drive in one of three capacities (400GB, 800GB, and 1.2TB), and you will enjoy sequential 128KB reads up to 2,500MBps, sequential 128KB writes up to 1,200MBps, random 4KB reads up to 460,000IOPS, and random 4KB writes up to 290,000IOPS. (These numbers represent maximum speeds for the 1.2TB drives; speeds for other capacities vary.)

types. These versatile, dependable drives are available in both SATA 2.5-inch and M.2 form factors, and come in capacities ranging from 56GB to 360GB. Sequential 128KB reads and writes across the board can reach 540MBps and 490MBps, respectively, and random 4KB reads and write speeds vary by form factor and size but can reach 48,000IOPS and 80,000IOPS.

NUC

Intel's NUC (Next Unit of Computing) small form factor barebones PC is a tiny but powerful PC unit that provides lots of cool options like a VESA mount, a detachable lid that you can replace with your own custom 3D-printed lid, and more. Two recent NUC units in particular represent groundbreaking

The NUC5PGYH packs an Intel Braswell Pentium N3700 quad-core CPU with Intel HD Graphics that runs at 2.4GHz, as well as 2GB of DDR3L (you can expand up to 8GB), a 32GB eMMC on-board drive, and Microsoft Windows 10. It supports a full range of wired and wireless networking options, lets you add both a 2.5-inch SATA drive and SDXC flash memory cards, and provides the same USB 3.0 options as its Core i7 sibling.

Both units provide fast, quiet computing power for a variety of applications and (of course) a very small footprint for convenient placement in any room or setting. For more information on these and other NUC units, visit www.intel.com/nuc.

Intel SSD 750 Series

Intel NUC NUC5PGYH

Intel Compute Stick

SSD 730 Series

Available in both 240GB and 480GB capacities, Intel's SSD 730 Series drives represent the pinnacle of performance and reliability for SATA 6Gbps form factor drives, providing sequential 4KB reads up to 550MBps, sequential 4KB writes up to 470MBps, random 4KB reads up to 89,000IOPS, and random 4KB writes up to 74,000IOPS. (These numbers represent maximum speeds for the 480GB drive; 240GB drive speeds vary.) The drives also scale impressively when placed in two-drive RAID 0 configurations.

SSD 535 Series

Intel's SSD 535 Series drives are the perfect general-use solution drives for a host of system configurations and application

firsts: The NUC5i7RYH is the first barebones NUC unit powered by a Core i7 CPU, making it the highest-performing NUC ever, and the NUC5PGYH is the first NUC to come as a complete PC, with everything you need to plug in and get started right out of the box.

The NUC5i7RYH's dual-core Core i7-5557U processor runs at 3.1GHz (3.4GHz Turbo) and has a 4MB cache, as well as Iris Graphics 6100 and support for both HDMI and DisplayPort displays. It provides up to 7.1 surround sound, has four USB 3.0 ports (one of which is a charging port), and supports both wired Gigabit Ethernet connections and Wi-Fi 802.11ac and Bluetooth connectivity. Just add up to 16GB of DDR3L memory via two SODIMMs and a SATA 6Gbps SSD or hard drive, and you are ready to fire it up.

Compute Stick

The Intel Compute Stick is one of the smallest, most portable PCs available today. Roughly the size of a large flash memory drive, it lets you quickly transform any HDMI display into a PC that you can use for entertainment, productivity, digital signage, or a number of other applications.

This tiny unit includes a quad-core Intel Atom processor with Intel HD Graphics, 32GB of storage (Windows version), 2GB of memory, a USB 2.0 port and MicroSD card reader, and integrated Wi-Fi and Bluetooth. You can get a Compute Stick in both Windows and Ubuntu versions, and it's an incredibly convenient way to take your data and your personalized settings with you no matter where you go. Learn more at www.intel.com/computestick. ■