Performance and Security for Military, Aerospace, and Government
Intelligent Systems based on Intel® Architecture

With service to over 3,500 customers in 30 diverse market segments over a span of more than 30 years, Intel continues to bring industry-leading computing and communications technologies to intelligent systems. This breadth and depth of experience makes Intel a trusted and reliable supplier to customers in aerospace, defense and government.

As the world’s largest supplier of semiconductor products, Intel is committed to enabling new devices with higher functionality and complexity while controlling power, cost, and size. For example, Intel’s industry leading 3-D tri-gate transistor technology enables a 37 percent performance increase at low voltage and 50 percent power reduction at constant levels of performance.

Intel’s long-term commitment to manufacturing leadership and stability is backed by our $10.8 billion investment in plant and equipment in 2011, and an investment of $8.4 million in research and development over the same period (source: Intel Corporation 2011 Annual Report).

Intel’s broad product roadmap, including Intel® Atom™ processors, Intel® Core™ processors, and Intel® Xeon® processors deliver industry-leading performance per watt, for industry-leading size, weight, and power (SWAP) backed by a minimum of seven years of product support.

Market Segment Trends
Intel has a finger on the pulse of present and future trends shaping the future of the industry. military, aerospace, and government systems place a strong focus on cost control and efficiency, and the growth of net-centric operations continues to drive growing demand for connected and secure computing and communications solutions.

Because of these trends, RFQs for military, aerospace, and government systems place a strong focus on cost control and efficiency. At the same time the growth of net-centric operations continues to drive the demand for high-performance, connected, and highly secure intelligent systems.

The transition from traditional embedded systems to new generations of highly capable intelligent systems is at the center of the industry’s shift from fixed to mobile devices; from manned to unmanned systems; from proprietary designs to commercial off-the-shelf solutions.

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Intel’s Performance/Watt Leadership

Intel® Multi-Core processors provide industry-leading performance/watt for power efficient performance, and Intel® processors include a broad range of other performance enhancing technologies:

• Intel® Advanced Vector Extensions (Intel® AVX) improve floating point and vector computation for media and other high performance computing applications.

• Intel® Hyper-Threading Technology delivers thread-level parallelism on each processor by enabling multiple threads to run on each core, improving processor throughput and accelerating overall performance on threaded software.

Intel® vPro™ Technology

In addition to their performance and power efficiency, Intel® Core™ and Xeon® processors with Intel® vPro™ technology incorporate leading hardware-based technologies for security, virtualization, and secure remote manageability in mission-critical systems.

Processors with Intel vPro technology include built-in security technologies that allow consistent implementation of security policies and protect mission-critical data and devices themselves, enterprise infrastructure to intelligent systems at the network edge:

• Intel® Advanced Encryption Standard New Instructions (Intel® AES-NI) is a new encryption instruction set that improves on the Advanced Encryption Standard (AES) algorithm and accelerates the encryption of data in the Intel® Xeon® and the Intel® Core™ processor families.

• Intel® Trusted Execution Technology (Intel® TXT) is designed to harden platforms from the emerging threats of hypervisor attacks, BIOS, or other firmware attacks, malicious root kit installations, or other software-based attacks. It increases protection by allowing greater control of the launch stack through a Measured Launch Environment (MLE) and enabling isolation in the boot process.

• Intel® Virtualization Technology (Intel® VT-d) enables multiple virtual execution environments to run in protected virtual machines on a single hardware platform. Intel TXT extends the Virtual Machine Extensions (VMX) environment of Intel VT to enable the verifiably secure installation, launch, and use of a hypervisor or operating system.

At Intel, we believe silicon innovation can significantly help today’s aerospace and defense industry meet the demand for new capabilities while keeping a tight rein on costs. Intelligent systems based on Intel architecture devices deliver unique levels of performance, energy efficiency, manageability, and security, with interoperability and proven software compatibility that can shorten development time and simplify the deployment of new connected devices.

Intel® architecture supports leading real-time and general purpose operating systems with a wide range of software tools that can accelerate development of new designs in addition to the migration of existing applications from legacy systems.

When your objective is improved system capabilities and user experiences, with reduced development and operational costs, what’s inside your next design can really make a difference.