

Application Note
Intel® Digital Security Surveillance
Digital Security



Intel® Digital Security Surveillance

When Safety Is Critical



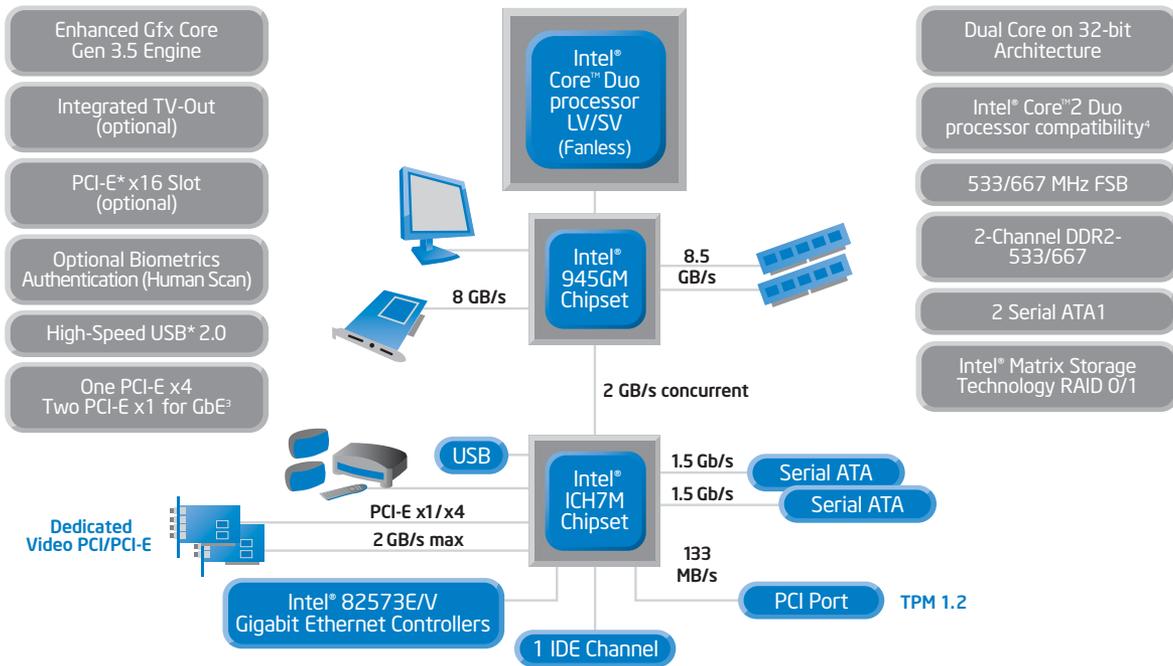
High-value protection and security for less

The digital security surveillance industry is evolving quickly. To keep up with the needs of innovative and sophisticated security and monitoring requires more computing capacity, higher reliability, faster connectivity, and greater storage abilities found in the advanced technologies of Intel® Digital Security Surveillance platforms.

The Intel Digital Security Surveillance platform is available in a new fanless configuration for companies needing robust and powerful, yet smaller, more compact solutions. This new fanless Intel Digital Security Surveillance platform delivers broader bandwidth for higher video resolution, greater storage capacity, and high-performance computing in a dense, low-power platform. A fanless platform option reduces design requirements, while lower power consumption relieves power and cooling demands in digital security surveillance infrastructures.

Feature	Benefit
Low-power, fanless platform	<ul style="list-style-type: none"> Intel® Core™ Duo processor LV (1.5W) and Intel® Core™ Duo processor SV (31W) enable powerful dual-core computing at very low power Reduced design requirements (no fan required) Reduce environment (fan) noise, lower power and cooling requirements
Dual-core processing	<ul style="list-style-type: none"> Increased performance for multi-threaded code High processing throughput for Streaming SIMD 3 (SSE3) instructions accelerates video processing 667 MHz system bus for high system throughput Large 2 MB L2 cache keeps more data closer to the cores for faster execution
I/O Scalability with PCI Express* or PCI*	<ul style="list-style-type: none"> Supports multiple capture cards Supports four or more channels of D1 resolution or 16 channels of CIF resolution¹ (depending on capabilities of capture card) Supports both PAL and NTSC High I/O bandwidth provides headroom for high-resolution video from multiple cameras
Intel® Matrix Storage Technology	<ul style="list-style-type: none"> Reliable RAID 0/1 storage of critical video data Data striping/mirroring for secure, safe data storage
Dual on-board Gigabit Ethernet	<ul style="list-style-type: none"> Fast connectivity for data network High-speed IP camera connectivity option
Intel® Active Management Technology ²	<ul style="list-style-type: none"> Out-of-band system management enables asset management regardless of system state Persistent asset inventory improves equipment audit efficiency
Trusted Platform Module (TPM)	<ul style="list-style-type: none"> Enhances platform security with protected space for security-critical tasks

Intel® Digital Security Surveillance Platform Overview — Complete Fanless Solution



Find security anomalies faster with Intel® Core™ Duo processor and dual-core computing

The two cores of the Intel® Core™ Duo processor deliver much more computing capacity to execute the sophisticated algorithms of innovative surveillance and recognition applications, while also processing high-resolution video streams. In addition, Intel technologies further improve performance for advanced Intel Digital Security Surveillance applications:

- **Intel® Smart Cache.** An intelligent L2 cache that reduces latency to data, improving performance and power efficiency. Intel Smart Cache is integrated into the large L2 cache.
- **Intel® Advanced Digital Media Boost.** Doubles performance of streaming instructions (SSE/SSE2/SSE3) by executing complete 128-bit instructions in one clock cycle, instead of two cycles as in previous microarchitectures.

The platform is forward compatible with Intel's next-generation Intel Core Duo processor, making it easy to migrate to even more processing capacity when necessary.

Flexibility and scalability with PCI Express* or PCI* interfaces

The fanless Intel Digital Security Surveillance platform supports up to 4 or more channels of D1 video resolution (depending on capture card capabilities) or 16 channels of CIF resolution! The platform supports both PCI* and PCI Express* (PCIe*) connectivity, allowing customers to continue to use legacy PCI-based video cards or today's PCI Express-based (PCIe) capture devices. The platform incorporates one PCIe x4 link dedicated for video capture and one PCI (133 MB/s) interface.

Secure video data with dual SATA1 interfaces and Intel® Matrix Storage Technology

Faster, reliable data storage from large-capacity SATA1 drives delivers performance for fast storage and retrieval of massive amounts of video data that might need to be quickly recalled and analyzed by recognition software. Intel® Matrix Storage Technology, with RAID 0/1, enhances data retrieval capabilities and improves safekeeping of critical video data across multiple drives.

A truly trusted platform

The Trusted Platform Module (TPM) enhances platform security above-and-beyond the capabilities of today's software by providing a protected space for key operations and other security critical tasks. Using both hardware and software, the TPM protects encryption and signature keys at their most vulnerable stages.

Optional features enhance security and usability

Integrated TV-out, PCIe x16 video interface, and biometrics authentication options extend the rich functionality and security of the Intel Digital Security Surveillance platform.

For more information, visit www.intel.com/info/dss.

¹Based on Huperlab's huperDVR 2400 v1.3 system software.

²Intel® Active Management Technology requires the platform to have an Intel® AMT-enabled chipset, network hardware and software, connection with a power source and a network connection.

³PCI-E riser card with Intel 41210 bridge for extended scalability.

⁴Based on Intel's next-generation mobile processor for 945GM chipset platform.

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