



Solution Brief  
Digital Security and Surveillance

# Digital Security and Surveillance Solution Options

for the Intel® solution system builders and resellers

As the Digital Security and Surveillance (DSS) market transitions to new high-definition digital technologies and expands beyond traditional building security, a wide range of opportunities exist for Intel® system builders and resellers to offer solutions at different price/performance levels, form factors, and energy consumption levels, etc.

As DSS becomes more intelligent and innovations such as HD video and video analytics become more prevalent, the need for higher-performing, more reliable solutions grows even greater. This ongoing evolution in the DSS markets presents opportunities for the traditional IT reseller channel:

- DSS systems are PC/server/storage-based solutions—Leverage your expertise in assembly and support.
- IT departments increasingly own DSS at the customer level—Leverage your existing customer relationships.
- DSS systems reside on the network—Leverage your IT network expertise.

## Why Intel for DSS?

DSS solutions deployed to protect people and property need to be capable of high-performance video processing combined with 24/7/365 reliability. Optimized power consumption, simplified management and low-heat generation are other critical performance factors. Solution developers addressing the DSS market need platforms that support ease of development and faster time to market combined with performance scalability and design flexibility.

Here are two sample solution options: An entry-level DSS application based on an Intel® Atom™ processor and a high-performance solution based on a 2nd generation Intel® Core™ i7 processor.

## Entry-level DSS Application

Intel® Atom™ processors have set a new standard in performance-per-watt on the industry-standard Intel® Architecture, delivering the fanless, power-efficient performance needed for the new generation of smarter, faster DSS solutions.



Entry-level DSS applications feature:

- 4-8 channels of D1
- 8-16 channels of CIF

This solution shows the Intel® “Bulpitt-P” reference design, available from IEI (<http://usa.ieiworld.com>) based on the Intel Atom processor D510. It can power up to eight full-frame-rate D1 (720x480) channels while executing video analytics, making this an easily deployable solution for building and mobile surveillance applications. The CPU handles encoding, recording, display and the software application, while A-D and decode is performed by on-board Conexant chips. (Schematic and layout files available from Intel.)

| Target Applications  | Feature   | Configuration                                |
|--|---|--|
| <ul style="list-style-type: none"> <li>▪ <b>Traditional building surveillance:</b> Providing security for facilities such as retail stores, SOHO, or branch offices.</li> <li>▪ <b>Mobile surveillance:</b> Implemented in transportation, including police vehicles, cars, buses and trains.</li> </ul> | Chassis + Motherboard                             | ▪ IEI-IBX-300* System (Nano-ITX form factor) |
|  | A-D and Decoder                                   | ▪ 2 chips: Conexant Cx2585x* and Cx25820*    |
|  | Intel® Processor                                  | ▪ Intel® Atom™ processor D510 with ICH8M     |
|  | Memory  | ▪ 2 GB                                       |
|  | Hybrid DVR Software<br>VMS Software               | ▪ huperVision* 4000<br>▪ huperCenter*        |
|  | <i>BNC Connector Interface to “Octopus” Cable</i> |  |
|  | Analog CCTV Cameras                               | ▪ Any will work                              |

**TOTAL HARDWARE COST: ~\$500**

## High-performance DSS Application

The 2nd generation Intel® Core™ i7-2600K processor delivers the performance needed to meet the specifications of the next-generation Networked Video Recorders enabled with high-definition and video analytics. With Intel® HD Graphics 2000 integrated into the CPU, the Intel Core i7-2600K processor platform’s media processing acceleration capabilities eliminate the need for discrete signal processing hardware, and the associated design and software development costs. This solution shown here, an Intel® demo NVR system built with COTS components and VMS partner software, can power up to 16 channels of 1080p25 resolution video, 32 channels of D1 or up to 64 channels of CIF.



High-performance DSS applications feature:

- Up to 16 channels (1080p25)
- Up to 32 channels (D1)
- Up to 64 channels (CIF)

| Target Applications  | Feature                                      | Configuration  | Cost     |
|--|--|--|----------|
| <ul style="list-style-type: none"> <li>▪ <b>Intelligent, high-definition security and surveillance:</b> Providing intelligent, enterprise-class security for public and private facilities, such as critical infrastructure, corporate buildings, airports and retail.</li> <li>▪ <b>Business intelligence:</b> For data-driven businesses that want to gather and analyze operational and anonymous customer data such as demographics, in-store traffic patterns, sales conversions, etc.</li> <li>▪ <b>Intelligent traffic:</b> Monitoring systems in transport infrastructures to improve traffic safety and management, law enforcement and toll collection.</li> </ul> | Chassis                                      | ▪ Rosewill TU-155* II 500 Black 0.8mm cold-rolled steel ATX Mid Tower Computer Case with 500W Power Supply | \$74.99  |
|  | Memory                                       | ▪ G.SKILL Ripjaws* Series 8 GB DDR3 1333   | \$84.99  |
|  | Motherboard                                  | ▪ Intel® BOXDH67CL i7/i5/i3 LGA1155 H67 DDR3 HDMI SATA 6 Gb/s USB 3.0 ATX Motherboard                      | \$105.95 |
|  | Intel® Processor                             | ▪ Intel® Core™ i7-2600K processor, 3.4 GHz, 8 MB Cache, 32NM LGA1155                                       | \$319.95 |
|  | VMS Software                                 | ▪ Milestone XProtect* Corporate<br>▪ Milestone XProtect Smart Wall   | Fee/Unit |
|  | Video Codecs                                 | ▪ Intel® Integrated Graphics and Media Accelerators  | Included |
|  | <i>Cameras connected via Ethernet/switch</i> |  |          |
| IP CCTV Cameras  | ▪ Axis P3344* HD IP Camera                   |  |          |

## DSS Solution Providers

Take advantage of a burgeoning ecosystem to develop your own solutions, resell an existing solution or work with an integrator specializing in DSS.

### Hardware Providers

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|---|---|
| <b>Branded DVR/NVR Solution Providers</b> | <ul style="list-style-type: none"><li>▪ Pelco</li><li>▪ Cisco</li><li>▪ Interlogix</li><li>▪ March Networks</li><li>▪ Next Level Security Systems</li></ul> |
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|--------------------------------|--|
| <b>ODMs/System Integrators</b> | <ul style="list-style-type: none"><li>▪ Advantech</li><li>▪ Seneca</li><li>▪ Nexcom</li><li>▪ Portwell</li><li>▪ huperLab</li><li>▪ QNAP</li></ul> |
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|-------------------------------|---|
| <b>Motherboard/Video Card</b> | <ul style="list-style-type: none"><li>▪ Advantech</li><li>▪ Nexcom</li><li>▪ Geovision</li><li>▪ huperLab</li><li>▪ Hikvision</li><li>▪ IEI</li><li>▪ Lanner</li><li>▪ Portwell</li></ul> |
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|-----------------------|---|
| <b>Camera Vendors</b> | <ul style="list-style-type: none"><li>▪ AXIS</li><li>▪ ACTi</li><li>▪ Avigilon</li><li>▪ Panasonic</li><li>▪ Sony</li></ul> |
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### Software Providers

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|--|--|
| <b>Video Management Software (VMS)</b> | <ul style="list-style-type: none"><li>▪ Milestone Systems</li><li>▪ Genetec</li><li>▪ Verint</li><li>▪ Lenel</li></ul> |
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|---------------------------------|---|
| <b>Video Analytics Software</b> | <ul style="list-style-type: none"><li>▪ ObjectVideo</li><li>▪ Lenel</li><li>▪ iOmniscient</li><li>▪ LightHaus Logic</li></ul> |
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| <b>Video Codec Software</b> | <ul style="list-style-type: none"><li>▪ Arcsoft</li><li>▪ Corel</li><li>▪ huperLab</li><li>▪ Intel® Media SDK at <a href="http://www.intel.com/software/media">www.intel.com/software/media</a></li></ul> |
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## Now Is the Time

There has never been a better time to get involved in DSS. The current transition from older analog, standard-definition DSS solutions to higher-valued, digital, high-definition solutions presents an array of opportunities for resellers.

Intel is committed to driving the future of DSS and working with developers at every level of the ecosystem, facilitating the development of integrated, intelligent, DSS solutions.

## Learn More

Get the latest on what Intel is doing in DSS at [www.intel.com/info/dss](http://www.intel.com/info/dss)

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