Integrated USB 3.0 Chipset for Entry Notebook

Mobile Intel® 7 Series HM70 Express Chipset and Intel® Pentium™ and Celeron™ Processors

For entry notebook, look for Intel® Pentium™ and Celeron™ processors and the Intel® HM70 Express Chipset. This new notebook platform features integrated USB 3.0 and improved system responsiveness.

**Increased Responsiveness**

Intel® Smart Connect Technology enables instant access to your data by allowing your content to be refreshed in the standby power state—all while minimizing power consumption. In addition to faster boot and resume times, Intel® Rapid Start Technology provides energy efficiency without sacrificing user experience.

**Improved Display**

The Mobile Intel® 7 Series HM70 Express Chipset supports **up to three displays** to allow for flexibility.

**The Mobile Intel® 7 Series HM70 Express Chipset delivers the latest platform features for superb system performance with the latest I/O technologies**

The Mobile Intel® 7 Series HM70 Express Chipset integrates several capabilities to provide flexibility for connecting I/O devices. **Integrated USB 3.0** support helps you connect faster to your digital life. The latest Intel® Rapid Storage Technology enables the full Serial ATA (SATA) interface speed of up to 6 Gb/s to support next-generation Solid State Drives (SSDs) and traditional Hard Disk Drives (HDDs). In addition, the Mobile Intel® 7 Series HM70 Express Chipset drives lower power through enhanced link power management of the Advanced Host Controller Interface (AHCI), enable easier expandability with support for native hot plug, and enhance boot and multitasking performance with Native Command Queuing (NCQ).

Intel® Rapid Recover Technology (part of the Intel Rapid Storage Technology suite) provides a fast, easy-to-use method for the end user to recover their data and return their system to an operational status.
Mobile Intel® 7 Series HM70 Express Chipset Block Diagram

- 1x16 lanes or 2x8 - PCI Express* 3.0 Graphics
- 1x8 & 1x4 lanes - PCI Express* 3.0 + 1x4 lanes for Thunderbolt
- 3 Independent Display Support
- 2xUSB 3.0 Ports 6xUSB 2.0 Ports Dual EHCI; USB Port Disable
- Intel® Integrated 10/100/1000 MAC
- PCIe* x1 | SM Bus
- Intel® Gigabit LAN Connect
- DDR3/3L up to 1600 MHz
- DDR3 up to 1600 MHz
- Intel® High Definition Audio
- 4 PCI Express* 2.0
- 1xSATAIII, 3xSATAII; eSATA; Port Disable
- Intel® Rapid Storage Technology
- Responsiveness Technologies**
- Intel® ME 8.x Firmware and BIOS Support

* Other Names and Brands maybe claimed as property of others.
**Includes Intel® Rapid Start Technology and Intel® Smart Connect Technology
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<td>Support for Intel® Pentium™ and Celeron™</td>
<td>HM70 supports Intel® Pentium and Celeron™ processors from both the Sandy Bridge and Ivy Bridge families</td>
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<td>Processors</td>
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| Intel® Rapid Storage Technology10             | • With additional hard drives added, provides quicker access to digital photo, video and data files with RAID 0, 5, and 10, and greater data protection against a hard disk drive failure with RAID 1, 5, and 10.  
• Support for external SATA (eSATA) enables the full SATA interface speed outside the chassis, up to 3 Gb/s. |
| Intel® Rapid Recover Technology               | • Intel's latest data protection technology provides a recovery point that can be used to quickly recover a system should a hard drive fail or if there is data corruption. The clone can also be mounted as a read-only volume to allow a user to recover individual files. |
| Intel® High Definition Audio11                | • Integrated audio support enables premium digital surround sound and delivers advanced features such as multiple audio streams and jack re-tasking. |
| Intel® Smart Connect Technology3             | • Provides faster application refresh by allowing applications to be updated in a low-power state.                                         |
| Intel® Rapid Start Technology4                | • Allows quick system resumes from the hibernate state.                                                                                |
| Universal Serial Bus 3.0                     | • Integrated USB 3.0 support, provides greater enhancement in performance with a design data rate of up to 5 gigabits per second (Gbps) with up to 2 USB 3.0 ports. |
| Universal Serial Bus 2.0                     | • Hi-Speed USB 2.0 support with a design data rate of up to 480 megabits per second (Mbps) with up to 8 USB 2.0 ports.                   |
| USB 2.0 Rate Matching Hub                    | • Enables lower power requirements and manages the transition of the communication data rate from the high speed of the host controller to the lower speed of USB full-speed/low-speed devices. |
| Serial ATA (SATA) 6 Gb/s                    | • Next-generation high-speed storage interface supporting up to 6 Gb/s transfer rates for optimal data access with up to 1 SATA 6Gb/s ports. |
| Serial ATA (SATA) 3 Gb/s                    | • High-speed storage interface supporting up to 3 SATA 3Gb/s ports.                                                                      |
| eSATA                                         | • SATA interface designed for use with external SATA devices. Provides a link for 3 Gb/s data speeds to eliminate bottlenecks found with current external storage solutions. |
| SATA Port Disable                             | • Enables individual SATA ports to be enabled or disabled as needed. This feature provides added protection of data by preventing malicious removal or insertion of data through SATA ports. Especially targeted for eSATA ports. |
| PCI Express* 2.0 Interface                   | • Offers up to 5 GT/s for fast access to peripheral devices and networking with up to 4 PCI Express 2.0 x1 ports, configurable as x2 and x4 depending on motherboard designs. |
| USB Port Disable                              | • Enables individual USB ports to be enabled or disabled as needed. This feature provides added protection of data by preventing malicious removal or insertion of data through USB ports. |
| Intel® Integrated 10/100/1000 MAC            | • Support for the Intel® 82579LM Gigabit Network Connection.                                                                         |
| Green Technology                             | • Manufactured with lead-free and halogen-free component packages.                                                                     |
1 Requires a system with Intel® Turbo Boost Technology capability. Intel Turbo Boost Technology 2.0 is the next generation of Turbo Boost Technology and is only available on 2nd gen Intel® Core™ processors. Consult your notebook manufacturer. Performance varies depending on hardware, software, and system configuration. For more information, visit http://www.intel.com/technology/turboboost.

2 Requires an Intel® HT Technology enabled system, check with your notebook manufacturer. Performance will vary depending on the specific hardware and software used. For more information including details on which processors support HT Technology, visit http://www.intel.com/info/hyperthreading.

3 Requires a select Intel® processor, Intel® software and BIOS update, Intel® wireless adapter, and Internet connectivity. Solid state memory or drive equivalent may be required. Depending on system configuration, your results may vary. Contact your system manufacturer for more information.

4 Requires a select Intel® processor, Intel® software and BIOS update, and a small Solid-State Drive (SSD). Depending on system configuration, your results may vary. Contact your system manufacturer for more information.

5 Requires a select Intel® processor, enabled chipset, Intel Rapid Storage Technology software, and a properly configured SSD hard drive. Depending on system configuration, your results may vary. Contact your system manufacturer for more information.

6 Built-in visual features are not enabled on all notebooks and optimized software may be required. Check with your system manufacturer. Learn more at http://www.intel.com/go/biv.

7 Viewing stereo 3D content requires 3D glasses and a 3D-capable display. Physical risk factors may be present when viewing 3D material.

8 Requires Intel® Wireless Display-enabled system, compatible adapter, and a TV. 1080p and Blu-ray® or other protected content playback only available on 2nd or 3rd gen Intel® Core™ processor-based notebooks with built-in visuals enabled, a compatible adapter and media player, and supporting Intel® WDDM software and graphics driver installed. Consult your notebook manufacturer. For more information, see www.intel.com/go/widi.

9 Requires the use of a 3rd Generation Intel® Core™ processor. This feature is dependent on your system configuration.

10 Intel® Rapid Storage Technology requires the computer have an Intel RST-enabled Intel® chipset, RAID controller in the BIOS enabled and the Intel® Rapid Storage Technology software driver installed. Please consult your system vendor for more information.

11 Requires an Intel® HD Audio-enabled system. Consult your notebook manufacturer for more information. Sound quality will depend on equipment and actual implementation. For more information about Intel® HD Audio, refer to http://www.intel.com/design/chipsets/hdaudio.htm.

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