Key Specifications

Processor Type: Intel® Core i7, i5, i3

RAM Type: Non-ECC DDR3 PC3-10600 (1333 MHz) & PC3-8500 (1066 MHz)

Expansion Slots (Low profile) :
• (1) PCIe-x16
• (2) PCIe-x1
• (1) PCI

Chipset: Intel Q65 Express

Graphics Adapter: Integrated Intel HD graphics

Bays :
• (1) external 5.25-inch
• (1) internal 3.5-inch
• (1) external 3.5-inch

I/O Interfaces:
Front: (4) USB, microphone, headphone
Rear: (6) USB, PS/2 keyboard and mouse, line in, line out, VGA, DisplayPort v1.1a, RJ-45, serial, parallel (optional), eSATA (optional)

Preinstalled Operating Systems:
• Windows® Vista
• Windows 7
• FreeDos

System Unit

1 Front bezel 646814-001
2 Power supply, 90% efficient 613762-001
3 Chassis Not spared
4 Access panel 646815-001

Cables

1 Front I/O cable and power switch assembly 658520-001
2 SATA cable, 19.5 inch, 2 straight ends 638513-001
3 SATA power cable 638502-001
* SATA cable, 25.2 inch, 1 straight end, 1 angled end 638184-001
* SATA-6G to dual VGA cable 639025-001
* Adapter, DisplayPort to VGA 602023-001
* Adapter, DisplayPort to DVI 601495-001
* Adapter, DisplayPort to HDMI 617485-001
* DisplayPort cable 607582-001

Note: not shown

Keyboards (not illustrated)

PS/2, Basic 647784-xx1
USB, Basic 583774-xx1
USB, Basic (4-in-1, 122 only) 661359-xx1
Washable 615825-xx1

Smartcard 654016-xx1

Arabic -17x LA Spanish[d] -36x
Belgian[d] -18x Norwegian[d] -92x
Bosnian[d] -26x People’s Republic of China[b] -AAx
Bulgarian[c] -26x Portuguese -13x
Czech[d] -22x Romanian[c] -27x
Danish[d] -08x Russian -25x
Finnish[d] -35x Swedish[d] -10x
French[d] -05x Spanish[d] -07x
French Canadian[d] -12x South Korea[d] -59x
German[d] -04x Spanish[c] -09x
Greek[d] -15x Sub-Saharan[d] -59x
Hebrew -BBx Swiss[c] -11x
Hungarian[d] -21x Taiwanese[c] -ABx
International[d] -37x Thai[b] -28x
International English[d] -L3x Turkish -14x
Italian[d] -06x U.K.[b] -03x
Japanese[d] -29x U.S. -00x

Mass Storage Devices (not illustrated)

16X SATA DVD±RW drive with LightScribe 619860-001
16X SATA DVDRW drive 619899-001
Blu-ray HD-DVD SuperMulti DL Drive with LightScribe 617070-001
3.5 TR, 7200 rpm SASA hard drive 616511-001
73GB, 7200 rpm SASA hard drive 625250-001
730 GB, 7200 rpm SASA hard drive 609005-001
320 GB, 7200 rpm SASA hard drive, 2.5-inch 634274-001
800 GB, 10000 RPM SASA hard drive 639080-001
300 GB, 10000 RPM SASA hard drive 609985-001
250 GB, 7200 rpm SASA hard drive 609987-001
500 GB, 7200 rpm SASA hard drive 609989-001
1 TB, 7200 rpm SASA hard drive 609990-001
2 TB, 7200 rpm SASA hard drive 609991-001
160 GB Solid State Drive (SSD) 606809-001
80 GB Solid State Drive (SSD) 607917-001
**Standard and Optional Boards**

- **System Board**
  - Standard and Optional Boards
  - System board with replacement thermal material
  - 1 System board, includes Trusted Platform Module (TPM) - worldwide use: 615114-001
  - 6 System board, does not include TPM - only for use in EMEA region: 649515-001

- **Memory modules (PC3-10600, CL9)**
  - 1 G B: 635802-001
  - 2 G B: 635803-001
  - 4 G B: 585157-001

- **Miscellaneous Parts**
  - 1 Chassis fan: 645327-001
  - 2 Fans: 649706-001
  - 3 Front bezel: 643236-001
  - 4 Speaker: 639553-001
  - 5 Serial port: 644409-001
  - 5 Printer port, PCI card: 638817-001
  - 7 Hard drive: 638819-001
  - 8 Display card: 638820-001
  - 9 SATA port assembly, PCI card: 647228-001
  - 10 System board connectors and jumpers (component location may vary)

**Common POST Error Messages**

<table>
<thead>
<tr>
<th>Screen Message</th>
<th>Probable Cause</th>
<th>Recommended Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>101-Option ROM Error</td>
<td>System BIOS checksum error.</td>
<td>1. Verify ROM, install if required. 2. Remove suspected card, reboot. 3. Clear CMOS memory, reboot. 4. Replace system board.</td>
</tr>
<tr>
<td>203-System Board Failure</td>
<td>BIOS error.</td>
<td>1. Reboot system. 2. Check CMOS memory. 3. Remove expansion boards. 4. Replace system board.</td>
</tr>
<tr>
<td>304-Memory Size Error</td>
<td>Hard drive is about to fail.</td>
<td>1. Determine hard drive is giving correct error message. Enter Computer Setup and run the Drive Protection Symantec under Storage &gt; DUPS Solution. 2. Apply hard drive firmware patch if applicable. 3. Back up contents and replace hard drive.</td>
</tr>
</tbody>
</table>

**System Board Connectors and Jumpers (component location may vary)**

- PWR: Power connector
- SATA0: 1st hard drive (SATA 3.0)
- SATA1: 2nd hard drive (SATA 2.0)
- SATA2: 1st optical drive (SATA 2.0)
- USB 3.0 port, PCIe x1 card
- eSATA port assembly, PCI card
- Clamp lock, includes universal cable (plate not included)
System Setup and Boot

Access the Setup Utility during the computer boot sequence by pressing the F10 key while the Power-On Self-Test (POST) is in progress. To establish default settings for the front panel LED indicators, set the Front Panel LED Configuration option to Custom. The default setting is Enabled.

Press the F10 key when the computer is turned on to enter the Advanced Power-On Options menu.

To change the boot order, select the Boot Sequence option. From the Boot Sequence drop-down list, select the Boot Device you want to prioritize. You can order your boot devices from highest priority to lowest priority.

To enter the Computer Setup, press Esc and follow the instructions on the screen.

Password Security

Establishing a Setup or Power-On password:

1. Turn on or restart the computer.
2. To change the Setup password, as soon as the computer turns on:
   - Press the F10 key while the ESC key for Startup Menu message is displayed.
   - Press the F10 key to enter Computer Setup.
3. When the key icon appears, type your current password, a slash (/) or alternate delimiter character, your new password, another slash (/) or alternate delimiter character, and your new password again in the specified order.
4. Press Enter.

Deleting a Power-On or Setup password:

1. Delete the Setup password, go to step 2.
2. To delete the Setup password, go to step 3.
3. To change the Setup password, as soon as the computer turns on:
   - Press the F10 key while the ESC key for Startup Menu message is displayed.
   - Press the F10 key to enter Computer Setup.
4. When the key icon appears, type your current password, a slash (/) or alternate delimiter character, your new password, another slash (/) or alternate delimiter character, and your new password again in the specified order.
5. Before exiting, click File > Save Changes and Exit.

Changing a Setup or Power-On password:

1. Turn on or restart the computer.
2. To change the Setup password, go to step 2.
3. To change the Power-On password, go to step 3.

Booting to external devices:

1. Select the boot device that you want to use from the Boot Sequence.
2. Press Enter to select the boot device.
3. When the key icon appears, type your current password, a slash (/) or alternate delimiter character, your new password, another slash (/) or alternate delimiter character, and your new password again in the specified order.
4. Press Enter.

Clearing CMOS:

1. Turn off the computer and disconnect the power cord from the power outlet.
2. Remove the access panel.
3. On the system board, press and hold the CMOS button for 3 seconds.
4. Replace the access panel and reconnect the power cord.
5. Turn on the computer and allow it to boot.

Diagnosing the computer:

1. Power-On/Boot System:
   - Press the F10 key to access the boot sequence.
   - Select the boot device you want to use.

2. Memory Test:
   - Press the F10 key to access the memory test.
   - Select the memory test you want to run.

3. Hardware Power Management:
   - Press the F10 key to access the hardware power management options.

4. System Information:
   - Press the F10 key to access the system information.

5. Flash System ROM:
   - Press the F10 key to access the flash system ROM.

6. Set Time and Date:
   - Press the F10 key to access the time and date.

Password Security

Establishing a Setup or Power-On password:

1. To access the System Setup, press the F10 key during POST to enter the Advanced Power-On Options menu.

2. To establish a Setup or Power-On password, go to step 3.

3. To establish the Setup password, select Security > Setup Password and follow the instructions on the screen.


5. Before exiting, click File > Save Changes and Exit.

Changing a Setup or Power-On password:

1. To access the System Setup, press the F10 key during POST to enter the Advanced Power-On Options menu.

2. To change the Setup password, as soon as the computer turns on:
   - Press the F10 key while the ESC key for Startup Menu message is displayed.
   - Press the F10 key to enter Computer Setup.

3. When the key icon appears, type your current password, a slash (/) or alternate delimiter character, your new password, another slash (/) or alternate delimiter character, and your new password again in the specified order.

4. Press Enter.

Deleting a Power-On or Setup password:

1. To delete the Setup password, go to step 2.
2. To delete the Power-On password, go to step 3.

3. To change the Setup password, as soon as the computer turns on:
   - Press the F10 key while the ESC key for Startup Menu message is displayed.
   - Press the F10 key to enter Computer Setup.

4. When the key icon appears, type your current password, a slash (/) or alternate delimiter character, your new password, another slash (/) or alternate delimiter character, and your new password again in the specified order.

5. Before exiting, click File > Save Changes and Exit.

Clearing CMOS:

1. Turn off the computer and disconnect the power cord from the power outlet.
2. Remove the access panel.
3. On the system board, press and hold the CMOS button for 3 seconds.
4. Replace the access panel and reconnect the power cord.
5. Turn on the computer and allow it to boot.

Diagnosing the computer:

1. Power-On/Boot System:
   - Press the F10 key to access the boot sequence.
   - Select the boot device you want to use.

2. Memory Test:
   - Press the F10 key to access the memory test.
   - Select the memory test you want to run.

3. Hardware Power Management:
   - Press the F10 key to access the hardware power management options.

4. System Information:
   - Press the F10 key to access the system information.

5. Flash System ROM:
   - Press the F10 key to access the flash system ROM.

6. Set Time and Date:
   - Press the F10 key to access the time and date.