

# System Setup

Dell™ OptiPlex™ 780 Service Manual—Mini-Tower, Desktop, and Small Form Factor

- [Boot Menu](#)
- [Navigation Keystrokes](#)
- [Entering System Setup](#)
- [System Setup Simulation](#)
- [System Setup Menu Options](#)

## Boot Menu

Press <F12> when the Dell™ logo appears to initiate a one-time boot menu with a list of the valid boot devices for the system.

The options listed are:

**Internal HDD**  
**CD/DVD/CD-RW Drive**  
**Onboard NIC**  
**BIOS Setup**  
**Diagnostics**

This menu is useful when you are attempting to boot to a particular device or to bring up the diagnostics for the system. Using the boot menu does not make any changes to the boot order stored in the BIOS.

## Navigation Keystrokes

Use the following keystrokes to navigate the System Setup screens.

Navigation Keystrokes	
Action	Keystroke
Expand and collapse field	<Enter>, left- or right-arrow key, or +/-
Expand or collapse all fields	< >
Exit BIOS	<Esc>—Remain in Setup, Save/Exit, Discard/Exit
Change a setting	Left or right-arrow key
Select field to change	<Enter>
Cancel modification	<Esc>
Reset defaults	<Alt><F> or <b>Load Defaults</b> menu option

## Entering System Setup

Your computer offers the following BIOS and System Setup options:

- Bring up a one-time boot menu by pressing <F12>
- Access System Setup by pressing <F2>

### <F12> Menu

Press <F12> when the Dell™ logo appears to initiate a one-time boot menu with a list of the valid boot devices for the computer. **Diagnostics** and **Enter Setup** options are also included in this menu. The devices listed on the boot menu depend on the bootable devices installed in the computer. This menu is useful when you are attempting to boot to a particular device or to bring up the diagnostics for the computer. Making changes in the boot menu does not make any changes to the boot order stored in the BIOS.

### <F2>

Press <F2> to enter System Setup and make changes to user-definable settings. If you have trouble entering System Setup using this key, press <F2> when the keyboard lights first flash.

## System Setup Menu Options

 **NOTE:** System Setup options may vary depending on your computer and may not appear in the exact same order.

General	
System Board	Displays the following information: <ul style="list-style-type: none"><li>System information: Displays <b>BIOS Info,, System Info, Service Tag, Express Service Code, Asset Tag, Manufacture Date,</b> and the <b>Ownership Date..</b></li></ul>

	<ul style="list-style-type: none"> <li>Memory information: Displays <b>Installed Memory, Usable Memory, Memory Speed, Memory Channel Mode, Memory Technology, DIMM_1 Size, DIMM_2 Size, DIMM_3 Size, and DIMM_4 Size.</b> .</li> <li>Processor information: Displays the <b>Processor Type, Processor Speed, Processor Bus Speed, Processor L2 cache, Processor ID, Microcode Version, Multi Core Capable and HT Capable 64-bit Technology..</b></li> <li>PCI information: Displays available slots on the system board.</li> </ul>
Date/Time	Displays the system date and time. Changes to the system date and time take effect immediately.
Boot Sequence	<p>Specifies the order in which the computer attempts to find an operating system from the devices specified in this list.</p> <ul style="list-style-type: none"> <li><b>Onboard or USB Floppy</b></li> <li><b>HDD(will show the model currently in system)</b></li> <li><b>Onboard or USB CD-Rom Drive</b></li> <li><b>USB Device</b></li> </ul>

Drives	
Diskette drive	<p>This field determines how the BIOS configures floppy drives, Operating Systems with USB support will recognize USB Floppy drives regardless of this setting:</p> <ul style="list-style-type: none"> <li><b>Disable</b> - All Floppy drive are disable</li> <li><b>Enable</b> - All floppy drive are enable.</li> </ul> <p>The "USB Controller" Setup option will affect floppy operation.</p>
SATA Operation	<p>configures the operating mode of the integrated hard drive controller.</p> <ul style="list-style-type: none"> <li><b>RAID Autodetect / AHCI</b> = RAID if signed drives, otherwise AHCI</li> <li><b>RAID Autodetect / ATA</b>= RAID if signed drives, otherwise ATA</li> <li><b>RAID On / ATA</b>= SATA is configured for RAID on every boot</li> <li><b>Legacy</b> = The hard drive controller is configured for legacy mode</li> </ul> <p><b>Legacy</b> mode provides for compatibility with some older operating systems that do not support native resources assigned to the drive controller.</p> <p><b>RAID Mode is incompatible with ImageServer. Please disable RAID mode if enabling Image Server.</b></p>
S.M.A.R.T. Reporting	<p>This field controls whether hard drive errors for integrated drives are reported during system startup. This technology is part of the SMART(Self Monitoring Analysis and Reporting Technology) specification.</p> <p>This option is <b>disabled</b> by default.</p>
Drives	Enables or disables the SATA or ATA drives connected to the system board.

System Configuration	
Integrated NIC	<p>Enables or disables the integrated network card. You can set the integrated NIC to:</p> <ul style="list-style-type: none"> <li>Disable</li> <li><b>Enable</b> (default)</li> <li><b>Enable with PXE</b></li> <li><b>Enable with ImageSever</b></li> </ul> <p>ImageServe is incompatible with RAID mode. Please disable RAID if enabling ImageServer.</p> <p>PXE is needed only if intending to boost to an operating system located on a server, not if you are booting on an OS located on a hard drive in this system.</p>
USB for Flex bay	<p>This field enable and disable the internal USB for Flex Bay, you can set:</p> <ul style="list-style-type: none"> <li><b>Disable</b> - Internal USB for Flex Bay is disable</li> <li><b>Enable</b> - Internal USB for Flex Bay is enable</li> <li><b>No Boot</b> - Internal USB for Flex Bay is enable, but not bootable. (default)</li> </ul>
USB Controller	<p>Enables or disables the integrated USB controller. You can set the USB controller to:</p> <ul style="list-style-type: none"> <li><b>Enable</b> (default)</li> <li><b>Disable</b></li> <li><b>No boot</b></li> </ul> <p>Operating systems with USB support will recognize USB Storage</p>
Parallel Port	<p>Identifies and defines the parallel port settings. You can set the parallel port to:</p> <ul style="list-style-type: none"> <li><b>Disable</b></li> <li><b>AT</b></li> <li><b>PS/2 (default)</b></li> <li><b>EPP</b></li> <li><b>ECP No DMA</b></li> <li><b>ECP DMA 1</b></li> <li><b>ECP DMA 3</b></li> </ul>
Parallel Port Address	Sets the base I/O address of the integrated parallel port.
Serial Port #1	<p>Identifies and defines the serial port settings. You can set the serial port to:</p> <ul style="list-style-type: none"> <li><b>Disable</b></li> <li><b>Auto</b> (default)</li> <li><b>COM1</b></li> <li><b>COM3</b></li> </ul>

	The Operating System may allocate resources even though the setting is disabled.
Serial Port #2	Identifies and defines the serial port settings. You can set the serial port to: <ul style="list-style-type: none"> <li>• <b>Disable</b></li> <li>• <b>Auto</b> (default)</li> <li>• <b>COM2</b></li> <li>• <b>COM4</b></li> </ul> The Operating System may allocate resources even though the setting is disabled.
Miscellaneous Devices	Enables or disables the following onboard devices: <ul style="list-style-type: none"> <li>• <b>Front USB</b></li> <li>• <b>Rear Dual USB</b></li> <li>• <b>Rear Quad USB</b></li> <li>• <b>PCI slots</b></li> <li>• <b>Audio</b></li> </ul>

<b>Video</b>	
Primary Video	This field determines which video controller will become the primary video controller when 2 controllers are available in the system. This selection matters only if there are 2 video controller present. <ul style="list-style-type: none"> <li>• <b>Auto</b>(default) - Use the add-in video controller.</li> <li>• <b>Onboard/Card</b> - Use the integrated video controller unless a Graphic care is installed. A PCI Express Graphic(PEG) card will override and disable the integrated video controller.</li> </ul>

<b>Performance</b>	
Multi Core Support	This field specifies whether the processor will have one or all cores enable. The performance of some application will improve with the additional cores.
Intel® SpeedStep™	This Option enables or disables the Intel® SpeedStep™ mode of the processor. When disabled, the system is placed into the highest performance state and the Intel® SpeedStep™ applet or native operating system driver are prevented from adjusting the processor's performance. When enable. the Intel® SpeedStep™, enabled CPU is allowed to operate in multiple performance states.  This option is <b>disabled</b> by default.
C States Control	This option enables or disables additional processor sleep states. The operating system may optionally use these for additional power saving when idle.  This option is <b>disabled</b> by default.
Limit CPUID Value	This field limits the maximum value the processor Standard CPUID Function will support. Some operating systems will not complete installation when the maximum CPUID Function supported is greater than 3.  This option is disabled by default.
HDD Acoustic Mode	This option allows you to optimize your hard drives performance and acoustic noise level based on your personal preferences. <ul style="list-style-type: none"> <li>• <b>Bypass</b>(default)- Do nothing (needed for older drives)</li> <li>• <b>Quiet</b>- The drive is slower, but quieter.</li> <li>• <b>Suggested</b> - Allow drive manufacturer to select the mode.</li> <li>• <b>Performance</b>- The drive is faster, but possibly noisier.</li> </ul>

<b>Virtualization Support</b>	
Virtualization	This Option specifies whether a Virtual Machine Monitor (VMM) can utilize the additional hardware capabilities provided by Intel® Virtualization Technology.  <b>Enable Intel® Virtualization Technology</b> - This option is <b>disabled</b> by default.
VT for Direct I/O	Enables or disables the Virtual Machine Monitor (VMM) from utilizing the additional hardware capabilities provided by Intel® Virtualization technology for direct I/O.  <b>Enable Intel® Virtualization Technology for Direct I/O</b> - This option is <b>disabled</b> by default.
Trusted Execution	Field specifies whether a Measured Virtual Machine(MVMM) can utilize the additional hardware capabilities provided by Intel® Trusted Execution Technology. The TPM Virtualization Technology and Virtualization Technology for Direct I/O must be enable to use this feature.  <b>Enable Intel® Trusted Execution Technology</b> - This option is <b>disabled</b> by default.

<b>Security</b>	
Administrative Password	Provides restricted access to the computer's system setup program in the same way that access to the system can be restricted with the <b>System Password option</b> .  This option is not set by default.
System Password	Displays the current status of the system's password security feature and allows a new system password to be assigned and verified.  This option is not set by default.
Password Changes	Enables or disables the user from changing the system password without the administrative password.  This option is enabled by default.
TPM Security	Enables or disables the trusted platform module (TPM) security.

	<p>You can set the TPM security to:</p> <ul style="list-style-type: none"> <li>• <b>Deactivate</b> (default)</li> <li>• <b>Activate</b></li> <li>• <b>Clear</b></li> </ul> <p>NOTE: When TPM Security is set to <b>Clear the system setup program clears the user information stored in the TPM.</b></p>
CPU XD Support	<p>Enables or disables the execute disable mode of the processor.</p> <p>This option is enabled by default.</p>
Computrace(R)	<p>Enables or disables the optional Computrace® service designed for asset management.</p> <p>You can set this option to:</p> <ul style="list-style-type: none"> <li>• <b>Deactivate</b> (default)</li> <li>• <b>Disable</b></li> <li>• <b>Activate</b></li> </ul>
SATA-0 Password	<p>Displays the current status of the password set for the hard drive connected to the SATA-0 connector on the system board.</p> <p>You can also set a new password. This option is not set by default.</p> <p>NOTE: The system setup program displays a password for each of the hard drives connected to your system board.</p>

### Power Management

AC Recovery	<p>Determines how the system responds when AC power is re-applied after a power loss. You can set the AC Recovery to:</p> <ul style="list-style-type: none"> <li>• <b>Power Off</b> (default)</li> <li>• <b>Power On</b></li> <li>• <b>Last State</b></li> </ul>
Auto On Time	<p>Sets time to automatically turn on the computer.</p> <p>Time is kept in the standard 12-hour format (hours:minutes:seconds).</p> <p>Change the startup time by typing the values in the time and AM/PM fields.</p> <p>NOTE: This feature does not work if you turn off your computer using the switch on a power strip or surge protector or if <b>Auto Power On is set to disabled.</b></p>
Low Power Mode	<p>Enables or disables low power mode.</p> <p>This option is <b>disabled</b> by default.</p> <p>When low power mode is enabled, the integrated network card is disabled when the system is shutdown or in Hibernate mode. Only Add-in NIC cards will be able to remotely wake the system.</p>
Remote Wake up	<p>Allows the system to power up when a network interface controller receives a wake up signal. You can set Remote Wake up to:</p> <ul style="list-style-type: none"> <li>• <b>Disable</b> (default)</li> <li>• <b>Enable</b></li> <li>• <b>Enable with Boot NIC</b></li> </ul>
Suspend Mode	<p>Sets the power management suspend mode to:</p> <ul style="list-style-type: none"> <li>• <b>S1</b></li> <li>• <b>S3</b> (default)</li> </ul> <p>NOTE: If the AMT Management Engine (ME) of the system is <b>disabled</b>, the S1 suspend mode is unavailable in the system setup.</p>
Fan Control Override	<p>Controls the speed of the system fan.</p> <p>NOTE: When <b>enabled</b>, the fan runs at full speed.</p>

### Maintenance

Service Tag	<p>Displays the Service Tag of your computer.</p>
Asset Tag	<p>Allows you to create a system asset tag if an asset tag is not already set.</p> <p>This option is not set by default.</p>
SERR Messages	<p>Controls the SERR Message mechanism.</p> <p>This option is enabled by default.</p> <p>Some graphics cards require the SERR Message mechanism be disabled.</p>

### Image Server

Lookup Method	<p>Specifies how the ImageServer looks for the server address.</p> <ul style="list-style-type: none"> <li>• <b>Static IP</b></li> <li>• <b>DNS</b></li> </ul> <p>NOTE: You must set the <b>Integrated NIC to Enable with ImageServer to set the Lookup Method.</b></p>
ImageServer IP	<p>Specifies the primary static IP address of the ImageServer with which the client software communicates.</p>

	The default IP address is <b>255.255.255.255</b> NOTE: You must set the <b>Integrated NIC to Enable with ImageServer to set the ImageServer IP.</b>
ImageServer Port	Specifies the primary IP port of the image server with which the client software communicates. The default IP port is <b>06910</b> .
Client DHCP	Specifies how the client obtains the IP address. <ul style="list-style-type: none"><li>• <b>Static IP</b></li><li>• <b>DHCP</b> (default)</li></ul>
Client IP	Specifies the static IP address of the client. The default IP address is <b>255.255.255.255</b> NOTE: To set the Client IP you must set the Client DHCP to the Static IP
Client SubnetMask	Specifies the subnet mask for the client. The default setting is <b>255.255.255.255</b> NOTE: To set <b>Client Subnet Mask you must set Client DHCP to Static IP</b>
Client Gateway	Specifies the gateway IP address for the client. The default setting is <b>255.255.255.255</b> NOTE: To set <b>Client Subnet Mask you must set Client DHCP to Static IP</b>
License Status	Displays the current license status.

### Post Behavior

Fast Boot	When enabled (default), your computer starts more quickly because it skips certain configurations and tests.
NumLock LED	Enables or disables the NumLock feature when your computer starts. When enabled (default), this option activates the numeric and mathematical features shown at the top of each key. When disabled, this option activates the cursor-control functions labeled on the bottom of each key
POST Hotkeys	Allows you to specify the function keys to display on the screen when the computer starts. <ul style="list-style-type: none"><li>• <b>Enable F2 = Setup</b> (enabled by default)</li><li>• <b>Enable F12 = Boot menu</b> (enabled by default)</li></ul>
Keyboard Errors	Enables or disables keyboard error reporting when the computer starts. This option is enabled by default.
MEBx Hotkey	sign-on displays a message stating the keystroke sequence required to enter the Manageability Engine BIOS Extensions(MEBx) Setup program. This option is enabled by default.
OS Install	Set the system maximum memory for OS to load while installation. If enabled the maximum available memory is 256MB RAM. This option is <b>disable</b> by default. Reason being some operating system will not complete install with more then 2GB of system memory.

### System Logs

BIOS Events	Displays the system event log and allows you to: <ul style="list-style-type: none"><li>• <b>Clear Log</b></li><li>• <b>Mark all Entries</b></li></ul>
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[Back to Contents Page](#)