Intel Rapid Start Technology (FFS) Guide

Technical white paper

Table of contents

Intel Rapid Start Technology (FFS) Guide	
Product Definition	
Requirements	
Enabling Intel Rapid Start Technology	
System BIOS configuration	
For Computers with SSD primary drives	
Enabling Rapid Start Technology in Windows 7	
Enabling Rapid Start Technology in Windows 8	10
For Computers with HDD + mSATA module	
Enabling Rapid Start Technology in Windows 7	
Enabling Rapid Start Technology in Windows 8	
Issues related to replacing the operating system	
Removing data from mSATA module	
For more information	



Intel Rapid Start Technology (FFS) Guide

Product Definition

Intel Rapid Start Technology improves the standard hibernation features by providing a simple yet powerful solution that runs independently from the operating system. In addition, this feature is significantly faster than the standard operating-system based hibernation on the same solid state device (SSD) solution.

Requirements

In order to run Intel Rapid Start Technlogy, your computer must have:

- Rapid Start Technology enabled in the System BIOS
- An SSD primary drive or Hard Drive (HDD) plus an mSATA module SSD
- A healthy hibernation partition that must exist on the SSD prior to installation of the software

Note: Rapid Start Technology is not supported in the following configurations:

- When the computer only has a hard drive (HHD) with rotating media
- When the computer has a Self-Encrypted Drive (SED) or uses data encryption software

Enabling Intel Rapid Start Technology

System BIOS configuration

1. After pressing the power button to boot up the computer, press the ESC key to bring up the **Startup** menu. Then select the F10 key to enter the **BIOS Setup** menu.



- 2. Next, use the arrows to move to or click to select the **System Configuration** tab.
- 3. Next, select the **Device Configurations** link and press Enter.
- 4. In the **Device Configuration** menu, click the **Rapid Start Technology** check box to enable this feature.

Note: If Intel Rapid Start Technology does not appear in the **Device Configuration** menu, your computer may not support Rapid Start Technology.

5. Make sure that the **S3 Wake Timer** is set to 60 minutes, which is the recommended option.



Note: If your computer uses an HDD + mSATA module, you must also enable RAID mode as follows:

- 1. In the Device Configuration menu, select the **RAID** as the **SATA Device Mode**.
- 2. If your computer uses an SSD primary drive, make sure that **AHCI** is selected.



Note: In Windows 7, you will already be in legacy mode. In Windows 8, you must also make sure that the computer is in UEFI Native mode as follows:

- 1. In the System Configuration tab, in the System BIOS section, navigate to Boot Options.
- 2. Next, select **UEFI Native (Without CSM)** as the boot mode.

THE A	System Col	nfiguration
Customized Boot		
SecureBoot Configuration		
User Mode HP Factory Keys Customer Keys		
Boot Mode Legacy UEFI Hybrid (With CSM UEFI Native (Without C	R (M)	
UEFI Boot Order OS Boot Manager Notebook mSATA Drive USB Hard Drive Notebook Ethernet IPV4 Notebook Ethernet IPV6 SD Card		

For Computers with SSD primary drives

Enabling Rapid Start Technology in Windows 7

- 1. From the desktop, click Start, and then right-click Computer.
- 2. Next, select Manage.



3. Select Disk Management.



4. Right-click the hard drive that displays (e.g. the C: drive), and then select **Shrink Volume**.

Volume	Layout Type File Sys	Explore
s	, simple base title	Mark Partition as Active Change Drive Letter and Paths Format
		Extend Volume
		Shrink Volume
		Add Mirror Delete Volume
< [III	Properties
and the second s		114

5. Enter 4096 (the amount of space recommended by HP) in the **Enter the amount of space** to shrink in MB.

hrink C:		×
Total size before shrink in MB:	122102	
Size of available shrink space in MB:	60680	
Enter the amount of space to shrink in MB:	4096	(A)
Total size after shrink in MB:	118006	
You cannot shrink a volume beyond the point See the "defrag" event in the Application log f operation when it has completed.	where any unmovable files or detailed information abo	are located. ut the
 You cannot shrink a volume beyond the point See the "defrag" event in the Application log f operation when it has completed. See <u>Shrink a Basic Volume</u> in Disk Management 	where any unmovable files or detailed information abo ent help for more informatio	are located. ut the n.

6. Click the **Shrink** button.

Note: After this process is complete, make sure to leave the space as unallocated.

7. Restart the computer.

Creating the healthy hibernation partition

- 1. From the desktop, click **Start** > **All Programs** > **Accessories**.
- 2. Next, right-click the **Command** prompt, and then click **Run as Administrator**.
- 3. In the DOS dialog box, type the following switches, making sure to allow each process line to complete before typing the next.
 - a. Diskpart
 - b. List disk
 - c. Select disk 0
 - d. Create partition primary
 - e. List Volume
 - f. Select the 4GB Volume that was just created
 - g. Set id=84 override
 - h. Exit

Admir	nistrator: Co	mmand Prom	ot - diskpart		- • • •	
(c) 2012 Microsoft Corporati	on. All ri	ghts reserv	ed.			^
C:\Windows\system32>diskpart						
Microsoft DiskPart version 6	.2.9200					
Copyright (C) 1999-2012 Micr On computer: H	osoft Corp	oration.				
DISKPART> list disk <						
Disk ### Status S	ize Fr	•ee Dyn	Gpt			
Disk Ø Online	119 GB 40	196 MB	*			
DISKPART> select disk Ø <						
Disk Ø is now the selected d	isk.					
DISKPART> create partition p	rimary <	<u></u>				
DiskPart succeeded in creati	ng the spe	cified part	ition.			
DISKPART> list volume 📿 💳						
Volume ### Ltr Label	Fs	Туре	Size	Status	Info	
Volume 1 C Volume 2 Recovery Volume 3 * Volume 4	NTFS NTFS FAT32 RAW	Partition Partition Partition Partition	114 GB 300 MB 100 MB 4096 MB	Healthy Healthy Healthy Healthy	Boot Hidden System	
DISKPART> select volume 4 <<						
Volume 4 is the selected vol	ume.					
DISKPART> SET ID=84 OVERRID	E <					
DiskPart successfully set th	e partitio	on ID.				
DISKPART>						~

4. Restart the computer.

Enter timer duration

In order to set parameters for Rapid Start Technology, the following utilities must be installed:

- Intel's Chipset utility
- Intel Rapid Storage Technology utility
- Intel Rapid Start Technology utility

Note: If you have just installed Intel Rapid Start Technology, make sure that you have restarted your computer before proceeding with the following steps.

- 1. From the desktop, click Start > All Programs > Intel.
- 2. Make sure the status of Intel Rapid Start Technology is On.
- 3. Use the slider to set the time duration for the computer to enter Rapid Start Technology hibernation.

Note: The default time is 60 minutes (recommended).

el® Rapid Start Technology Manager		E
Intel® Rapid Sta Mana	rt Technology ger	(intel
Status		
Intel Rapid Start Technology 🛛	On	Off Off
Hide Advanced Settings		
Advanced Settings		
Critical Battery 📀	On	Off
Timer 🔞	On	Off
	60 Minutes	
0	•	120
[Save	Cancel

4. Click the **Save** button, and then restart the computer in order to make sure these settings are installed.

Enabling Rapid Start Technology in Windows 8

1. From the desktop, click the **File Explorer** icon.



2. Right-click **Computer**, and then click **Manage**.



3. Select Disk Management.

Computer Management (Local	Volume	Layout	Type	File System	Status
 System Tools Task Scheduler Event Viewer Shared Folders Local Users and Groups Performance Device Manager Storage Disk Management Services and Applications 	PC COE (C:)	Simple	Basic	NTFS	Healthy (System, Boot, Pag
	Disk 0 Basic 119.24 GB Online	PC C 119. Heal	OE (C:) 24 GB N Ithy (Sy:	ITFS stem, Boot, Pa	age File, Active, Crash Durr

4. Right-click the hard drive that displays (e.g. the C: drive), and then select **Shrink Volume**.

		Open
ent (Local	Volume Layout Type File Sys	Explore
r : d Groups	PC COE (C:) Simple Basic NTFS	Mark Partition as Active Change Drive Letter and Paths Format
		Extend Volume
er		Shrink Volume
ient cations		Add Mirror Delete Volume
	•	Properties
	Disk 0	Help
	Basic PC COE (C:) 119.24 GB 119.24 GB NTFS	

5. Enter 4096 (the amount of space recommended by HP) in the **Enter the amount of space** to shrink in MB.

Shrink C:	×				
Total size before shrink in MB:	460733				
Size of available shrink space in MB:	228428				
Enter the amount of space to shrink in MB:	4096				
Total size after shrink in MB:	456637				
You cannot shrink a volume beyond the point where any See the "defrag" event in the Application log for detailed operation when it has completed.	runmovable files are located. I information about the				
See <u>Shrink a Basic Volume</u> in Disk Management help for more information.					
	Shrink Cancel				

6. Click the **Shrink** button.

Note: After this process is complete, make sure to leave the space as unallocated.

7. Restart the computer.

Healthy hibernation partition

1. From the Start screen, type Command, right-click the **Command** prompt, and then select **Run as Administrator** from the selection bar at the bottom of the screen.

- 2. In the DOS dialog box, type the following switches, making sure to allow each process line to complete before typing the next).
 - a. Diskpart
 - b. List disk
 - c. Select disk 0
 - d. Create partition primary
 - e. List Volume
 - f. Select the 4GB Volume that was just created
 - g. Set id=84 override
 - h. Exit

NOTE - If your primary drive is formatted as GPT instead of MBR (as is the case on most Windows 8 machines), type the following instead as shown below: Set id=D3BFE2DE-3DAF-11DF-BA40-E3A556D89593.

Administ	rator: Co	mmand	Promp	ot - diskpart			×
(c) 2012 Microsoft Corporation.	All ri	ights re	serve	ed.			^
C:\Windows\system32>diskpart -							
Microsoft DiskPart version 6.2.	9200						
Copyright (C) 1999-2012 Microso On computer: H	ft Corp	poration	۱.				
DISKPART> list disk <table-cell-columns></table-cell-columns>							
Disk ### Status Size	Fr Fr	•ee	Dyn	Gpt			
Disk Ø Online 119	GB 40	196 MB		*			
DISKPART> select disk Ø <	3						
Disk Ø is now the selected disk	< _						
DISKPART> create partition prim	iary <						
DiskPart succeeded in creating	the spe	cified	parti	ition.			
DISKPART> list volume 📿 💳							
Volume ### Ltr Label	Fs	Туре		Size	Status	Info	
Volume 1 C Volume 2 Recovery Volume 3 * Volume 4	NTFS NTFS FAT32 RAW	Partit Partit Partit Partit	ion ion ion ion	114 GB 300 MB 100 MB 4096 MB	Healthy Healthy Healthy Healthy Healthy	Boot Hidden System	
DISKPART> select volume 4 <<====							
Volume 4 is the selected volume	-						
DISKPART> set id=D3BFE2DE-3DAF-	11DF-BA	140-E3A9	56D89	9593			
DiskPart successfully set the p	artitio	on ID.					
DISKPART>							~

3. Restart the computer.

Enter timer duration

In order to set parameters for Rapid Start Technology, the following utilities must be installed:

- Intel's Chipset utility
- Intel Rapid Storage Technology utility
- Intel Rapid Start Technology utility

Note: If you have just installed Intel Rapid Start Technology, make sure that you have restarted your computer before proceeding with the following steps.

1. From the Start screen, type Intel, and then select Intel Rapid Start Technology.

Apps Results for "Intel"	Search Apps Intel X P
Contraction of the second seco	eps 3
Management and	Settings 4
	Files 502
	Bing
	Accuiveather to Wincows 8
	Backgrounds Wellpapers HD
	finance
	Cames
	Cetting Started with Windows 8
	Hulu Plus

- 2. Make sure the status of Intel Rapid Start Technology is set to On.
- 3. Use the slider to set the time duration for the computer to enter Rapid Start Technology hibernation.

Note: The default time is 60 minutes (recommended).

Intel® Rapid Start Technology Manager		×
Intel® Rapid Sta Mana	y (intel)	
Status Intel Rapid Start Technology 🛛	On	© Off
Hide Advanced Settings		
Advanced Settings		
Critical Battery 🛛	On	Off
Timer 🕜	On	Off
	60 Minutes	
0	U	120
	Save	Cancel

4. Click the **Save** button, and then restart the computer in order to make sure these settings are installed.

For Computers with HDD + mSATA module

Enabling Rapid Start Technology in Windows 7

- 1. Ensure the computer is in RAID mode. (ref. System BIOS Configuration above)
- 2. Prepare the mSATA module by cleaning it of any data.

Note: Save any data if needed.

- 3. From the desktop, click **Start > All Programs > Accessories.**
- 4. Next, right click **Command** prompt, and then click **Run as Administrator**.
- 5. At the DOS prompt, type: DISKPART.
- 6. Next, type List Disk.
- 7. Select the mSATA module by typing SELECT DISK x (where x is the number associated with the mSATA module. For instance, if the mSATA module is Disk 1, type SELECT DISK 1).
- 8. Type CLEAN, and then restart your computer.

G .	Adı	ministrator:	Comman	d Promp	ot - DISKPART		-		×
Microsoft W (c) 2012 Mi	Microsoft Windows [Version 6.2.9200] <c> 2012 Microsoft Corporation. All rights reserved.</c>								^
C:\Windows\	system32>DISKP	ART 🔍							
Microsoft D	iskPart versio	n 6.2.9200	1						
Copyright (On computer	C) 1999-2012 M : HP	icrosoft (Corporat	ion.					
DISKPART> L	IST DISK 📿								
Disk ###	Status	Size	Free	Dyn	Gpt				
Disk Ø Disk 1	Online Online	465 GB 29 GB	6144 K 29 G	B B	*				
DISKPART> S	ELECT DISK 1								
Disk 1 is n	ow the selecte	d disk.							
DISKPART> C									
DiskPart su	cceeded in cle	aning the	disk.						
DISKPART>									
									~

9. Make sure that the appropriate Intel Chipset Utility and the Intel Rapid Storage Technology software are installed.

Enabling SRT

Smart Response Technology must first be enabled before enabling Rapid Start Technology as follows:

- 1. From the desktop, click Start > All Programs > Intel > Intel Rapid Storage Technology.
- 2. Select the Accelerate button, and then click Enable Acceleration.

6	Intel® Rapid Storage Technology					
Status	Manage	Accelerate	Preferences	(C) Help		(intel)
Intel® Your storag Enable acc	Smart Resp e system can be eleration 🕐	onse Techn accelerated using	ology , an available solid-	-state drive as a cac	he device in order to improve the overall performance.	

3. Select **18.6 GB** for size allocated for the cache memory and **Maximized mode** for the acceleration mode.

©	Intel® Rapid Storage Technology						
Status	Enable Acceleration	(intel)					
Intel ® Sm. Your storage sys Enable accelera	Select the solid-state drive you want to use to accelerate your storage system: • SATA SSD on Controller 0, Port 1 (30 GB) • WARNING: Completing this action will permanently delete all existing data, metadata, and partitions on the selected solid-state drive, including a drive that was previously configured as a cache device. Back up your data before continuing. Select the size allocated for the cache memory: 18.6 GB Custom: 30 GB Select the disk or volume to accelerate: SATA disk on Controller 0, Port 0 (466 GB) (system) • Select the boot disk or volume for optimal system acceleration. Select the acceleration mode:						
		melp on this page					

4. Restart your computer.

Creating the healthy hibernation partition

To prepare the healthy hibernation partition on the mSATA module:

- 1. From the Windows 7 desktop, click **Start** > **All Programs** > **Accessories**.
- 2. Next, right-click **Command** prompt, and then click **Run as Administrator**.
- 3. At the DOS prompt, type: DISKPART
- 4. Next, type List Disk.
- Select the mSATA module by typing SELECT DISK x (where x is the number associated with the mSATA module. For instance, if the mSATA module is Disk 1, type SELECT DISK 1).
- 6. Next, type Create Partition Primary.
- 7. Then, type List Volume and select the volume corresponding to the partition that was just created.
- 8. Finally, type: Set ID=84 OVERRIDE, type EXIT to exit the screen, and then restart the computer.

61	Administrator: Command Prompt - DISKPART							×
Microsoft Windows [Ve (c) 2012 Microsoft Co	ersion 6.2.92 prporation. A	200] 11 ri	ghts re	eserve	ed.			^
C:\Windows\system32>I	DISKPART <							
Microsoft DiskPart ve	ersion 6.2.92	200						
Copyright (C) 1999-20 On computer: RST12_5	012 Microsoft	Corp	oration	۱.				
DISKPART> LIST DISK	$\leq \square$							
Disk ### Status	Size	Fr	ee	Dyn	Gpt			
Disk Ø Online Disk 1 Online	465 G 11 G	GB 103 GB 5	24 KB 11 GB		*			
DISKPART> SELECT DISK	K 1 <							
Disk 1 is now the sel	lected disk.							
DISKPART> CREATE PART	TITION PRIMAR	RY <						
DiskPart succeeded in	n creating th	ne spe	cified	part	ition.			
DISKPART> LIST VOLUME								
Volume ### Ltr La	abel F	7s	Т уре		Size	Status	Info	
Volume Ø C OS Volume 1 E HF Volume 2 D HF Volume 3 ¥5 Volume 4 SY * Volume 5	S N P_RECOUERY N P_TOOLS F inRE N VSTEM F	NTFS NTFS PAT32 NTFS PAT32 RAW	Partit Partit Partit Partit Partit Partit	ion ion ion ion ion ion	449 GB 12 GB 2045 MB 1000 MB 100 MB 11 GB	Healthy Healthy Healthy Healthy Healthy Healthy	Boot Hidden System	
DISKPART> SELECT VOLU	JME 5 <							
Volume 5 is the selec	cted volume.							
DISKPART> SET ID=84 OVERRIDE <								
DiskPart successfully	y set the par	titio	n ID.					
DISKPART>								
								~

Enter timer duration

Install the Intel Rapid Start Technology software.

- From the desktop, click Start > All Programs > Intel > Intel Rapid Start Technology.
- 2. Use the slider to set the time duration for the computer to enter Rapid Start Technology hibernation.

Note: The default time is 60 minutes (recommended).

ntel® Rapid Start Technology Manager		×
Intel® Rapid Sta Mana	(intel)	
Status		1
Intel Rapid Start Technology 📀	On	Off
Hide Advanced Settings		
Advanced Settings		
Critical Battery 📀	On	⊘ Off
Timer 🛛	On	© Off
	60 Minutes	
0	v	120
	Save	Cancel

3. Restart your computer.

Enabling Rapid Start Technology in Windows 8

1. Ensure the computer is in RAID mode.

Note: For more information, see the System BIOS Configuration section.

2. Prepare the mSATA module by cleaning it of any data.

Note: Save any data if needed.

- 3. From the Start screen, type Command.
- 4. Right-click Command, and then select Run as Administrator.

А	NDDS Ret	sults for "comm			
Prv-	Command Prompt	,			
Pin to Start Pin t	o taskbar Open new window	Run as administrator) ile m		All apps

- 5. At the DOS prompt, type: DISKPART
- 6. Next, type List Disk.
- 7. Select the mSATA module by typing SELECT DISK x (where x is the number associated with the mSATA module. For instance, if the mSATA module is Disk 1, type SELECT DISK 1).
- 8. Type CLEAN, and then restart your computer.

Administrator: Command Prompt - DISKPART -									
Anticrosoft Windows [Version 6.2.9200] (c) 2012 Microsoft Corporation. All rights reserved.									
C:\Windows\system32>DISK	C:\Windows\system32>DISKPART								
Microsoft DiskPart versio	on 6.2.9200	1							
Copyright (C) 1999-2012 № On computer: HP	licrosoft C	Corporatio	on.						
DISKPART> LIST DISK 🛛 🧹									
Disk ### Status	Size	Free	Dyn	Gpt					
Disk Ø Online Disk 1 Online	465 GB 29 GB	6144 KB 29 GB		*					
DISKPART> SELECT DISK 1									
Disk 1 is now the selecte	ed disk.								
DISKPART> CLEAN 🥂									
DiskPart succeeded in cle	aning the	disk.							
DISKPART>									
							~		

9. Ensure that the appropriate Intel Chipset Utility and the Intel Rapid Storage Technology software are installed.

Enabling Smart Response Technology

Smart Response Technology must first be enabled before enabling Rapid Start Technology.

1. From the Start screen, type Intel and then select Intel Rapid Storage Technology.

	Search Apps Intel X A
Technology	Apps
Management and	🔅 Settings
and Media Contr	Hles
	bing
	AccuWeather for Windows B
	Backgrounds Wallpapers HD
	finance
	Cames
	Getting Started with Windows
	Hulu Plus

2. Select the Accelerate button, and then click Enable Acceleration.



3. Select **18.6 GB** for size allocated for the cache memory and **Maximized mode** for the acceleration mode.

e	Intel® Rapid Storage Technology	×
Status		(intel)
	Enable Acceleration	
Intel® Si Your storage Enable accel	Select the solid-state drive you want to use to accelerate your storage system: SATA SSD on Controller 0, Port 1 (30 GB) WARNING: Completing this action will permanently delete all existing data, metadata, and partitions on the selected solid-state drive, including a drive that was previously configured as a cache device. Back up your data before continuing.	
	Select the size allocated for the cache memory:	
	Select the boot disk or volume for optimal system acceleration.	
	Select the acceleration mode: O Enhanced mode Maximized mode	
	 WARNING: While in maximized mode, the system performance is highly improved, but cached data may be lost in the event of hardware removal or hardware failure. Once acceleration is complete, you will need to restart your computer before performing any partition or formatting operations on the accelerated disk. 	
	More help OK Cancel	
	wo	entelp on this page

4. Restart your computer.

Creating the healthy hibernation partition

To prepare the healthy hibernation partition on the mSATA module:

- 1. From the Start screen, type Command.
- 2. Right-click Command, and then select Run as Administrator.

Apps R	esults for "comm"	
Command Prom	~	
Pin to Start Pin to taskbar Open ne	Run as Open file administrator location	(iii) All apps

- 3. At the DOS prompt, type: DISKPART
- 4. Next, type List Disk.
- 5. Select the mSATA module by typing SELECT DISK x (where x is the number associated with the mSATA module. For instance, if the mSATA module is Disk 1, type SELECT DISK 1).
- 6. Next, type: Create Partition Primary, and then type SET ID=84 OVERRIDE.
- 7. Click **Exit** to exit the screen, and then restart your computer.

C:1		Administrator:	Command	Promp	t - DISKPART		
Microsoft W (c) 2012 Mi	indows [Vers crosoft Corp	ion 6.2.9200 poration. All] rights r	eserv	ed.		^
C:\Windows\	system32>DIS	KPART					
Microsoft D	iskPart vers	ion 6.2.9200	18				
Copyright (On computer	C> 1999-2012 : HP	? Microsoft C	orporatio	n.			
DISKPART> L	IST DISK 🧧						
Disk ###	Status	Size	Free	Dyn	Gpt		
Disk Ø Disk 1	Online Online	465 GB 11 GB	1024 KB 11 GB		*		
DISKPART> S	ELECT DISK 1						
Disk 1 is n	ow the seled	ted disk.					
DISKPART> C	REATE PARTII	ION PRIMARY					
DiskPart su	cceeded in o	reating the	specified	part	ition.		
DISKPART> S	ET ID=84 OVE	ERRIDE 🥂					
DiskPart su	ccessfully s	et the parti	tion ID.				
DISKPART>							
							~

Enter timer duration

To install the Intel Rapid Start Technology software:

- 1. From the Start screen, type Intel.
- 2. Select Intel Rapid Start Technology.



3. Use the slider to set the time duration for the computer to enter Rapid Start Technology hibernation.

Note: The default time is 60 minutes (recommended).

tel® Rapid Start Technology Manager	×		
Intel® Rapid S Ma	Intel® Rapid Start Technology Manager		
Status Intel Rapid Start Technology 🛛) On	© Off	
Hide Advanced Settings			
Advanced Settings			
Critical Battery 📀	On	Off	
Timer 🕜	On	© Off	
	60 Minutes		
0	U	120	
	Save	Cancel	

3. Restart the computer.

Issues related to replacing the operating system

Removing data from mSATA module

If it becomes necessary to reinstall the original operating system, Smart Response Technology and Rapid Start Technology should first be disabled using their respective user interfaces before the operating system is removed.

Note: Save any personal data you may have stored on the mSATA module before starting this process.

Disabling Smart Response Technology

- 1. Launch Intel Rapid Storage Technology.
- 2. Click the **Acceleration** tab
- 3. Click the Disable Acceleration link and wait for completion

Statur Manage	Dersta Preferancer Help	
Intel® Smart Response	Technology	
Your storage system is configured to tasking, and extend battery life.	use a solid-state drive as a cache device	to increase system responsiveness, ena
Acceleration Configuration		
Acceleration Configuration Accelerated device: Disk on port 0 (s)	stem) Disable acceleration 🕐 🛛	<u>}</u>
Acceleration Configuration Accelerated device: Disk on port 0 (s) ① You must first disable accelera	stem) <u>Disable acceleration</u>	c or volume.
Acceleration Configuration Accelerated device: Disk on port 0 (s) You must first disable accelera Acceleration mode: Maximized <u>Chan</u>	stem) <u>Disable acceleration</u> ⑦	c or volume.
Acceleration Configuration Accelerated device: Disk on port 0 (sy You must first disable accelera Acceleration mode: Maximized <u>Chan</u> SSD Configuration	stem) <u>Disable acceleration</u> ⑦	Cor volume.
Acceleration Configuration Accelerated device: Disk on port 0 (s) You must first disable accelera Acceleration mode: Maximized <u>Chan</u> SSD Configuration SSD on port 2: Normal	stem) <u>Disable acceleration</u> ②	c or volume.
Acceleration Configuration Accelerated device: Disk on port 0 (s) You must first disable accelera Acceleration mode: Maximized <u>Chan</u> SSD Configuration SSD on port 2: Normal Usage: Cache device	stem) <u>Disable acceleration</u> ion in order to accelerate a different disk <u>se mode</u>	c or volume.

4. Click the **Reset To Available** link when it displays in the tab.



Disabling Rapid Start Technology

- 1. Launch Intel Rapid Start Technology.
- 2. Click Off in the Intel Rapid Start Technology field.

Intel® Rapid Sta Mana	Intel® Rapid Start Technology Manager		(intel		
Status					
Intel Rapid Start Technology 🛛	۲	On	0	Off	-
Hide Advanced Settings					
Advanced Settings					
Critical Battery 📀	۲	On	O	Off	
Timer 0	0	On	0	Off	
	60 Minute	s			
0	0				120
	Save			Cance	el

Preparing the mSATA module for the operating system reinstallation

To ensure that all data and partitions have been removed from the mSATA module, follow the steps below.

- 1. Power off the computer.
- 2. Press the power button to start up the computer, and then press the ESC key to bring up the **Startup** menu.
- 3. Next, select the F10 key to enter the **BIOS Setup** menu.

 1 System Information 2 System Diagnostics 3 Initiate Intel CIRA 6 Enter Intel(R) ME Setup 7 HP SpareKey 9 Boot Device Options 70 BIOS Setup 71 MP Recovery 72 Network Boot ENTER - Continue Startup
$\langle p \rangle$

4. Next, use the arrows to move to or click to select the **Security** tab. Next, use the arrows to move to **Secure Erase**, and then press Enter.

FIIe	Security	System Comgulation
Fingerprint Reset on Re	aboot (If Present)	
Save/Restore MBR of t	he system Hard Drive 📀	
User Tools		
O Change Password		
O HP SpareKey Enrollmen	<u>t</u>	
Anti Theft		
O DriveLock		
Automatic DriveLock		
TPM Embedded Securit	X	
Utilities		
O Disk Sanitizer		
To run Disk Sanitizer, ple	ease go to:	nge SATA Device Mode to IDE or AHCI
System Configuration ->		
Secure Erase 🕢 🧹		
O System IDs		
		Save Help Exit

5. In the **Secure Erase** page, use the arrows to select **Notebook mSATA Drive**, and then press Enter.



6. Follow the on-screen instructions to erase the mSATA drive.



7. Once complete, exit the **BIOS** Menu, and then restart the computer to proceed with the reinstallation of the operating system.

For more information

For U.S. support, go to http://www.hp.com/go/contactHP. For worldwide support, go to http://welcome.hp.com/country/us/en/wwcontact_us.html.



Get connected www.hp.com/go/getconnected Current HP driver, support, and security alerts delivered directly to your desktop

© Copyright 2013 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

Trademark acknowledgments, if needed.

720486-001, Created February 2013

Share with colleagues 🖸 🖬 🛅





