



# Intel<sup>®</sup> Virtual Buttons Driver

Release Notes and Bring Up Guide

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*September 2013*

*Revision 1.1*



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## Revision History

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Document Number	Revision Number	Description	Revision Date
xxxxxx	0.8	<ul style="list-style-type: none"><li>Initial Beta Release.</li></ul>	May 2013
	1.0	<ul style="list-style-type: none"><li>PV release</li></ul>	July 2013
	1.1	<ul style="list-style-type: none"><li>HF1 release</li></ul>	September 2013

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# 1 Introduction

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## 1.1 Purpose and Scope of Document

This document provides installation instructions and general usage of the Intel® Virtual Buttons driver as well as release information, such as release kit summary, important notes, resolved issues and known issues. This document is intended to help OEM and ODM customers setup their platform as they prepare for validation and debug.

Intel® Virtual Buttons driver allows the SBIOS to send buttons and indicator events to the operating system. The driver supports the following operating system and platform:

**Operating System:**

- Windows\* 8.1 Operating System (64-bit version)

**Hardware Requirement:**

- Haswell Platforms

## 1.2 Acronyms and Terminology

Term	Description
ACPI	Advanced Configuration and Power Interface
GPIO	General Purpose IO
SBIOS	System BIOS
_STA	Intel® Virtual Button Driver Status Method
VBDL	Intel® Virtual Button Driver Load Method.



### 1.3 Reference Documents

Document	Document No./Location
2-in-1 Dual Personality Enabling and Intel® Virtual Buttons Driver for Windows* 8.1 Buttons and Indicators	525656
System BIOS Support for Intel® Virtual Buttons Driver	525585

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## 2 Release Kit Summary

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### 2.1 Release Kit Details

**Kit Name:** Intel® Virtual Buttons Driver

**Version:** HF1 Release

- Intel® Virtual Buttons Driver – 1.0.0.13 – new installer version 1.3.11.0

### 2.2 Kit Contents

The contents of this release kit include:

- Intel® Virtual Buttons Driver. The driver installer compose of the following modules:
  - Intel® Virtual Buttons Driver
- Intel® Virtual Buttons Driver Release Notes and Bring Up Guide
- License Agreement

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## **3**     *Important Notes*

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### **3.1**     **New Features:**

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## 4 Architecture

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The path to Buttons and Indicators Event handling starts with a platform specific Hardware Event and continues up the software stack until it is serviced by the operating system. With the exception of the hardware event, a complete solution is being provided to support conveying buttons and indicators.

Buttons and Indicators Event Handling Sequence:

1. Hardware Event is generated.
2. Hardware Event is sent to SBIOS.
3. SBIOS Passes Event to Virtual Buttons Driver
4. Intel® Virtual Buttons Driver passes Event onto Inbox Buttons Driver
5. Inbox Buttons Driver passes Event onto Operating System
6. Operating System Services Virtual Buttons Event.



## 5 *Driver Installation*

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**Note:** A supported Operating System must be installed prior to the installation of the Intel® Virtual Buttons Driver.

There are two different methods to install the Intel® Virtual Buttons Driver for this release:

1. Driver Installation via Installer
2. Silent Driver Installation via Installer

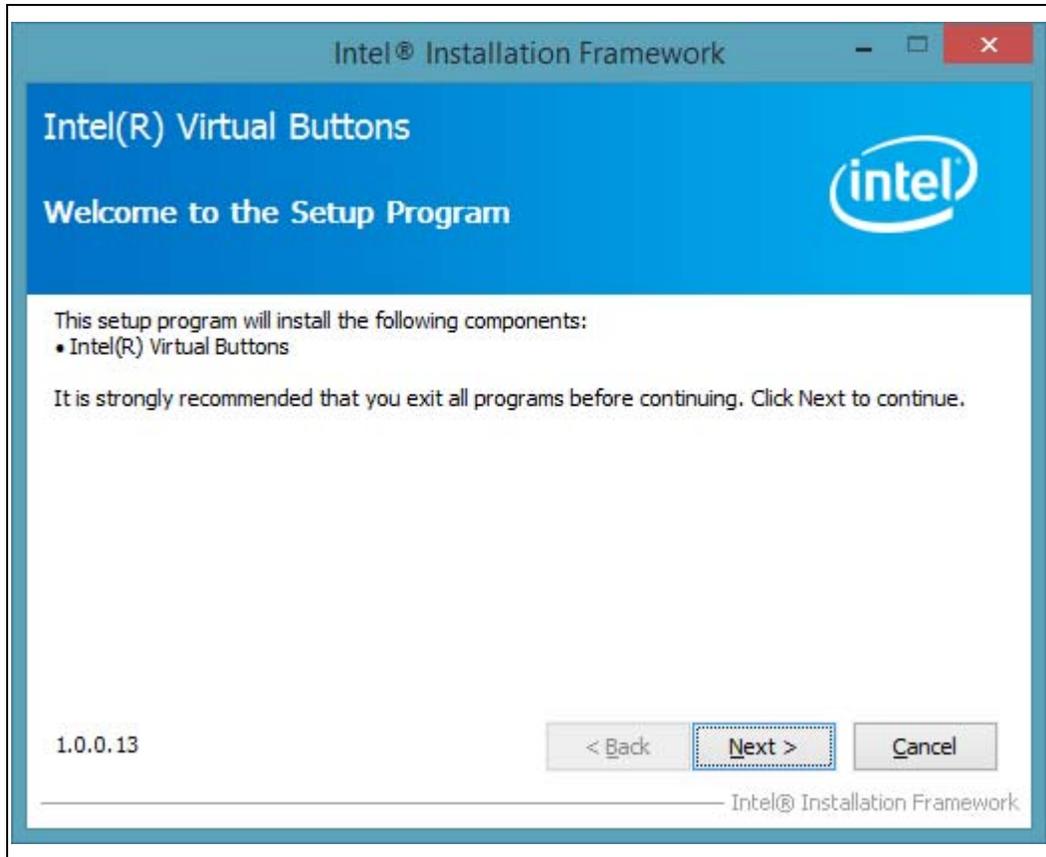
### 5.1 **Driver Installation via Installer**

To install the Intel® Virtual Buttons Driver following steps must be taken;

1. Update the test system with BIOS that supports the INT33D6 ACPI device.
2. Install a new copy of Windows\* 8.1 (64 bit).
3. Copy the installation package to the test machine.
4. Run the setup.exe program from within the install folder (Figure 1).



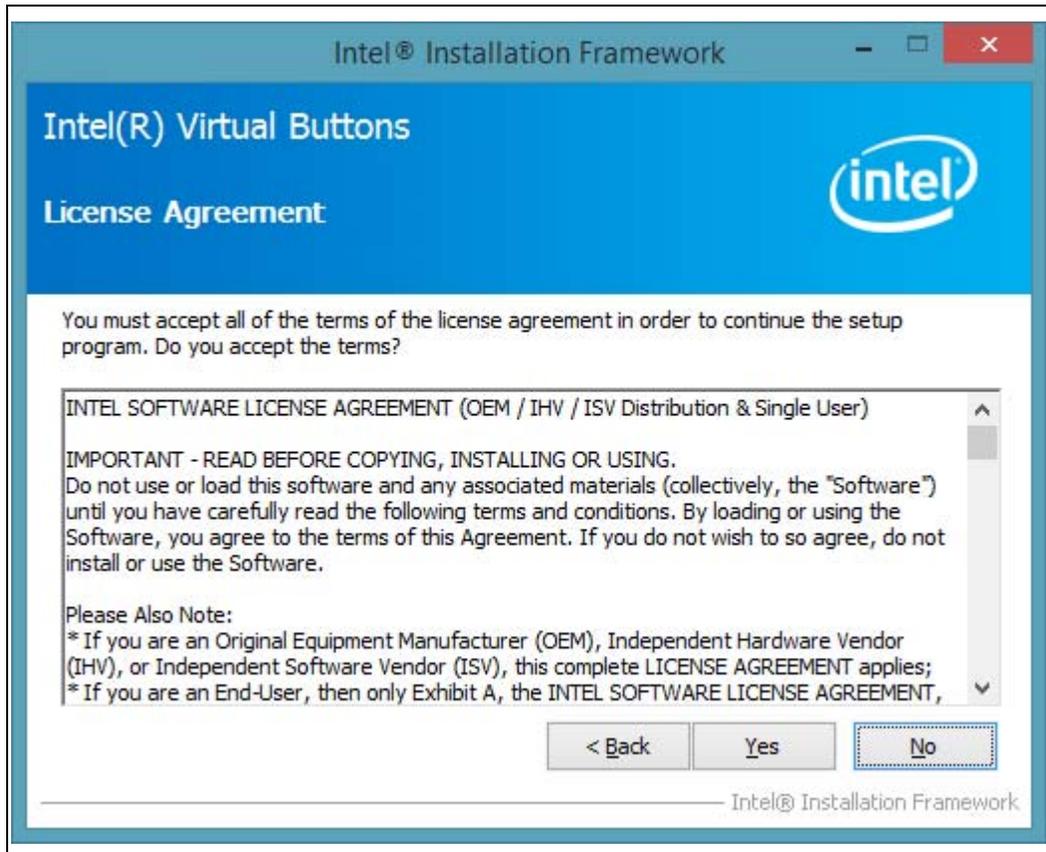
Figure 1. Welcome Screen



5. Next, you should see license agreement screen as shown in
6. [Figure 2](#). Please review the license agreement and if you accept the license terms then select "Yes" to continue, if you select "No" installation will stop.



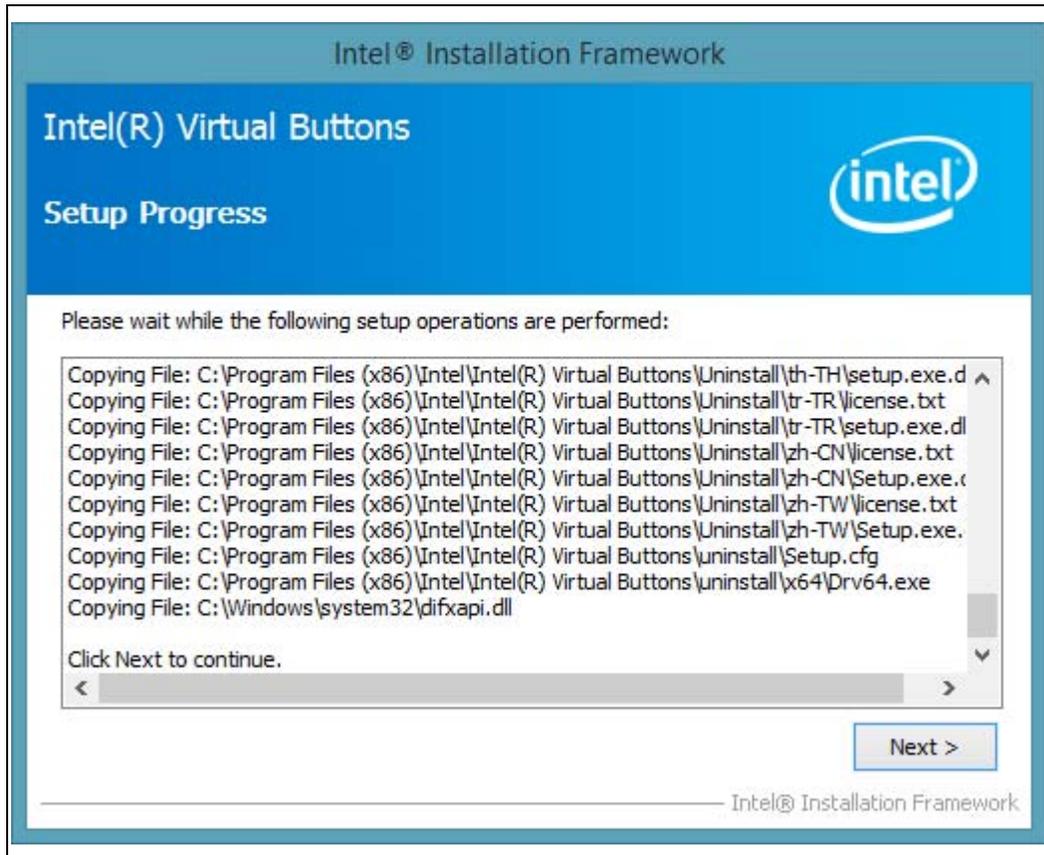
Figure 2. License Agreement





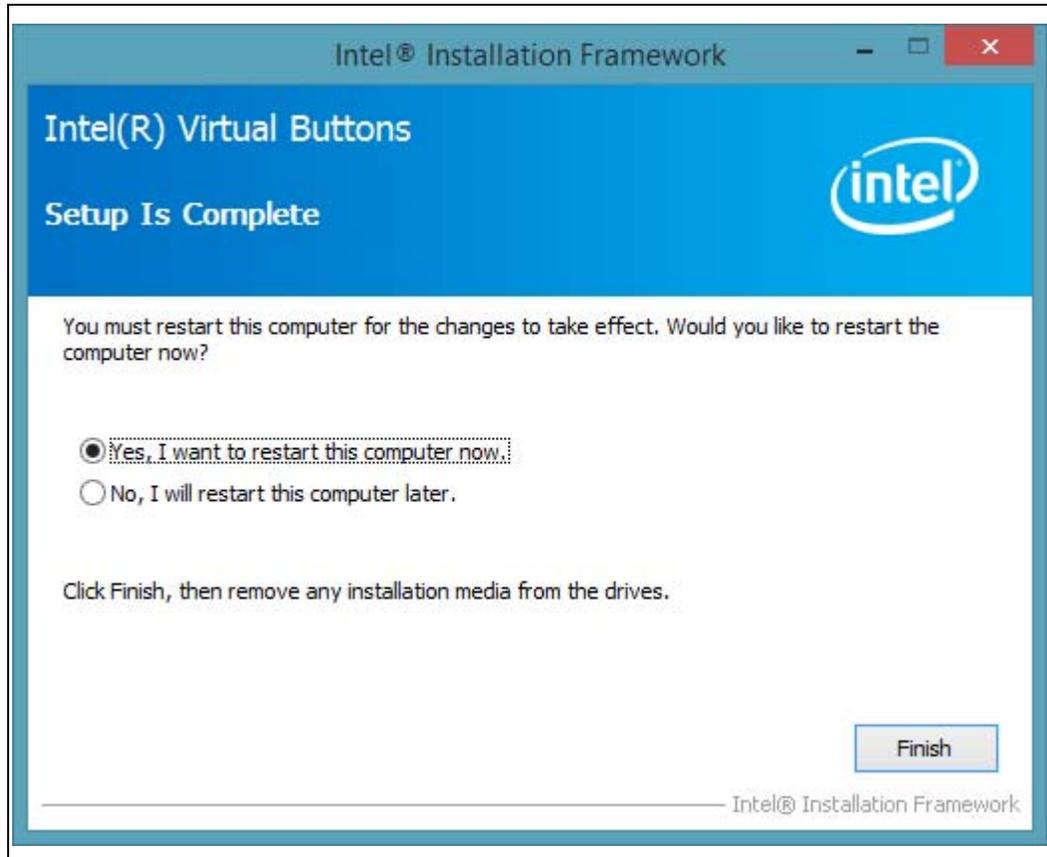
7. Next, the Intel® Virtual Buttons Driver files are loaded to their respective location. By default, the driver will be installed in c:\program Files (x86)\Intel\Intel(R) Virtual Buttons. Click on "Next >" button to continue installation.

Figure 3. Driver installs destination folder location



8. Next, after successful installation, you should see setup completion screen as shown in [Figure 4](#). Click on 'Finish' button to restart the system.

Figure 4. Setup Completion



## 5.2 Silent Driver Installation via Installer

Follow the steps listed below for silent driver installation via installer:

1. Open a Command Prompt (cmd.exe) with administrator rights (ie. Run as administrator). Click on 'Yes' button in User Account Control pop-up window.
2. Switch to the Intel® Virtual Buttons Driver installer directory
3. Setup.exe -s

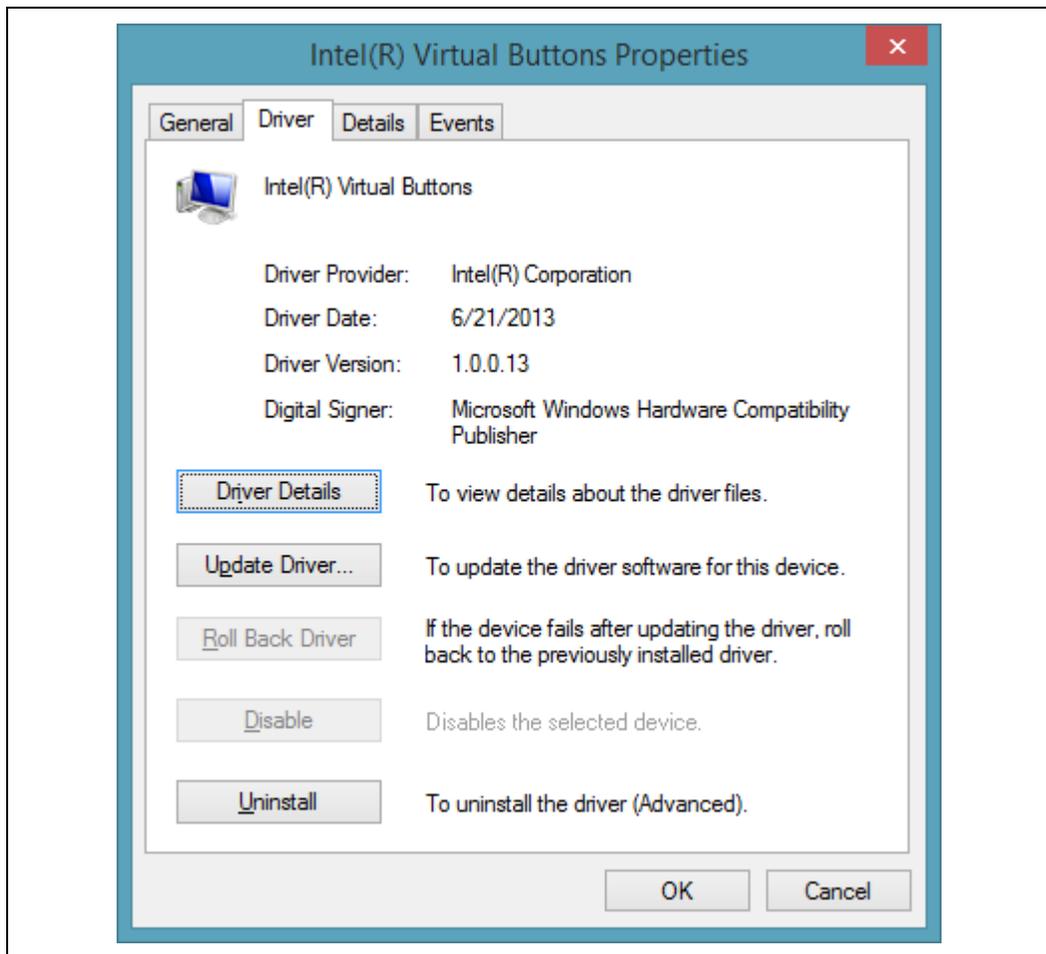
## 5.3 Checking the Driver Version

To check the Intel® Virtual Buttons Driver version, follow the below instructions:



1. Open Device Manager.
2. In View, select "show hidden devices"
3. Click on System Devices.
4. Double click on "Intel(R) Virtual Buttons"
5. Select the "Driver" tab and the Driver Version will be listed.

Figure 5. Intel® Virtual Buttons Driver



## 5.4 Uninstalling the Driver via Control Panel

Follow the steps listed below to uninstall the driver via the Control Panel:

1. Open the Control Panel window.

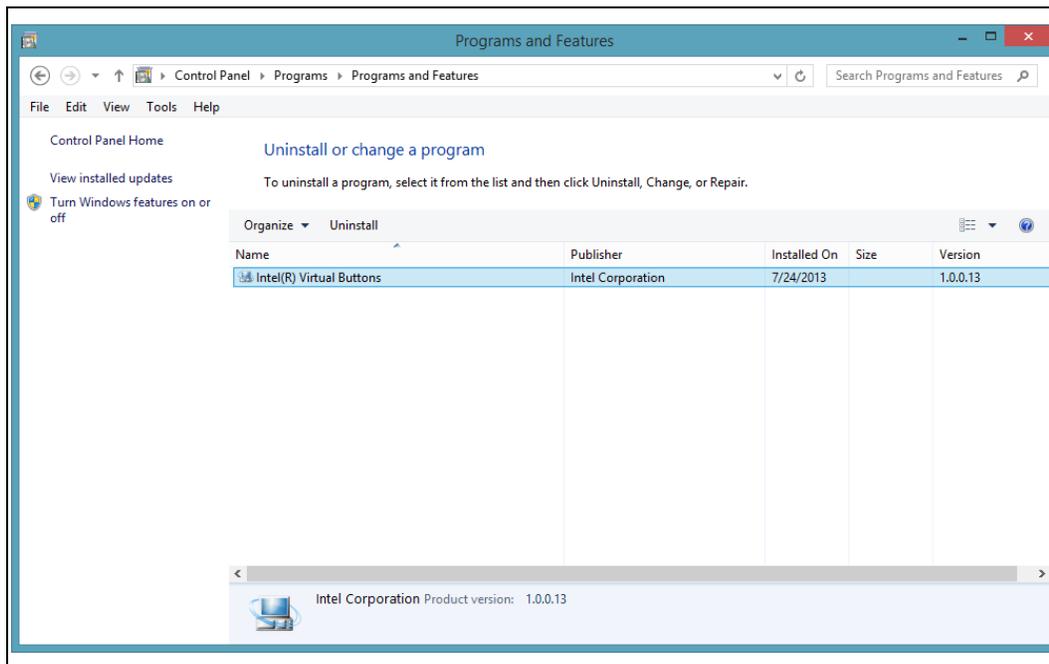
2. If the Control Panel window is shown in 'Category' view, then select "Uninstall a program" as shown in [Figure 6](#). Otherwise if the Control Panel window is shown in 'icon' view, then select "Programs and Features".

Figure 6. Control Panel – Uninstall a program



3. On the next window, select the "Intel® Virtual Buttons" (see [Figure 7](#)) from the list of programs. Then click the "Uninstall" button.

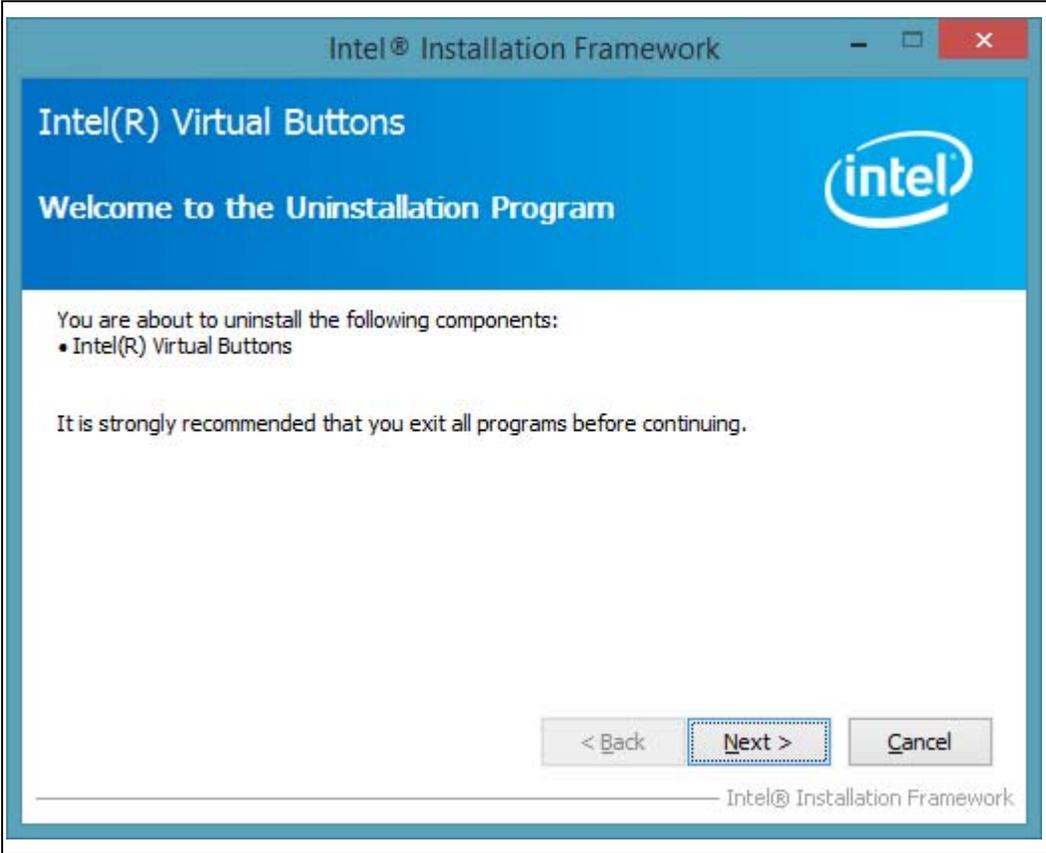
Figure 7. Control Panel – Programs List



4. You should see the Welcome to Uninstallation Program pop-up window with component details as shown in [Figure 8](#). Click 'Next >' button to continue.



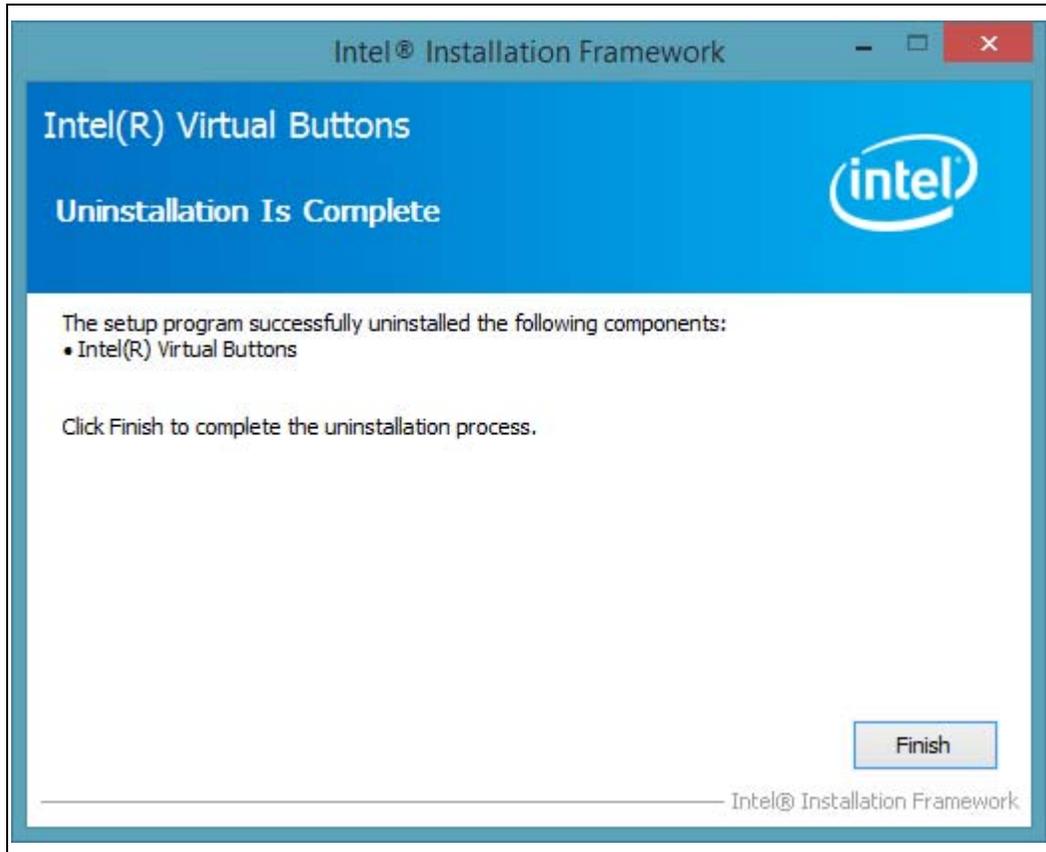
Figure 8. Welcome to the Uninstallation Program





5. Next, installer will perform various operations and show progress in Uninstallation progress screen. When the uninstall process is completed, you should see screen as shown in [Figure 9](#). Click on 'Finish' button to complete the uninstallation.

Figure 9. Uninstall Setup Completion



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## 6 Closed Issues

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Issue #	Description	Resolution
5181179	Uninstalling Virtual Buttons driver in the controller panel may adversely impacts other drivers installed on the platform	Fixed HF1 - New installer version 1.3.11.0
5041824	Incorrect version number in the driver installer	Implemented and closed in driver version 1.0.0.10
5041549	S3/S4 toggle for convertible notifications are not being sent to VGPIO driver	Implemented changes to update indicator state upon resume from S3/S4
5041127	Convertible and Dock indicators registry is not being reset to default values on a restart	Fixed in latest OS build.
5041884	Power button Release notify not coming immediately after press notify when system is in CS	Root caused to EC staying in low power mode even after power button press event. BIOS fix implemented
245182	When the system is in connected standby, upon pressing power button for > 2 seconds and less than 10 seconds, Slide to UI Window doesn't appear on user accounts without a password set	Root caused to OS issue. Fix verified in the latest OS build.

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## 7 *Known Issues*

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Issue #	Description
	N/A

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