



# NextWindow Multi-Touch Device Driver Release Notes

## Version 1.3.4.1

### **Supported Hardware:**

NextWindow 1900 DSP

### **Firmware Required:**

Version 2.98, 2.99, 2.99x

### **Supported Operating Systems:**

Microsoft Windows 7 32bit, Microsoft Windows 7 64bit.

### **Driver Signing Status:**

Digitally Signed by NextWindow

### **Driver Release Status:**

Release Candidate

### **Testing Status:**

Run with Logo Test – will pass 43 of 43 tests – some tests will only pass 80-90% of the time however.

### **Notes:**

Fixed issue with some units “bumping” out when drawing down the edges.

## Version 1.3.4.0

### **Supported Hardware:**

NextWindow 1900 DSP

### **Firmware Required:**

Version 2.98, 2.99, 2.99x

### **Supported Operating Systems:**

Microsoft Windows 7 32bit, Microsoft Windows 7 64bit.

**Driver Signing Status:**

Digitally Signed by NextWindow

**Driver Release Status:**

Release Candidate

**Testing Status:**

Run with Logo Test – will pass 43 of 43 tests – some tests will only pass 80-90% of the time however.

**Notes:**

Fixed a bug with the management of the floating point register. Have also simplified this part of the code so this type of problem shouldn't happen again.

**Version 1.3.3.5****Supported Hardware:**

NextWindow 1900 DSP

**Firmware Required:**

Version 2.98, 2.99, 2.99x

**Supported Operating Systems:**

Microsoft Windows 7 32bit, Microsoft Windows 7 64bit.

**Driver Signing Status:**

Digitally Signed by NextWindow

**Driver Release Status:**

Release Candidate

**Testing Status:**

Run with Logo Test – will pass 43 of 43 tests – some tests will only pass 80-90% of the time however.

**Notes:**

Fixed bug with calibration accuracy when screen is in portrait mode – due to Windows 7 automatically rotating the output points when in portrait mode, users need to calibrate in landscape mode before switching to portrait mode.



## **Version 1.3.2.5**

### **Supported Hardware:**

NextWindow 1900 DSP

### **Firmware Required:**

Version 2.98, 2.99, 2.99x

### **Supported Operating Systems:**

Microsoft Windows 7 32bit, Microsoft Windows 7 64bit.

### **Driver Signing Status:**

Digitally Signed by NextWindow

### **Driver Release Status:**

Release Candidate

### **Testing Status:**

Run with Logo Test – will pass 43 of 43 tests – some tests will only pass 80-90% of the time however.

### **Notes:**

Fixed BSOD when running driver verifier.

## **Version 1.3.2.0**

### **Supported Hardware:**

NextWindow 1900 DSP

### **Firmware Required:**

Version 2.98, 2.99, 2.99x

### **Supported Operating Systems:**

Microsoft Windows 7 32bit, Microsoft Windows 7 64bit.

### **Driver Signing Status:**

Digitally Signed by NextWindow

### **Driver Release Status:**



Release Candidate

**Testing Status:**

Run with Logo Test – will pass 43 of 43 tests – some tests will only pass 80-90% of the time however.

**Notes:**

Signed NW1900.sys file correctly.

**Version 1.3.1.9**

**Supported Hardware:**

NextWindow 1900 DSP

**Firmware Required:**

Version 2.98, 2.99, 2.99x

**Supported Operating Systems:**

Microsoft Windows 7 32bit, Microsoft Windows 7 64bit.

**Driver Signing Status:**

Digitally Signed by NextWindow

**Driver Release Status:**

Release Candidate

**Testing Status:**

Run with Logo Test – will pass 43 of 43 tests – some tests will only pass 80-90% of the time however.

**Notes:**

Fixed BSOD issue.

**Version 1.3.1.6**

**Supported Hardware:**

NextWindow 1900 DSP

**Firmware Required:**

Version 2.98, 2.99, 2.99x

**Supported Operating Systems:**

Microsoft Windows 7 32bit, Microsoft Windows 7 64bit.

**Driver Signing Status:**

Digitally Signed by NextWindow

**Driver Release Status:**

Release Candidate

**Testing Status:**

Run with Logo Test – will pass 43 of 43 tests – some tests will only pass 80-90% of the time however.

**Notes:**

Slight tweak to the algorithm for determining crossover points.

**Version 1.3.0.8****Supported Hardware:**

NextWindow 1900 DSP

**Firmware Required:**

Version 2.98, 2.99, 2.99x

**Supported Operating Systems:**

Microsoft Windows 7 32bit, Microsoft Windows 7 64bit.

**Driver Signing Status:**

Digitally Signed by NextWindow

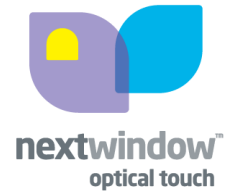
**Driver Release Status:**

Release Candidate

**Testing Status:**

Run with Logo Test – will pass 43 of 43 tests – some tests will only pass 80-90% of the time however.

**Notes:**



Fixed bug with drawing to the edge of the screen on large screen formats.  
Fixed timing issue with sending out touch up information

## **Version 1.3.0.2**

### **Supported Hardware:**

NextWindow 1900 DSP

### **Firmware Required:**

Version 2.98, 2.99, 2.99x

### **Supported Operating Systems:**

Microsoft Windows 7 32bit, Microsoft Windows 7 64bit.

### **Driver Signing Status:**

Digitally Signed by NextWindow

### **Driver Release Status:**

Release Candidate

### **Testing Status:**

Run with Logo Test – will pass 43 of 43 tests – some tests will only pass 80-90% of the time however.

### **Notes:**

Fixed potential 0x8E BSOD.

Fixed memory access violation (0x3B BSOD) when reporting descriptors

Improved selection of correct pair of points in top corner of the screen.

## **Version 1.2.9.3**

### **Supported Hardware:**

NextWindow 1900 DSP

### **Firmware Required:**

Version 2.98, 2.99, 2.99x

### **Supported Operating Systems:**

Microsoft Windows 7 32bit, Microsoft Windows 7 64bit.

**Driver Signing Status:**

Digitally Signed by NextWindow

**Driver Release Status:**

Release Candidate

**Testing Status:**

Run with Logo Test – will pass 43 of 43 tests – some tests will only pass 80-90% of the time however.

**Notes:**

Fixed 0x8E BSOD.

Added default setting for “Allow device to wake from sleep” when device is first installed.

Added reporting physical size of touch screen to improve gesture performance.

**Version 1.2.7.8****Supported Hardware:**

NextWindow 1900 DSP

**Firmware Required:**

Version 2.98, 2.99, 2.99x

**Supported Operating Systems:**

Microsoft Windows 7 32bit, Microsoft Windows 7 64bit.

**Driver Signing Status:**

Digitally Signed by NextWindow

**Driver Release Status:**

Release Candidate

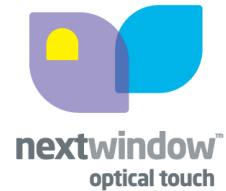
**Testing Status:**

Run with Logo Test – will pass 43 of 43 tests – some tests will only pass 80-90% of the time however.

**Notes:**

Fixed 0x3B BSOD when applications requested the collection descriptor.

Improved performance of horizontal swipes.



Significant improvement of two touches at the top of the screen – particularly with vertical swipes.

Fixed bug which could cause glitching when passing through occlusion.

## **Version 1.2.7.5**

### **Supported Hardware:**

NextWindow 1900 DSP

### **Firmware Required:**

Version 2.98, 2.99, 2.99x

### **Supported Operating Systems:**

Microsoft Windows 7 32bit, Microsoft Windows 7 64bit.

### **Driver Signing Status:**

Digitally Signed by NextWindow

### **Driver Release Status:**

Release Candidate

### **Testing Status:**

Run with Logo Test – will pass 43 of 43 tests – some tests will only pass 80-90% of the time however.

### **Notes:**

Fixed minor bug with positioning of occluded touches.

Fixed bug with touch-ups that was introduced in v1.2.5.3 with the smooth reporting rate.

Decrease jitter threshold to allow more sensitive movements – particularly useful for writing.

Fix to bug with wake from sleep implementation from last release.

## **Version 1.2.6.6**

### **Supported Hardware:**

NextWindow 1900 DSP

### **Firmware Required:**

Version 2.98, 2.99, 2.99x



**Supported Operating Systems:**

Microsoft Windows 7 32bit, Microsoft Windows 7 64bit.

**Driver Signing Status:**

Digitally Signed by NextWindow

**Driver Release Status:**

Release Candidate

**Testing Status:**

Run with Logo Test – will pass 43 of 43 tests – some tests will only pass 80-90% of the time however.

**Notes:**

Fixed a couple of 0x50 BSOD crashes.

Fixed a 0x8E BSOD crash.

Fixed a 0x3B BSOD crash.

Fixed remaining Prefast warnings.

Fixed StaticDV defects.

Implemented fix to only allow device to wake from sleep when checkbox enabled on device properties.

**Version 1.2.5.9****Supported Hardware:**

NextWindow 1900 DSP

**Firmware Required:**

Version 2.98, 2.99, 2.99x

**Supported Operating Systems:**

Microsoft Windows 7 32bit, Microsoft Windows 7 64bit.

**Driver Signing Status:**

Digitally Signed by NextWindow

**Driver Release Status:**

Release Candidate

**Testing Status:**



Run with Logo Test – will pass 43 of 43 tests – some tests will only pass 80-90% of the time however.

**Notes:**

Fixed an issue with a single touch splitting into two touches.  
Fixed a 0x7E BSOD crash.  
Fixed several Prefast warnings.

**Version 1.2.5.3**

**Supported Hardware:**

NextWindow 1900 DSP

**Firmware Required:**

Version 2.98, 2.99, 2.99x

**Supported Operating Systems:**

Microsoft Windows 7 32bit, Microsoft Windows 7 64bit.

**Driver Signing Status:**

Digitally Signed by NextWindow

**Driver Release Status:**

Release Candidate

**Testing Status:**

Run with Logo Test – will pass 43 of 43 tests – some tests will only pass 80-90% of the time however.

**Notes:**

Changed name of driver to NW1900.sys  
Now reports touches at regular 10ms intervals.  
Fixed various PreFast warnings.  
Multiple touch screen support.  
A blue screen fix connected to the use of floating point.  
Improved picking of correct points at crossover.

**Version 1.2.1.1 – Release Candidate**

**Supported Hardware:**

NextWindow 1900 DSP

**Firmware Required:**

Version 2.98, 2.99, 2.99x

**Supported Operating Systems:**

Microsoft Windows 7 32bit, Microsoft Windows 7 64bit.

**Driver Signing Status:**

Digitally Signed by NextWindow

**Driver Release Status:**

Release Candidate

**Testing Status:**

Fully Tested.

Run with Logo Test – will pass 43 of 43 tests – some tests will only pass 80-90% of the time however.

**Notes:**

Fixed occasional edge of screen dropouts.

Fixed bug with occasional glitching on double taps.

**Version 1.2.0.9****Supported Hardware:**

NextWindow 1900 DSP

**Firmware Required:**

Version 2.98, 2.99, 2.99x

**Supported Operating Systems:**

Microsoft Windows 7 32bit, Microsoft Windows 7 64bit.

**Driver Signing Status:**

Digitally Signed by NextWindow

**Driver Release Status:**

Released to test

**Testing Status:**



Run with Logo Test – passes 43 of 43 tests – some tests will only pass 80-90% of the time however.

**Notes:**

Fixed occasional glitch when switching from 2 touch to 1 touch when lifting uppermost touch when this touch was placed down first.

Added compatibility with existing NextWindow software applications – this will require new versions of these applications however.

Fixed bug with uninstall not completely removing the driver.

Fixed bug with calibration not updating the driver calibration settings until after reboot.

**Version 1.1.2.2**

**Supported Hardware:**

NextWindow 1900 DSP

**Firmware Required:**

Version 2.98, 2.99, 2.99x

**Supported Operating Systems:**

Microsoft Windows 7 32bit, Microsoft Windows 7 64bit.

**Driver Signing Status:**

Digitally Signed by NextWindow

**Driver Release Status:**

Released to test

**Testing Status:**

Partially Tested

Run with Logo Test – passes 43 of 43 tests – some tests will only pass 80-90% of the time however.

**Notes:**

Added width and height information for touches.

Added digital signature to the driver.

Fixed USB issue where switching the USB port the device was connected to would stop multi-touch working.

Fixed versioning in INF file.



## **Version 1.1.1.5**

### **Supported Hardware:**

NextWindow 1900 DSP

### **Firmware Required:**

Version 2.98, 2.99, 2.99x

### **Supported Operating Systems:**

Microsoft Windows 7 32bit, Microsoft Windows 7 64bit.

### **Driver Signing Status:**

Test Signed

### **Driver Release Status:**

Released to test

### **Testing Status:**

Partially Tested

Run with Logo Test – passes 42 of 43 tests.

### **Notes:**

Improved selection of correct points at crossover.

## **Version 1.1.1.3**

### **Supported Hardware:**

NextWindow 1900 DSP

### **Firmware Required:**

Version 2.98, 2.99, 2.99x

### **Supported Operating Systems:**

Microsoft Windows 7 32bit, Microsoft Windows 7 64bit.

### **Driver Signing Status:**

Test Signed

### **Driver Release Status:**

Released to test

### **Testing Status:**



Partially Tested  
Run with Logo Test – passes 42 of 43 tests.

**Notes:**

Fixed intermittent crash on startup when double tapping.

**Version 1.1.0.9**

**Supported Hardware:**  
NextWindow 1900 DSP

**Firmware Required:**  
Version 2.98, 2.99, 2.99x

**Supported Operating Systems:**  
Microsoft Windows 7 32bit, Microsoft Windows 7 64bit.

**Driver Signing Status:**  
Test Signed

**Driver Release Status:**  
Released to test

**Testing Status:**  
Partially Tested  
Run with Logo Test – passes 42 of 43 tests.

**Notes:**

Fixed glitching when performing “press and tap” gestures.  
Fixed bug with switching points on crossover.  
Fixed “skidding” issue when tapping on screen.

**Version 1.1.0.2**

**Supported Hardware:**  
NextWindow 1900 DSP

**Firmware Required:**  
Version 2.98, 2.99, 2.99x

**Supported Operating Systems:**

Microsoft Windows 7 32bit, Microsoft Windows 7 64bit.

**Driver Signing Status:**

Test Signed

**Driver Release Status:**

Released to test

**Testing Status:**

Partially Tested

Run with Logo Test – passes 42 of 43 tests.

**Notes:**

Greatly improved positional accuracy when performing a simultaneous two touch down into an occluded state.

Greatly improved positional accuracy when moving from 1 touch to 2 touches in an occluded state.

**Version 1.1.0.0****Supported Hardware:**

NextWindow 1900 DSP

**Firmware Required:**

Version 2.98, 2.99, 2.99x

**Supported Operating Systems:**

Microsoft Windows 7 32bit, Microsoft Windows 7 64bit.

**Driver Signing Status:**

Test Signed

**Driver Release Status:**

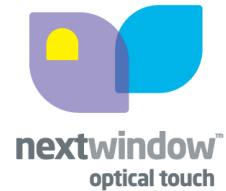
Released to test

**Testing Status:**

Partially Tested

Run with Logo Test – passes 40 of 43 tests.

**Notes:**



Significantly improved picking of correct points when performing a simultaneous two touch down.

Improved sample rate to approximately 90 packets per second – this is now well above Logo requirements.

Fixed glitching when passing through occlusion very slowly.

Minor tweaks to filters to improve smoothing through occlusion.

### **Version 1.0.4.7**

#### **Supported Hardware:**

NextWindow 1900 DSP

#### **Firmware Required:**

Version 2.98, 2.99, 2.99x

#### **Supported Operating Systems:**

Microsoft Windows 7 32bit, Microsoft Windows 7 64bit.

#### **Driver Signing Status:**

Test Signed

#### **Driver Release Status:**

Released to test

#### **Testing Status:**

Partially Tested

#### **Notes:**

Added velocity filter to improve smoothing across occluded states and picking the correct pair of points.

Fixing the bug where points get confused when performing a 2 touch vertical scroll down from the top of the screen.

Fixed offset problem on single touch connected to the two touch at top of screen code.

Fixed glitches when power tapping.

### **Version 1.0.4.3**

#### **Notes:**

Added ability to detect 2 touches at the top of the screen when the sensors only detect a single touch.

Improved smoothing across occluded states.



#### **Version 1.0.4.1**

##### **Notes:**

Call PoSetSystemState when driver has valid data to return. This ensures system power state does not change whilst user is tapping the screen.

When processing the Max Count Feature Report Query, return the max count data in the raw output buffer.

#### **Version 1.0.4.0**

##### **Notes:**

Converted to KMDF driver.

Added MAX\_CONTACTS to driver to signify to the OS how many touches the driver supports.

Added 'Edge Acceleration' to allow touch at all parts of the screen.

Added maximum velocity for touches to prevent glitching when rapid tapping.

Added smoothing through occluded states.

#### **Version 1.0.3.8**

##### **Notes:**

Fixed a corner case in the return from hibernate case were the device mode was not being set properly.

#### **Version 1.0.3.7**

##### **Notes:**

When the system returns from hibernation, re-set the device mode to Slopes Mode.

#### **Version 1.0.3.6**

##### **Notes:**

When uninstalling the driver, really reset the device mode to Digitizer. Before it was being reset to mouse mode.

#### **Version 1.0.3.5**

##### **Notes:**

Cancel and delete the driver allocated IRP when removing the device driver. This cleans up a memory leak.

Modified the install process so that the driver is installed as an FDO instead of a filter driver.



Move the setting of the Device Flags to AddDevice for Win7 but set the flags at Device Start time for all down rev'd OSES.

When uninstalling the device driver, re-set the device mode to "Digitizer" this will re-enable the digitizer node on the device.

#### **Version 1.0.3.4**

##### **Notes:**

Fixed hang when disabling the driver via device manager.  
Added safety checks to all floating point calculations.  
Fixed IRQ\_LESS\_THAN\_OR\_NOT\_EQUAL crash.

#### **Version 1.0.3.0**

##### **Notes:**

Fixed issue with touch screen not responding after hibernation.  
Fixed issue with requiring the touch screen to be touched to complete shut down and restart processes.  
Fixed recurring crash on 32bit version of Win7.

#### **Version 1.0.2.0**

##### **Notes:**

Multi-touch gestures (zoom, horizontal/vertical panning) working fine.  
Fixed hang on startup.  
Single touch working fine.  
Fixed glitched lines appearing off screen.  
Fixed missing touch-ups issue.  
ChkInf reports no errors.

#### **Version 1.0.1.0**

##### **Notes:**

Beta release.  
Single touch working okay.  
Multi touch works fine with line glitches on cross-over.  
Zoom gestures working okay.

#### **Version 1.0.0.4**

##### **Notes:**

Integrated the multi-touch filtering algorithms.  
Single touch working ok.



Multi-Touch sometimes gets confused on touch-up due to mistaking the touch ids of the two touches.

Zoom gestures currently not working – unknown reason.

**Added Features:**

Added the ability to return manufactured touch up reports if no touch up report is sent within 20 ms.

**Bug Fixes:**

Fixed a bug in NWReadReport() so that we have the correct privileges for reading report data from the device.

**Version 1.0.0.3**

**Notes:**

This version of driver contains the “hooks” for calling the NextWindow conversion algorithms however it has been compiled to use the test algorithms.

**Added Features:**

Fixed the installer so that the user does not have to reboot after installing/uninstalling.

Added NWHidTest.exe to the release.

**Bug Fixes:**

**Version 1.0.0.2**

**Notes:**

**Added Features:**

**Bug Fixes:**

NWFilter.sys:

Improved the algorithm for converting touch data.

NWCoIns.dll:

Fixed a bug where the installer would hang when uninstalling after the device has been removed from the system.

**Version 1.0.0.1**

Initial release.

**To Install:**

To install the drivers, execute Install.exe by double clicking on the icon. The user must reboot the machine in order for the changes to take effect.

**To Uninstall:**

Open the Programs and Feature applet. Find the entry labeled: NextWindow Drivers and right click. From the resulting context menu select "Uninstall". The user must reboot the machine in order for the changes to take effect.

**Safe Mode:**

To install the drivers on an 64-bit version of Windows, the system must be in "Safe Mode". To enter safe mode execute the following command line from within a command prompt that has been opened with elevated privileges.

BCDEDIT /set TESTSIGNING ON

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