

[Tech Note 811](#)

InTouch® MultiMonitor Support on Windows Vista, Windows 7 and Windows 2008 Server

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Introduction

This *Tech Note* explains the use of MultiMonitors within the InTouch® visualization environment. It is intended to provide a brief overview of MultiMonitor Technology and tips on choosing the proper card to use with your Wonderware® Software.

Application Versions

- InTouch 10.0 and later
- Microsoft Vista, Windows 7 and 2008 Server

MultiMonitor Technology Overview

A MultiMonitor system is a computer with more than one monitor connected to it, either by adding additional video cards or by using video cards with multiple outputs (ports).

Each monitor becomes a part of the desktop, enabling the mouse to move freely between monitors. You can drag windows from monitor to monitor, or stretch them across multiple monitors.

Video Hardware

Video hardware configuration can be divided into two categories:

A. One Individual Video card using custom drivers with multiple outputs (Ports).

or

B. Multiple Standard Video cards using Windows MultiMonitor support.

Another component you have to consider is the Video drivers used in these hardware configurations.

Video Drivers

Video driver configuration can also be divided into two categories:

A. Drivers capable of configuring 1 virtual desktop across multiple monitors.

or

B. Drivers that control individual multiple desktops.

Video Driver Characteristics

Category **A** drivers include the following characteristics:

- Capable of configuring 1 virtual desktop.
- Monitor settings and configuration are available for 1 monitor.
- The Windows taskbar extends across multiple monitors (when configured in a side-by-side layout).
- Windows applications can be maximized to fit all monitors.
- These types of drivers are typically made for custom video cards with multiple ports.

Category **B** drivers include the following characteristics:

- Capable of configuring multiple desktops.
- Monitor settings and configuration are available for each monitor.
- The Windows taskbar is fixed/assigned to one primary desktop (monitor).
- Windows applications can only be maximized on one primary designated monitor.
- This type of driver is provided by Windows support or as a standard driver for custom video cards.

Category A Driver Properties

Here's how the display properties look in a 2-monitor system with a Category A driver (following figure). Display settings are available for 1 monitor; i.e. you only have to configure 1 resolution, color depth, and refresh rate. The resolution setting is the resolution for the full display area of all monitors combined. In this figure the resolution setting is for 2 monitors configured in a side by side layout with a resolution of 1920 x 1080 per each monitor. This gives us a total viewing area of 3840 x 1080:

Note: The following graphics are included for example only. They show XP as the operating system, but the display properties are similar for more recent operating systems.

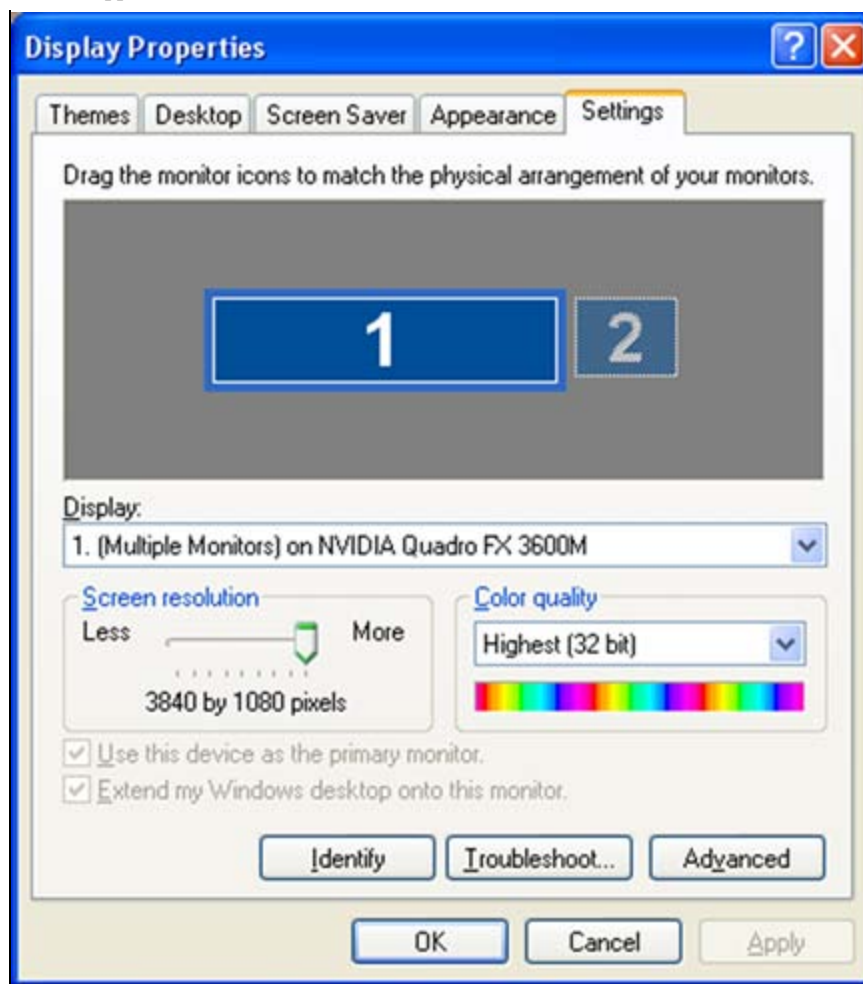


FIGURE 1: SINGLE SETTING ACROSS MULTIPLE MONITORS

Category B Driver Properties

Here's how Display Properties look in a 2-monitor system with a Category B driver (following figure). Resolution, color depth and refresh rate are configurable for each monitor. By dragging the monitors, you can adjust their position to match the physical arrangement of the actual monitors on your desktop:

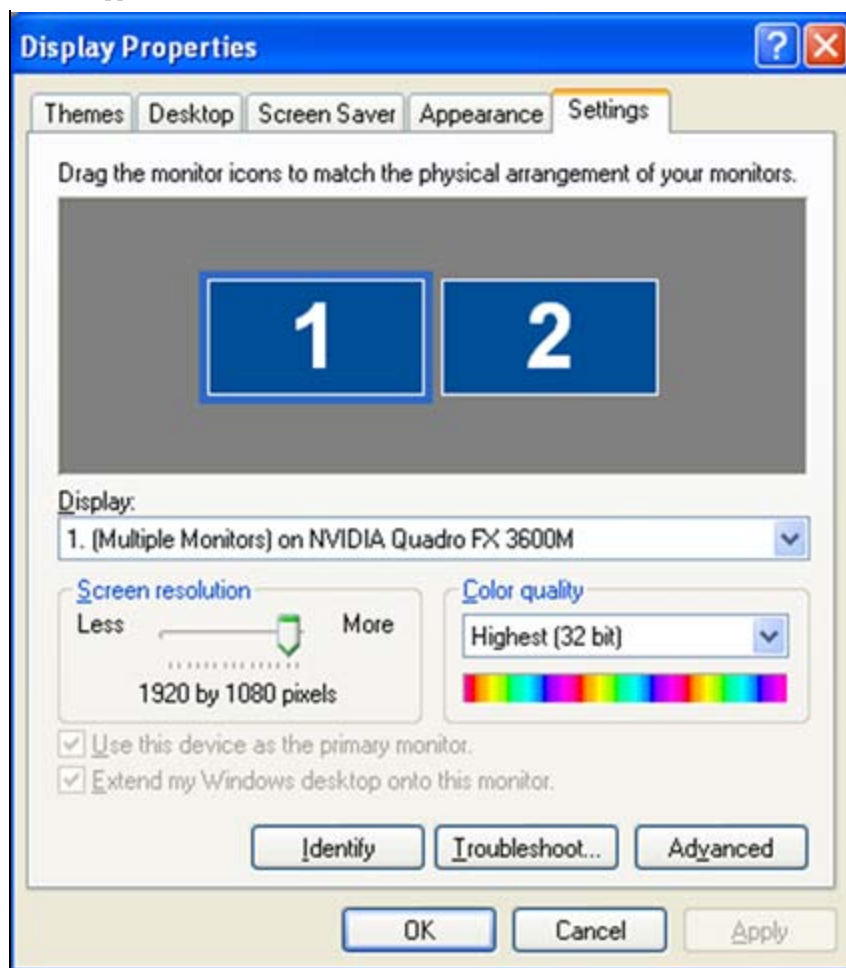


FIGURE 2: MULTIPLE MONITOR SETTINGS

InTouch and MultiMonitors

InTouch requires a Category **A** driver configuration (1 virtual monitor environment) to be completely functional and fully supported. This support includes InTouch 10.0, 10.1 and 10.5.

Within the Category A environment, **Win.ini** settings must be set to complete the IDEAL MultiMonitor configuration. The ini settings enable InTouch to properly place system dialogs and keypads in the proper locations on the monitors.

Note: When the **Lock Window Size** (new feature for InTouch 10.5) option is checked, the **ScaleForResolution=0** is added to the InTouch.ini file. The default value is **Enabled (ScaleForResolution=1)**. This setting is used to keep the application resolution intact (for windows graphics) when migrating between machines with different resolutions as you would see in a MultiMonitor environment.

Location for **Win.ini** (both Category A and Category B cards):

- For Windows 2003 Server and below, the **Win.ini** file is located at **C:\Windows** (see [Tech Note 307 MultiMonitor Support For](#)

[FS2000 and FS A²](#) for details).

- For Windows 2008 Server, Windows 7 and Windows Vista (32 bit & 64 bit), the **Win.ini** file is located at **C:\Users\<<UserName>\AppData\Local\Wonderware**.

Settings: Win.ini for Category A driver card

- `MultiScreen = 1`
- `MultiScreenWidth = 1920`
- `MultiScreenHeight = 1080`

Set the MultiScreen setting to **0** or **1** to disable or enable MultiMonitor functionality.

The MultiScreenWidth and MultiScreenHeight indicate the screen resolution for 1 monitor in the system.

Settings: Win.ini for Category B driver card:

- `MultiScreen = 1`

Note: Make sure that the MultiMonitor Win.ini settings are also configured on the destination machine prior to running your application. Win.ini settings do not automatically transfer with an InTouch application.

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