

## [Tech Note 968](#)

# Using InTouch with Multi-Monitors

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## Introduction

As computer performance and processing power improves, multi-monitor setups are very common. The multi-monitor mode is documented by the graphic card manufacturer, but is usually not covered in detail. Developers often overlook the mode differences unless they have developed on one mode and deployed the InTouch application on another mode.

The mode you select will affect how you develop your InTouch Application.

This *Tech Note* explains the available multi-monitor modes provides InTouch display details for each mode.

## Application Versions

- All InTouch versions

## Overview

There are generally 3 modes for multi-monitor setups.

- Clone Mode
- Extended Mode
- Horizontal Stretch Mode

Clone and Extended modes are the most common modes supported by most graphic cards that have more than 1 port. Horizontal stretch mode is only supported on higher performance graphic cards. Do not assume that the computer that you are developing InTouch application on has horizontal stretch mode, and that the actual live system has the same capability.

## Clone Mode

As the name implies, the Clone Mode "clones" the primary screen across all the monitors. This mode is mostly used for presentations where the second monitor is a projector.

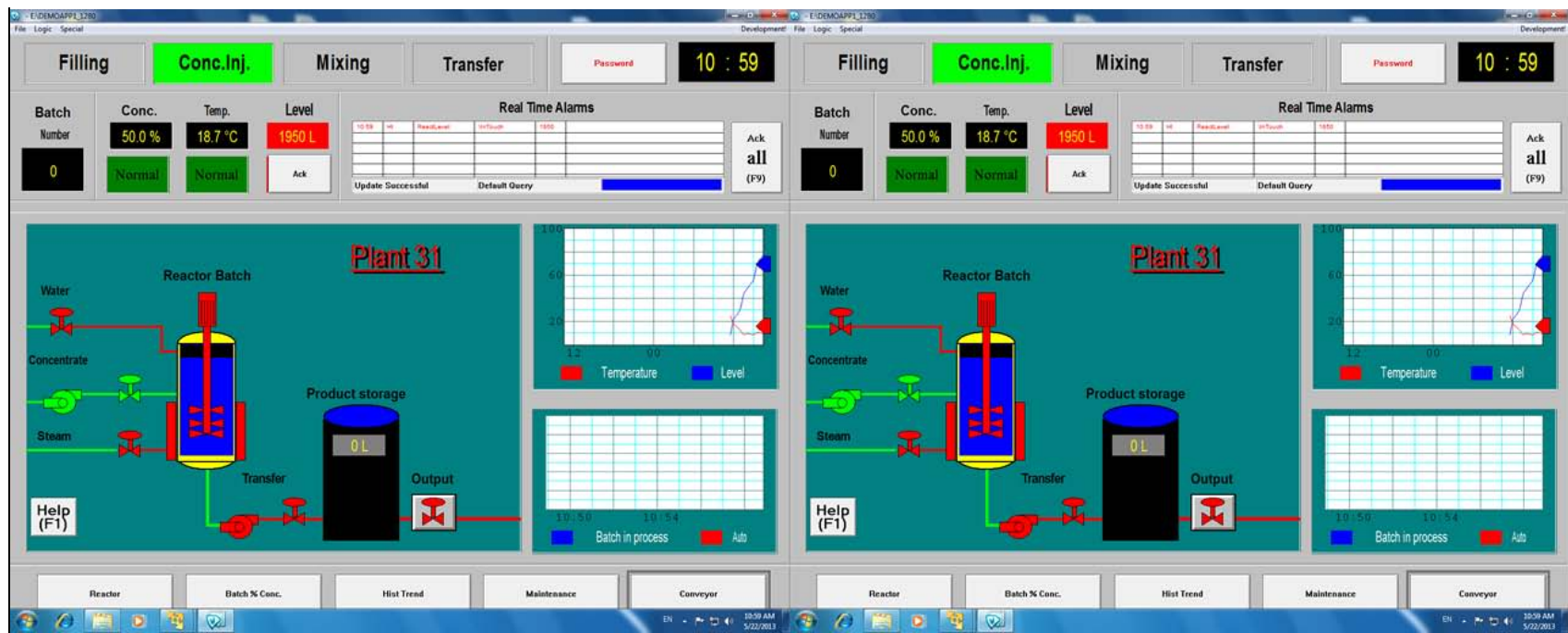


FIGURE 1: CLONE MODE: BOTH MONITORS DISPLAY THE SAME INFORMATION

## Extended Mode

Extended Mode is the most commonly-used mode. This mode extends the desktop to the second monitor. Each monitor can have its own resolution setting, refresh rate and quality. This mode is suitable where you have 2 monitors of different sizes. The most distinct feature of this mode is that when you maximize an application like Internet Explorer, it only maximizes to one monitor rather than two.

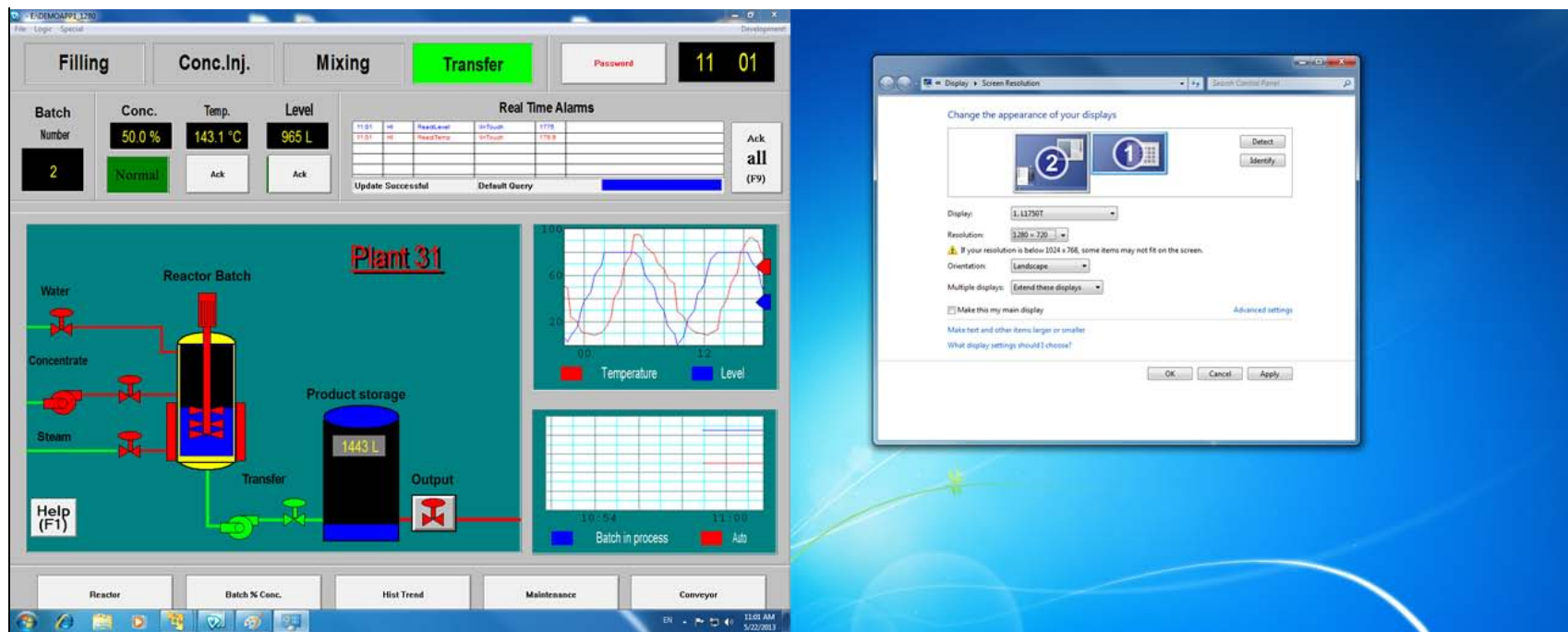
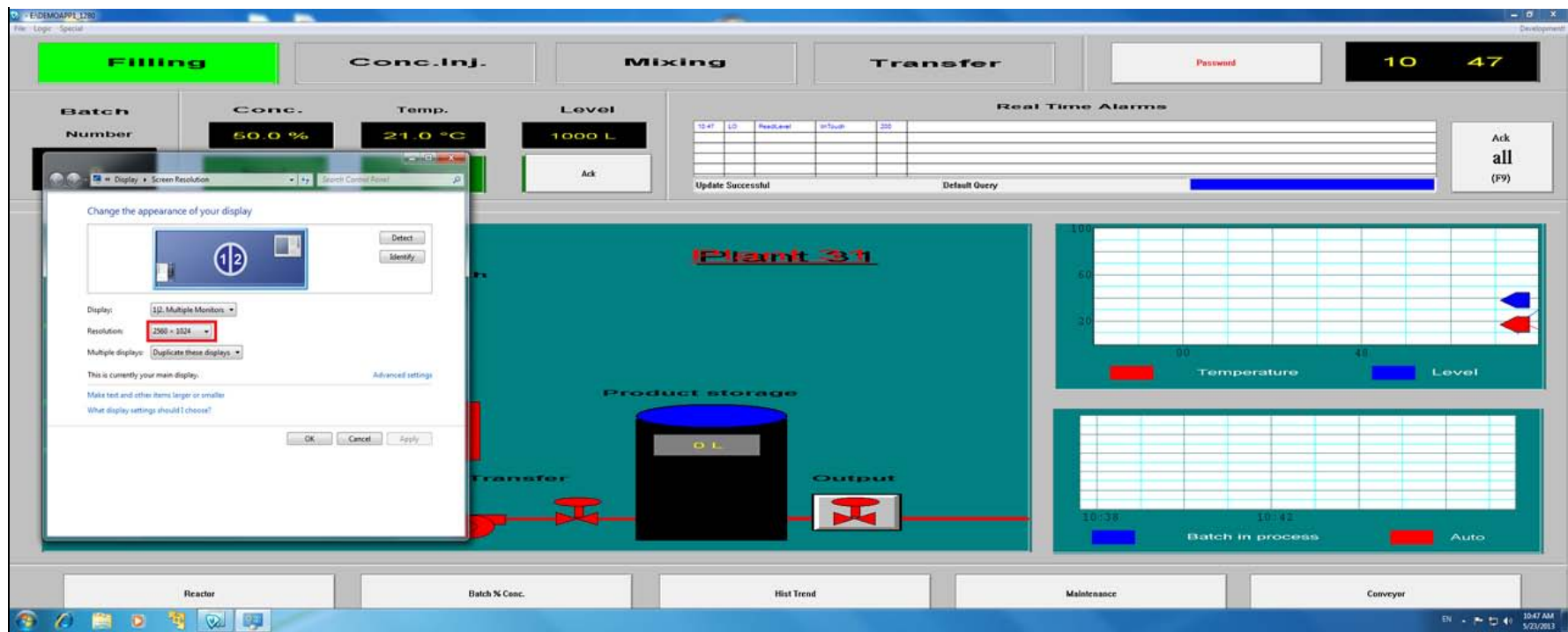


FIGURE 2: EXTENDED MODE: EACH MONITOR CAN HAVE A DIFFERENT RESOLUTION

## Horizontal Stretch Mode

The Windows desktop is stretched across 2 monitors and is treated as one large desktop. As such, the resolution can be thought of as the *horizontal* dimension of two individual monitors. For example:

- Monitor 1 is running as 1280 X 1024
- Monitor 2 is running as 2180 X 1024
- The desktop area is thus now running at **2560 X 1024**



**FIGURE 3: HORIZONTAL STRETCH MODE: WINDOWS DESKTOP SEES BOTH MONITORS AS ONE SINGLE DESKTOP**

Most of the time the display mode is configured from the graphic card's User Interface. Figure 4 (below) shows an example:



FIGURE 4: MONITOR DISPLAY SETTINGS

## Monitor Resolution and InTouch

The resolution that Windows desktop sees the monitors is also what determines the screen resolution when you create an InTouch Application.

In **Clone** and **Extended** modes, the InTouch Application resolution is only one monitor size. This means that when you click the **Maximize** button of WindowViewer, it only maximizes to one monitor, and the other monitor is empty. Of course you don't have to run in Maximized mode. You then manually resize the WindowViewer to the second monitor. But do remember that you have to do this every time you restart WindowViewer or the computer.

The resolution that Windows desktop sees the monitors is also what determines the screen resolution when you create an InTouch Application. Figures 4 and 5 (below) show WindowViewer maximized to only one monitor, and WindowViewer maximized to two monitors in horizontal stretch mode.

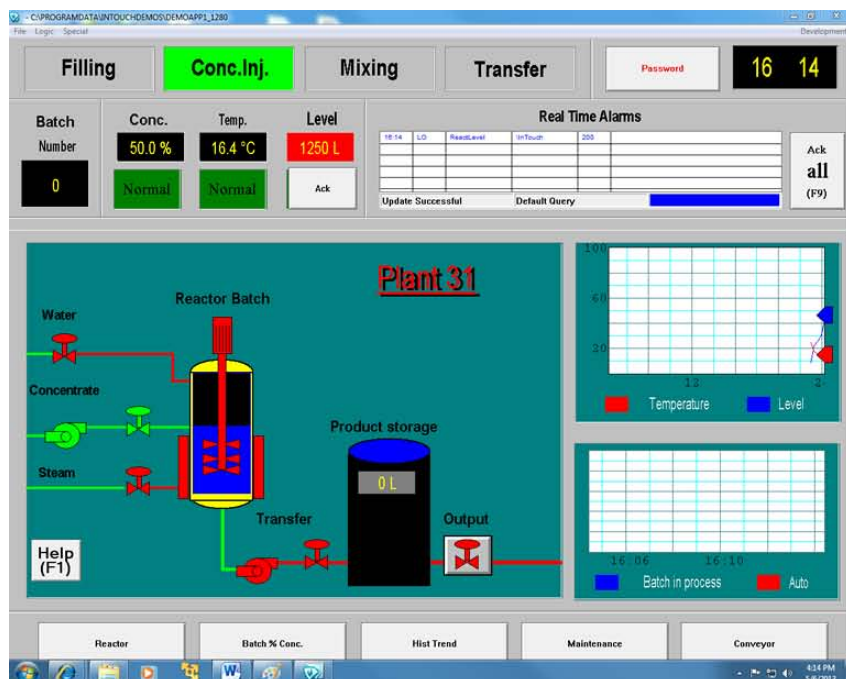
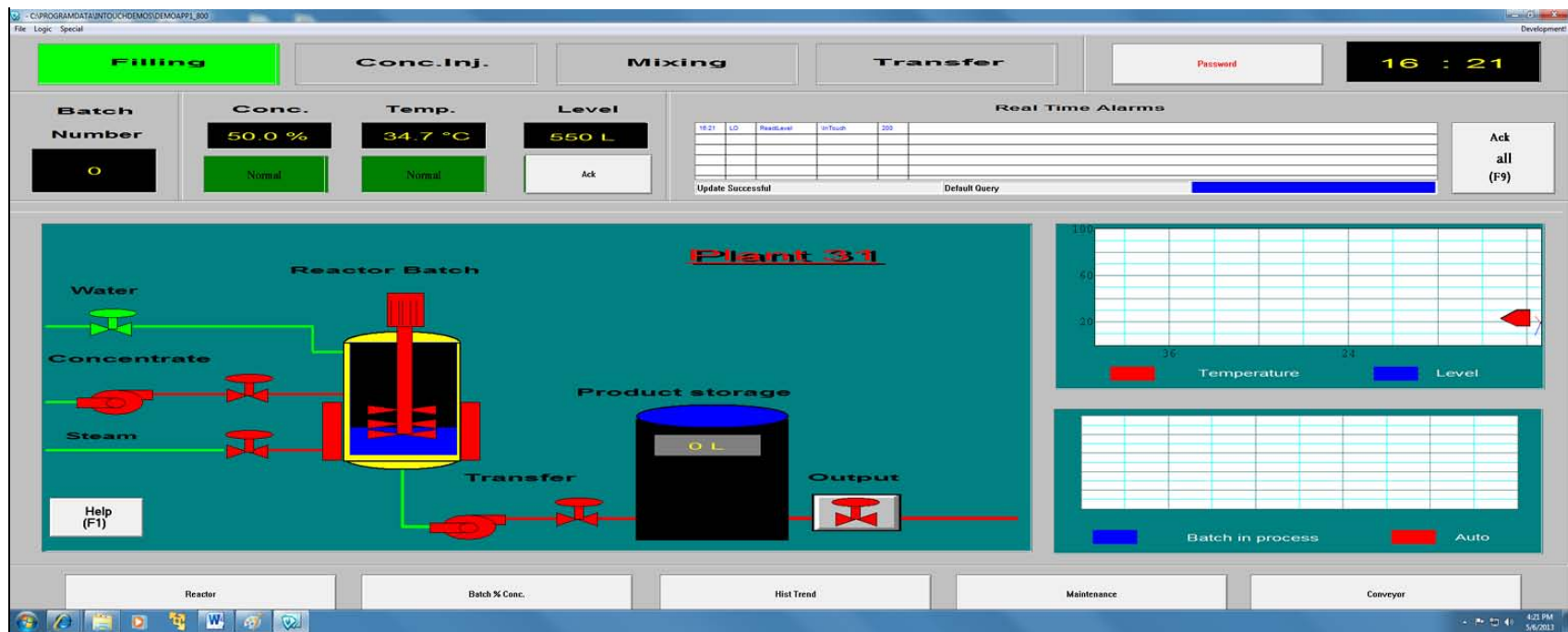


FIGURE 5: WINDOWVIEWER MAXIMIZED TO ONE MONITOR





**FIGURE 6: WINDOWVIEWER MAXIMIZED ACROSS TWO MONITORS IN HORIZONTAL STRETCH MODE**

Although the InTouch Manager has a built-in function to convert between resolutions, the outcome may not be desirable - especially when an Application is stretched from a smaller resolution to a larger resolution. As you can see from the figures above, the objects and text boxes are stretched and are out of proportion. Also, if there are any scripts that open popup in a pre-defined XY location, they will be affected.

It is important that as a developer, you identify which multi-monitor mode to use as this will affect the resolution that you will use to develop your InTouch application.

## Summary

- Identify the type of multi-monitors mode to use.
- Make sure the hardware supports the mode in particular if you have a separate development station and live station.

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