

# Installation and set up

Multi-touch driver





## Multi-touch driver

Independent touches and  
gestures for your Windows  
Touch & custom applications

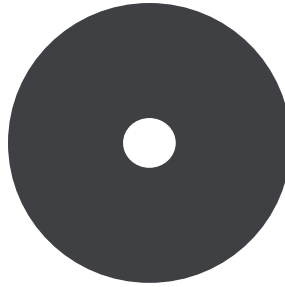
Installation instructions for  
Microsoft Windows



# Installing the multi-touch driver - (MT2-64W)

The multi-touch driver software is available as a downloadable file. The driver software is also included on the touchfoil™ driver CD

If you are updating the multi-touch driver, please follow the "Uninstall Procedure" section to remove the previous version before updating the driver



Supported system platforms:  
Windows Vista  
Windows 7 (32bit/64bit)

## STEP 1

Insert the touchfoil™ driver CD into your computer CD drive. If the installation does not start automatically navigate to the CD drive, right click the drive name and then do one of the following:

In Windows 7 or Windows Vista, click **Install** or **run the program**

If you have downloaded the driver software, click **MT2Setup.exe** and follow the instructions on screen (proceed to "Set up" section of this guide). If you are installing from the CD, proceed to "Step 2" below

## STEP 2

Install menu:



Click on **Install touchfoil driver – MT2-64W** and follow the on screen instructions. Once you have finished your installation click on **exit** to exit the installation

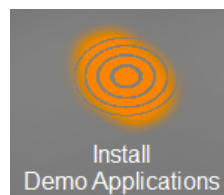


**Note:** you may need to restart your computer after installing the multi-touch driver

If you wish the driver to automatically start after installation click on the **launch driver** check box

## STEP 3

To install the multi-touch demonstration programs (if required), click on **Install Demo Applications** and follow the onscreen instructions



The **Demo Applications** are included to demonstrate the multi-touch functionality provided by the touchfoil™ in custom and TUIO modes. More information can be found in the **Advanced Setup** section of this document



## Set up

Multi-touch driver

## STEP 1

### Starting the multi-touch driver

If you selected the driver to automatically start after the install then the driver window will appear



During the driver install process a **short cut** of the multi-touch driver is placed in the **start-up** folder, this enables the multi-touch driver to automatically start on system boot up.

If you do not require the driver to auto-start, remove the driver shortcut from the start-up folder

For manual start, click on the **Desktop or Start menu** shortcut to start the driver

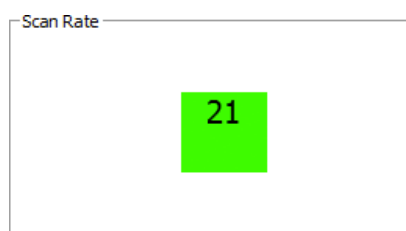
When running, the driver can be found in the taskbar. Right-click the orange icon and select **Restore** to bring up the driver window



## STEP 2

### Communication

Connect the USB lead to the PC and touchfoil™ controller. The scan rate box will turn green. The driver will now automatically launch the auto-sensitivity screen

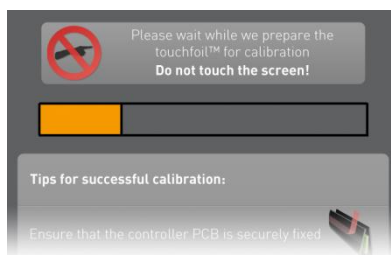


If the touchfoil is not connected, the "Scan Rate" box will show a red box and prompt you to **Plugin USB**

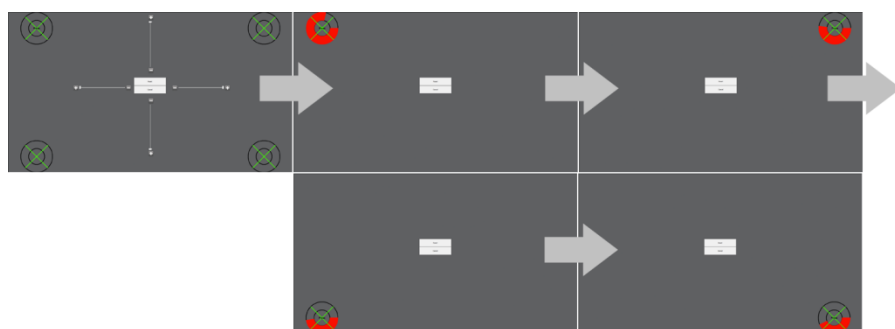
## STEP 3

### Auto-Sensitivity & Calibration

Upon touchfoil connection, the auto-sensitivity screen will appear. The driver will take some time to sample the environment conditions. Do not touch the touchfoil during this time



Once this process is complete, the calibration screen will appear. Touch the targets in turn with your first (index) finger as prompted. Use your left hand for the targets on the left, and your right hand for those on the right of the display. Wait for both the green and red circles to complete before moving to the next. On completion, the calibration screen will close



The auto-sensitivity procedure will have set your Threshold and Sensitivity values to their theoretical optimum levels. If you need to adjust sensitivity, refer to Step 5 below

Some graphics cards support display orientations other than Landscape. Changing the display **orientation** will require (re)calibration of the multi-touch driver

If you are using Windows 8, you may get best results by enabling Edge Gain. See **Advanced Setup** section of this document

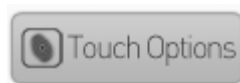
If you are having problems with calibration, see the **Troubleshooting** section of this document

## STEP 4

### Touch Options

By default the **Multi-touch (Win-7)** option is selected to enable Windows 7 Touch capability. This option is not available on Windows Vista, and so the **Single-touch** option is selected which enables standard mouse control

If you wish to change the touch function, select the **Touch Options** button to launch the Touch Options menu



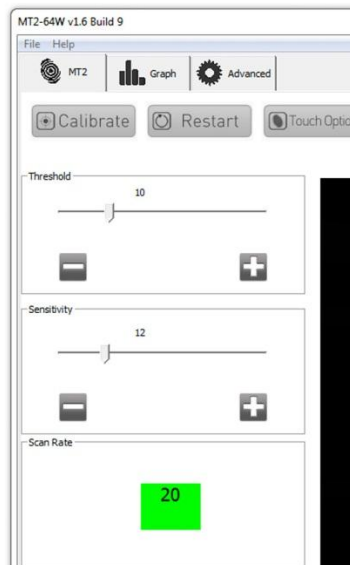
For advanced functionality such as **Custom Multi-touch** and **TUIO** support, see the **Advanced Setup** section below

## STEP 5

### Threshold and Sensitivity Levels

Only adjust the sensitivity/press threshold levels if the touchfoil™ is either too sensitive or insensitive after auto-sensitivity/calibration i.e. the touch is activated too far from the display or random touches occur when not touching the display or not responding to your touch

Increase or decrease sensitivity by 1 point at a time and test by making sure that the Desktop responds to touches and drags as expected



When installing with an LCD/LED, you will need an air gap between the LCD/LED panel and the back of the touchfoil™. See the **Installation Tips** section of this document for more information

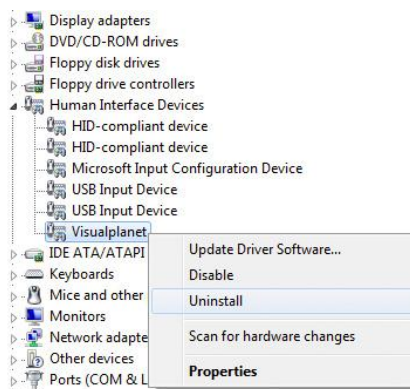
Make sure that you have followed the installation tips outlined during the auto-sensitivity process

**Note:** sensitivity is limited to between 5 and 20 points above threshold

## UNINSTALL PROCEDURE

The multi-touch driver must be uninstalled in two stages:

1. Run **uninstall.exe** in "C:/touchfoildriver-MT2-64W/"
2. Uninstall the **Visualplanet** item in Device Manager under "Human Interface Devices". Check "Delete the driver software for this device" when prompted





## Advanced set up

Multi-touch driver



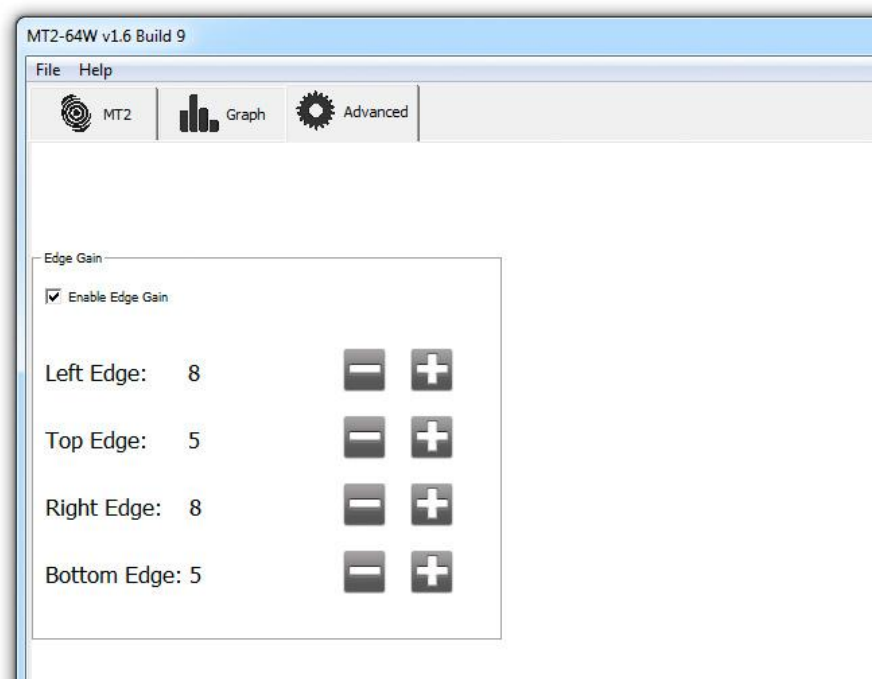
## EDGE GAIN

### Introduction

In Microsoft Windows 8 a swipe from the edge is needed to access the “charm” menus. If the touchfoil’s active area exactly matches the display area, then you may need to use the edge gain feature to accelerate the touch cursor at the very edges of the display. This improves the reliability of the edge swipes in the New Windows UI (Windows 8 UI)

### Configuring Edge Gain

1. To enable edge gain, click on the **Advanced** tab in the MT2 Controller and check **Enable Edge Gain**
2. The default values are 5 on each edge. These values should accelerate the cursor at the edges of the display by around 15mm (depending on screen resolution)
3. Increase the values to shift the position where cursor acceleration starts inwards (towards the centre of the display). Please note, if you increase the values too much, the calibration will be affected in the main area of the display
4. If you do not need edge gain on particular edges, you can decrease their value to 1



## TUIO SENDER

### Introduction

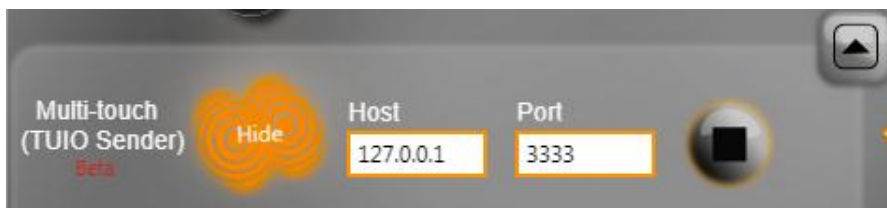
TUIO is an open framework, based on the Open Sound Control standard. It defines a common protocol and API for transmission of an abstract description of interactive multi-touch surfaces

Data from visualplanet's multi-touch driver can be encoded in standard TUIO protocol, using the "Multi-touch (TUIO Sender)" option in the Touch Options control panel. The TUIO data from the driver can then be received and decoded in a TUIO compatible client application

For more information about the TUIO protocol itself, please visit <http://www.tuio.org/>

### Enabling TUIO Sender

Reveal the Advanced Touch Options by clicking the downward arrow button



By default the TUIO Sender will broadcast using the following parameters:

- Host 127.0.0.1
- Port 3333

This will allow applications running on the same machine to receive and interpret TUIO data on port 3333 from the multi-touch driver

The TUIO sender has the ability to broadcast packets to the local network. In order to achieve this, change the **Host** parameter to the I.P address of the computer where the client application resides, and change the **Port** to the port which the client application is listening to for TUIO events

To start the TUIO Sender, click the triangular play button. To stop the TUIO Sender, click the square stop button

### TUIO Client Applications

After starting the TUIO Sender, you can run TUIO Client Applications

For demonstration purposes, we have included a TUIO Smoke Demo application as part of the Demo Applications package. You can find it in "C:\touchfoildriver-MT2-64W\Demo Applications\TUIO Smoke Demo". The application is set to listen to local TUIO events (127.0.0.1) on port 3333

Further example TUIO applications can be found at <http://www.tuio.org/?software>. We recommend trying applications like "TUIO demo" and "TUIO dump" which are included in various languages under the "Client Reference Implementations" section. These applications will display raw data (mouse co-ordinates) in the console window to help in getting started and for debugging purposes

To install the Demo Applications package, double-click the **DemoApplications.exe** installer on the installation CD, or download from the visualplanet website

## CUSTOM MULTI-TOUCH

### Introduction

The Custom Multi-touch mode of the MT2 driver can be selected to enable multi-touch operation for applications developed in C and C# using visualplanet's Software Development Kit (SDK). This allows applications to respond to multi-touch events from the touchfoil™ in Windows Vista, or in Specific scenarios where Windows 7 Touch operation is not required

Included on the CD is a SDK, which provides APIs which will establish communication between the touchfoil™ and **custom** multi-touch applications. See SDK documentation for further details

### Enabling Custom Multi-touch

Reveal the Advanced Touch Options by clicking the downward arrow button

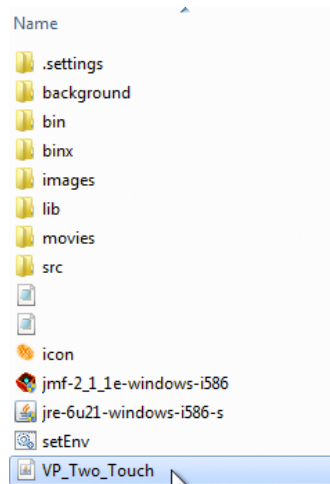


### Custom Multi-touch Demo Application

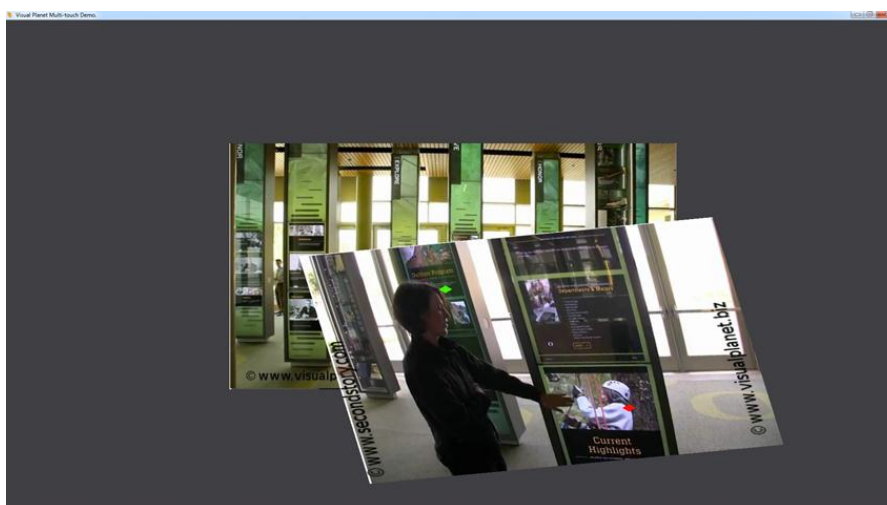
After selecting the **Multi-touch (Custom)** option, you can run custom multi-touch applications

For demonstration purposes, we have included a picture manipulation demo as part of the Demo Applications package. You can find it in "C:\touchfoildriver-MT2-64W\Demo Applications\Multi-touch Demo"

Double-click on the jar file "VP\_Two\_Touch" to launch the application.



To install the Demo Applications package, double-click the **DemoApplications.exe** installer on the installation CD, or download from the visualplanet website



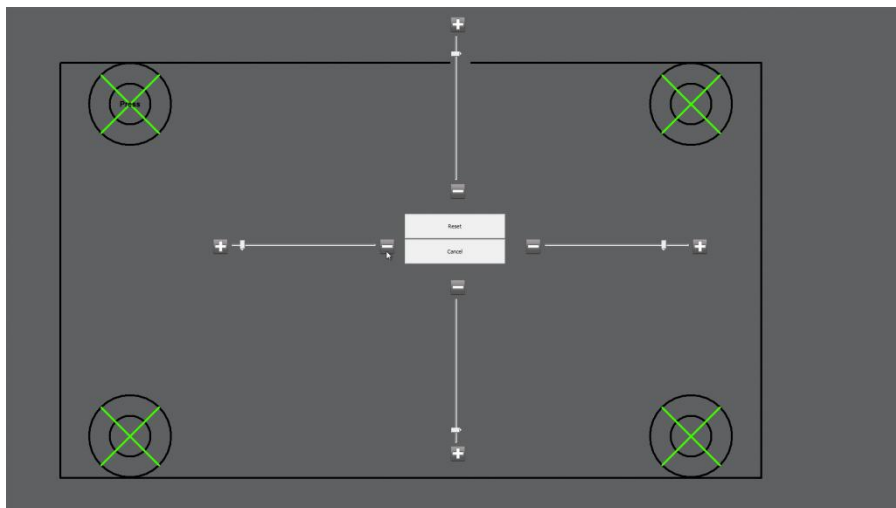
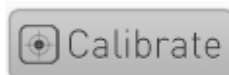
## ADVANCED CALIBRATION

### Introduction

To configure the touchfoil in custom installations, the calibration can be altered to account for discrepancies between display size and touch active area

### Touch Zone Calibration

Click on the **Calibrate** button in the multi-touch driver to launch the calibration screen



If the touchfoil™ is the **same size or larger** than the display area, you can define a **touch zone** that is not full screen to exclude a display area from touch response. Use the sliders to define the size and ratio of the calibration box. The touchfoil™ will still sense touch activity in the excluded area but will not produce touch events (clicks, taps, drags etc.) beyond the boundaries of the touch zone

If the touchfoil™ is **smaller** than the display area, then you can adjust the calibration box using the sliders so that the boundary of the **touch zone** on screen matches the touchfoil™ active area. This will ensure that the touch response is correctly calibrated for the region of the display to which you have mounted your touchfoil™

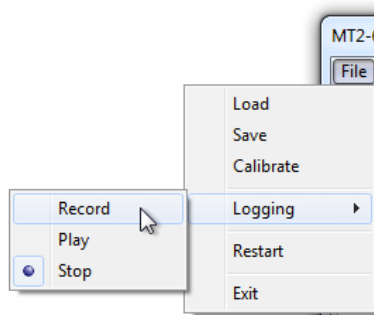
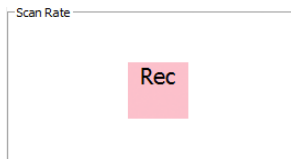
## LOGGING

### Introduction

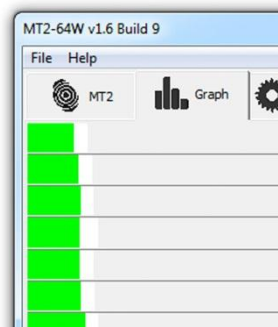
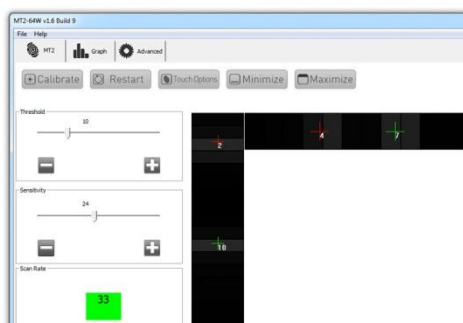
To help diagnose any driver setup issues you may encounter, you can record a log of the touchfoil's response. Visualplanet support staff may ask you to send this log via email so that we can resolve these issues

### Recording a Log

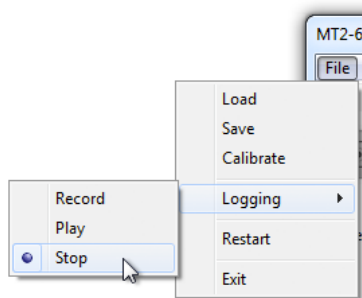
To record a log, click **File -> Logging -> Record**. The Scan Rate box will turn pink whilst recording



You should now run your finger from left to right across the touchfoil's area, and then from top to bottom. You can see the touch response on the black bars of the main **MT2** tab panel, and also on the **graph** tab panel

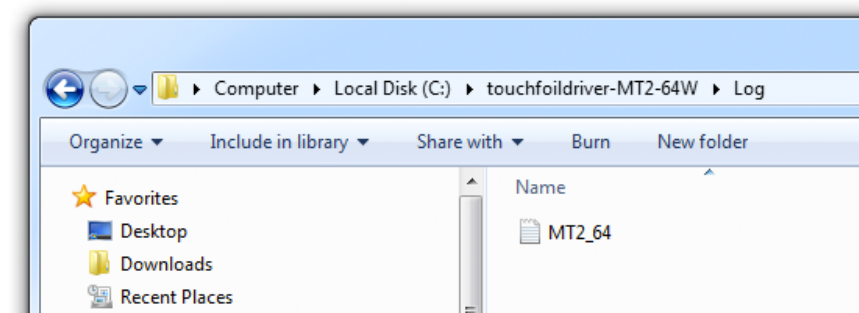


When you have finished recording the log, click **File -> Logging -> Stop**. The Scan Rate box will go back to green



### Sending a Log

The log file is created in "C:\touchfoildriver-MT2-64W\Log". It is a binary file and will be less than 1mb in size for ease of emailing



Visualplanet's support team may also ask you for your **INI** file which can be found in "C:\touchfoildriver-MT2-64W\bin\MT2-64W.ini"

## INSTALLATION TIPS

When installing the touchfoil™ with an LCD display an air gap is required between the back of the touchfoil™ and the LCD display. The recommended air gaps below can be affected by the quality of the LCD display, we would always recommend that industrial displays intended for digital signage are used

The distance of the air gap is dependent on the size and quality of the LCD display. As a guide, a 40" touchfoil™ requires a 4-10mm gap and a 55" touchfoil™ requires a 6-10mm gap. The earth lead on the USB cable **must** be connected to a clean metal point on the LCD metal casing. This will reduce the interference that is caused by the LCD unit

Route the touchfoil™ USB cable away from all mains, VGA and power supply cables and external power supplies

If you are integrating the touchfoil™ as part of an OEM solution such as a kiosk or totem, please contact your account manager for a copy of our **OEM Integration Guide**

### Tips for successful calibration:

Ensure that the controller PCB is securely fixed



Ensure that the controller PCB is grounded using the black cable



A gap is required between the touchfoil™ and the display panel. Please refer to the user guide



Minimize noise from the display panel by ensuring that the chassis is connected to a reliable ground



### Cannot complete calibration

If you are finding it hard to complete the calibration because the target animations are failing to complete, then you may require more sensitivity. Press the **Cancel** button, and then increase sensitivity by 1 or 2 points before pressing the **Calibrate** button to try again

If this still doesn't cure the problem, then you may be experiencing issues with noise interference. Ensure that you have followed the Installation Tips displayed in the auto-sensitivity screen. To display these again, restart the driver and click the **Calibrate** button if necessary

### Random touches or touch activates too far from the display

Reduce sensitivity levels in small increments only. You should see no flickering on the X/Y touch indicators when you are not touching the display (top and side black bars). Only adjust the sensitivity/press threshold levels if the touchfoil™ is either too sensitive or non-responsive to your touch

### Unable to find multi-touch driver control window

When you minimise the multi-touch driver it will move to the Windows system tray. To restore the multi-touch driver to the desktop left click on the orange icon present in the system tray

### Application does not respond to multi-touch

Check your application has been developed to work with the touchfoil™ multi-touch function (Either Windows Touch, visualplanet's Custom multi-touch SDK, or TUIO protocol)

### Unable to use multi-touch gestures with the visualplanet multi-touch demonstration program

Check in the touch options menu that **Multi-touch (custom)** option has been selected

### Unable to use touch in Windows desktop

Check **Single Touch** or **Multi-touch (Win 7)** option is selected in touch options menu

### Touch not tracking the finger

Check calibration, re-calibrate if required

Sensitivity levels are incorrect, increase sensitivity or reduce threshold levels as required. Alternatively, click the **Restart** button and then click the **Calibrate** button to launch the auto-sensitivity and calibration process

# Now enjoy the world of touch



t +44 (0)845 123 5370

w [www.visualplanet.biz](http://www.visualplanet.biz)

Visualplanet, Camboro Business Park, Oakington Road, Girton, Cambridge, CB3 0QH, UK

Manufacturers of **visualplanet<sup>™</sup> touchfoil** 

© Copyright 2013 visualplanet