3Dconnexion® CadMouse: More Info

Why has 3Dconnexion developed the CadMouse?
The ordinary mouse is an extremely important input device for CAD professionals, with studies finding that CAD users can perform more than 5000 clicks per day and 1km of mouse movement per week.

For 20 years, 3Dconnexion has focused on complementing the ordinary mouse with its line of SpaceMouse products. With a SpaceMouse in one hand taking care of 3D navigation, the ordinary mouse in the other hand is free to move the mouse cursor to click and select. However, when meeting our customers we realized there simply wasn't an ordinary mouse available that was designed for their specific needs. At this point, it became clear that 3Dconnexion needed to extend its attention to our customers other hand so we started to develop an intelligent solution that would be anything but ordinary. The CadMouse project was born.

During the product development we discovered the possibility to introduce smart new features on CadMouse that would enhance the "Two Handed Power" workflow enabled by our SpaceMouse product range. For example, users can QuickZoom to their point of interest with one click of the CadMouse thumb button and then perform a detailed inspection using the unparalleled 3D navigation that's only possible with a 3Dconnexion SpaceMouse.

What are the main features of the 3Dconnexion CadMouse?

- **Dedicated Middle Mouse Button (MMB)** - Every CAD user knows how much they rely on the middle mouse button (MMB), but most ordinary mice bury it under the scroll wheel. The CadMouse has a dedicated full-size middle mouse button, so it's no longer necessary to click the uncomfortable scroll wheel thousands of times per day.
- **QuickZoom** – Most CAD users spend a lot of time zooming in and out of their models and drawings. Typically, this is achieved by rolling the scroll wheel or a combination of keyboard and mouse buttons / movements. 3Dconnexion felt it was important to offer a better solution, especially as these actions are performed hundreds to thousands of times per day. The QuickZoom feature introduced by the 3Dconnexion CadMouse leverages the power of our software integration with the world's leading CAD applications. Simply press the front thumb button to zoom in to the cursors position and press the rear thumb button to zoom out.
- **Smart Scroll wheel**– Despite the introduction of QuickZoom in CAD applications, 3Dconnexion understands that some users may still want to use the scroll wheel for zooming in CAD and also for scrolling in documents and browsers. So we designed the Smart Scroll wheel to be deliver the right performance in each situation. CadMouse knows when you are working in a CAD application, so the Smart Scroll wheel delivers precise "click to click" zooming. When you switch to a document or browser, most people want a faster zooming experience, so the CadMouse changes automatically delivering speedy scrolling that can be easily sped up, down or stopped depending on how you use the wheel. It's a similar experience to scrolling on many tablets or smartphones and we're confident CadMouse users will love it.
- **High precision laser sensor** – With increasingly large and sometimes multiple displays on the CAD users desk, it's important to have a high precision sensor capable of moving the cursor from one side of the desktop to the other without having to pick up and reposition the mouse. The 8200 dpi, 1000 Hz poll rate laser sensor in the 3Dconnexion CadMouse means you can move the cursor with speed and click exactly where you want when you want.
- **Gesture Button** – Positioned just behind the Smart Scroll wheel, the gesture button opens an application or environment-specific radial menu so you can access your favorite commands with a simple mouse gesture. After opening the radial menu, simply move the mouse cursor left, right, up or down through the outer segment to activate the command. It's easy to make your own radial menus using 3DxWare 10.
- **High quality PTFE feet** – 3Dconnexion is focused on improving the experience of working in CAD which means we pay acute attention to important details like how materials and geometry affect friction. That's why the CadMouse has optimally shaped feet made from PTFE, a material with one of the lowest coefficients of friction against any solid.

Does buying a CadMouse mean I don't need a SpaceMouse anymore?

Absolutely not, especially for people who are serious about working with 3D content. Despite all the cool features of the 3Dconnexion CadMouse, nothing can replace the smooth and simultaneous 6-degrees-of-freedom (6DoF) navigation that's possible with a 3Dconnexion SpaceMouse.

In fact, the introduction of the 3Dconnexion CadMouse enables a new level of "Two Handed Power" that's only possible by combining a SpaceMouse and CadMouse. For example, a user can QuickZoom to their point of interest with a single click of the CadMouse QuickZoom button and then undertake a detailed inspection thanks to the SpaceMouse's natural and precise 6DoF navigation. An example of this is shown on the CadMouse web page.

How does the CadMouse relate to 3Dconnexion's SpaceMouse products?
The 3Dconnexion CadMouse and SpaceMouse products have separate roles but complement each other perfectly. A SpaceMouse is primarily focused on natural and precise navigation of 3D models or camera views while the CadMouse is primarily focused on moving and clicking the mouse cursor. In addition, some of the unique features introduced by CadMouse such as QuickZoom enable previously undiscovered levels of collaboration between the two devices.

When you pair a 3Dconnexion CadMouse with a 3Dconnexion SpaceMouse like the SpaceMouse Pro or SpaceNavigator, the results are extraordinary. We call it Two Handed Power. The SpaceMouse smoothly positions your object or view, while your CadMouse selects and creates with ease. It's a natural and comfortable work style that can't be matched. The 3Dconnexion CadMouse and our line of SpaceMouse products don't just play well together. They were made for each other.

Why is it important to have a dedicated middle mouse button and scroll wheel?
Most CAD applications rely heavily on the MMB so some CAD professionals are still using older 3-button mice (that have a dedicated MMB). However, these 3-button mice do not have a scroll wheel so they are inconvenient to use in office application or browsers. In addition, these older products are let down by low precision sensors which make working with today's large / multi-monitor desktop setups impractical and frustrating.

Some users are turning to higher precision mice (including gaming mice) that can move the cursor across the screen without having to repeatedly pick it up and move it back into position. However, making this decision means sacrificing the dedicated middle mouse button, so users have to press the scroll wheel to activate the MMB which is far from ideal. When you consider that a serious CAD can activate the MMB several thousand times per day, it's easy to see how users find this a frustrating and uncomfortable experience.

Remarkably, 3Dconnexion has even observed CAD users with two different mice on their desktop – a 3-button mouse for CAD and a 2-button "scroll wheel" mouse for browsing and office work.

The introduction of CadMouse with its dedicated MMB and Smart Scroll wheel provides a high performance, all-in-one solution that CAD users will immediately recognize and appreciate.

Does CadMouse require any special software to operate?
In order to access all the features of CadMouse such as QuickZoom, Smart Scroll and Radial Menus, it's necessary to install the 3Dconnexion 3DxWare 10 driver.

Does CadMouse use a different driver to 3Dconnexion's SpaceMouse product range?
No, 3DxWare 10 is a unified driver solution that supports all 3Dconnexion's products. In other words, users with a SpaceMouse and a CadMouse only need to install one driver and can customize and optimize each product via one clean, consistent interface.

What influenced the size and shape of the CadMouse?
Customer feedback indicated that the majority of users prefer a full size mouse and our ergonomic testing indicated that the full-size design worked well for all hand sizes. For this reason, and to accommodate the full size middle mouse button we designed CadMouse to support the users hand in a comfortable and natural position hour after hour.

Is there a learning curve to the 3Dconnexion CadMouse?
Because the MMB is so important to CAD users, we observed that many users of 2-button mice grow accustomed to resting their middle finger on the scroll wheel (for pressing the MMB and scrolling the wheel). These users will quickly find it more comfortable to rest their middle finger on the dedicated middle mouse button and use the more conventional index finger on the scroll wheel. CAD users that already have a 3-button mouse should also feel comfortable with CadMouse very quickly and immediately appreciate the added convenience of the Smart Scroll wheel and other features like QuickZoom.

Why isn't the 3Dconnexion CadMouse wireless?
For a variety of reasons including security, IT management and performance (sensor precision, battery life) and because the majority of 3Dconnexion's customers are accustomed to working with wired input devices, we felt it was sensible for CadMouse, the first product in this new category to be a wired device.

What differentiates the 3Dconnexion CadMouse from other mice on the market?
The combination of dedicated middle mouse button, scroll wheel and CAD specific features (QuickZoom buttons, Smart Scroll wheel (patent pending) and gesture button) make CadMouse unique at this time. The high performance laser sensor, are further justification that CadMouse is the first and only mouse designed specifically for CAD professionals.

How long is the CadMouse USB cable?
CadMouse features a 2m braided USB cable.

What applications does QuickZoom work in?
QuickZoom leverages 3Dconnexion's software integration with the world's leading CAD applications. At the time of the CadMouse launch, QuickZoom will be available in the following applications: SolidWorks, Inventor, Catia, Creo / ProE, AutoCAD, NX, Solid Edge, SketchUp, 3DxViewer, 3ds Max & Maya. Support for CadMouse features in more applications will follow in subsequent driver releases.

If the CadMouse poll rate can be as high as 1000Hz, why would I want to set it lower?

Software applications perform calculations as the position of the mouse cursor moves. The amount of system resources required and available for these calculations depends on a combination of factors including the users system, the number of applications running and the active application. The default CadMouse poll rate of 250Hz should ensure smooth cursor movement for the majority of users but those with very large screens or refresh rates may find that increasing the poll rate makes the CadMouse cursor movement appear smoother.

Does CadMouse have any benefits for non-CAD users?
The majority of the CadMouse's features were designed with CAD users in mind, but even the most hardcore CAD users need to use other applications from time to time. The ergonomic design ensures a comfortable experience while the thumb buttons and Smart Scroll wheel provide next page / previous page and speed scrolling functionality respectively in office and browsers. In addition, some users, such as gamers may find the dedicated middle mouse button convenient as it provides a more comfortable and accurate solution than clicking the scroll wheel.

What is the warranty period?
2 years

Is CadMouse suitable for use in the left hand?
No, CadMouse is designed for use in the right hand as this caters for the majority of users.

What operating systems does SpaceMouse Wireless support?
At time of launch, all features of the 3Dconnexion CadMouse will be supported on Microsoft Windows 8, Microsoft Windows 7 and Windows Vista.

The product is optimized for applications running on Microsoft Windows as this operating system offers extensive support for 3-button mice. Users of other operating systems (e.g. OS X and Linux) may be able to take advantage of certain hardware features like the dedicated middle mouse button and advanced laser sensor but not the additional features including QuickZoom, Smart Scroll or the gesture button.