

# Touchboards

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mimio®: Transforming Teaching and Learning



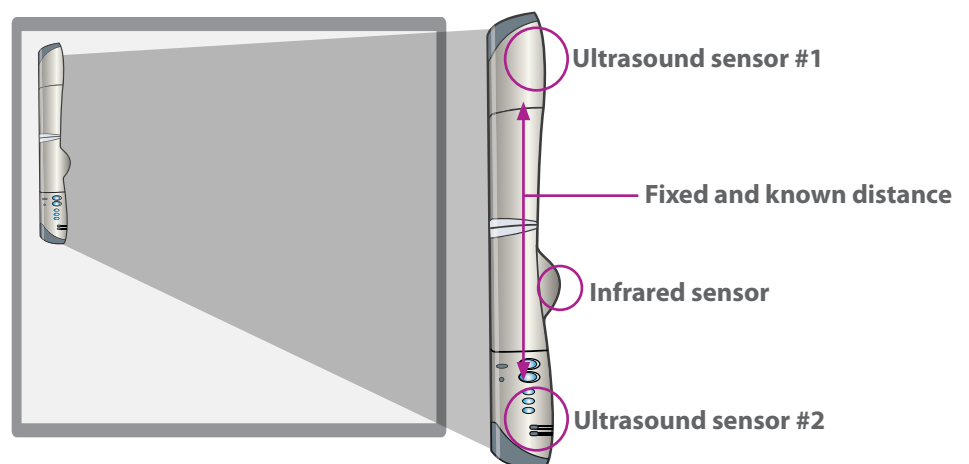
## mimio®: Transforming Teaching and Learning

Today's educators are looking for ways to balance two seemingly competing needs: the need to create 21<sup>st</sup> century classrooms that take advantage of the latest instructional technology, and the need to spend precious dollars wisely and keep costs low. mimio® meets the challenge head-on, providing interactive whiteboards that offer lower initial and long-term costs, ease of use, convenience, and portability. The mimio advanced technology delivers a more cost-effective and less complicated solution than competitors' products, but offers all of the same functionality. It's a solution that can help educators stay within budget while creating the kind of classroom students and teachers need.

### mimio Technology: How Does It Work?

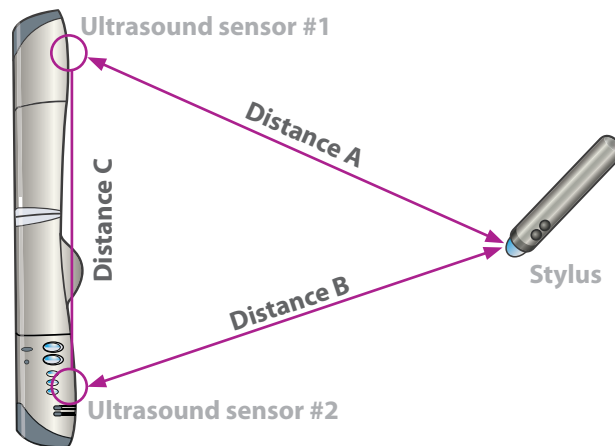
Unlike conventional interactive whiteboard technologies, mimio tracking technology is not embedded in the whiteboard surface. Instead, it uses ultrasound and infrared to create an innovative, surface-independent tracking system. Though some complexities are involved, the overall process is fairly straightforward and easy to understand.

The mimio Interactive system uses ultrasound and infrared to track the position of the mimio Interactive Stylus on the whiteboard and communicate stylus information. The primary hardware is a compact mimio Interactive Bar, which attaches to any whiteboard or flat surface via suction cups or mounting brackets. The bar contains two ultrasonic receivers and one infrared receiver. The two ultrasonic receivers are fixed, with a known distance between them.



When a mimio Interactive Stylus touches the whiteboard, it triggers ultrasonic and infrared signals. The infrared signal travels instantly – at the speed of light – to the infrared receiver on the mimio bar. This signal lets the mimio system know that an ultrasonic signal was sent. When mimio Capture pens are used, the system can identify which pen touched the surface by an encoded signal.

The ultrasonic signal arrives after the infrared signal – at the speed of sound – at both ultrasonic receivers on the mimio bar. Now, using the speed of sound and the signal start time, the mimio system calculates the distance between the stylus and the ultrasonic receivers.



This process may become clearer through the analogy of thunder and lightning. If you count the number of seconds until you hear thunder after a lightning flash and then divide that number by 5, you can learn how many miles away a storm is. The process the mimio system uses to determine the stylus position on a whiteboard is similar.

Simple trigonometry determines the location of the mimio stylus on the whiteboard. We know the distance between the two ultrasonic sensors. We know the distance between the stylus and each of the two ultrasonic sensors. We also know where the mimio bar is located on the surface. We form a triangle with this information (see image above) to compute the exact location (x,y) of the stylus on the whiteboard. And when mimio Capture pens are used, we can compute the color of the pen used, as well as the position. This technology provides definite advantages over board-based systems.

### Benefits to Both the Buyer and the End User

Breakthrough mimio technology offers many benefits above and beyond conventional interactive whiteboard technology – to both the buyer and the end user.

Affordability is the most obvious benefit of the mimio Interactive system. You get all of the functionality you expect from an interactive whiteboard, at a much lower cost. Numerous factors contribute to its affordability. First of all, the mimio Interactive system costs less to manufacture than competitive products and covers a larger surface area (up to 4 feet by 8 feet). The mimio Interactive Xi Bar attaches to an existing whiteboard, drastically reducing installation expense. The bar can function on standard whiteboards, which are often made of porcelain on steel. That makes it much less susceptible to damage than conventional interactive whiteboard technologies that use active surfaces, which are more easily scratched and susceptible

to permanent damage from dry-erase markers. Since the mimio technology is not embedded in the whiteboard, the tracking system will continue to work even if the surface board is damaged. Finally, the portability of the mimio Interactive system makes it easy for multiple locations or classrooms to share a single device, so fewer systems will need to be purchased.

Ease of installation is another benefit. Shipped in a small box, the mimio system can be unpacked and set up by a single person in a matter of minutes – no tools required.

The mimio Interactive Stylus has two conveniently located buttons, providing quick and easy execution of both right-click and hover actions from anywhere on the whiteboard. The mimio bar also has five quick access buttons that let you access common features from the whiteboard, without needing to click on software tools.

The mimio Interactive system was designed to be extendable. All mimio accessories integrate seamlessly with mimio hardware and software. These include add-ons that can be used to create a wireless connection to a PC (mimio Wireless), capture real ink written by dry-erase markers (mimio Capture Kit), and enable mobility and remote student response in the classroom via a wireless tablet (mimio Pad).

### **An Affordable, Versatile Solution**

Thanks to its unique patented technology and innovative design, the mimio Interactive system offers a versatile solution with all the capabilities users want in an interactive whiteboard – at a lower cost. The mimio tracking system is surface-independent, allowing it to be used with existing whiteboards. Installation and setup are a breeze, and the system's portability makes sharing a snap. Users get started quickly and discover more depth as they become more comfortable with the system.

mimio Interactive learning products will continue to be refined as mimio develops a variety of complementary educational solutions for the classroom environment. If you seek advanced innovation, quality, value, and commitment to award-winning educational classroom solutions, consider mimio Interactive technology.