

Smartboard Sb 680

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THE INTERACTIVE POWERHOUSE: A DEEP DIVE INTO THE SMARTBOARD SB 680

In the evolving landscape of modern education and corporate collaboration, the interactive whiteboard has emerged as a cornerstone technology. Among the many models that have defined this space, the **Smartboard Sb 680** stands out as a reliable and robust tool. For years, this model has been a staple in classrooms and boardrooms around the world, known for its durability, intuitive functionality, and seamless integration into existing digital ecosystems. Understanding its capabilities, features, and optimal use cases is essential for any institution or business looking to enhance interactive learning and dynamic presentations without overhauling their entire infrastructure.

This article provides a comprehensive exploration of the Smartboard Sb 680. We will delve into its core technical specifications, the unique advantages it offers for group collaboration, the software ecosystem that powers it, and best practices for installation and maintenance. Whether you are an educator seeking to revitalize your teaching methods or a business professional aiming to improve meeting productivity, this guide will equip you with all the knowledge necessary to leverage this powerful tool effectively.

What is the Smartboard Sb 680? A Legacy of Interaction

The **Smartboard Sb 680** is a front-projection interactive whiteboard system developed by SMART Technologies. Part of the highly regarded 600 series, this model was designed as a workhorse for high-traffic environments. Unlike modern flat-panel displays, the Sb 680 uses a passive, pressure-sensitive surface that detects touch without the need for expensive, fragile sensors or batteries in pens. This core technology—known as DViT (Digital Vision Touch)—uses cameras located in the board's bezel to detect finger, pen, or even pointer contact, instantly translating physical gestures into digital input.

This unique approach provides a tactile, immediate feel that many users find more natural than capacitive glass screens. The surface is designed to be durable and resistant to scratches, dents, and everyday wear and tear, making it an excellent long-term investment for school districts and companies alike. The board connects to a computer via USB, which powers the touch detection and communication, while a standard projector casts the computer's image onto the board's surface.

This simple, elegant architecture is the reason why so many units remain in active service today, years after their initial release.

Key Technical Specifications and Build Quality

To fully appreciate the Smartboard Sb 680, it is helpful to examine its physical and technical attributes. The board is engineered for reliability and ease of use.

- **Diagonal Size:** 77 inches (195.6 cm), providing a large, immersive interactive area ideal for groups of up to 20 people.
- **Interactive Surface Area:** 62.2 inches (158.0 cm) wide by 46.5 inches (118.1 cm) high.
- **Technology:** DViT (Digital Vision Touch), which uses infrared cameras in the bezel for touch detection.
- **Touch Capabilities:** Supports up to two simultaneous touches, allowing for basic multi-user interaction like rotating objects, zooming, or navigating with two fingers.
- **Input Method:** Passive, battery-free pens or any pointing object (including a finger). The board responds to the first point of contact, eliminating the need for specific "active" styluses.
- **Connectivity:** USB 2.0 connection to a host computer. The board is powered via USB, so no external power supply is needed.
- **Surface:** A hard, durable, and low-glare surface that can be used as a standard whiteboard with dry-erase markers when the projector is off.
- **Weight:** Approximately 60 lbs (27.2 kg), requiring a sturdy wall mount or rolling cart.
- **Speakers:** Includes integrated speakers that connect to the computer via a standard audio cable, providing clear sound for multimedia content.

The build quality of the Sb 680 is exceptional. The steel frame and scratch-resistant surface mean it can withstand thousands of hours of use. The pens are robust and replaceable, and the lack of moving parts inside the board contributes to its longevity. This rugged construction is a key differentiator from consumer-grade touch screens and makes the Sb 680 suitable for environments where equipment is used heavily and sometimes without kid gloves.

The Software Ecosystem: Unlocking Full Potential

While the hardware is impressive, the true power of the Smartboard Sb 680 is unleashed through its companion software, primarily **SMART Notebook**. This software is the heart of the interactive experience, transforming the board from a simple touch surface into a powerful teaching and collaboration hub.

SMART NOTEBOOK: THE AUTHORING TOOL

SMART Notebook allows users to create, organize, and deliver interactive lessons or presentations. Key features include:

- **Infinite Cloner:** Create unlimited copies of any object (like a math problem or a shape) with a single touch.
- **Screen Shade:** Reveal information gradually, perfect for hiding answers until you are ready to discuss them.
- **Annotation Tools:** Write, draw, and highlight directly over any application, website, or video playing on the computer.
- **Gallery of Interactive Content:** Access thousands of pre-made images, backgrounds, and interactive activities (like flash simulations in older versions) that can be dragged directly into lessons.
- **Lesson Activity Builder (LAB):** A tool for creating engaging games and quizzes (like matching, sorting, and fill-in-the-blanks) that students can interact with on the board.

SMART NOTEBOOK FOR COLLABORATION

Beyond simple lectures, the software promotes active participation. Users can import documents (PDF, Word, PowerPoint) and annotate them in real time. The ability to save all annotations and changes means that every meeting or class becomes a retrievable record of the discussion. This is invaluable for reviewing key points, creating study guides, or documenting meeting minutes on the fly.

OTHER SOFTWARE COMPONENTS

The **SMART Board 680** also comes with the **SMART Product Drivers**, which handle the touch recognition and calibration. The **Floating Tools** toolbar provides quick access to common functions (pen, eraser, screen capture) from any application. Additionally, **SMART Response** (formerly Senteo) systems can be integrated for instant audience polling and assessment, providing real-time feedback on comprehension.

Practical Applications in Education and Business

The versatility of the **Smartboard Sb 680** makes it suitable for a wide range of professional settings.

IN THE CLASSROOM

- **Math and Science:** Teachers can demonstrate complex equations, graph functions in real time, label diagrams, and simulate laboratory experiments using interactive flash files.
- **Language Arts:** Analyze text as a class by underlining metaphors, circling vocabulary words, and using the on-screen keyboard for spelling and grammar exercises.
- **Social Studies:** Explore interactive maps, annotate historical photographs, and create timelines with student input.
- **Special Education:** The large, tactile interface is highly effective for students with fine-motor skill challenges or visual impairments, allowing for whole-group participation.
- **Student Engagement:** The novelty of touching the board increases participation. Students can come up to the board to solve problems, sort items, or present their work, fostering a more active learning environment.

IN THE CORPORATE WORLD

- **Brainstorming & Strategy:** Teams can use the board to map out ideas, create flowcharts, and capture thoughts in a free-form manner using the pens.
- **Data Analysis:** Present complex spreadsheets and dashboards, then zoom in on key figures and annotate trends directly on the data.
- **Training & Development:** Deliver training sessions that require participant interaction. Use the board for group activities, quizzes, and role-playing exercises.
- **Project Management:** Keep Gantt charts and to-do lists visible and editable during team meetings. Changes can be made and saved instantly.
- **Remote Collaboration (Limited):** While designed primarily for physical presence, the saved Notebook files can be shared with remote team members for review. (Note: The Sb 680 itself does not have native video conferencing without additional hardware.)

Installation, Setup, and Calibration

Setting up a **Smartboard Sb 680** is a straightforward process, but it requires careful attention to detail, particularly with projector alignment.

1. **Physical Mounting:** The board must be mounted on a solid, level wall using the included wall

brackets. Alternatively, it can be placed on a mobile floor stand (sold separately) for flexibility. Ensure the board is at an appropriate height for your users (typically the bottom edge is around 30-36 inches from the floor).

2. **Projector Installation:** The projector must be mounted in a way that the image perfectly matches the dimensions of the interactive area. Use the "Check Alignment" feature in the SMART software to ensure the projected image is square and fills the board. A misaligned projector will cause touch inaccuracy.
3. **Computer Connection:** Connect the board to your computer using a standard USB cable. The board will be recognized immediately by the operating system (Windows, macOS, or Linux).
4. **Software Installation:** Install the SMART Notebook software and the SMART Product Drivers from the included CD or download the latest versions from the SMART Technologies website. The drivers include the calibration tool.
5. **Calibration:** Calibration aligns the touch points with the projected image. With the software installed, press the "Calibrate" button on the board's pen tray (or in the software). A series of crosshairs will appear. Touch each crosshair accurately with a pen or your finger. This process takes only a minute and should be repeated whenever the projector is moved or the board is relocated.

Pro Tip: Ensure your projector has sufficient brightness for your room's lighting conditions. A typical recommendation is at least 2500 lumens for a standard classroom. A dim projector will wash out the image, making it difficult for students to see the content.

Troubleshooting Common Issues and Maintenance

Even with the robust design of the Smartboard Sb 680, occasional issues can arise. Most can be resolved quickly with simple checks.

- **Touch Not Working:** First, check the USB connection. Try a different USB port on the computer. Ensure the SMART Product Drivers are running in the background (look for the

SMART icon in the system tray). If the board has power, the grid of infrared cameras is active; a solid red light on the board's power button indicates it is receiving power.

- **Inaccurate Touch / Drift:** This is almost always a calibration issue. Run the calibration tool again. If the issue persists, ensure the projector is perfectly aligned and not vibrating. Also, clean the board's surface and the bezel cameras (see below).
- **Pen Not Working at All:** The pens are passive; they do not contain batteries. If the board detects touch with a finger but not a pen, the pen tip may be worn down. Replace the pen tip or try a different object. The board senses the first point of contact, so a soft touch is best.
- **Computer Not Recognizing Board:** Try a different USB cable. Check for driver conflicts in the Device Manager (Windows) or System Information (macOS). Restart the computer with the board connected.
- **Image Flickering or Unstable:** This is a projector or video cable issue, not a board fault. Check the VGA, HDMI, or DVI cable between the computer and projector. Try a different cable or a second projector if available.

ROUTINE MAINTENANCE

- **Surface Cleaning:** Clean the board's surface with a soft, damp cloth. Use standard whiteboard cleaner for stubborn marker residue. Do not use abrasive cleaners or harsh chemicals, as they can damage the surface.
- **Bezel Cleaning:** Gently wipe the black bezel (the frame around the board) with a soft cloth. The infrared cameras are located behind small slits in the bezel; keeping them clean ensures accurate touch detection. Avoid pressing hard or getting moisture inside the bezel.
- **Pen Storage:** Keep the pens in their magnetic tray when not in use. The tray also acts as a tool selector and contains the calibration button.

Comparing the Sb 680 to Modern Interactive Displays

While the Smartboard Sb 680 is