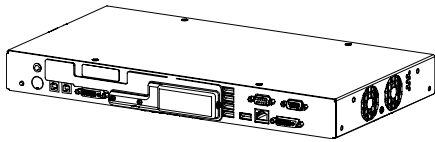# SMART Hub VE220

Installation and User's Guide

Extraordinary made simple™ | **SMART**™

Product Registration

If you register your SMART product, we'll notify you of new features and software upgrades.

Register online at www.smarttech.com/registration.

Keep the following information available in case you need to contact SMART Technical Support.

Serial Number: _____

Date of Purchase: _____

Contents

About Your SMART Hub VE220

Overview

The SMART Hub VE220 is a device you can connect to your SMART Board™ interactive whiteboards, SMART Board™ *for Flat-Panel Displays* interactive overlays, SMART Board™ interactive display frames, Actalyst™ interactive overlays and SMART Podium interactive pen displays. It has the following features:

- Whiteboard capability for writing notes with digital ink

- Easy upgrade to the SMART Hub SE240

- User-friendly design

- Easy-to-maintain hardware

☞ **IMPORTANT**

- To ensure your hub functions as expected, immediately upgrade your hub's firmware to version 3.0.X.

- To access your hub's audio feature, upgrade your firmware, and then remove the hub's cover plate as per the instructions in Chapter 3 of this manual.

SMART Hub VE220 Features

Your hub's compact size allows you to easily integrate it into your boardroom or classroom. You can mount it in four ways:

- 19" (48.3 cm) rack mounting

- wall mounting

- tabletop or shelf mounting

- under-shelf mounting

Your hub includes connectors for:

- SMART products

- one computer

- speakers and other peripheral devices (including USB storage devices)

Computer Input Formats

- VGA
- XGA
- SXGA
- MAC

- SVGA
- WXGA
- SXGA+

Computer Output Formats

- SVGA
- WXGA
- 720p
- 1080p

- XGA
- SXGA
- 1080i

Your hub also includes 256 MB DDR RAM, and its two fans cool the hub while producing less than 30 dB noise at 16.4' (5 m).

Firmware Features

Your hub's main firmware features include whiteboarding for writing notes and creating drawings with digital ink, and saving documents for later use.

Standard Accessories

SMART provides the following accessories with your hub. If you need to purchase replacements, contact your authorized SMART reseller.

Power Supply

SMART provides a 12V DC, 5.0A power supply and the cable you need to connect it to a power outlet (depending on your region).
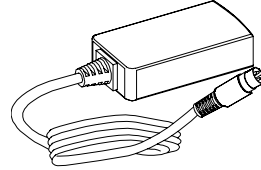
Cables and Adapters

SMART provides the following cables:

- 6' (1.8 m) DVI male to VGA male cable to connect to the Extended Control Panel (ECP) from the DVI-out port.
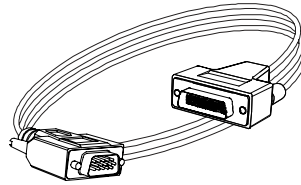
- 6' (1.8 m) DVI male to DVI male cable to use if your display supports DVI ports.
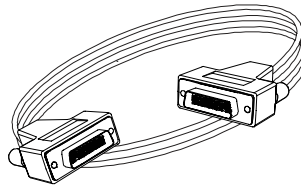
- DVI male to VGA female adapter to connect your hub to a projector or display using a VGA cable.

    NOTE
    Use this adapter if you use an Actalyst interactive overlay.
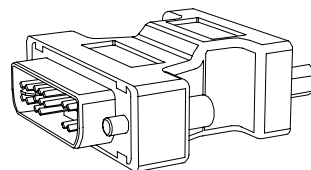
• A USB to serial adapter to enable you to connect your hub to your SMART product if it has a serial connector instead of a USB connector.
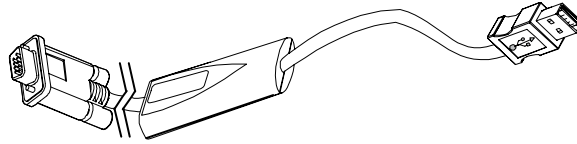
You can purchase additional cables from your [authorized SMART reseller](#).

Chapter 2
Installing Your Hub

Environmental Requirements

Before you install your hub, review the following environmental requirements.

Storage Temperature and Humidity

You can store your hub in temperatures ranging from -4°F to 140°F
(-20°C to 60°C) and humidity ranging from 0% to 80%, non-condensing.

Water and Fluid Resistance

Your hub is for indoor use only and doesn't meet any salt-spray or water ingress
requirements.

> ⚠ **CAUTION**
> Do not pour or spray any liquids directly onto the product. These liquids can get
> into areas where they could damage sensitive electronic components.

Dust and Scratching

Your hub is for use in office and classroom environments only. It isn't designed for
industrial use, where heavy dust and pollutants can cause malfunctions or impaired
operation. The design is for pollution degree 1 (P1) as per EN61558-1, which is
defined as "No pollution or only dry non-conductive pollution."

Electrostatic Discharge (ESD)

Your hub meets the requirements of EN61000-4-2 severity level 4 for direct and
indirect ESD. No malfunction or damage up to 15 kV (both polarities) with a
330 ohm, 150 pF probe (air discharge). Unmated connectors meet 8 kV for direct
(contact) discharge.

Conducted and Radiated Emissions

The narrowband radiated electric field from your hub meets the limits for Class B
performance as defined in EN55022/CISPR 22.

Before Installing Your Hub

Choose a location for your hub as close as possible to your SMART product, its projector or display and a network connection. You can mount your hub on a rack, wall, tabletop or shelf.

Tools Required

You need a Phillips® No. 2 screwdriver to connect the mounting brackets to your hub. You may need additional screwdrivers or an electric drill with appropriate bits depending on the screws you use to mount the hub on a rack, wall, tabletop or shelf.

Additional Cables Required for Your Hub

Your hub includes cables and accessories, but you may require the following additional cables:

- a USB cable to connect your hub to other SMART products

  NOTE
  SMART provides a USB cable with products that have USB connectors.

- a VGA cable to connect your hub to a computer using a DVI to VGA connector

- a USB cable to connect your hub to a computer

- A 3.5 mm audio cable

Optional Accessories

You can control your hub by connecting a USB keyboard or USB mouse device, or you can use the on-screen keyboard.

IMPORTANT
Some USB, keyboard and mouse devices aren't supported by your hub.

Installing Your Hub

Install your hub in three stages:

1. Mount your hub.

2. Connect your hub.

3. Verify that your hub firmware is current.

> 👉 **IMPORTANT**
>
> After installing your hub, verify that its firmware is current. See the *SMART Hub SE240/VE220 Administrator's Guide* (document 137274) for more information.

Mounting Your Hub

You can mount your hub in one of the following configurations:

• 19" (48.3 cm) rack mounting (rack not included)

• wall mounting

• tabletop or shelf mounting

• under-shelf mounting

> 🔺 **CAUTION**
>
> – When mounting your hub, ensure its fans are not obstructed to allow for proper cooling. If you mount the hub vertically, be sure that the fans face up to provide optimal cooling.
>
> – Also ensure you use the appropriate screws. Use screws and anchors appropriate for the wall on which you're mounting your hub (screws may not be supplied, depending on your wall type). If you have a steel wall, for example, use a toggle to mount your hub. If you're mounting your hub on wood, use wood screws to mount your hub.

#8 × 2" (4)

10-24 × 2" (4)
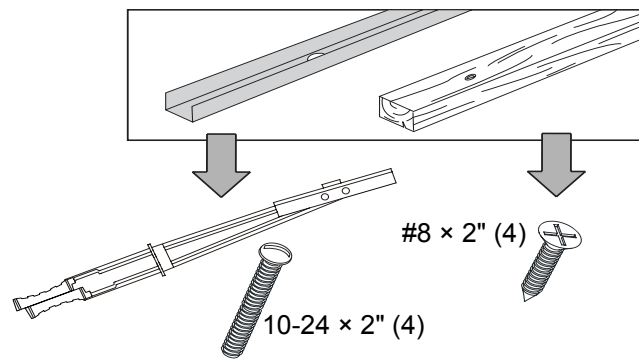
To mount your hub on a 19" (48.3 cm) rack

1. Attach the mounting brackets to the sides of your hub using the screws provided.

   ### ℹ NOTE

   There are several methods for attaching the brackets to the side of your hub. Use the method that works best for your rack. SMART recommends that you use a method using two mounting brackets aligned with the back of the unit.

2. Mount your hub to the rack.
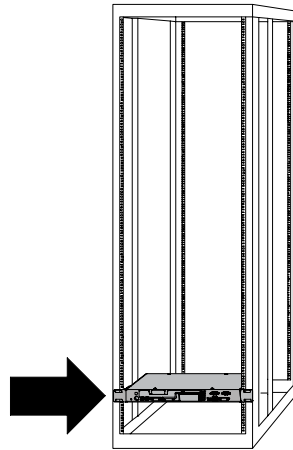
To mount your hub on a wall

1. Align the base of the mounting brackets with the bottom of your hub.

2. Attach the mounting brackets to the sides of your hub using the screws provided, and then mount your hub to the wall.

   ### ☞ IMPORTANT

   Ensure that the side of the unit with the fan is on top.
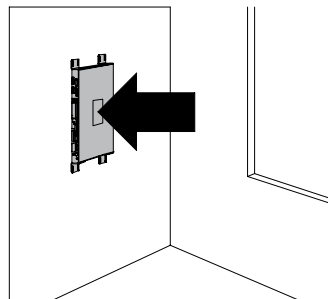
To mount your hub on a shelf or table

1. Align the base of the mounting brackets with the bottom of your hub.

2. Attach the mounting brackets to the sides of your hub using the screws provided.

3. Mount your hub on the shelf or table using the appropriate screws.
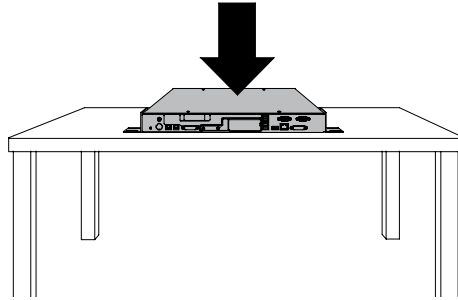
To mount your hub under a table top or shelf

1. Align the base of the mounting brackets with the top of your hub.

2. Attach the mounting brackets to the sides of your hub using the screws provided.

3. Mount your hub under the tabletop or shelf.
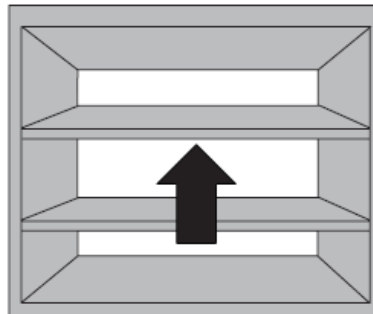
Connecting Your Hub

After mounting your hub, connect it to your SMART product and peripheral devices.

To connect your hub

1. Connect your hub to your SMART product's projector through a DVI-out port using a DVI to VGA cable, or the provided DVI cable.

   ℹ NOTES
   – Use a USB cable to connect your hub to another SMART product. If your SMART product has a serial connector rather than a USB connector, use the USB to serial adapter provided with your hub.

   – Your hub includes two video cables. Use these cables to connect your hub to your projector or display.

   – SMART recommends using a DVI cable, when possible, for optimal performance.

   – You can connect multiple SMART products to a single SMART Hub VE220. All SMART products connected to the unit share a common display. For more information, contact the SMART Support site.

2. Connect your hub to your network.

3. Connect your hub to your peripheral devices with USB connectors.

4. Connect your hub to its power supply, and then turn on your SMART product and its projector or display.

   Your SMART product enters **Whiteboard** mode.

Chapter 3

Configuring Your Hub

Orienting Your SMART Products

📄 **IMPORTANT**

- Before orienting your hub, download the latest version of firmware for your hub from the [SMART Support site](#).

- When your SMART interactive product uses its default orientation data, the touch point on the screen corresponds to the projected image, provided the projected image fills the entire interactive screen. However, the projected touch point might be offset from the actual touch point in some situations. Resolve this issue by orienting your SMART product.

- Orient your SMART interactive product with your hub before you orient it with other connected computers.

To orient your SMART product with your hub

1. Select **System > Settings**, and then press **Orient**.

   OR

   Press both pen tray buttons on your SMART Board interactive whiteboard simultaneously.

   The orientation screen appears.

2. Using a pen tray pen, press and release the center of the first target.

3. Repeat step 2 for each target.

   The orientation data saves to your hub's memory.

Configuring Multiple SMART Hub VE220 Units

If you have more than one SMART Hub VE220, you can configure one unit, export the configuration settings to a USB storage device, and then import the configuration settings to the other units.
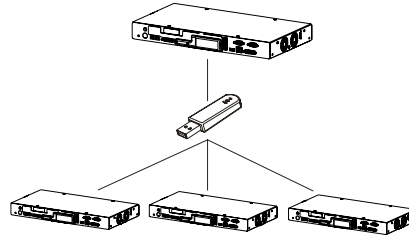
> 👉 **IMPORTANT**
> The export process doesn't include orientation data on the USB storage device.

Exporting and Importing Configuration Settings

To export configuration settings to a USB storage device

1. Connect a USB storage device to your hub, and then select **System > Settings**.

   The *SMART Hub VE220 Settings* dialog box appears.

   > 👉 **IMPORTANT**
   > If a password is required to change the configuration settings, enter it in the text box located at the bottom of the window, and then press **OK**.

2. Select **Administration > Export Settings**.

   A dialog box appears asking you to select the settings you want to export to a USB drive.

3. Select the **SMART Hub VE220 system settings** check box to export configuration settings, and the **E-mail Contacts** check box to export e-mail contacts.

4. Press **OK**.

   A second dialog box appears indicating that you've successfully exported all selected settings files.

5. Press **OK**.

To import configuration settings from a USB storage device

1. Connect the USB storage device to to your hub.

2. Press **System > Settings**.

   The *SMART Hub VE220 Settings* dialog box appears.

3. Press **Administration > Import Settings**.

   A dialog box appears asking you to select the settings you want to import from a USB drive.

4. Select the **SMART Hub VE220 system settings** check box to import configuration settings, and the **E-mail Contacts** check box to import e-mail contacts.

5. Press **OK**.

   A second dialog box appears indicating that you've successfully imported all selected settings files.

6. Press **OK**.

   The new settings take affect automatically.

Securing Configuration Settings

You can password protect your configuration settings.

> 💡 **TIP**
> If you forget your password, contact the SMART Support site.

To apply a password to configuration settings

1. Select **System > Settings**.

   The *SMART Hub VE220 Settings* dialog box appears.

2. Press **Administration**, and then select the **Require password to access system settings** check box.

   A *Settings password* dialog box appears prompting you to enter your old password.

3. Enter your old password, and then create a new one. After you confirm your new password, press **OK**.

   > ℹ️ **NOTE**
   > You only have to enter your old password if you have an existing one, or if you haven't already done so in the text box at the bottom of the main *Settings* dialog box.

4. Press **Apply All**.

Connecting Your Computer to Your Hub

You can connect your computer to your hub to view its input on your SMART product's display and do the following:

• Draw notes and drawings in digital ink.

• Freeze the display.

• Take screen captures.

• Use the on-screen keyboard and right-click features of your hub's firmware.

> **ⅰ NOTE**
>
> Connect your computer to your hub using the appropriate VGA/DVI or DVI-D cables and adapters.

To configure your hub for the computer

1. Select **System > Settings**.

   The *SMART Hub VE220 Settings* dialog box appears.

2. Press **Input Configuration**.

3. In the *Input device name* box, type a name for the computer.

4. In the *Input Type* list, select **Analog** or **Digital**.

   > **☞ IMPORTANT**
   >
   > – Select **Analog** if you are using a VGA/DVI-I cable, or if you are using a DVI/DVI cable with a VGA/DVI adapter.
   >
   > – Select **Digital** if you are using a DVI/DVI cable.
   >
   > – If the setup is incorrect, your hub will not work with a Mac computer.

5. Press **Apply All**.

   > **💡 TIPS**
   >
   > If you want to adjust your settings, press **Adjust Settings**.
   >
   > A *Picture Settings* dialog box appears allowing you to change your hub's brightness or contrast. Press **OK**, **Cancel** or **Reset** accordingly.

Configuring the Display Settings

You can configure your hub's resolution, aspect ratio and time-out settings to work with your SMART product's display.

To configure the display settings

1. Select **System > Settings**.

   The *SMART Hub VE220 Settings* dialog box appears.

2. Press **Display Configuration**.

   TIP

   The top portion of the *Display Configuration* tab shows information about the projector or display connected to your hub. You can refresh this information by pressing **Refresh**.

3. Select a resolution in the *Resolution* list, and then press **Apply All**.

   NOTE

   You also have the option of choosing how many minutes you want your hub to wait before it enters sleep mode, shuts down the projector, or displays the device's control strip.

Configuring Network Settings

Connect your hub to a network to take advantage of its networking features, such as e-mailing Whiteboard files to specified addresses.

IMPORTANT

You must be familiar with basic networking, Simple Network Management Protocol (SNMP) and Simple Mail Transfer Protocol (SMTP) to complete the following procedures. If you are not familiar with these concepts, consult an information technology professional in your organization.

To configure basic network settings

1. Select **System > Settings**.

   The *SMART Hub VE220 Settings* dialog box appears.

2. Press **Network**, and then type a name for your hub in the *Device name/network ID* box.

3. Press **Network Address** if the tab isn't already selected, and then select the **Use DHCP (automatically detect network settings)** option to configure networking settings automatically.

   OR

   Select the **Manually specify network settings and addresses** option to configure networking settings manually, and then type the appropriate information (as supplied by your network administrator) in the following boxes:

   – *IP address*

   – *Subnet mask*

   – *Default gateway*

   – *DNS server 1*

   – *DNS server 2*

4. Press **Apply All**.

   NOTE
   You may want to reset your unit to ensure your settings are applied.

To configure e-mail (SMTP) settings

1. Select **System > Settings**.

   The *SMART Hub VE220 Settings* dialog box appears.

2. Select **Network > E-Mail (SMTP)**.

3. Type the name of your SMTP server in the *SMTP server name* box, and then type the port number of your SMTP server in the *Port number* box.

   NOTE
   The SMTP's default port number is **25**.

4. Type the domain name of the SMTP server in the *Domain name* box.

5. Press **Apply All**.

   NOTES
   – Select the **Enable file export by e-mail** check box to enable file export by e-mail.

   – Select the **Enable RJ45 Ethernet port** check box to enable your networking features on the *Administration* tab.

To configure network management settings

1. Select **System > Settings**.

   The *SMART Hub VE220 Settings* dialog box appears.

2. Select **Network > Management**.

3. Select the **Enable remote management of SMART Hub VE220** check box to enable your hub's SNMP settings.

4. Select **Use the settings password as the SNMP (Simple Network Management Protocol) read/write strings** to use the general settings password for the SNMP read/write strings.

   OR

   Select **Manually assign SNMP read/write strings**, and then type the appropriate information (as supplied by your network administrator) in the following boxes to manually assign the SNMP read/write strings:

   – *Read community string*

   – *Write community string*

   – *Trap destination address*

   ☞ **IMPORTANT**
   In SNMP, community strings are text strings that act as passwords. Get requests are valid only if their community strings match the value in the *Read community string* box, and set requests are valid only if their community strings match the value in the *Write community string* box.

5. Type the IP address to which your hub should send traps (as supplied by your network administrator) in the *Trap destination address* box.

   ☞ **IMPORTANT**
   Traps are unsolicited, asynchronous events that devices such as your hub generates to indicate status changes.

6. Press **Apply All**.

💡 **TIP**
To fully utilize the SNMP features, download your hub's Management Information Base (MIB) files from www.smarttech.com/VE220firmware. SNMP management software uses MIB files to interpret the information from the devices that it monitors.

Configuring Language and General System Settings

Your hub's user interface is set to English by default. You can change the language to one of the following:

- English
- French
- German
- Italian
- Spanish

You can view your hub's system information, including the firmware version, Internet Protocol (IP) address and Media Access and Control (MAC) address.

To set your hub's user interface language

1. Select **System > Settings**.

   The *SMART Hub VE220 Settings* dialog box appears.

2. Press **System and Language**.

3. In the *Language* list, select your preferred language from the drop-down menu.

4. Press **Apply All**.

To view system information

1. Select **System > Settings**.

   The *SMART Hub VE220 Settings* dialog box appears.

2. Press **System and Language**

   The system information appears.

Disabling Your System Hardware Settings

To disable your system hardware settings

1. Select **System > Settings**.

   The *SMART Hub VE220 Settings* dialog box appears.

2. Clear the **Enable RJ45 Ethernet port** check box to disable network settings.

3. Clear the **Enable USB storage device support** check box to disable the USB storage device settings.

4. Press **Apply All**.

Enabling Your Audio Feature

To enable the hub's audio feature

Connect a 3.5 mm audio cable into one of the hub's audio ports, as per the diagram below.

🔺 **CAUTION**

Only the audio in and audio out ports are enabled on this hub. Do not use cables in any of the other ports.

Audio In   *Audio Out*
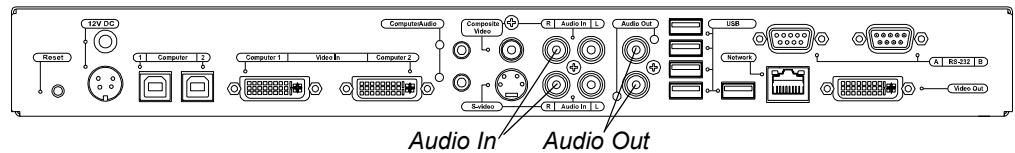
ℹ️ **NOTE**

Before you can use your hub's audio feature, you must remove the cover plate.

To remove the hub's cover plate

1. Using a Phillips No. 1 screwdriver, remove the two screws securing the hub's cover plate.

2. After you remove the screws, pry the plastic cover off of the hub with either a flat-headed screwdriver, or a similar device.

   ℹ️ **NOTES**

   – An adhesive glue holds the plastic plate to the hub. Don't use a lot of force when removing the plate.

   – You now have access to the hub's audio feature.

Upgrading to the SMART Hub SE240

You can upgrade your SMART Hub VE220 to a SMART Hub SE240 for additional features and benefits, such as:

• collaboration with remote computers using SMART Bridgit™ software

• more extensive audio and video input and output options

• serial room control capability

• making notes over video sources

> 👉 **IMPORTANT**
> Before you can upgrade your SMART Hub VE220, you must purchase a product upgrade key from your authorized SMART reseller.

To upgrade your VE220 firmware

1. Select **System > Settings**.

   The *SMART Hub VE220 Settings* dialog box appears.

   > 👉 **IMPORTANT**
   > If a password is required to change the configuration settings, type the password in the box at the bottom of the menu, and then press **OK**.

2. Press **Upgrade Hub to SE240**.

3. Type the product key number into the *Product Key* box.

   > ℹ️ **NOTE**
   > The product key number follows this format: SE-XXXX-XXXX-XXXX-XXX.

4. If you have an Internet connection, press **Upgrade**.

   OR

   Select **Manual Activation**, type your activation key into the *Activation Key* box, and then press **Upgrade**.

   > ℹ️ **NOTES**
   > – If you don't have an Internet connection, contact the SMART Support site and they will send you an activation key. You must provide your product key and installation ID in order to receive your activation key.
   >
   > – You only need to request an activation key if you don't have an Internet connection and are activating your hub manually.

To upgrade your VE220 using a product key file

1. Connect a USB storage device to your computer's USB interface.

2. Create a folder named **SMART** on the USB storage device.

3. Create and save a text file as **SMART_upgrade_keys.txt** in the SMART folder on the USB storage device.

4. In the file, type the following text:

   _PRODUCT_KEY =SE-XXXX-XXXXX-XXXX-XXXX

   Where the XXXX is your product key.

5. If you have an activation key, you can add it to the text file in this format:

   _ACTIVATION_KEY = XXXXXXXXXXXXXXXXXXXXXXXX

   ℹ NOTES

   – If you don't have your activation key, contact the [SMART Support site](#) and they will send it to you. You must provide your product key and installation ID in order to receive your activation key.

   – You don't have to type dashes when you enter your activation or product key numbers.

   Your Installation ID is unique to your SMART Hub VE220.

6. Disconnect the USB storage device from your computer and connect it to your hub's USB interface.

7. Select **System > Settings**.

   The *SMART Hub VE220 Settings* dialog box appears.

8. Press **Upgrade Hub to SE240.**

9. Press the **Get from File** button.

10. Press **Upgrade**.

    You have now upgraded your hub to a SMART Hub SE240.

    ☞ IMPORTANT
    After you upgrade your hub to the SMART Hub SE240, refer to the *SMART Hub SE240 Installation and User's Guide* [(document 122178)](#) instead of this guide.

Chapter 4
Installing Your Hub

Basic Tools

Sidebar

The sidebar menu allows you to move between Whiteboard, computer and video source sessions.

Page Sorter

The page sorter helps you navigate through your pages.
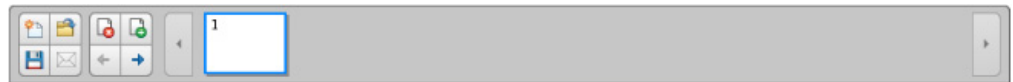
NOTES

- See the Quick Reference document entitled, *Using Your SMART Hub VE220* (document 135647) included with your hub for descriptions of the sidebar buttons.

- To minimize the sidebar, press the **Collapse** button. To move the sidebar, press the **Move Toolbar** button.

SMART Keyboard

If there's no keyboard connected to your hub, you can use SMART's on-screen keyboard to type information.

To access the SMART Keyboard

Press the **Keyboard** button .

The SMART Keyboard appears.

NOTE

The button appears at the right end of many text boxes, and on the side bar when you are in Computer mode.

Right-Click

If you connect a computer to your hub and there's no mouse connected, you can simulate a right-click by pressing the interactive whiteboard's **Right-Click** button, and then pressing the interactive screen with your finger.

Volume Adjustment and Mute

If your hub is connected to speakers, adjust the volume by pressing **Volume**.

Adjust the volume by moving the slider up to increase the volume, or down to decrease the volume.

i **NOTE**
> You can also control volume adjustment through the volume button on the SystemOn Module connected to the pen tray.

System Help

Your hub includes Help.

To view Help
1. Select **System > Help**.

   The *Help Topics* dialog box appears.

2. Press a topic to view the associated information.

Starting Your Hub Session

There are three ways to start a new session.

Situation	Procedure
Your SMART product turns off.	Turn on your SMART product as documented in its user's guide.
Your SMART product turns on, but the display is blank.	Swipe your finger or a pen tray pen across the display of your SMART product.
Your hub has timed out and is in *Sleep* mode.	Swipe your finger or a pen tray pen across the display of your SMART product.

Whiteboarding

Whiteboard allows you to capture notes and drawings in digital ink on your SMART product. Use Whiteboard for brainstorming, note-taking and other activities for which you want to use your SMART product's digital ink tools without conecting to a computer.

To create a file   Press **New File** button.

To open a file
1. Connect the USB storage device that contains the Whiteboard file to your hub, and then press **File open** button.

    The *File Browser* dialog box appears.

2. Select the USB storage device's drive letter in the *Look In* list, and then browse to and select the file.

3. Press **Open**.

    The file opens.

To add a page   Press **Add Page** button .

A new page appears after the current page.

To delete a page
1. Select the page you want to delete, and then press the **Delete Page** button .

    A *Delete page confirmation* appears.

2. Press **OK** to delete the page.

Saving or E-mailing a File

You can save your file on a USB storage device or e-mail it in one of the following formats:

- Whiteboard file (.notebook)

- JPEG archive (.zip)

- Portable Document Format (.pdf)

  After saving a file on a USB storage device, you can open, view and edit it on a computer with SMART Notebook™ or SMART Meeting Pro software.

To save a file

1. Connect a USB storage device to your hub.

2. Press the **Save** button 💾 .

   The *File browser* dialog box appears.

3. Select the USB storage device's drive letter in the *Look In* list, and then browse to the folder where you want to save the file.

   ℹ️ **NOTE**
   Press the **New Folder** button to create a new folder for the file.

4. Type a file name in the *File Name* box, and then select a file type in the **Save as type** list.

   – Whiteboard file (.notebook)

   – JPEG archive (.zip)

   – Portable Document Format (.pdf)

   ℹ️ **NOTE**
   If you select **JPEG Archive (.zip)**, your hub saves each page in the Whiteboard file as a JPEG image and then archives them in a single zip file.

5. Press **Save**.

To e-mail a file

1. Press the **E-mail** ✉️ button.

   The *File Browser* dialog box appears.

2. Select the recipient in the *Recipient* list.

   OR

   Type the recipient's e-mail address in the *E-mail address* box.

> ℹ️ **NOTES**
>
> – Add a new recipient or edit the list of recipients by pressing the appropriate button in the upper right corner of the *E-mail* dialog box.
>
> – If you're using the on-screen keyboard to type e-mail addresses, press **SHIFT 2** for the @ symbol.

3. In the **Save as type** list, select a file type:

   – Whiteboard File (.notebook)

   – JPEG Archive (.zip)

   – Portable Document Format (.pdf)

   > ℹ️ **NOTE**
   >
   > If you select **JPEG Archive (.zip)**, your hub saves each page in the Whiteboard file as a JPEG image file and then archives them in a single zip file.

4. Press **Send E-mail**.

Using Your SMART Product with Computer Inputs

When viewing computer inputs, you can draw digital ink notes on the display. If you want to save your digital ink notes, you can take a screen capture of the display.

1. Pick up a pen tray pen.

   OR

   Press the **Pen** button on the side bar.

   The pen toolbar appears.

2. In the pen toolbar, select the appropriate color and thickness options, and then draw digital ink.

To erase digital ink   Pick up the eraser from your SMART product's pen tray.

OR

Press the **Eraser** button on the side bar.

To clear the display

Press **Clear** .

Digital ink notes clear from the display.

To freeze the display

Press **Freeze** .

The display freezes.

> **NOTE**
> To unfreeze the display, press **Resume**.

To capture the display

Press Capture .

The last page in the page sorter contains a screen capture of the display.

Chapter 5
Maintaining Your Hub

Updating Your Hub's Firmware

SMART periodically releases firmware updates that introduce new functions, or correct known issues with existing functions.

You can update your hub's firmware through a USB storage device.

To determine if an update is required

1. Select **System > Settings.**

   The *SMART Hub VE220 Settings* dialog box appears.

2. Press **System & Language.**

   The current version of the firmware appears in the *System Information* section of the tab.

3. Go to www.smarttech.com/VE220firmware to determine the latest version of the firmware.

   If the latest version of the firmware on the SMART Support site is newer (in other words the number is higher) than your current version, you'll need to complete an update.

To update your firmware through a USB storage device

1. Connect the USB storage device to a computer with Internet access.

2. Go to www.smarttech.com/VE220firmware and download the latest version's application files to the following location on the USB storage device:

   \SMART

3. Disconnect the USB storage device from your computer, and then connect it to one of the USB A receptacles on your hub.

4. Select **System > Settings**.

   The *SMART Hub VE220 Settings* dialog box appears.

5. Press **Administration**, and then press **Firmware Update**.

   A dialog box appears.

6. Select the **Application** check box, and then press **OK**.

7. Press **Restart**.

   i NOTE

   The initial reset after updating the firmware may take several minutes.

Maintaining Your Hub's Hardware

Your hub's hardware requires little maintenance. However, clean its fans at least once per year using a vacuum cleaner or a can of compressed air to ensure its best performance.

If your hub's environment is unusually dusty, clean its fans more frequently.

Chapter 6

Troubleshooting Your Hub

Resetting Your Hub

Occassionally, your hub can stop responding or behave in unexpected ways. You can reset your hub to end the current session and begin a new, restored one.

To reset your hub, press and release the **Reset** button on the back of your hub, and then wait for it to start.

> **NOTE**
> You will lose unsaved Whiteboard documents when you reset your hub.

General SMART Hub VE220 Troubleshooting

Use this table to help troubleshoot general issues with your hub.

Symptom/Observation	Action/Solution
Your SMART Board interactive whiteboard or other product doesn't respond to touch.	• Ensure your hub is properly connected to your SMART product. • If you're connecting to a SMART product with a serial connector, ensure you use the USB to serial adapter provided with your hub. • If you're using a mouse and keyboard with your hub, ensure they're properly connected and working. • If the issue persists, contact the SMARTSupport site.
You're unable to connect to a computer.	• Ensure your hub is properly connected to your computer, and that you select the correct input type (Analog or Digital) from the *Input Configurations* tab under *Settings*. • If you're connecting to a laptop, ensure the laptop is in presentation mode. See the laptop's online Help or manual for instructions.
You're unable to use your hub's networking and e-mail features	• Ensure your hub is properly connected to your network. • Select **System > Settings**, and then assign an IP address to your hub to enable networking and e-mail features.
Your hub stops responding or behaves unexpectedly.	• Reset your hub to end the current session. To begin a new, restored session, press and release the **Reset** button, and then wait for it to start. If this doesn't resolve the issue, disconnect the power cable, and then wait two minutes before reconnecting it and turning on your hub.

You're trying to put your hub into Bootloader mode, and an indicator light on the hub turns red.	• Press and hold the **Reset** button until the light flashes amber and then turns solid amber. If it doesn't turn amber, contact the [SMART Support site](#). • A red light that doesn't change to green after about 30 seconds indicates that your unit needs servicing. Contact the [SMART Support site.](#)
Your display or your screen is out of focus.	Check your cable to ensure that your computer supports either DVI-D or DVI-I. • Select **System > Settings > Input Configuration** and check the drop-down menu under *Input Type*. If you're using DVI-D, your Input Type must be set to **Digital**, but DVI-I can be set to either **Digital** or **Analog**. If this doesn't work, try a different cable or display. • Make sure the selected resolution from your hub is compatible with your output display settings. Don't set your resolution too high. See your projector or plasma display manual for the native resolution. • The above settings must be correct for your hub to work with a Mac computer.
You're unable to write in digital ink on your computer.	• Orient your hub, and then correctly orient your other SMART products. Make sure the proper SMART Product Drivers are installed and running on your computer. • Make sure your cables are properly connected.

You're unable to enable the e-mail buttons.	• Configure your e-mail through e-mail STMP. • Select **System > Settings > Network > E-mail (SMTP)**, and select **Enable file export by e-mail**. Ensure your company's SMTP server name and domain are correct.
You're unable to save Whiteboard files on your USB storage device.	• Ensure there's enough space on the USB storage device to save your files. • Ensure the USB storage device is compatible with your hub.

Appendix A

Hardware Environmental Compliance

SMART Technologies supports global efforts to ensure that electronic equipment is manufactured, sold and disposed of in a safe and environmentally friendly manner.

Waste Electrical and Electronic Equipment Regulations (WEEE Directive)

Waste Electrical and Electronic Equipment regulations apply to all electrical and electronic equipment sold within the European Union.

When you dispose of any electrical or electronic equipment, including SMART Technologies products, we strongly encourage you to properly recycle the electronic product when it has reached end of its life. If you require further information, please contact your reseller or SMART Technologies for information on which recycling agency to contact.

Restriction of Certain Hazardous Substances (RoHS Directive)

This product meets the requirements of the European Union's Restriction of Certain Hazardous Substances (RoHS) Directive 2002/95/EC.

Consequently, this product also complies with other regulations that have arisen in various geographical areas, and that reference the European Union's RoHS directive.

Packaging

Many countries have regulations restricting the use of certain heavy metals in product packaging. The packaging used by SMART Technologies to ship products complies with applicable packaging laws.

China's Electronic Information Products Regulations

China regulates products that are classified as EIP (Electronic Information Products). SMART Technologies products fall under this classification and meet the requirements for China's EIP regulations.

Appendix B
Customer Support

Online Information and Support

Visit www.smarttech.com/support to view and download user's guides, how-to and troubleshooting articles, software and more.

Training

Visit www.smarttech.com/trainingcenter for training materials and information about our training services.

Technical Support

If you experience difficulty with your SMART product, please contact your local reseller before contacting SMART Technical Support. Your local reseller can resolve most issues without delay.

> **NOTE**
> To locate your local reseller, visit www.smarttech.com/where.

All SMART products include online, telephone, fax and e-mail support:

Online	www.smarttech.com/contactsupport
Telephone	+1.403.228.5940 or
	Toll Free 1.866.518.6791 (U.S./Canada)
	(Monday to Friday, 5 a.m. – 6 p.m. Mountain Time)
Fax	+1.403.806.1256
E-mail	support@smarttech.com

Shipping and Repair Status

Contact SMART's Return of Merchandise Authorization (RMA) group, Option 4, +1.866.518.6791, for shipping damage, missing part and repair status issues.

General Inquiries

Address	SMART Technologies
	3636 Research Road NW
	Calgary, AB T2L 1Y1
	CANADA
Switchboard	+1.403.228.5940 or
	Toll Free 1.866.518.6791 (U.S./Canada)
Fax	+1.403.228.2500
E-mail	info@smarttech.com

Warranty

Product warranty is governed by the terms and conditions of SMART's "Limited Equipment Warranty" that shipped with the SMART product at the time of purchase.

Registration

To help us serve you, register online at www.smarttech.com/registration.

SMART™