STERIS®



HexaVue™ Focus

Integration System

Operator Manual

en
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Revision B

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A Word from STERIS

Welcome

The HexaVue™ Focus Integration System is an all-digital, high resolution video routing and control center for operating rooms. It connects various components within a surgical environment, such as cameras, displays, and lighting systems, to a central touch panel where you can manage them.

This manual is intended for the operating room staff who control the integration system from its touch panel.

Trademark Information

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Intended Use

The HexaVue™ Focus Integration System is an integrated audio-visual system which combines monitors, medical imaging devices, lights, music, and cameras. It is intended to be used in the displaying and viewing of video and graphics for review and analysis by trained medical practitioners. The mode of operation for these devices is continuous operation.

Intended Clinical Benefit

When used as intended, the HexaVue Focus Integration System benefits patients by optimizing the workflow for trained medical practitioners to make images and videos readily accessible and to allow control of the operating room from a common interface. The intended clinical benefit of the HexaVue Focus Integration System is not directly measurable as it only provides indirect benefits. The device is not intended for direct patient use.

Intended Users and Use Environment

The intended users of the HexaVue Focus Integration System are trained healthcare professionals at a health care facility.

Contraindications

The device is not intended to be used with life support equipment.

Advisory

Operation is subject to the following two conditions:

- This device must not cause harmful interference to nearby equipment.
- This device must reject any interference, including interference that is known to cause undesired operation.

Accessory Equipment

The use of accessory equipment not complying with the equivalent safety requirements of this equipment may lead to a reduced level of safety of the resulting system. Consideration relating to the choice shall include:

1. Use of the accessory in the patient vicinity
2. Evidence that the safety certification of the accessory has been performed in accordance with the appropriate IEC 62368–1 harmonized national standard.

Certifications

- IEC 62368–1: This device has been evaluated to the IEC 62368–1 standard.

  Equipment evaluated to this standard is not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide (unless additional tests have been passed). Therefore this device is not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide. This device was not tested to the IPX standards.

- Class I Equipment: This device is classified as Class I Equipment.

  Class I equipment is defined as equipment in which protection against electric shock does not rely on basic insulation only, but which includes an additional safety precaution in that means are provided for accessible parts of metal or internal parts of metal to be protectively earthed.

- Class B digital device: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules.

  These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

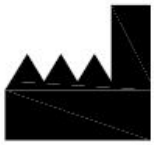
  – Reorient or relocate the receiving antenna.

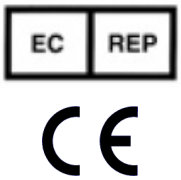
  – Increase the separation between the equipment and receiver.

  – Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

  – Consult a STERIS technician for help.

Addresses

<table>
<tr><td></td><td>STERIS
503 Canal Blvd.
Richmond, CA 94804
United States

Tel: 1 510 539–4500
www.steris.com</td><td rowspan="3">
</td><td rowspan="3">The European Authorized Representative (AR) for this product on behalf of the manufacturer is

STERIS Ireland Limited
IDA Business and Technology Park
Tullamore
County Offaly
R35 X865
Ireland

Tel: +353 (0) 57–9349999</td></tr>
<tr><td>UK Responsible Person
</td><td>STERIS Solutions Limited
Chancery House Rayns Way
Watermead Business Park, Syston
Leicester LE7 1PF UK</td></tr>
<tr><td>
</td><td>STERIS GmbH
c/o BDO AG Längfeldweg
116A CH-2504 Biel-Bienne
Switzerland</td></tr>
</table>

Technical Support

To get technical support or to report incidents with the device, contact STERIS:

- In Europe, UK, the Middle East, and Africa, call +33 5 56 93 94 94 or email Bordeaux_Tech_Supt@steris.com.
- In Australia, call 1300 211 422 or email TechServiceANZ@steris.com.
- In New Zealand, call 0800 211 422 or email TechServiceANZ@steris.com.
- In the United States, Canada, and any other country not listed above, call 1 800 548–4873 or email ORI@steris.com.

Safety Precautions

1.1 Safety Precautions

General Warnings

- Read all these instructions before operating the device.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- For the purpose of this document, the end user is someone using the touch panel interface and associated accessories.
- Use of this system outside of operating specifications will void the device warranty and may cause permanent damage.
- Only skilled and trained personnel should attempt to operate the integration system and its components. STERIS provides training for skilled end users before and during the system's first use. After that, skilled and trained personnel can train other personnel. If additional training is required, contact your STERIS service team.
- Do not modify this equipment without authorization of the manufacturer.
- If any liquid, object, or foreign substance enters the integration system, unplug the power cord and contact STERIS Technical Support for assistance.
- If there are any unusual smells or sounds coming from your integration system, turn the system off, unplug the power cord, and contact STERIS Technical Support for assistance.
- The HexaVue™ Focus Integration System is not to be used for diagnostic purposes.
- Do not service the integration system when it's in use with a patient.
- Do not service the integration system when it's powered on.

Caution: Fire Hazard

- Do not connect items that are not specified as part of the system. This may cause damage, fire, or electric shock.
- Do not remove or replace components of the integration system. This may cause electric shock or fire. Contact STERIS Technical Support for assistance.
- Keep the integration system indoors and away from locations exposed to moisture, oil, or smoke. Not doing so may cause damage, fire, or electrical shock.
- If the system is not in use for an extended period of time, turn it off and unplug it. Not doing so may degrade insulation or allow dirt to accumulate, causing heat emission, electric shock, or fire.
- Never insert anything metallic (wire, tools, etc.) or flammable (matches, paper, etc.) into the openings or ports of the system. This may cause damage, fire, electric shock, or bodily harm.

Caution: Equipment Damage

- In the event of a storm or lightning, you may want to disconnect the power plug from the outlet if power surges are a possibility. Power surges can cause system damage.

Warning: Avoid Interference

To avoid interference, the following precautions are made by STERIS integration staff during installation:

- Avoid running digital video cables in parallel with power cables in order to avoid electromagnetic interference.
- A safe separation distance of 12 inches is preferred if running digital video cables alongside power cables.
- It is recommended not to locate any item with a strong magnetic field above or below the integration system.

Warning: Fire Hazard

- Keep candles and other open flames away from the integration system. Not doing so may cause a fire.
- Do not install the integration system in a badly ventilated location. Increases in the internal temperature of the system may cause fire or reduced component life.
- Only use cables and equipment that are listed for the application and environment.
- Properly ground and bond cables to prevent electrical hazards and interference. Use appropriate grounding hardware and techniques as specified in NFPA 70, Article 250 from the National Fire Protection Association.
- Install cables to avoid physical damage and follow manufacturer guidelines for bending radius and pulling tension. Ensure that cables are supported and secured as per NEC requirements, avoiding sharp edges and potential pinch points.

Warning: Electric Shock Hazard

- If the system is dropped or knocked over, or if the surface is damaged, turn off the system, unplug the power cord, and contact STERIS Technical Support for assistance. The system could malfunction, causing fire or electric shock.
- Do not try to move any part of the system by pulling only on a wire or signal cable. This may damage the wire or cable, or cause electric shock or fire.
- Install the integration system in a location with minimal dust and relative humidity between 10% to 90%. Failure to do so may cause fire within the system or electric shock.
- If a connector is dusty or dirty, gently clean it using a dry cloth. A dirty connector may cause fire or electric shock.
- Unplug the power cord before cleaning the system. Not doing so may cause fire or electric shock.
- Do not use a damaged or loose plug. This may cause electric shock or fire.
- Do not pull the system's plug out by the wire. This may cause electric shock or fire.
- Only use a properly grounded plug and receptacle. An improper ground may cause electric shock or system damage.
- Do not touch the system's power plug with wet hands. This may cause electric shock or fire.
- Do not bend the power cord excessively or place a heavy object on the plug. Doing so may cause system damage, electric shock, or fire.
- External equipment using an additional power source may not have common ground with the integration system. This may cause electric shock.

Warning: Personal Injury Hazard

- Changes or modifications to the integration system not expressly approved by STERIS should not be performed by the end user. Doing so may void their right to operate the equipment.
- Do not drop the system when moving it. This may damage the system or injure the person(s) moving it.
- When moving the integration system base unit or a monitor, do not turn it upside down. This may cause it to fall and become damaged or injure the person moving it.

Warning: Explosion Hazard

- Keep the system away from combustible chemical sprays or flammable substances. This could cause fire or an explosion.

Storage

- Prior to installation, store and ship the integration system and its power distribution box (if any) in a dry location with temperatures between -4° Fahrenheit (F) and 140° F / -20° Celsius (C) and 60° C and a barometric pressure of 700 hPa to 1060 hPa.

Installation

- Only appropriately skilled and trained personnel should install and commission the HexaVue™ Focus Integration System.
- The base unit can be used free-standing, in a rack, or mounted on the wall either vertically or horizontally. It must be kept at temperature between 32°F to +104°F (0°C to +40°C) with a relative humidity between 10% to 90%, and cannot be mounted more than 6.5 ft (2m) above the ground.
- The minimum clearance around the system is the following:
  - 0.6in (15mm) from bottom and top
  - 2in (50mm) from all other sides (including the cable cover)
  - 6.7in (170mm) from back side, if the cable cover is not used
- There must be enough air flow from front to bottom side to keep the ambient temperature below 40°C.
- Install the integration system so you can reach the back of the system to disconnect its power.
- Medical electrical equipment needs special precautions regarding EMC and needs to be installed and put into service according to the EMC information provided in the *HexaVue™ Focus Integration System Installation Guide*.
- Be mindful when locating installed equipment; portable and mobile RF communications equipment can affect medical electrical equipment.
- The base unit should be no higher than 6.5 feet (2 meters).
- The use of accessories, transducers, and cables other than those specified, with the exception of transducers and cable sold by STERIS for the use with the HexaVue™ Focus Integration System as replacement parts for internal components, may result in increased emissions or decreased immunity of the integration system equipment.
- The integration system equipment should not be used adjacent to or stacked with other equipment and if adjacent or stacked use is necessary, the integration system equipment should be observed to verify normal operation in the configuration in which it will be used.

Power

- Firmly insert the power plug so that it does not become loose or disconnect. A bad connection may cause fire.
- An additional medical power supply outlet (MPSO) or extension cord should not be connected to the system.
- Do not connect too many extension cords or power plugs to one outlet. This may cause fire.

Security Precautions

- Authorized access: Only authorized personnel may have access to the system and connected devices inside the operating room. Only trained personnel may perform repairs, adjustments, or alterations on the system and connected devices.
- Data integrity: Preventive maintenance for communication infrastructure between the system, connected devices inside the operating room and facility network must be done regularly using standard IT procedures and security measures.

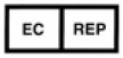
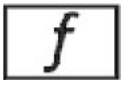
- Functionality of connected devices: The functional state, proper operation, and maintenance of devices connected to the system is the responsibility of a facility. Only devices approved by a system supplier may be connected to the system. Before surgery, check that the cabling is firmly connected to the system and cables are not physically damaged.
- Audit Log/ePHI administration and disposal: While handling the Audit Logs, be sure to follow your facility's security and privacy guidelines. Before the retention period for Audit Logs passes and they're permanently erased, be sure to export them off the integration system by using the Settings > System Settings > Audit Logs screen. Before disposing of the base unit or shipping it offsite, back up the Audit Logs and erase them using the Settings > System Settings > Audit Logs screen, and then erase any ePHI using ePHI section of the Settings > System Settings > General screen.
- When exporting media or patient case data, keep the following in mind:
  - Only patient information is encrypted and it's stored in a dedicated file.
  - Images and media exported to USB drives or NAS are not stored in encrypted form, even when encryption is enabled.
  - Users must make sure that media files (images and videos) do not contain any data that violate patient privacy such as personally identifiable information. If they do, users must apply external encryption or security measures to prevent unauthorized access.
  - The facility is responsible for implementing appropriate data protection policies and secure handling procedures for exported media.

Waste Management Guidelines

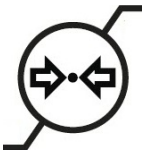
- When you dispose of the integration system or its parts, make sure you properly dispose of hazardous and other regulated waste in compliance with national, state, and local WEEE/RoHS regulations.

Symbols and Labels

2.1 Symbols on the Device

	This label alerts you to read the operating manual for important safety information.		Indicates the model number or type number of a product.
	This label indicates that the product is a medical device.		Indicates the device part number or catalogue number.
	Indicates the device serial number.		This label appears beside a product's unique device identifier.
	Indicates the device meets the requirements of the applicable EC directives/ regulations.		Indicates the Authorized Representative for the European Union.
	Indicates the Authorized Representative for Switzerland.		Indicates the device meets the requirements of the UK MDR 2002 (as amended).
	Indicates the entity importing the medical device.		Indicates the medical device manufacturer as defined in the EU Directive.
	Indicates the country of manufacture.		Indicates Alternating Current (AC).
	Indicates frequency.		This alerts the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.
	This alerts the user to the presence of uninsulated "dangerous voltage" within the products enclosure that may be of sufficient magnitude to constitute a risk of electric shock.		Indicates this device must not be thrown in the trash but must be recycled, according to the European WEEE (Waste Electrical and Electronic Equipment) directive.

2.2 Symbols on the Box

 Indicates that the following conditions must be maintained when transporting the device.	 Indicates that the following conditions must be maintained when storing the device.
 Indicates the temperature limits to which the device can be safely exposed.	 Indicates the range of humidity to which the device can be safely exposed.
 Indicates the range of atmospheric pressure to which the device can be safely exposed.	 Indicates the storage direction of the box. The box must be transported, handled and stored in such a way that the arrows always point upwards.
 Indicates a device that needs to be protected from moisture when being stored.	 Indicates a device that can be broken or damaged if not handled carefully when being stored.
 Indicates the packaged product has passed a valid ISTA (International Safe Transit Authority) pre-shipment test.	

Specifications

Video Inputs	▪ 6 HDMI™ 2.0 ▪ 4 12G SDI / 1x Quad SDI
Video Outputs	▪ 6 HDMI™ 2.0 ▪ 4 12G SDI
Audio Connections	▪ 2 Microphone Inputs ▪ 1 Line (aux) Input ▪ 1 Line (aux) or Microphone Input ▪ 2 Line Outputs ▪ 4 Speaker Outputs (2 pairs)
Data Connections	▪ 6 RS-232 ▪ 2 Network ▪ 2 Accessory (Trigger) ▪ 3 USB type B (KVM) ▪ 6 USB type A
Data Drive	1 TB
Keyboard and mouse control	Yes
Image capture and video recording	Yes (HD / 4K)
DualVue	Yes (PIP and PAP layouts)
Image Printing	Yes
Media Network Export	HexaVue Connect, DICOM server, Network Attached Storage (NAS)
Media copy to USB	Yes
SignatureSuite™ patient experience	Yes
Standby mode	Yes
Device control	▪ Remote PC control (KVM) – up to 3 PCs ▪ PTZ wall camera control ▪ Surgical light control ▪ Surgical in-light camera control

	▪ STERIS Vividimage 32 4K displays ▪ STERIS professional grade wall displays ▪ STERIS Vividimage 4K wall displays
Patient case data entry	▪ Manual entry ▪ Automated (through Modality Worklist or HexaVue Connect integration)
Videoconferencing	Yes (Direct SIP)
Universal conferencing kit	Yes (for Microsoft Teams, Zoom, Webex)
Room and display presets	Yes
Onbaord diagnostics	Yes
Remote diagnostic support option	Yes
User login option	Yes
Audit logs	Yes
Dimensions	▪ Without cable cover: 5.9 in x 15.7 in x 14.4 in (150 mm x 400 mm x 367mm) ▪ With cable cover: 5.9 in x 15.7 in x 20.6 in (150 mm x 400 mm x 524mm)
Weight	▪ Without cable cover: 12.6 lbs (5.7 kg) ▪ With cable cover: 14.1 lbs (6.4 kg)
Power Outputs	5V DC, 4.5A
Power Supply	100 – 240 V AC, 50 – 60Hz
Temperature	▪ Operating: +32°F to +104°F / 0°C to +40°C ▪ Storage: 14°F to +140°F / -10°C to +60°C
Humidity	▪ Operating: 10% to 90% non-condensing ▪ Storage: 10% to 90% non-condensing
Maximum Altitude	▪ Operating: 1.86 miles (3km) ▪ Storage: 6.21 miles (10km)
Barometric Pressure	▪ Operating: 700hPa – 1060hPa ▪ Storage: 264hPa – 1060hPa
Heat Output	▪ Maximum: ~480 BTU ▪ Standby: ~210 BTU

Compliance	IEC 62368–1 Radiated emissions class A
Safety Rating	This device complies with the protection class I

Component Identification

4.1 Identifying the Ports and Buttons

The front of the base unit contains the power button, a round button with a green ring that lights up when the device is on.

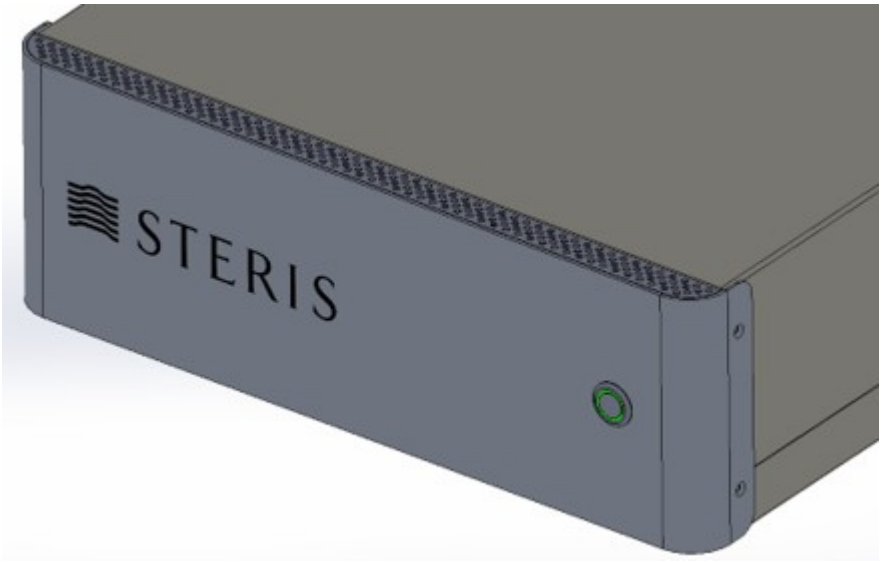


Figure 4-1. Front Panel

The back panel contains all the device's ports:

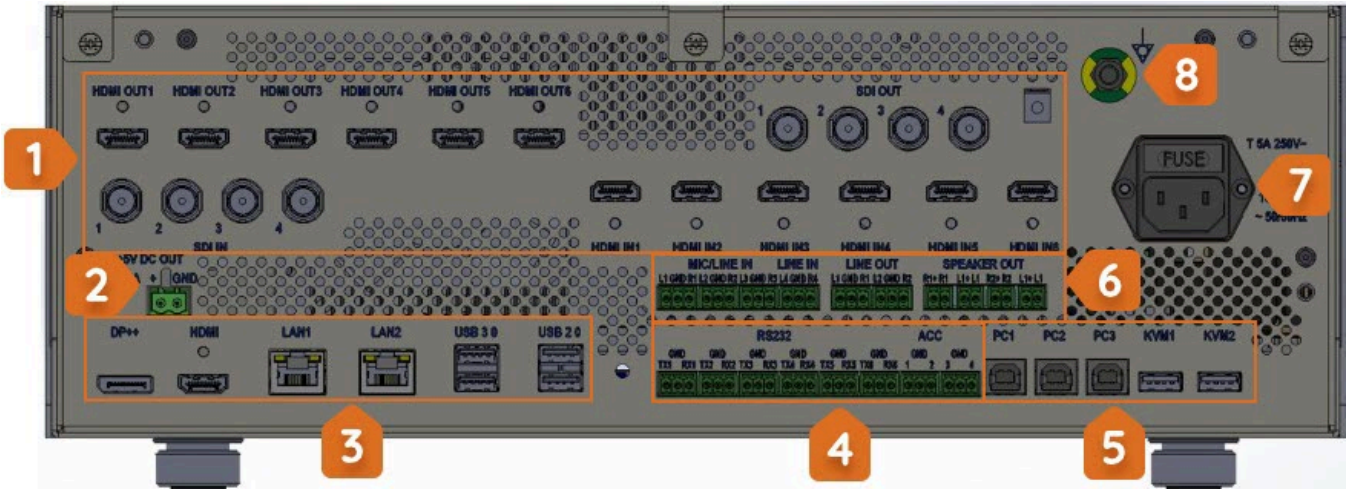


Figure 4-2. Back Panel

1. *Video input and output ports*
2. Power output

3. *Touch panel and network ports*
4. *RS232 and ACC control ports*
5. *External PC ports*
6. *Audio input and output ports*
7. Power input
8. Grounding connector

Video input and output ports

These are the video ports for all the sources and destinations:

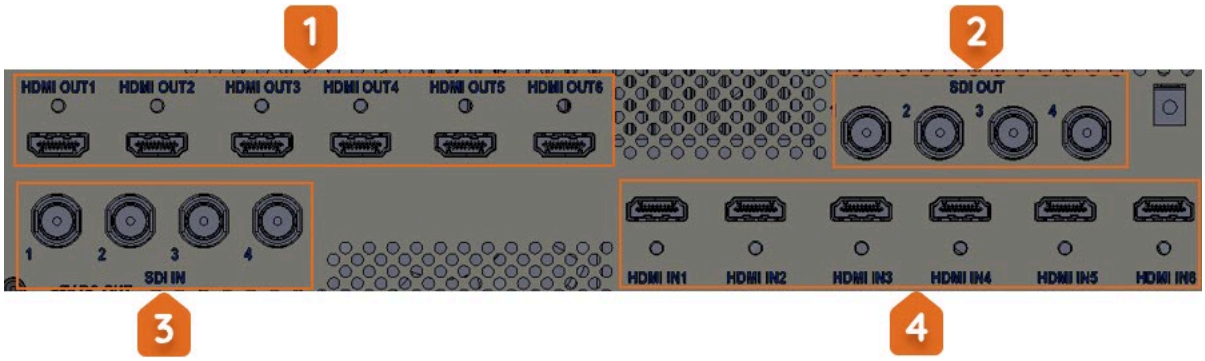


Figure 4-3. Video input and output ports

1. HDMI™ 2.0 output ports
2. 12G SDI output ports
3. 12G SDI input ports
4. HDMI™ 2.0 input ports

Touch panel and network ports

These ports are for the touch panel, USB devices, the hospital's network, and external devices that use Ethernet ports, such as a STERIS lighting system.

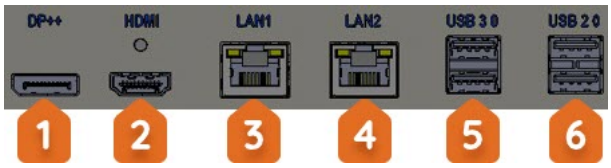


Figure 4-4. Touch panel and network ports

1. DisplayPort for touch panel
2. HDMI™ 2.0 port for touch panel (preferred)

   Use either of these for the touch panel that controls the integration system. If they're both connected to touch panels, they both show the same interface.
3. Ethernet port for the hospital's LAN
4. Ethernet port for approved external devices with an Ethernet port
5. USB 3.0 Type-A ports

6. USB 2.0 Type-A ports

   Used for USB storage devices and other devices.

   If the base unit is connected to external PCs that share the integration system's mouse and keyboard, connect the mouse and keyboard to the USB ports near the *External PC ports*.

RS232 and ACC control ports

These ports are for compatible devices that the integration system can control and for triggers that initiate actions such as capturing an image.

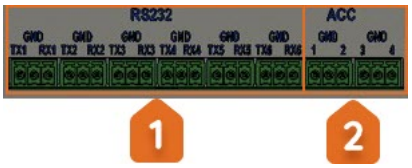


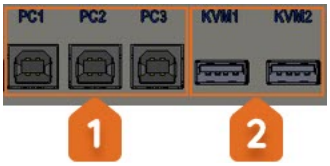
Figure 4-5. RS232 and ACC control ports

1. RS232 ports for compatible devices that the integration system can control
2. ACC ports for triggers

External PC ports

These are USB ports that connect to external PCs. If the integration system is licensed to use the KVM feature, you can access an external PC from the integration system's touch panel and use the integration system's mouse and keyboard to control the PC.

You also need to connect a video port on each PC to a video input port in *Video input and output ports*.



1. USB Type-B ports that connect to USB ports on the external PCs
2. USB Type-A ports for a keyboard and mouse

Figure 4-6. External PC ports

Audio input and output ports

These ports are for audio inputs and outputs.



Figure 4-7. Audio input and output ports

1. Microphone and line inputs
2. Line input
3. Line outputs

4. Speaker outputs

Operating Instructions

5.1 Introduction

The HexaVue™ Focus Integration System is an all-digital, high-resolution video routing and control center for operating rooms. It connects various components within a surgical environment, such as cameras, displays, and lighting systems, to a a central touch panel where you can manage them. The integration system's base unit may be in the operating room (outside the surgical field) or outside the operating room.

Here's what you can do:

- Route video: Route video to the display closest to the person who needs it from the Home screen. The video can be from the OR's cameras, remote PCs, and vitals.
- Control devices: Control compatible devices all around the operating room from the central touch panel from the Device Control screen. You can choose a preset for a display or turn surgical lights on and off. And if a device is inside the surgical field, you don't need to enter the field to adjust it.
- Connect to the facility's network: If the integration system is licensed to use your facility's DICOM server, you can view a room's schedule from the touch panel and save images and videos directly to the facility's servers.

5.2 About the Interface

You control the integration system from a touch panel, normally located at the nurse's station. To operate it, touch the screen directly or use the mouse and keyboard beside it. The station may contain a USB hub, where you can insert USB drives to copy files from the system.

Here's what's on the touch panel's screen:

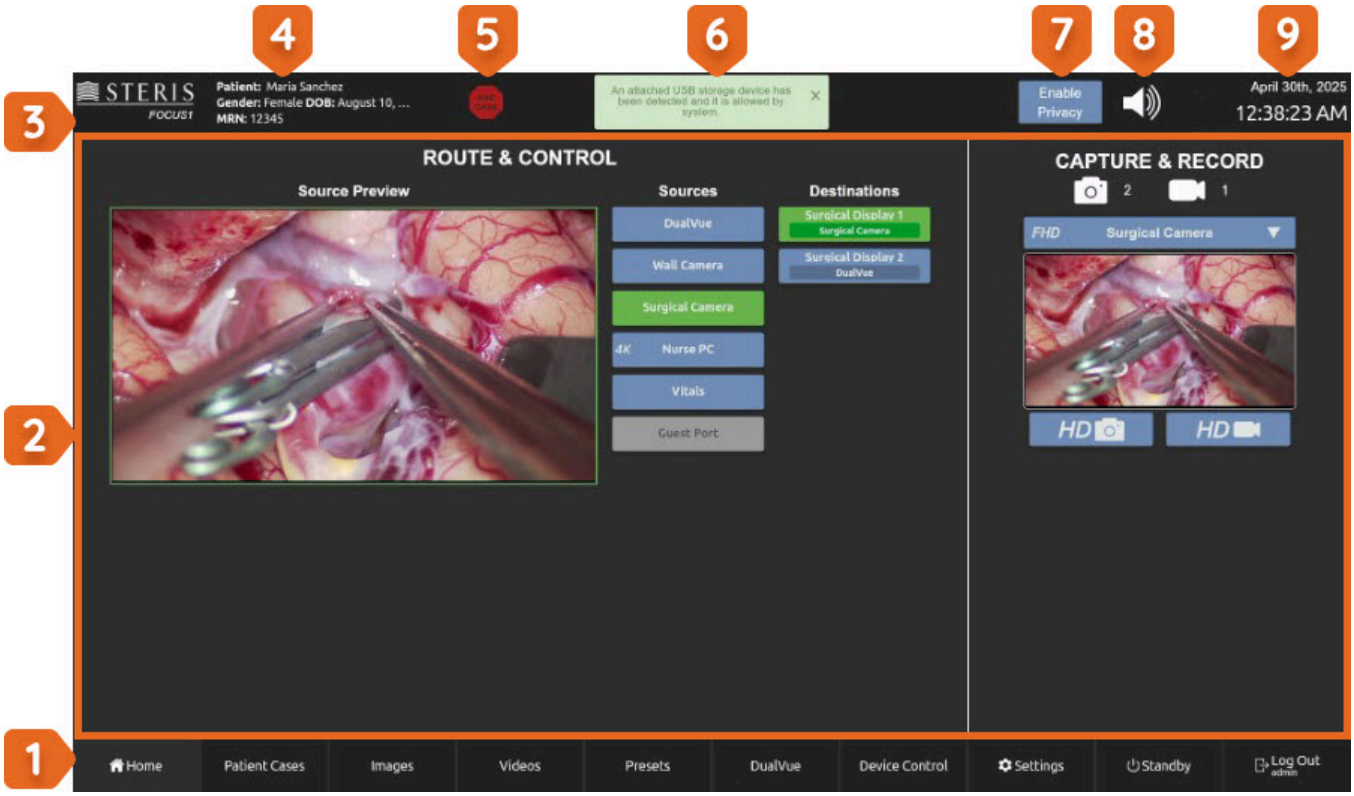


Figure 5-1. Touch Panel Interface

1. **Tabs**: Click one of the tabs to choose what appears in the content area.
2. **Content View**: The contents of this view depends on which tab you choose.
3. **Station Name**: The name for the integration station. When you contact STERIS technical support or your facility's OR integration support staff, they may ask for this name
4. **Case Info**: Information about the patient and procedure for the current case. If there's no case, the name is "Anonymous."
5. **Start/End Case**: Click to start a new case or end the current case. See *Section 6.1, Patient Cases*.
6. **Alerts**: Informational messages appears here.
7. **Privacy Control**: During a video conference, click to prevent the other room from hearing or viewing your room temporarily. Click it again to resume it. It may also black out some monitors that are in sensitive locations. See *Section 9.5, Enabling Privacy*.
8. **Audio Control**: Click this control to choose which audio source to play on the room's speakers and to change the volume. See *Section 9.8, Controlling Audio*.
9. **Current Date & Time**: The current date and time at the integration system.

Here are all the possible tabs at the bottom of the screen. Some of these are for optional features that may not be present on your HexaVue Focus Integration System.

- **Home**: Route video from video sources to destinations, and capture images and videos. See *Section 9.1, Routing Video and Audio* and *Section 10.1, Capturing Images and Videos*.
- **Patient Cases**: View upcoming and past cases. See *Section 6.1, Patient Cases*.
- **Images**: View and manage images captured during the currently selected case. See *Section 11.1, Managing Images*.
- **Videos**: View and manage videos recorded during the currently selected case. See *Section 12.1, Managing Videos*. (This feature is optional.)

- **Presets**: Create and apply groups of video routing and display settings. See *Section 15.1, Presets*.
- **DualVue**: View two sources on one display. See *Section 9.7, DualVue*. (This feature is optional.)
- **STERIS Lights**: Control the room's HarmonyAIR™ A-Series Lights and (if available) in-light camera . For more information on those controls, see their documentation. They are similar to the control panel that's part of the lighting system. (This feature is optional.)
- **Device Control**: Control some types of cameras and displays. See *Section 14.1, Device Control*.
- **Settings**: Set options for the integration system.

  Only users with admin or manager privileges can access this page. If you accidentally click this tab and see a login page, click one of the other tabs at the bottom of the screen.
- **Standby**: Enter standby mode which saves energy and turns off any connected displays.
- **Logout**: Log out the current user to prevent unauthorized access.

  The name of the currently logged-in user also appears on this tab.

5.3 Using the Integration System

Here's the typical process you'll follow when using the integration system during a procedure.

1. Wake up or turn on the system.

   If you see this image on the touch panel, the integration system is in standby mode. To wake the system, touch the screen, move the mouse, or type on the keyboard.

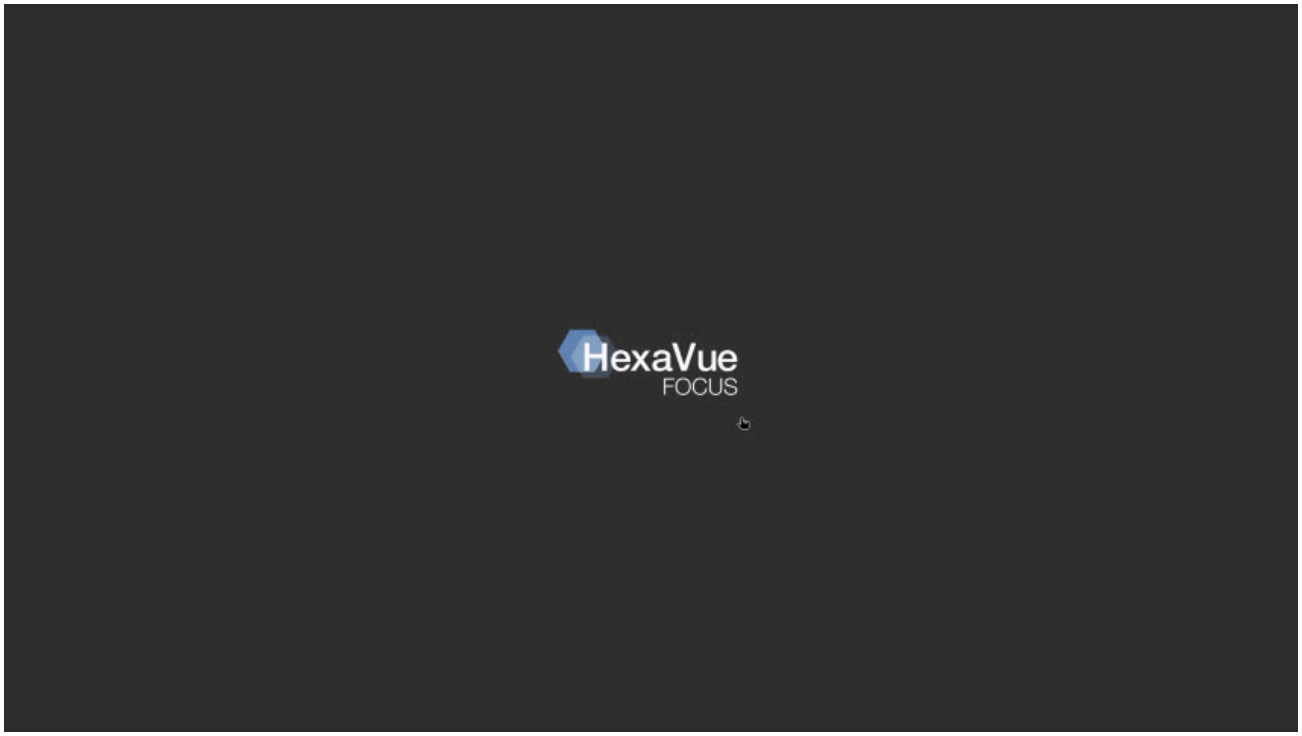


Figure 5-2. Standby Mode Screen

   If the touch panel is blank, power on the integration system. See *Section 5.4, Turning On the Integration System*.

2. Log into the system.

   If you see a screen asking for a user name and password, enter them here, and press Log in.

If you're asked to set a new password, enter a new password twice. It must contain eight characters or more, with at least 1 uppercase letter, 1 lowercase letter, and one special character (#$%^&*= [ ] { } ( ) < >\ /|;:',?+- or a space).

3. Connect any mobile video sources.

   For any mobile video input device, including any on a cart you wheeled into the room, connect the device's cable to a port in the room that's connected to the integration system. Then turn on the device.

4. Power on the video sources and displays.

   Make sure all video sources and displays you'll be using during the procedure have buttons on the Home screen that are not gray.

   If some of the buttons are gray, see *Section 18.12, A Video Output Does Not Receive Video*.

5. Route the video and audio to monitors and speakers.

   - To route video, click the Home tab, click a source from the Sources list and then click a destination in the destination's list. For more information, see *Section 9.3, Routing a Source to a Destination*.
   - To route audio, click the Volume button at the top of the screen and select an audio source from the drop-down list that appears. See *Section 9.8, Controlling Audio*.

5.4 Turning On the Integration System

If the touch panel is blank and the power button is not lit, press the power button on the front of the base unit.

5.5 Placing the Integration System into Standby

When you're done using the integration system, place the system into standby mode to potentially save power, put some cameras in sleep mode, and extend the life of some displays. Depending on how your integration system is set up, putting it into standby mode may also log you out.

There are three ways to do this:

- If you started a case, click the **End Case** button on the top of the screen, click **OK**, and then click **Set Entire System into Standby**.

  See

- Click the **Standby** tab at the bottom of the screen, and then click **OK**.
- Let the integration system go into standby mode automatically.

  The system can go into standby mode automatically when no case is active, no recording is in progress, and the touch panel, mouse, or trigger isn't used for a period of time. Before it goes into standby mode, a window appears on the touch panel that lets you keep the system awake.

If going into standby mode doesn't log you out, you can log out of the system to prevent unauthorized users from accessing it:

- Click the **Logout** tab at the bottom of the screen.

  If you see a dialog asking if you want to log out of the system or settings, click **OK**.

5.6 Turning Off the Integration System

If you won't be using the integration system for a long period of time or if the integration system isn't operating correctly and you want to power it off and on, you can power it off.

- Press the green power button on the front of the base unit.

  When you're asked if you're sure you want to power it off, click **OK**.

If the touch panel is not displaying the user interface, you may need to perform a "hard" power off. This process may result in lost or corrupted data, and you should use it only as a last resort.

- Press and hold the green power button on the front of the device until the green light turns off.

Press the power button again to turn the device on.

Patient Cases

6.1 Patient Cases

A HexaVue™ Focus Integration System organizes information about medical procedures into cases, which contain information on the patient, physician, and procedure, as well as any videos and photos taken during the procedure.

If this integration system is licensed to use your facility's DICOM server, the integration system creates cases using information from your facility's scheduling system. Click the **Start Case** button at the top of the touch panel to start a case, and click the **End Case** button when the case is over. You may also be able to copy a case's images and videos to the DICOM server. See *Section 11.6, Saving Images to a Network Server*, *Section 12.6, Saving Videos to a Network Server* and *Section 8.5, Saving a Case to the DICOM Server*. Ask your facility's OR integration support staff to learn how to access the media and whether just images or both images and videos can be saved.

If this integration system is not licensed to use the DICOM server, enter the case information at the integration system. That information, along with any photos and videos you take during the procedure, are stored on the integration system's disk. If you want to view them elsewhere, copy them to a USB flash drive or print them. See *Section 11.3, Saving Images to a USB Drive*, *Section 12.5, Saving Videos to a USB Drive*, *Section 11.4, Printing Selected Images*, and *Section 11.5, Printing Images Automatically as They're Taken*.

This chapter discusses the following:

- *Section 8.1, Performing a Case With a DICOM Server*
- *Section 7.1, Performing a Case Without a DICOM Server*

For more information on managing the images and videos in previous cases, see *Section 11.1, Managing Images* and *Section 12.1, Managing Videos*.

6.2 About the Patient Cases Screen

The Patient Cases Screen displays all the cases on the integration system in the order they were created. It lists only cases that are on the integration system. The name of the case you're currently viewing appears on the top left corner of the screen.

Each screen displays a list of nine cases. Use the scroll bars to see all ten cases. Use the numbered page buttons on the bottom of the list to view other lists of ten cases.

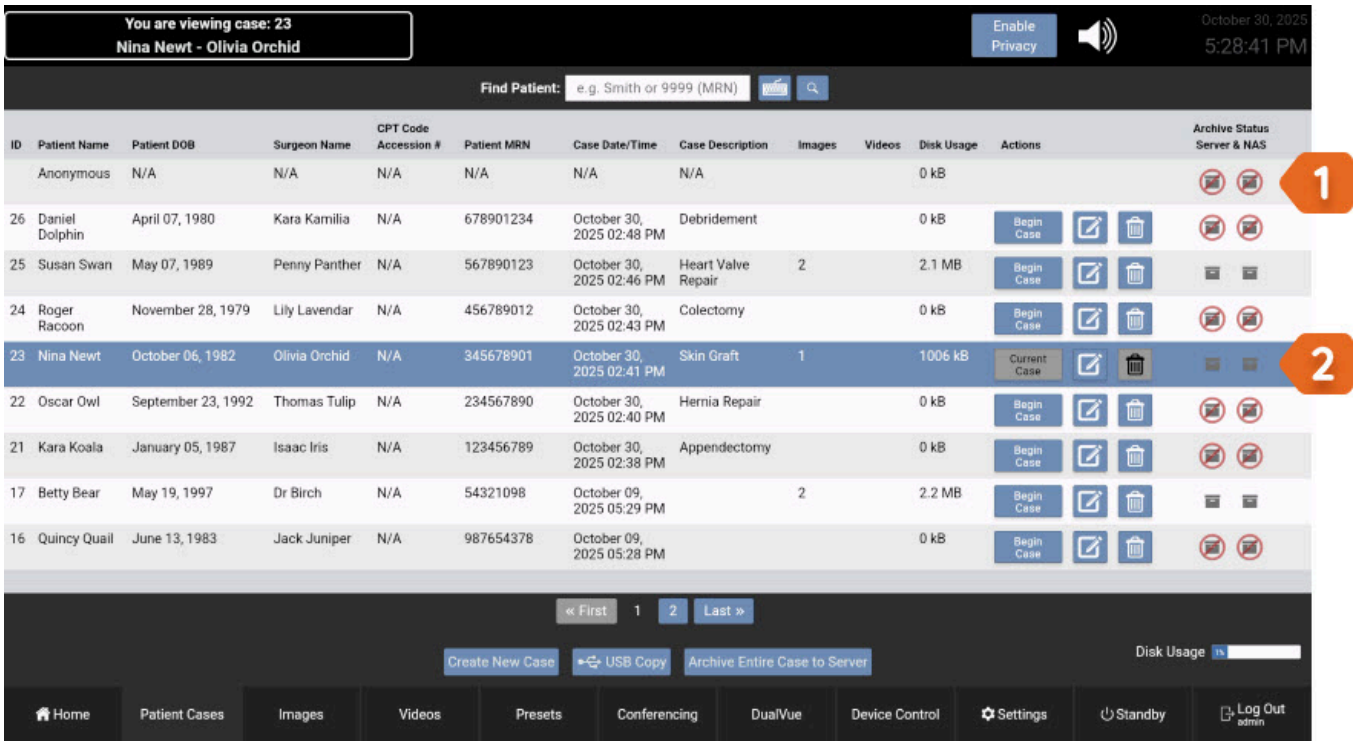


Figure 6-1. Patient Cases Screen

1. The default Anonymous case is at the top of the list. This is where images are stored if you take pictures or recordings without starting a case.
2. The current case has "Current Case" tag in its entry instead of the **Begin Case** button.

Here's what's in each column:

- **ID**: The integration system's ID number for the case.
- **Patient Name** and **Patient DOB**: The name and date of birth for the patient.
- **Surgeon Name**: The name of the surgeon performing the procedure.
- **CPT Code Ascension #:** The DICOM server's ID number for the case.

  If this is not "N/A," this case has been matched with a case from the hospital's scheduling system, and you can save its media and info to the DICOM server.
- **Patient MRN**: The patient's medical record number.
- **Case Date/Time**: The day and time the case started.
- **Case Description**: More information about the case.
- **Images** and **Videos**: The number of images and videos in the case.
- **Disk usage**: The amount of storage space used by the images and videos.
- **Actions**: Buttons that let you start the case, edit its information, and delete it including its images and videos.

Table 6-1. Patient Case Buttons

Button	Description
Begin Case	**Begin Case**: See *Section 7.4, Starting a Case*. You can also use the **Start Case** button on the top of the screen to start a case. See *Section 8.2, Starting a Scheduled Case* and *Section 7.4, Starting a Case*.
	**Pencil**: Edit this case. See *Section 7.3, Editing a Case*. If this integration system is connected to a DICOM server, edit the case at your facility's scheduling system.
	**Trash Can**: Delete this case from the integration system. See *Section 7.6, Deleting a Case*.

- **Archive Status**: Whether the case has been saved to a network server. It contains one of these icons:

Table 6-2. Archive Status Icons

Icon	Description
	This case has no media, or the system is not set up to export media to a network server.
	This case has media but none have been exported.
	At least one piece of media has been exported.

6.3 Choosing Which Case to View

If there's no case in progress, you can view the media for a previous case by selecting the case in the Patient Cases page and then viewing the Images and Videos screens. If a case is in progress, the Images and Videos screens always show the media for the current case.

To select a past case when there's no case in progress:

1. Click the **Patient Cases** tab.

   The Patient Cases Screen displays all the cases on the integration system. The cases are listed in order of creation. If there are too many cases for one page, use the numbered page buttons on the of the list to view more.

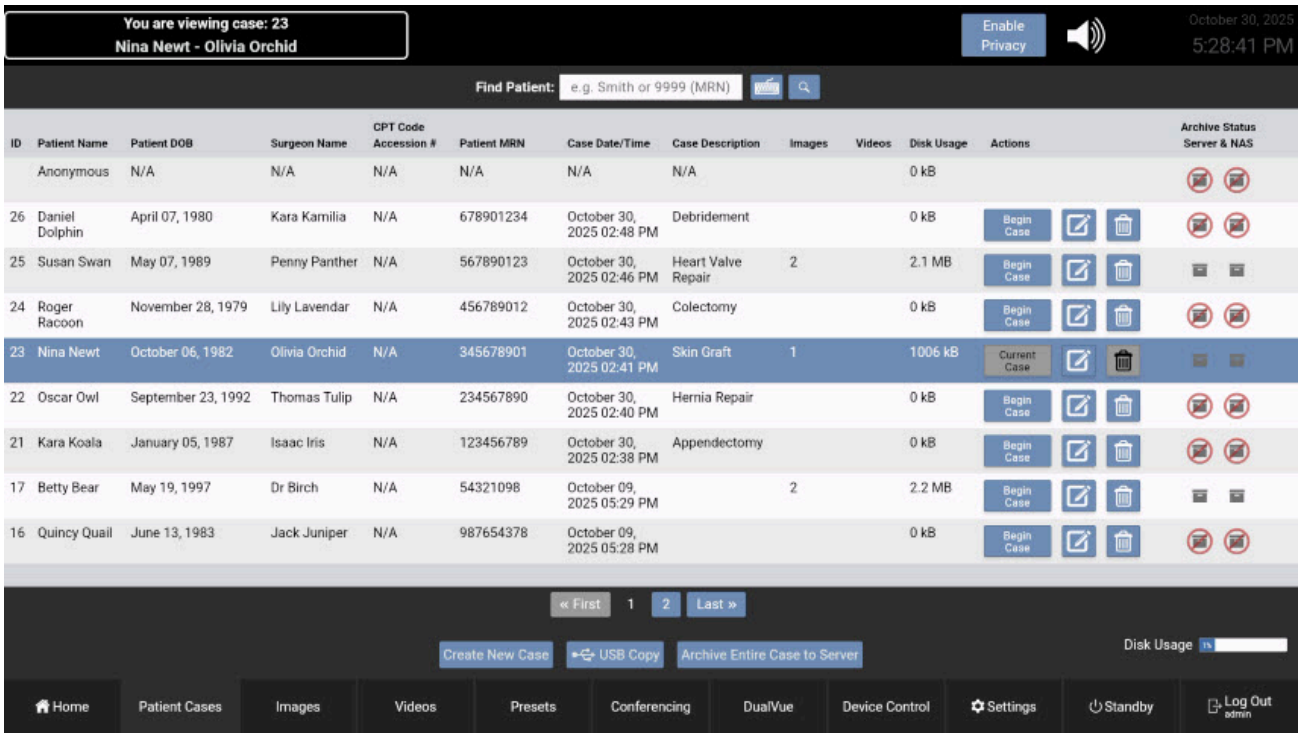


Figure 6-2. Patient Cases Screen

- If you take pictures or recordings without starting a case, the images are stored in the default Anonymous case at the top of the list.

2. Click the case to view.

   The top of the screen displays the message "You are viewing case" and the case number.

   When you click the **Images** or **Videos** tab, the images and videos from that case are displayed and you see that case's number at the top of the screen.

6.4 Saving a Case to a USB Drive

You may be able save a case to a USB drive so you can view it elsewhere. You may be able to copy the case manually or the system may automatically copy the case to a connected USB drive.

The integration systems copies the case to a folder on the USB drive. That folder includes the case's images, videos, and possibly a JSON file with data on the case including the patient's name, ID number, case description, and physician's name. That JSON file may be encrypted to protect the patient's privacy. If so, you need extraction software that supports the AES-256 standard. To extract that file, you need to enter either a password set by your facility or a password you chose when you save the case.

If your facility supports copying a case only to encrypted USB drives, you can use one of the following types of drives:

- A software-encrypted Kingston DataTraveler Vault - Privacy Edition drive with model number 04301-093.A00LF or 04331-162.A01LF. To set up a pass code for the drive, connect it to a PC and follow the instructions that appear.
- A hardware-encrypted USB drive such as the Aegis Apricorn. To set up a pass code for the drive, follow its instructions.

If your facility supports copying a case to unencrypted drives, use a USB drive formatted as FAT, FAT32, or NTFS. Even if unencrypted drives are allowed, STERIS recommends using an encrypted drive for data protection. Ask your OR integration support staff for their policy.

Media saved to a USB drive are not encrypted. Make sure they don't contain any data that could violate patient privacy such as personally identifiable information. If they do, use external encryption or security measures to prevent unauthorized access. Ask your OR integration support staff for your facility's policy.

Manually copying a case to a USB drive

To copy the case to the USB drive, do the following:

1. Click the **Patient Cases** tab.
2. Click the case to archive.
3. Click **USB Copy**, and then click **OK**.

   If you do not see a **USB Copy** button, your integration system does not support this feature. If you see a **USB Copy** button that's grayed out, the USB hub may not support file copying. Try inserting the USB drive in a different hub.

   If you see a dialog asking for a pass code, the integration is exporting the case data with AES-256 encryption. To extract it later, use extraction software that supports the AES-256 standard, and enter the pass code again.

   The touch panel displays a status window. as the system copies the case. Leave the USB drive inserted until it finishes.

Automatically copying a case to a USB drive

If the integration system supports copying a case to a USB drive automatically, simply insert a USB drive into a USB hub connected to the system. The media is copied to the drive as it's captured or at the end of the case.

Ask your facility's biomed team for more information on how it's set up.

Performing Cases Without DICOM

7.1 Performing a Case Without a DICOM Server

If the integration system isn't connected to your facility's scheduling system, you can create and manage cases right from the integration system.

Here's what's in this section:

- *Section 7.2, Creating a New Case*
- *Section 7.3, Editing a Case*
- *Section 7.4, Starting a Case*
- *Section 7.5, Ending a Case*
- *Section 7.6, Deleting a Case*

7.2 Creating a New Case

1. Click the **Patient Cases** tab.
2. Click **Create New Case**.

   The New Patient Case window appears.

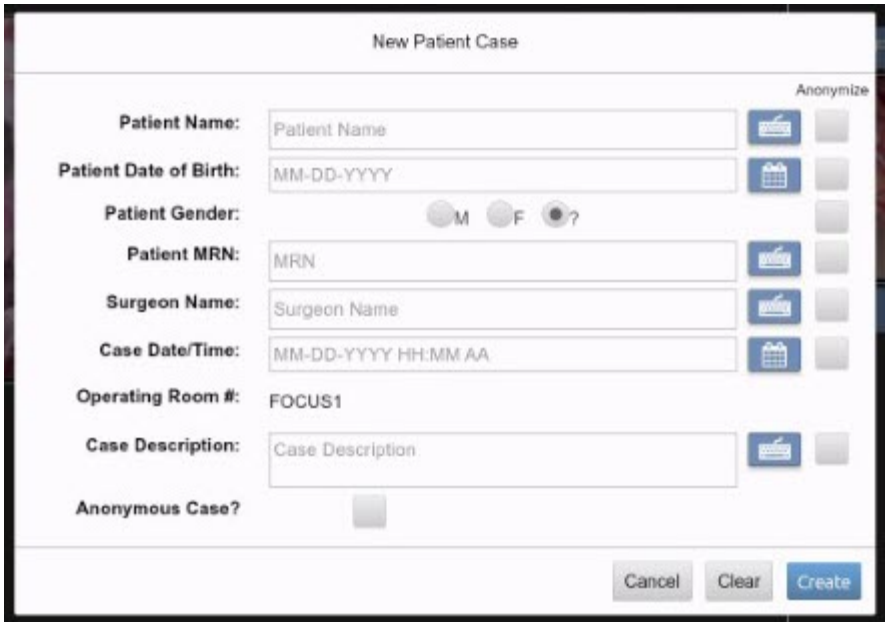


Figure 7-1. Create Case: New Patient Case Window

3. Enter the case information.

   As you type in the **Patient Name** and **Surgeon Name** fields, suggested completions appear in a list using names from other cases.

   Note that **Operating Room #** is set to the current operating room and can't be changed.

You don't need to update **Case Date/Time** which contains the current date and time. Although the case won't reflect the time when it was started, the media will be timestamped with the correct time.

4. To anonymize one field, select the **Anonymize** check box next to it. To anonymize all case information, select the **Anonymous Case?** check box.

   When you anonymize a field, its contents are replaced with X's.

5. Press **Create** when finished.

To start the case, find it in the cases list, and click the **Begin Case** button.

7.3 Editing a Case

If you need to change information in a case, do the following:

1. Click the **Patient Cases** tab.
2. Press the pencil button next to the case you want to edit.

   The Edit Patient Case window appears.

3. Edit the case information.

   As you type in the **Patient Name** and **Surgeon Name** fields, suggested completions appear in a list using names from other cases.

4. To anonymize one field, select the **Anonymize** check box next to it. To anonymize all case information, select the **Anonymous Case?** check box.

   When you anonymize a field, its contents are replaced with X's.

5. Press **Save Changes** when finished.

7.4 Starting a Case

To start a case that you created on the Patient Cases page:

1. Click the **Patient Cases** tab.
2. Press the **Begin Case** button next to the case you want to start.

   The Home screen appears and the case starts.

To start a case that you haven't created on the Patient Cases page:

1. Click **Start Case** at the top of the screen.

   The New Patient Case window appears.

2. Enter the case information.

   As you type in the **Patient Name** and **Surgeon Name** fields, suggested completions appear in a list using names from other cases.

   Note that **Operating Room #** is set to the current operating room and can't be changed.

3. To anonymize one field, select the **Anonymize** check box next to it. To anonymize all case information, select the **Anonymous Case?** check box.

   When you anonymize a field, its contents are replaced with X's.

4. Press **Create**.

7.5 Ending a Case

Click **End Case** at the top of the screen and then choose what to do next.

- To start a case that wasn't entered in the Patient Cases screen, click **Switch to a New Case**.

  The New Patient Case window appears. See *Section 7.4, Starting a Case*.

- To start a case that was entered in the Patient Cases screen, click **Cancel**, click the **Patient Cases** tab, and click the **Start Case** button beside the case to start.
- To end the case and put the integration system, including any connected displays, into standby, click **Set Entire System into Standby**.
- To go back to the default anonymous case, click **Cancel**.

7.6 Deleting a Case

You can let the integration system delete media automatically according to the facility's retention policy or you can delete a case's media before that time. When the integration system's storage contains more than a certain threshold, it deletes its oldest media until it's below that threshold. It may also delete a case and its media when it's older than a certain age. Ask your facility's OR integration support staff for details.

To delete a case and its media before the retention policy requires its deletion, do the following:

1. Click the **Patient Cases** tab.
2. Click the Trash Can button next to the case to delete, and then click **OK**.

   The integration system deletes the case and all its media.

To see how much storage space is left on your integration system, look at the Disk Usage indicator at the bottom right of the Patient Cases screen.

Performing Cases With DICOM

8.1 Performing a Case With a DICOM Server

If this integration system is licensed to use your facility's DICOM server, use your facility's scheduling system to create, edit, and manage upcoming cases. Click the **Start Case** button to start a case using information downloaded from the scheduling system. When the case is over, click the **End Case** button.

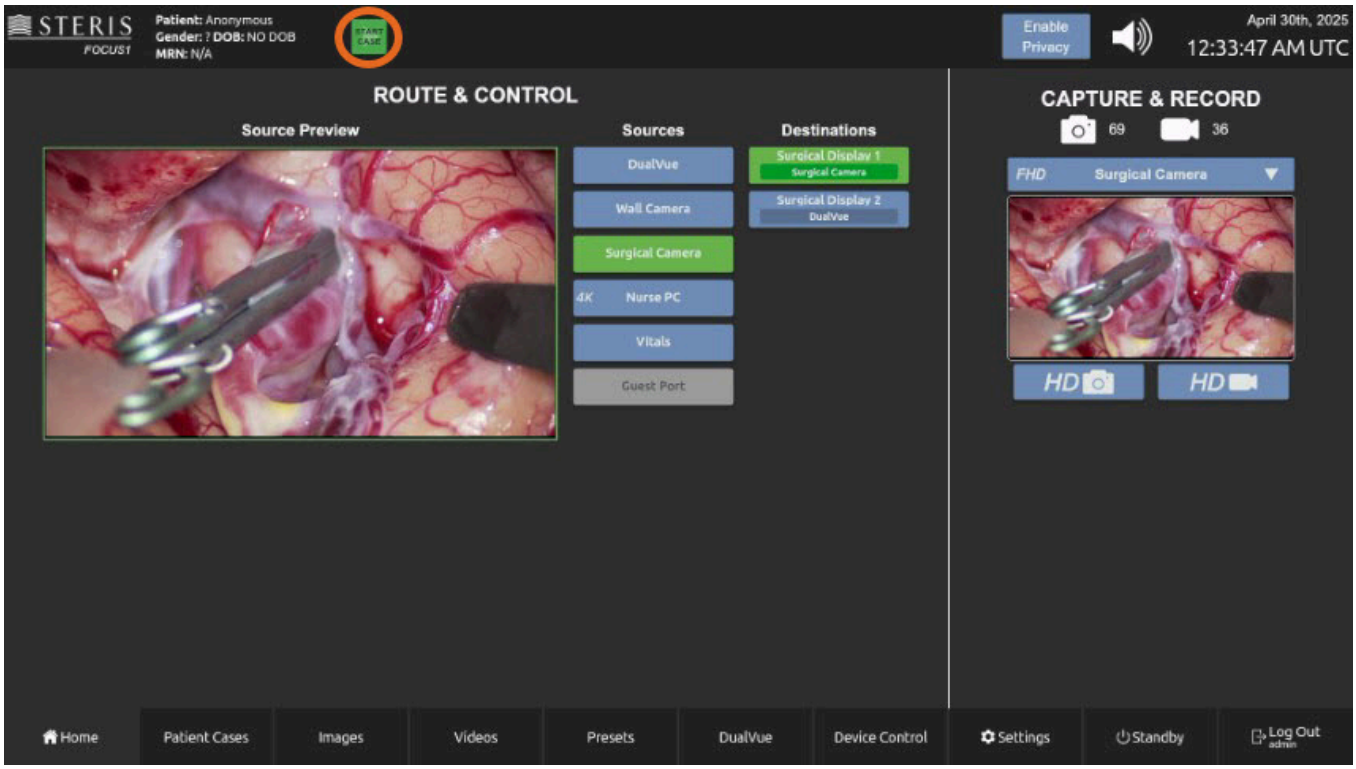


Figure 8-1. Start Case Button on the Home Screen

If you take a picture or recording before you start a case, those images are saved to the default anonymous case on the integration system. To send media in the anonymous case to the server, you must first move the media to another case. See *Section 11.7, Moving Images to a Different Patient Case* and *Section 12.7, Moving Videos to a Different Patient Case*.

If you take a picture or recording after you start a case, those media are saved to that case.

Here's what's in this section:

- *Section 8.2, Starting a Scheduled Case*
- *Section 8.3, Starting an Unscheduled Case*
- *Section 8.4, Ending a Case*
- *Section 8.5, Saving a Case to the DICOM Server*
- *Section 8.6, Deleting a Case*

8.2 Starting a Scheduled Case

To start a case that was previously scheduled on the facility's scheduling system, do the following:

1. Click **Start Case** at the top of the screen.

   The New Patient Case window appears.

2. Click **Query**.

   A window appears with a list of upcoming cases for this room. To see a list of cases for all rooms, click the tab labeled **All OR**.

   To filter the list of cases, type something in the Search field and press Enter. You can search by any field such as room number, patient or surgeon name, and date.

   Click a case to enter its information in the New Patient Case window.

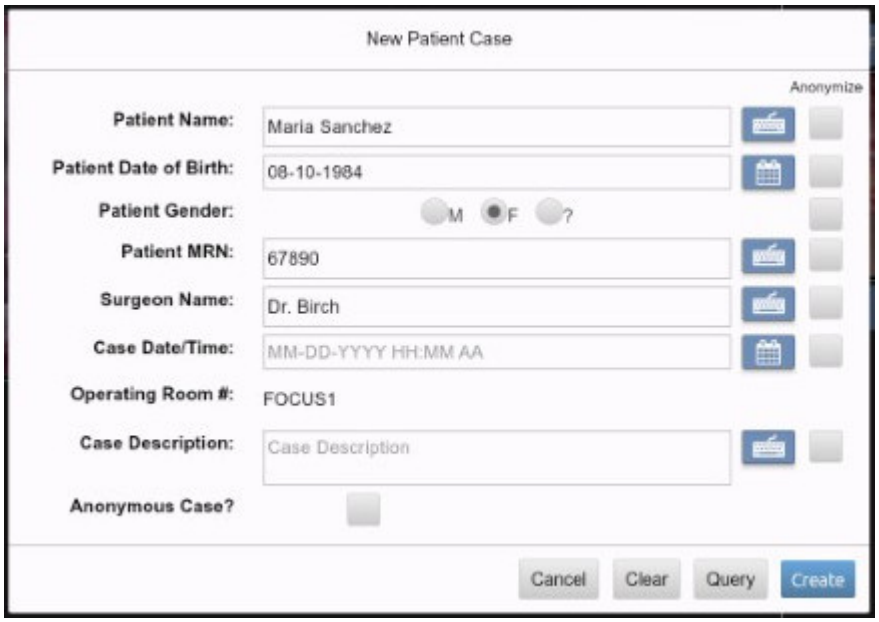


Figure 8-2. Start Case: Filled New Patient Case Window

   If you don't see the case in that list, enter the case information manually. See *Section 8.3, Starting an Unscheduled Case*.

3. Decide whether to anonymize any case information.

   To anonymize one field, select the **Anonymize** check box next to it. To anonymize all case information, select the **Anonymous Case?** check box.

   When you anonymize a field, its contents are replaced with X's.

4. Click **Create** to start the case.

8.3 Starting an Unscheduled Case

To start a case that wasn't previously created on the facility's scheduling system, such as an emergent case, create a placeholder case on the integration system. Later, someone will add a case on the facility's scheduling system, and you can copy the media captured during the procedure to that case.

To create a placeholder case, do the following:

1. Click **Start Case** at the top of the screen.

   The New Patient Case window appears.

2. Click **Clear**.



Figure 8-3. Start Case: New Patient Case Window

3. Enter the case information.

   Enter as much of this information as possible so you can find the case later:

   a. **Patient Name**
   b. **Patient Date of Birth**
   c. **Patient Gender**
   d. **Surgeon Name**
   e. **Case Description**

   Note that **Operating Room #** is set to the current operating room and can't be changed.

   Do not anonymize any of the fields.

4. Click **Create**.

During the case, capture images and videos as usual, but don't use the **Save to Server** button because there's no case on the server to save them to.

When the case is over, go to the facility's scheduling system and make sure there's a case with the proper information. If the case hasn't been created by midnight on the day of the procedure, call STERIS technical support for help.

After you've verified that the case was created, go back to the integration system and do the following:

1. Select the placeholder case as the current case. See *Section 6.3, Choosing Which Case to View*.
2. Move over any images you want to save to the case you created. See *Section 11.7, Moving Images to a Different Patient Case*.
3. Move over any videos you want to save to the case you created. See *Section 12.7, Moving Videos to a Different Patient Case*.
4. Double-check the Images and Videos screens to make sure you've moved all the media you want to save.
5. Delete the placeholder case from the integration system. See *Section 8.6, Deleting a Case*.

If a case and its media have been saved to a server, they remain there even after they have been deleted from the integration system.

8.4 Ending a Case

Click **Stop Case** at the top of the screen and then choose what to do next.

- To start another case, click **Switch to a New Case**.

  The New Patient Case window appears. See *Section 8.3, Starting an Unscheduled Case*.

- To end the case and put the integration system, including any connected displays, into standby, click **Set Entire System into Standby**.
- To go back to the default anonymous case, click **Cancel**.

8.5 Saving a Case to the DICOM Server

You may be able save all the case's media and information to your facility's DICOM server. Later, you can view this media on the facility's network. Ask your facility's OR integration support staff for details on how to view it and whether just images or both images and videos are archived.

To ensure that all of a case's media is saved to the facility's internal network:

1. Click the **Patient Cases** tab.
2. Click the case to archive.
3. Click **Archive Entire Case**, and then click **OK**.

   If you do not see an **Archive Entire Case** button, your integration system does not support this feature.

   The integration server copies all the cases media to the server and stores them together.

8.6 Deleting a Case

You can let the integration system delete media automatically according to the facility's retention policy or you can delete a case's media before that time.

When the integration system's storage contains more than a certain threshold, it deletes its oldest media until it's below that threshold. It may also delete a case and its media when it's older than a certain age. Ask your facility's OR integration support staff for details.

To delete a case and its media before the retention policy requires its deletion, do the following:

1. Click the **Patient Cases** tab.
2. Click the Trash Can button next to the case to delete, and then click **OK**.

   The integration system deletes the case and all its media.

To see how much storage space is left on your integration system, look at the Disk Usage indicator at the bottom right of the Patient Cases screen.

If a case has been saved to a server, it remains there even after the case has been deleted from the integration system.

Routing Video and Audio

9.1 Routing Video and Audio

You can direct a video signal from a selected video input device, such as a camera or PC, to an output device, such as a monitor. This is called video routing. You can also choose what's playing on the room's speakers and change the volume.

Here's what's in this chapter:

- *Section 9.3, Routing a Source to a Destination*
- *Section 9.4, Accessing a Remote Computer*
- *Section 9.5, Enabling Privacy*
- *Section 9.6, Using Mobile Video Inputs*
- *Section 9.7, DualVue*
- *Section 9.8, Controlling Audio*

9.2 About the Video Routing Controls

To route video, click the **Home** tab at the bottom of the screen.

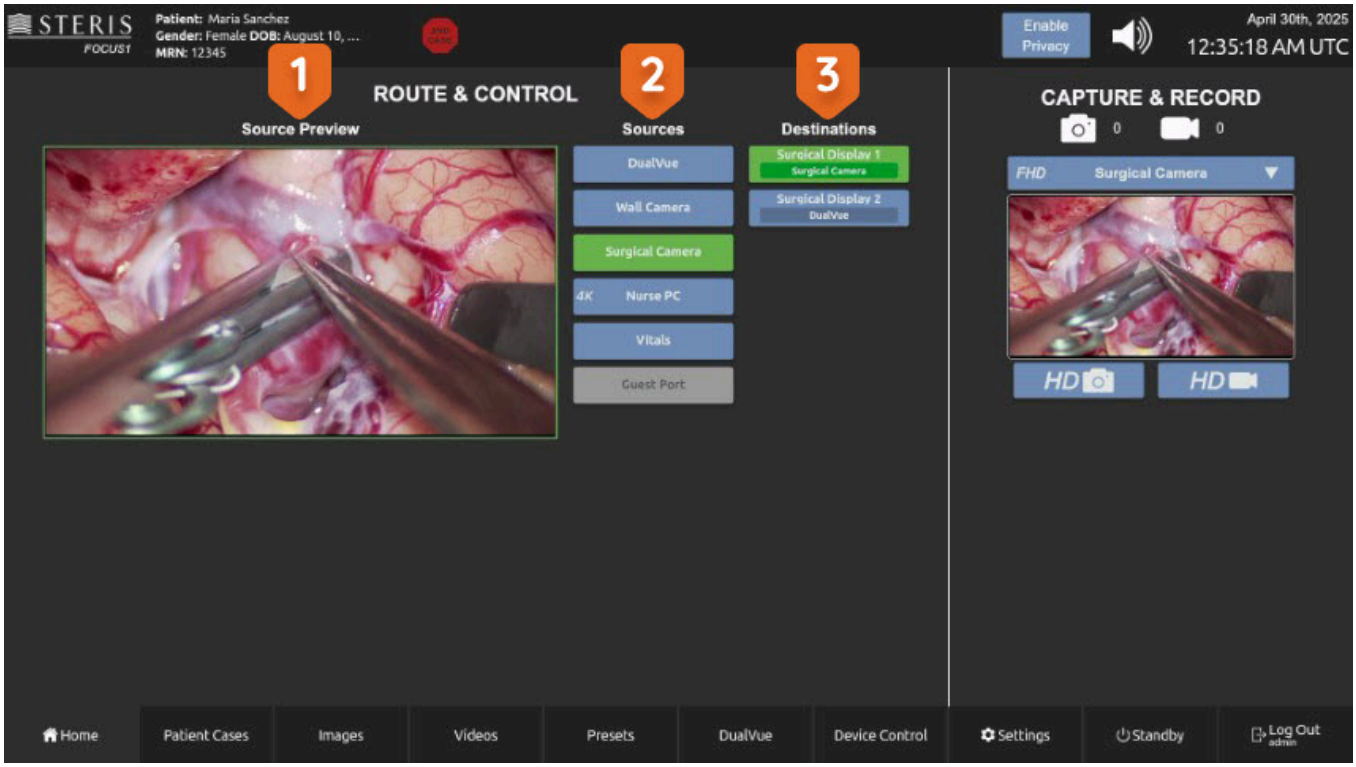


Figure 9-1. Home Screen

The controls are used for video routing:

1. **Source Preview**: The image being sent from the device selected in the Sources list. To view a full-screen preview, click the preview window. Click the screen again to return to the Home screen.
2. **Sources**: A video source is a device that sends an image signal, such as a camera, endoscope, or external PC.
3. **Destinations**: Devices which can receive image signals, such as displays. The bottom of the button displays the name of the video source device it's displaying.

The other controls on this screen are for capturing images and videos, which is described in *Section 10.1, Capturing Images and Videos*.

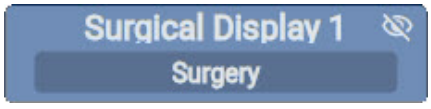
The video source buttons show their status with these colors:

Table 9-1. Source Button Colors

Button	Description
	**Green button**: The device is active and selected. Its video is being displayed in the Source Preview pane.
	**Blue button**: The device is active and not selected.
	**Gray button with no border**: The device is inactive and not selected.
	**Gray button with green border**: The device is selected but inactive. You can route it to destinations so its video will appear on those destinations when it becomes active.

Some buttons may contain these symbols:

Table 9-2. Button Symbols

Button	Description
	**Rec symbol**: The source is being recorded.
	**4K symbol**: The device displays or transmits a 4K or UHD signal.
	**Privacy symbol**: This destination is showing a black screen with a crossed-out eye because privacy has been enabled.

A destination button also list the source it's displaying below the destination's name, if it's displaying a source.

If you see arrows at the top and bottom of the Sources or Destinations list, the list contains more buttons that can fit. Click the arrows to scroll through the list.

9.3 Routing a Source to a Destination

1. Click the **Home** tab.
2. From the Sources list, select a video source to display or record.

   The image from that device appears in the Source Preview window.
3. From the Destinations list, select the output device.

   The name of the source appears at the bottom in the selected destination button and the source video is displayed on the selected destination device.

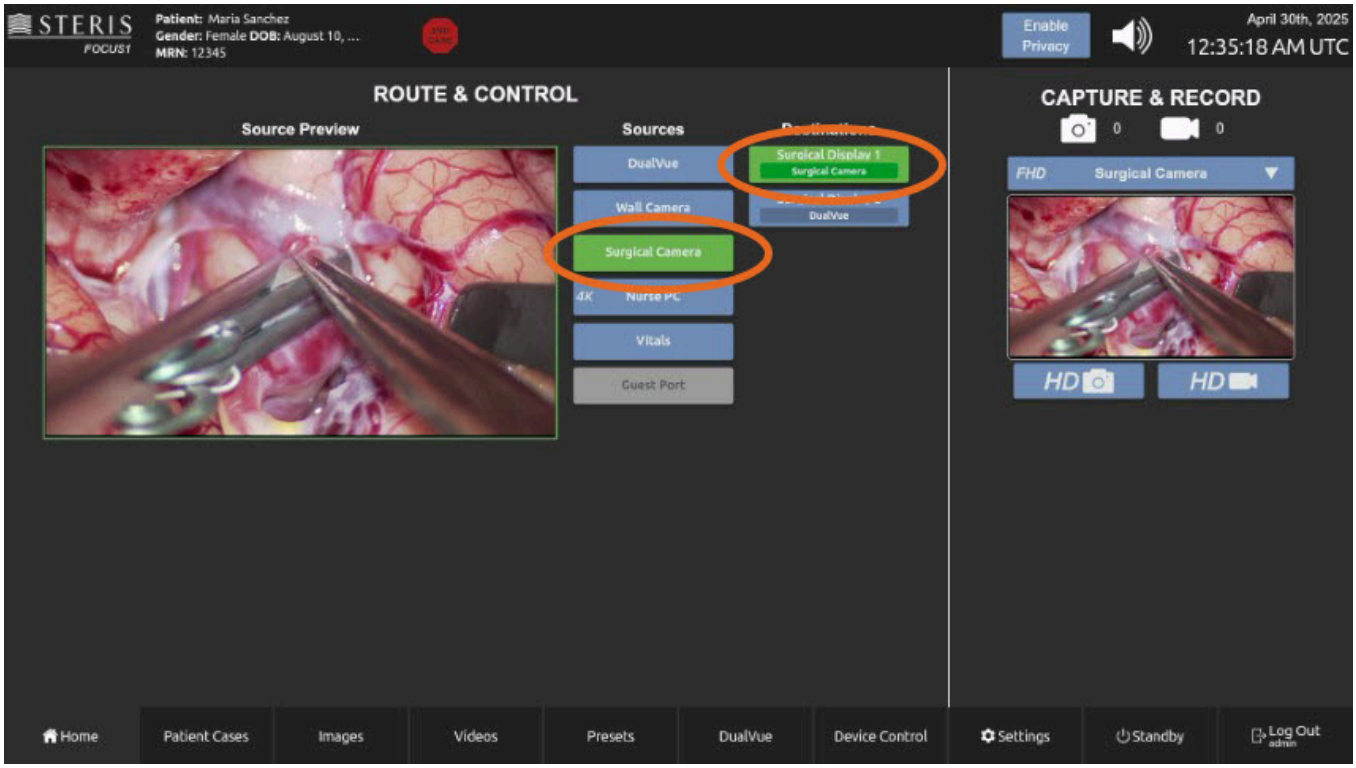


Figure 9-2. Routing a Source to a Destination

Viewing Full-Screen Video

To view a video source using the entire area of the touch panel, click the Source Preview window. The video from that source fills the display. Touch anywhere on the screen again to return to the Home screen.

9.4 Accessing a Remote Computer

If a video source is a computer that's been set up to be controlled from the touch panel, click the computer's button in the Sources list and then click the Source Preview so the source appears full-screen. You can then use the keyboard and mouse at the touch panel to operate the computer. Touch anywhere on the screen to return to the Home screen

9.5 Enabling Privacy

To prevent sensitive content from being displayed on some destinations, click the **Enable Privacy** button at the top of the screen. Destinations that could be viewed by people unauthorized to see sensitive content are disabled, such as a display in a public area. Ask your OR integration support staff which outputs are disabled when privacy is enabled.

To re-enable the displays, click **Disable Privacy**.

9.6 Using Mobile Video Inputs

Some video input devices, such as endoscopes or microscopes, are shared among several operating rooms. The device is on mobile cart and wheeled wherever it's needed. To use a mobile device, connect it to a guest port in the operating room. It may be on a wall or boom.

HexaVue™ Focus Integration Systems support three types of guest port: 12G SDI , HDMI™ 2.0 , or multi-format port with connections for DVI, VGA, and composite video. (HexaVue Focus Integration Systems do not support the S-Video connector on the multi-format port.) Note that you can connect only one device at a time to the multi-format port.



Figure 9-3. Multi-Format Guest Port

If the guest port has a jack for a trigger cable and the device has a trigger cable, connect the cable to the jack and use the trigger to capture media.

After you connect the device's connector to the guest port, turn on the device. After a short time, the button for the device changes from gray to blue or green, and you can route the device just like any other device in the room

When you're done with the device, unplug its connector from the wall port. The button on the Home screen turns gray.

If a cable on the mobile cart is damaged, contact STERIS technical support for a replacement. Using a cable that STERIS hasn't verified could damage your equipment.

9.7 DualVue

If you see a DualVue tab at the bottom of the screen, you can view two sources on one display.

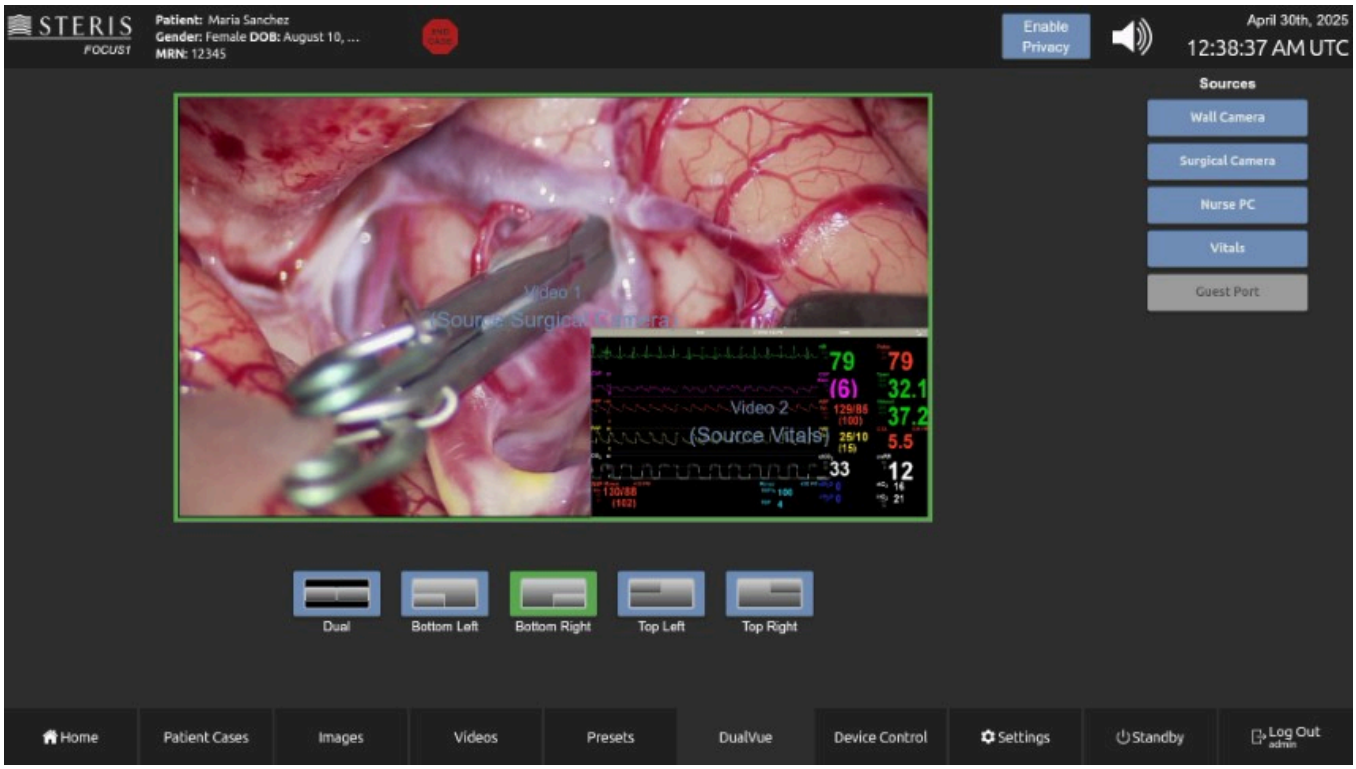


Figure 9-4. DualVue Screen

Setting Up a DualVue Layout

1. Click the **DualVue** tab.
2. Select a configuration from the list of configurations.
3. For each pane in the layout, select a source:
    a. Click a source from the Source list on the right of the screen.
    b. Click one of the window panes in the preview.
    The video from that input is now displayed in that pane.

Routing a DualVue Layout to a Destination

If the Home screen's Source list contains a DualVue button, you can route it to a destination.

1. Click the **Home** tab.
2. Click the **DualVue** button in the Source list, and then click a button in the Destinations list.

9.8 Controlling Audio

You can control the audio being played in the room by clicking the Audio button on the top of the screen.

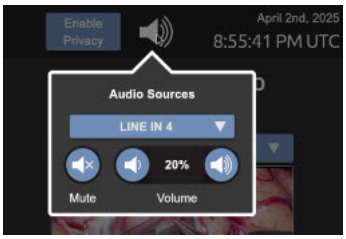


Figure 9-5. Audio Controls

A small window appears with the following controls. Click anywhere outside the window to close it.

Table 9-3. Audio Control Buttons

Button	Description
	Mute/Unmute
	Volume Down
	Volume Up

- To choose the audio source played over the room's speakers, select it from the Audio Sources list.
- To change the volume, click the Volume Down and Volume Up buttons.
- To mute the audio, click the Mute button. To unmute it, click Unmute.

Capturing Images and Videos

10.1 Capturing Images and Videos

You can capture images from any input device connected to the integration system, all from the touch panel. And if your integration is licensed for video recording, you can also record videos.

Here's what's in this section:

- *Section 10.2, About Capture & Record Controls*
- *Section 10.3, Capturing an Image*
- *Section 10.4, Recording a Video*
- *Section 10.5, Capturing Images or Videos With a Trigger*

10.2 About Capture & Record Controls

Here are the controls for capturing images and videos on the Home screen.

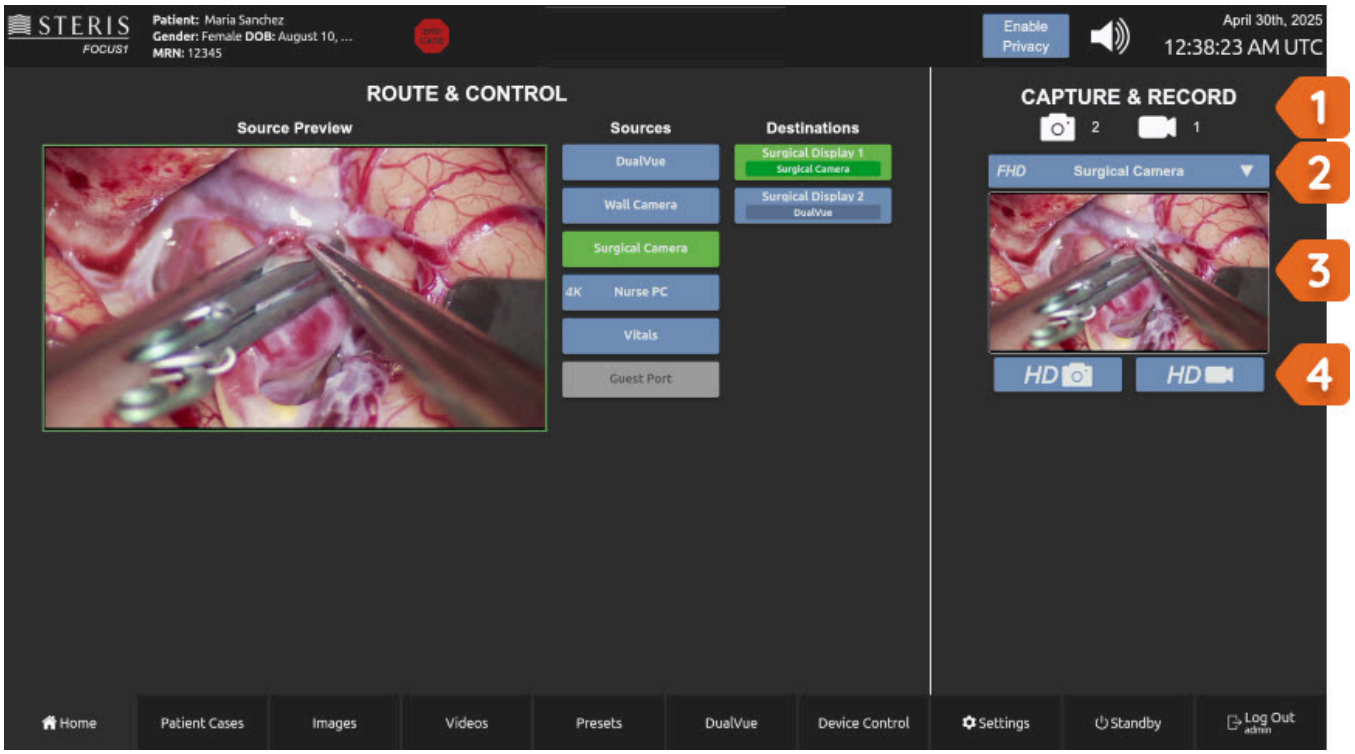


Figure 10-1. Image Capture Controls in the Home Screen

Here are the image capture controls:

1. **Number of Images and Videos**: The total number of images and videos taken from any source during the current case.
2. **Video Capture Source**: The source that's captured when you click the Camera or Video button. To change the video capture source, click this button and choose a source from the list that appears.

3. **Video Capture Preview:** The image that's captured when you click the Camera or Video button.
4. **Video and Camera buttons:** Click to take a photo or start recording the video input above the button.

Button	Description
	Camera: Captures an image.
	Video: Starts or stops a recording. (This is an optional feature that may not be present on your integration system.)

The badges on the buttons show the resolution of the selected source: either 4K or HD.

The other controls on the screen are for video routing, which is described in *Section 9.1, Routing Video and Audio*.

10.3 Capturing an Image

1. Click the **Home** tab.
2. Select the source to capture.

   Click the button above a video capture preview and select a source from the list that appears.

   You can also click the source's button in the Sources list and then click a video capture preview.

   The buttons below the video capture preview tell you the format for captured images: 4K or HD.
3. Click the Camera button.

   A preview of the captured image momentarily appears in the upper right corner of the touch panel. The preview may also appear on any surgical displays showing that captured source, depending on the system's configuration. You can capture up to five images per second in a burst, and one image per second sustained.

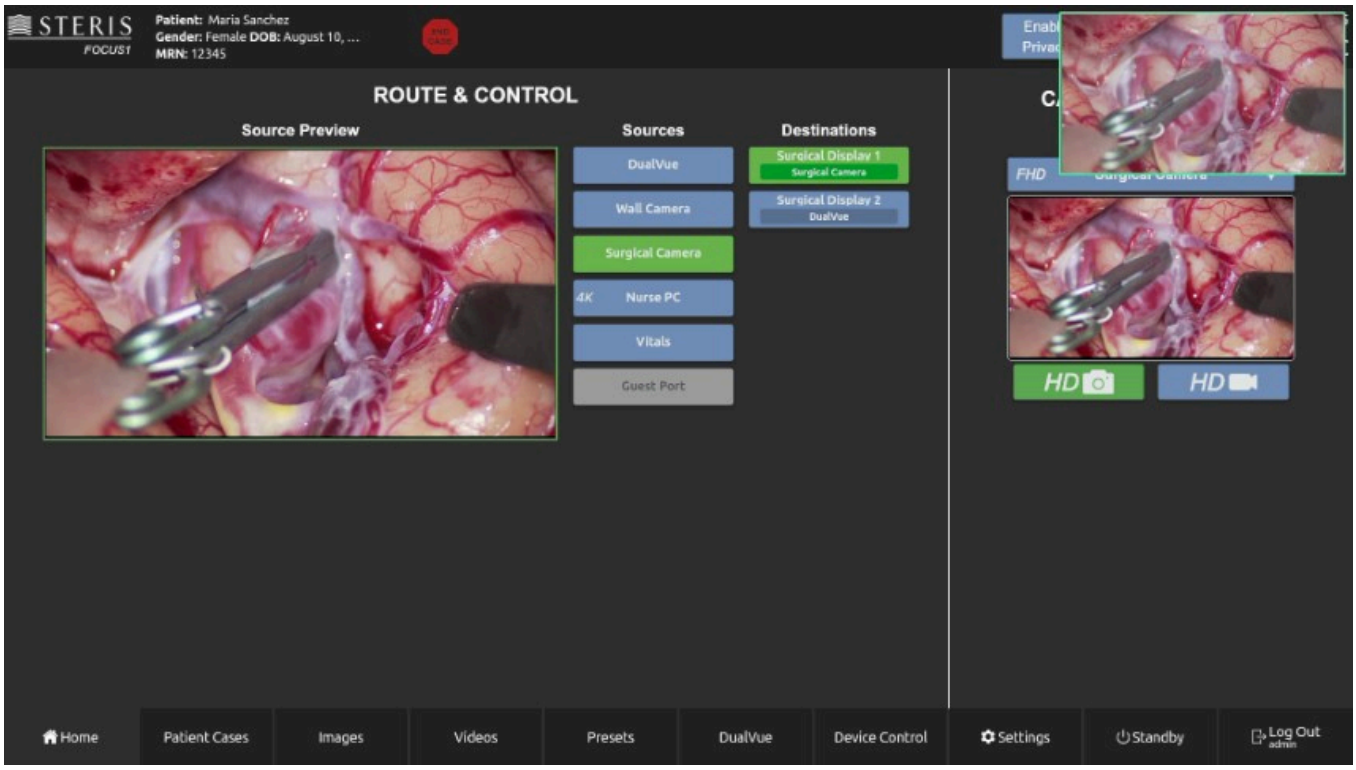


Figure 10-2. Capturing an Image

10.4 Recording a Video

1. Click the **Home** tab.
2. Select the source to record.

   Click the button above a video capture preview and select a source from the list that appears.

   You can also click the source's button in the Sources list and then click the video capture preview.

   The buttons below the video capture preview tell you the format for captured images: 4K or HD.
3. To start recording, click the Video button under the video capture preview.

   If you don't see a Video button, this integration system does not have a license for this feature.

   The Video button turns red, and the word "REC" appears in red on the top of the screen and on the button for the source being recorded.

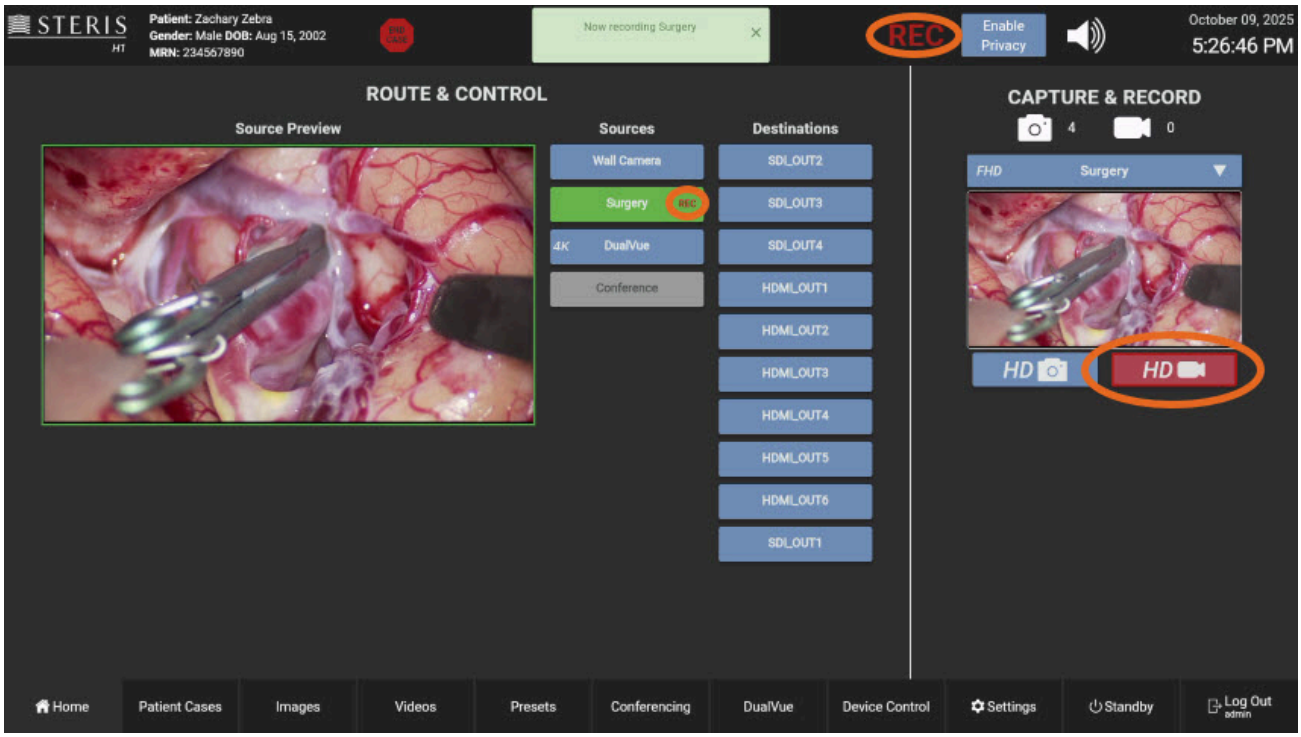


Figure 10-3. Recording Video Indicators

If you selected an inactive source, the Video button is outlined in red but recording doesn't start. When the source becomes active, the Video button turns red and recording starts.

4. At significant moments, click the Camera button to save an image.

   Your system may place an event marker in the video whenever you press the Camera button. When you play back the video on the integration system, the markers appear in the video's time line.

5. To stop recording, click the Video button again.

After recording for an hour, a message appears at the top of the screen asking if you want to continue. If you don't respond within ten minutes, the recording stops.

10.5 Capturing Images or Videos With a Trigger

You may be able to capture images or videos with a trigger, which could be a button on a camera or a pedal on the floor. Ask your facility's OR integration support staff for more information on what the trigger is configured to do.

Note that pressing a trigger always captures images or video from the selected capture source. To capture images or media from a camera with a trigger, that camera must be selected as the capture source.

Managing Images

11.1 Managing Images

Here's what you can do with the images in a case:

- *Section 11.2, Viewing an Image*
- *Section 11.3, Saving Images to a USB Drive*
- *Section 11.4, Printing Selected Images*
- *Section 11.5, Printing Images Automatically as They're Taken*
- *Section 11.6, Saving Images to a Network Server*
- *Section 11.7, Moving Images to a Different Patient Case*
- *Section 11.8, Deleting Images*

To view images from old cases, see *Section 6.3, Choosing Which Case to View*.

11.2 Viewing an Image

1. Click the **Images** tab.

   The images for the current viewing case appear.

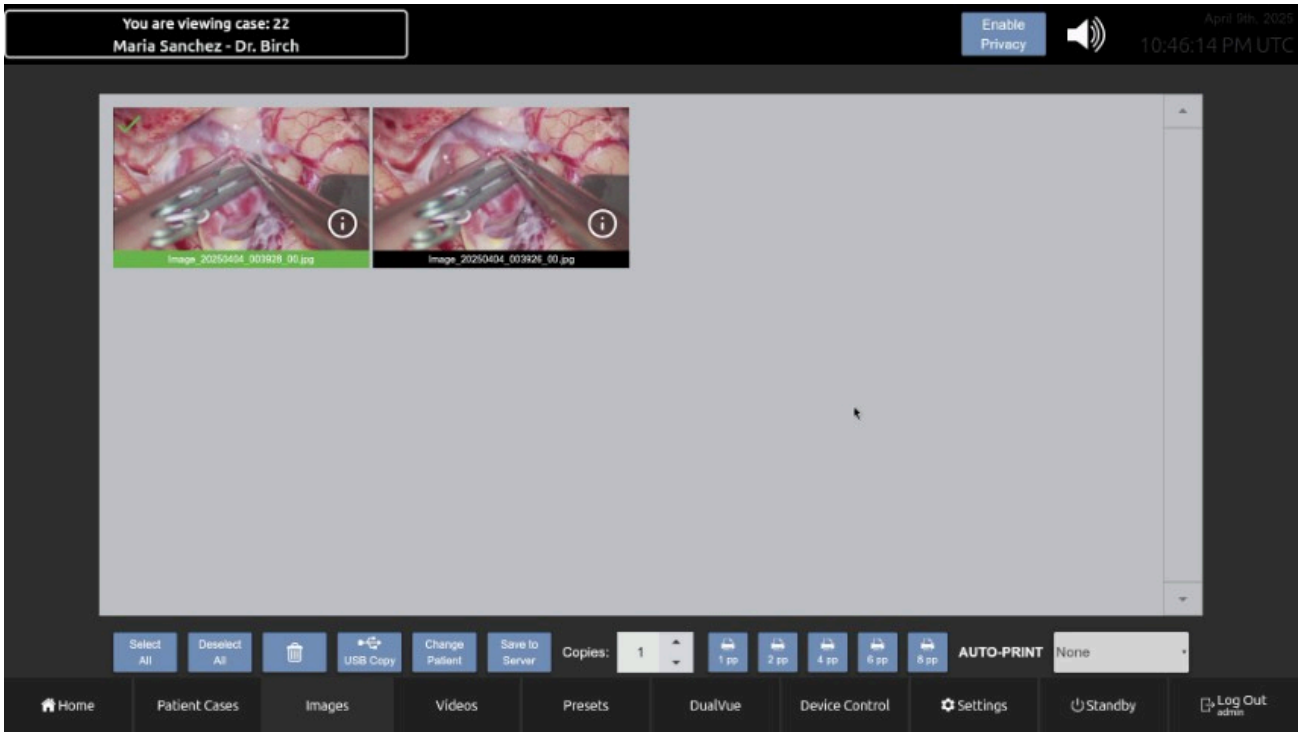


Figure 11-1. Images Screen

2. To view an image full-screen, click the full-screen icon in the upper right-hand corner of the image.

   Touch the screen again to exit full-screen mode.

To view information on an image, such as its resolution and size, click the “i” button on the lower right corner of the image’s thumbnail.

11.3 Saving Images to a USB Drive

You may be able to copy images to a USB drive so you can view them elsewhere.

The integration systems copies all the media for the same case to the same folder on the USB drive. That folder includes the images and videos you chose to copy, and possibly a JSON file with data on the case including the patient’s name, ID number, case description, and physician’s name. That JSON file may be encrypted to protect the patient’s privacy. If so, you need extraction software that supports the AES-256 standard to view the file by entering either a password set by your facility or a password you chose when you saved the case. Ask your OR integration support staff for their policy.

If your facility supports copying images only to encrypted USB drives, you can use one of the following types of drives:

- A software-encrypted Kingston DataTraveler Vault - Privacy Edition drive with model number 04301-093.A00LF or 04331-162.A01LF. To set up a pass code for the drive, connect it to a PC and follow the instructions that appear.
- A hardware-encrypted USB drive such as the Aegis Apricorn. To set up a pass code for the drive, follow its instructions.

If your facility supports copying images to unencrypted drives use a USB drive formatted as FAT, FAT32, or NTFS. Even if unencrypted drives are allowed, STERIS recommends using an encrypted drive for data protection.

Images saved to a USB drive are not encrypted. Make sure they don’t contain any data that could violate patient privacy such as personally identifiable information. If they do, use external encryption or security measures to prevent unauthorized access. Ask your OR integration support staff for your facility’s policy.

To copy images to the USB drive, do the following:

1. Insert a USB drive in a USB port on the back of the base unit or on a USB hub by the touch panel.

   If an alert appears saying the USB drive isn’t supported, ask your OR integration support staff what drives are supported.

   If an alert appears saying the USB drive is encrypted, click **Unlock USB** and enter its pass code.
2. Click the **Images** tab.
3. Select the images to copy.

   To select an image, click it.

   To select all images in the current viewing case, click **Select All**.
4. Click **USB Copy**, and then click **OK**.

   If the **USB Copy** button is not available, the USB hub may not support file copying. Try inserting the USB drive in a different hub.

   If you see a dialog asking for a pass code, the integration system is exporting the case data with AES-256 encryption. To extract it later, use extraction software that supports the AES-256 standard, and enter the pass code again.

   The touch panel displays a status window. as the system copies the images. Leave the USB drive inserted until it finishes.
5. When copying is complete, click **OK**.

11.4 Printing Selected Images

1. Click the **Images** tab.
2. Select the images to print.

   To select an image, click it.

   To select all images in the current viewing case, click **Select All**.

3. Select the number of copies to print from the **Copies** list.

   To choose how many images to print per page and then print the images, click the **1 pp**, **2 pp**, **4 pp**, **6 pp**, or **8 pp** button (to print the images one per page, two per page, etc.).

   A message appears saying the print job has been queued. Click **OK** to continue using the integration system.

   Status messages appear at the top of the screen showing the printing progress. To cancel the printing, click the **Cancel Printing** button in the status message. To hide a status message. click the X in the upper-right corner of the message. Closing a status message does not stop the printing.

11.5 Printing Images Automatically as They're Taken

1. Click the **Images** tab.
2. Select how many images to print per page from the **Auto-Print** list: 1, 2, 4, 6, or 8.

   When that many images have been taken, they're printed.

If the case is closed when there are images that haven't been printed because there aren't enough for the print-per-page threshold, those images are not printed.

To turn off automatic printing, select **None** from the **Auto-Print** list.

11.6 Saving Images to a Network Server

If you see a **Save to Server** or **Save to NAS** button on the Images page, you can copy images from the integration system to a location on your facility's network. **Save to Server** saves the image to your facility's DICOM server. **Save to NAS** saves the image to a network-attached storage device. Ask your facility's OR integration support staff for details on how to access the images.

Images saved to a network-attached storage device drive are not encrypted. Make sure they don't contain any data that could violate patient privacy such as personally identifiable information. If they do, use external encryption or security measures to prevent unauthorized access. Ask your OR integration support staff for your facility's policy

To copy images to the server, follow these steps.

1. Click the **Images** tab.
2. Select the images to save.

   To select an image, click it.

   To select all images in the current viewing case, click **Select All**.

3. Click **Save to Server** or **Save to NAS**.

   If you do not see these buttons, your integration system does not support this feature.

   The integration system copies the images to the server and stores them with all the other saved media from this case.

To save videos to the server, see *Section 12.6, Saving Videos to a Network Server*.

If you see a **Save to Server** button, you can also save all of a case's media at once to your facility's DICOM server. See *Section 8.5, Saving a Case to the DICOM Server*.

11.7 Moving Images to a Different Patient Case

If you start the wrong case or forget to start a case before you start taking images, you can move images to a different patient case.

1. Select the case to copy images from.

   See *Section 6.3, Choosing Which Case to View*.

2. Click the **Images** tab.
3. Select the images to move.

To select an image, click it.

To select all images in the current viewing case, click **Select All**.

4. Click **Change Patient**.

   The Select Patient Case window appears.

5. Search for and then select the desired case.
6. Click **OK**.

11.8 Deleting Images

You can delete images that you don't need from the integration system. This does not delete images from the DICOM server.

IMPORTANT: *This permanently deletes the images from the integration system. They cannot be restored or undeleted from the integration system.*

1. Click the **Images** tab.
2. Select the images to delete.

   To select an image, click it.

   To select all images in the current viewing case, click **Select All**.

3. Click the Trash Can button.

   A dialog appears asking you to confirm the deletion.

4. Click **OK**.

Managing Videos

12.1 Managing Videos

If your integration system has a license for video recording, there is a Videos tab at the bottom of the touch panel that displays a screen that lets you manage and edit videos:

- *Section 12.2, Playing a Video*
- *Section 12.3, Clipping a Video*
- *Section 12.4, Capturing an Image from a Video*
- *Section 12.5, Saving Videos to a USB Drive*
- *Section 12.6, Saving Videos to a Network Server*
- *Section 12.7, Moving Videos to a Different Patient Case*
- *Section 12.8, Deleting Videos*

To view videos from old cases, see *Section 6.3, Choosing Which Case to View*.

12.2 Playing a Video

1. Click the **Videos** tab.
2. Click a video file in the Videos list to play it.

   The video appears to the left and starts to play.

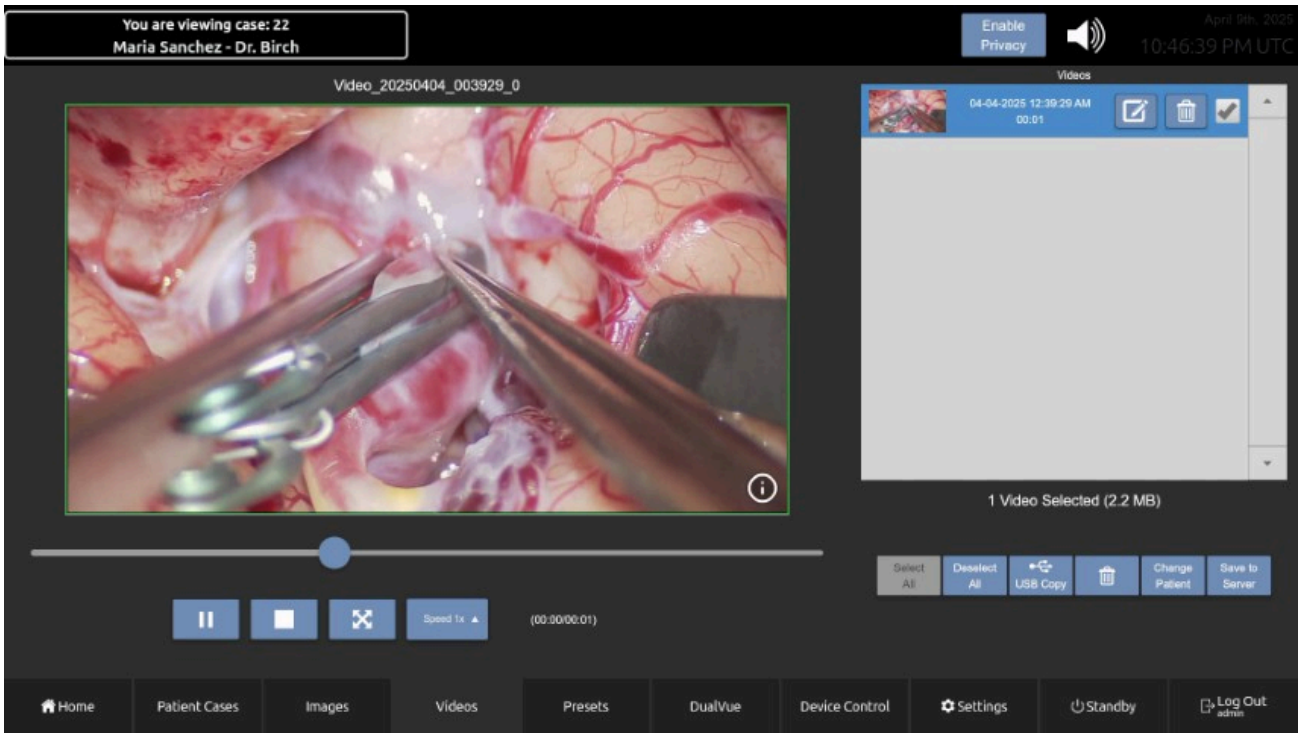


Figure 12-1. Playing Video from a Patient Case

Use the buttons below the video to play, stop, or pause it. To increase the speed of video playback, click the Speed button.

To view a recording full-screen, double-click the preview screen or click the full-screen button. To return the video to its original size, click the screen again.

To view information on the video, such as its resolution, size, and bit rate, click the "i" button on the lower right corner of the video.

12.3 Clipping a Video

You can create shorter videos from a long one. For example, if you have an hours-long video of an entire procedure, you can create shorter videos highlighting the most important parts.

1. Click the **Videos** tab.
2. In the Videos list, click the **Pencil** button next to the video file to edit.

   The Video Editor window appears.

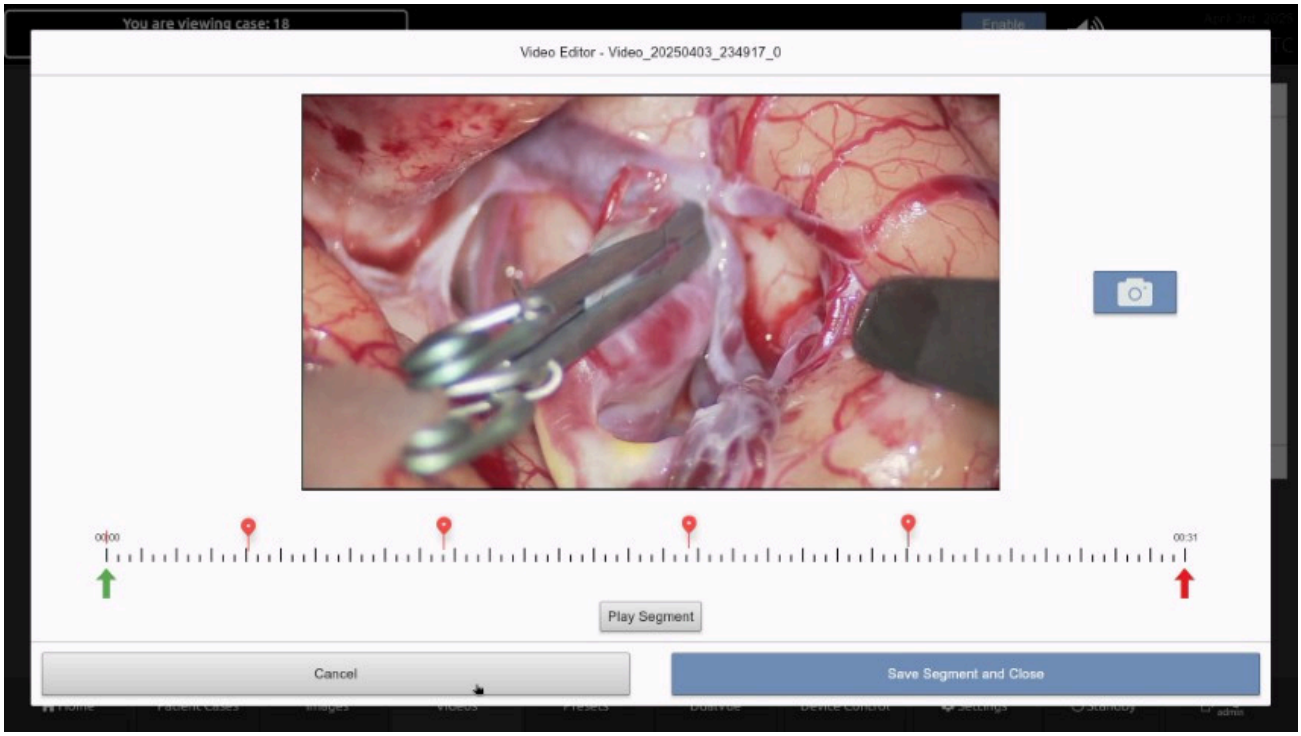


Figure 12-2. Video Editor Window

3. Drag the green and red arrow markers to choose the length of the segment.
4. Click the **Play Segment** button to review the segment.
5. Click **Save Segment and Close** to save the clipped video as a new video.

   The touch panel displays a status window as the video is saved. A long clip may take several minutes to save. You can use the touch panel when the operation completes.

   The original video is retained.

12.4 Capturing an Image from a Video

You can take a snapshot of a video frame to add it to the case's media.

1. Select the **Videos** tab.

2. Click the **Pencil** button next to the video to edit it.

   The Video Editor window appears.

3. Click **Play Segment**, or drag the end marker.
4. To capture the frame being displayed, click the **Camera** button.

   The captured image appears in the Images screen.

12.5 Saving Videos to a USB Drive

You may be able to copy videos to a USB drive so you can view them elsewhere.

The integration systems copies all the media for the same case to the same folder on the USB drive. That folder includes the images and videos you chose to copy, and possibly a JSON file with data on the case including the patient's name, ID number, case description, and physician's name. That JSON file may be encrypted to protect the patient's privacy. If so, you need extraction software that supports the AES-256 standard to view the file by entering either a password set by your facility or a password you chose when you saved the case. Ask your OR integration support staff for their policy.

If your facility supports copying videos only to encrypted USB drives, you can use one of the following types of drives:

- A software-encrypted Kingston DataTraveler Vault - Privacy Edition drive with model number 04301-093.A00LF or 04331-162.A01LF. To set up a pass code for the drive, connect it to a PC and follow the instructions that appear.
- A hardware-encrypted USB drive such as the Aegis Apricorn. To set up a pass code for the drive, follow its instructions.

If your facility supports copying videos to unencrypted drives, use a USB drive formatted as FAT, FAT32, or NTFS. Even if unencrypted drives are allowed, STERIS recommends using an encrypted drive for data protection.

Videos saved to a USB drive are not encrypted. Make sure they don't contain any data that could violate patient privacy such as personally identifiable information. If they do, use external encryption or security measures to prevent unauthorized access. Ask your OR integration support staff for your facility's policy.

To copy videos to the USB drive, do the following:

1. Insert a USB drive in a USB port on the back of the base unit or on a USB hub by the touch panel.

   If an alert appears saying the USB drive isn't supported, ask your OR integration support staff what drives are supported.

   If an alert appears saying the USB drive is encrypted, click **Unlock USB** and enter its pass code.

2. In the Videos list, select the check box to the right of each video to copy.
3. Click **USB Copy**, and then click **OK**.

   If the **USB Copy** button is not available, make sure you inserted the drive into the correct USB hub.

   If you see a dialog asking for a pass code, the integration system is exporting the case data with AES-256 encryption. To extract it later, use extraction software that supports the AES-256 standard, and enter the pass code again.

   The touch panel displays a status window as the system copies the videos, which cold take several minutes for long videos. Leave the USB drive inserted until it finishes.

4. When the copying is done, click **OK**.

12.6 Saving Videos to a Network Server

If you see a **Save to Server** or **Save to NAS** button on the Videos page, you can copy videos from the integration system to a location on your facility's network. **Save to Server** saves the video to your facility's DICOM server. **Save to NAS** saves the video to a network-attached storage device. Ask your facility's OR integration support staff for details on how to access the videos.

Videos saved to a network-attached storage device drive are not encrypted. Make sure they don't contain any data that could violate patient privacy such as personally identifiable information. If they do, use external encryption or security measures to prevent unauthorized access. Ask your OR integration support staff for your facility's policy.

To copy videos to the server, follow these steps.

1. Click the **Videos** tab.
2. Select the videos to save.

   To select a video, click it.

   To select all videos in the current viewing case, click **Select All**.
3. Click **Save to Server** or **Save to NAS**.

   If you do not see these buttons, your integration system does not support this feature.

   The integration system copies the videos to the server and stores them with all the other saved media from this case.

To save images to the server, see *Section 11.6, Saving Images to a Network Server*.

If you see a **Save to Server** button, you can also save all of a case's media at once to your facility's DICOM server. See *Section 8.5, Saving a Case to the DICOM Server*.

12.7 Moving Videos to a Different Patient Case

If you start the wrong case or forget to start a case before you started recording, you can move videos to a different patient case.

1. Select the case to copy videos from.

   See *Section 6.3, Choosing Which Case to View*.
2. Click the **Videos** tab.
3. In the Videos list, select the check box to the right of each video to save.
4. Click **Change Patient**.

   The Select Patient Case window appears.
5. Find the desired case and click it.
6. Click **OK** to move the selected videos to this case.

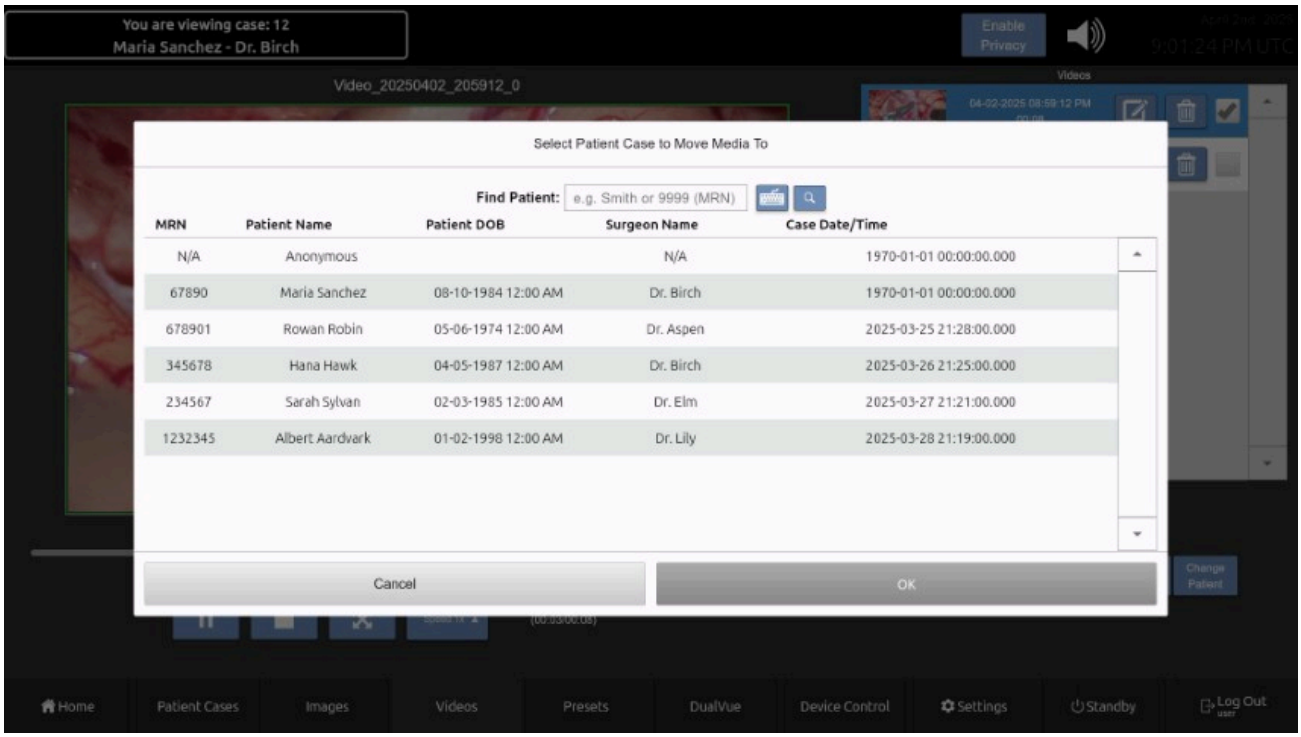


Figure 12-3. "Select Patient Case To Move Media To" Window

12.8 Deleting Videos

You can delete videos that you don't need from the integration system. This does not delete videos on the DICOM server.

IMPORTANT: *This permanently deletes the videos from the integration system. They cannot be restored or undeleted from the integration system.*

To delete a single video:

1. Click the **Videos** tab.
2. In the Videos list, click the Trash Can icon to the right of the video to delete.

   When your asked to confirm, click **OK**.

To delete multiple videos:

1. Click the **Videos** tab.
2. In the Videos list, select the check box to the right of each video to delete.
3. Click the Trash Can button below the Video list.

   A dialog appears asking you to confirm the deletion.
4. Click **OK**.

SignatureSuite

13.1 Signature Suite

If the integration system has a license for Signature Suite, you can help a patient relax before a case starts by playing soothing audio and video within the OR.

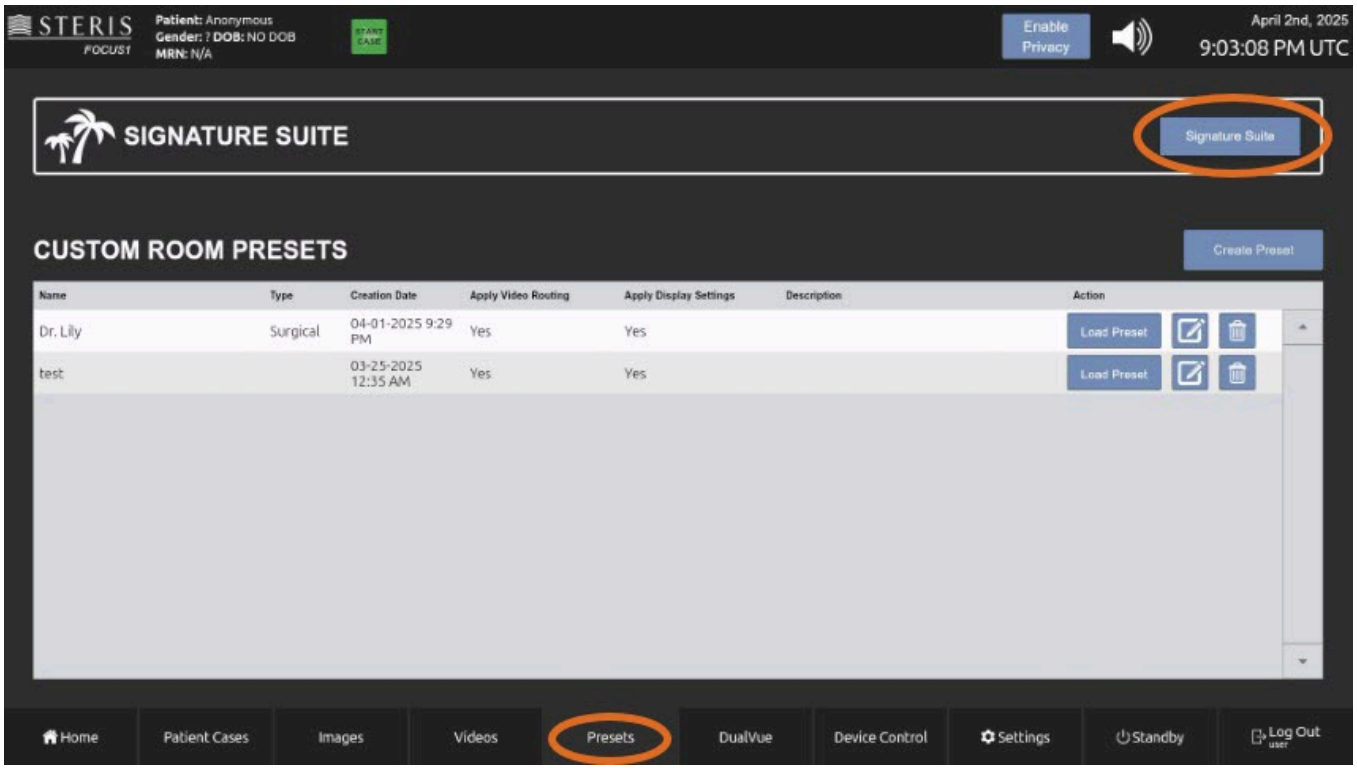


Figure 13-1. Signature Suite Multimedia Button

13.2 Using Signature Suite

To use Signature Suite:

1. Click the **Presets** tab.
2. Click **Signature Suite**.

   If you don't see this button, the integration system does not have a license for this feature.

   The Signature Suite window appears.
3. Choose a Signature Suite scene.

   The scene's audio is played on the room's speakers, and the scene's video appears on selected displays in the room. A "Signature Suite is active" alert appears at the top of the touch panel.

Signature Suite is stopped automatically whenever you start or accept a conference call from this integration system.

To stop Signature Suite manually, click the **End** button in the "Signature Suite is active" alert.

Device Control

14.1 Device Control

You can control some devices directly from the touch panel of the HexaVue™ Focus Integration System by clicking the **Device Control** tab at the bottom of the screen. Those devices include some Vividimage™ and OptikView displays as well as some types of camera.

If you see a tab for STERIS Lights at the bottom of the screen, your system can also control the room's HarmonyAIR™ A-Series Lights and (if available) in-light camera. For more information on those controls, see their documentation. They are similar to the control panel that's part of the lighting system.

What appears on the Device Control screen depends on what's connected to your integration system. The controls you see on your integration system may be different depending on how that device is configured.

14.2 Vividimage™ Displays

If a tab for an Vividimage™ display appears on the Device Control screen, you can turn it on and off and choose a preset.

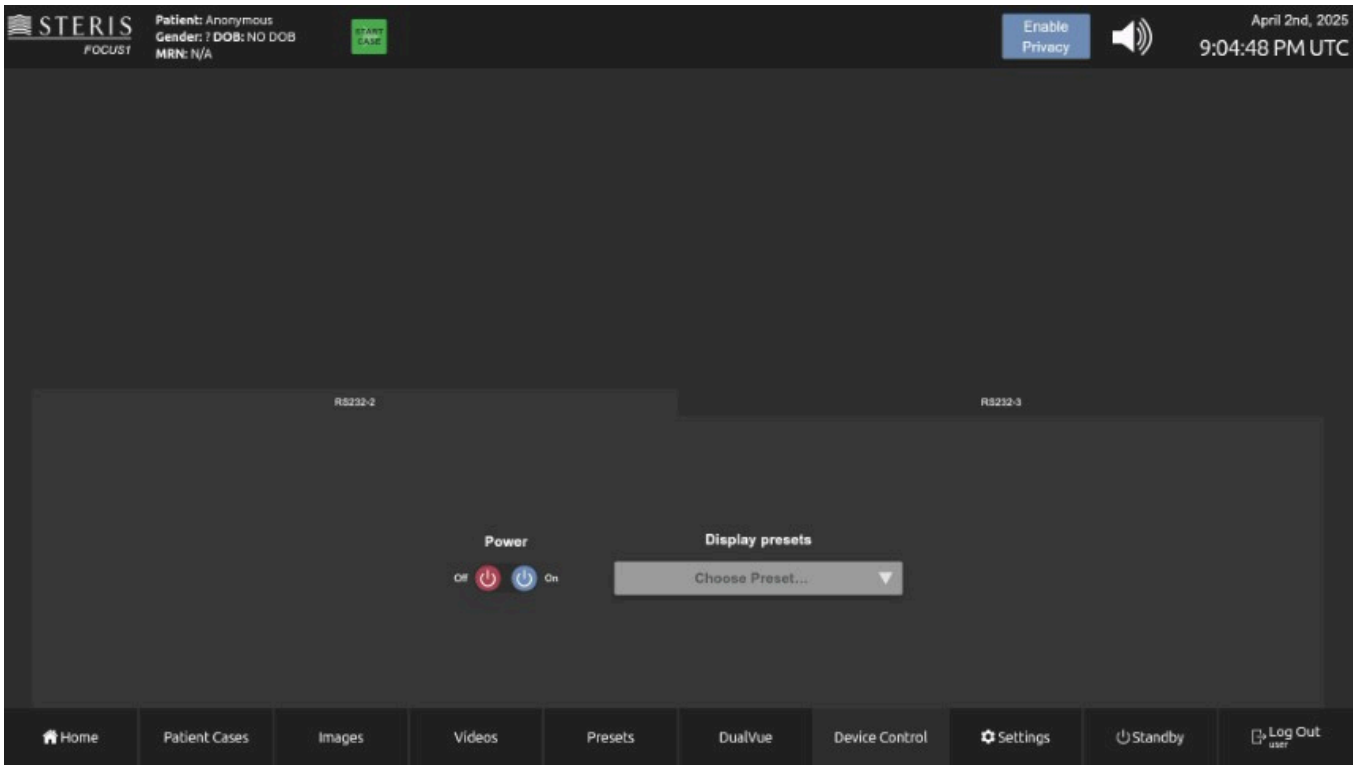


Figure 14-1. Vividimage™ Display

- To turn the device on or off, use the Power buttons.
- To choose a preset, use the Display Presets drop-down menu. For more information on what's in the presets, see the documentation that came with the display.

14.3 Wall Cameras

If a **Wall Camera** tab appears on the Device Control screen, you can position it and zoom it in and out.

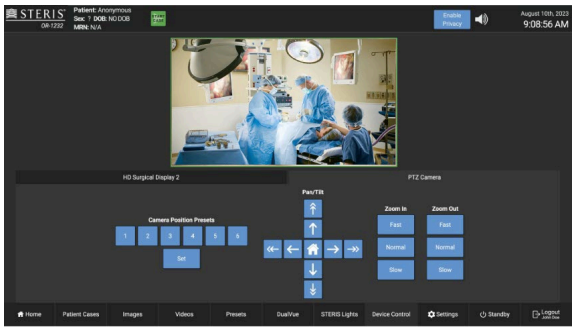


Figure 14-2. Wall Camera Controls

You may not see all these controls on your Device Control screen depending on how the camera is configured.

Zooming the Wall Camera In and Out

1. Click the **Device Control** tab and then click the tab for the wall camera.
2. Use the buttons in the Zoom In section to make the image appear closer, and use the buttons in the Zoom Out section to make the make the image appear further away.

   The names of the buttons, **Fast**, **Normal**, and **Slow**, tell you how quickly they change the zoom level.

Panning and Tilting the Wall Camera

1. Click the **Device Control** tab and then click the tab for the wall camera.
2. Press the Pan/Tilt arrow buttons to pan or tilt.

   The buttons with two arrows move the camera quicker than the buttons with one arrow.

To return the camera to the original position, press the Home button.

Saving and Recalling Camera Settings

You can save the pan, tilt, and zoom settings to a preset so you can recall them later.

To save a camera preset:

1. Click the **Device Control** tab and then click the tab for the wall camera.
2. Zoom and pan as desired.

   See *Zooming the Wall Camera In and Out* and *Panning and Tilting the Wall Camera*.
3. In the Camera Positions Presets section, press **Set** and then press a preset button from **1** to **6**.

   The camera pan and zoom settings are saved to the selected preset.

To recall a camera preset:

1. Click the **Device Control** tab and then click the tab for the wall camera.
2. In the Camera Positions Presets section, press the number (from **1** to **6**) for the preset.

   The saved pan, tilt, and zoom settings are applied to the wall camera.

Presets

15.1 Presets

You can save video routing and display settings as a preset so you can recall them later from the Presets screen.

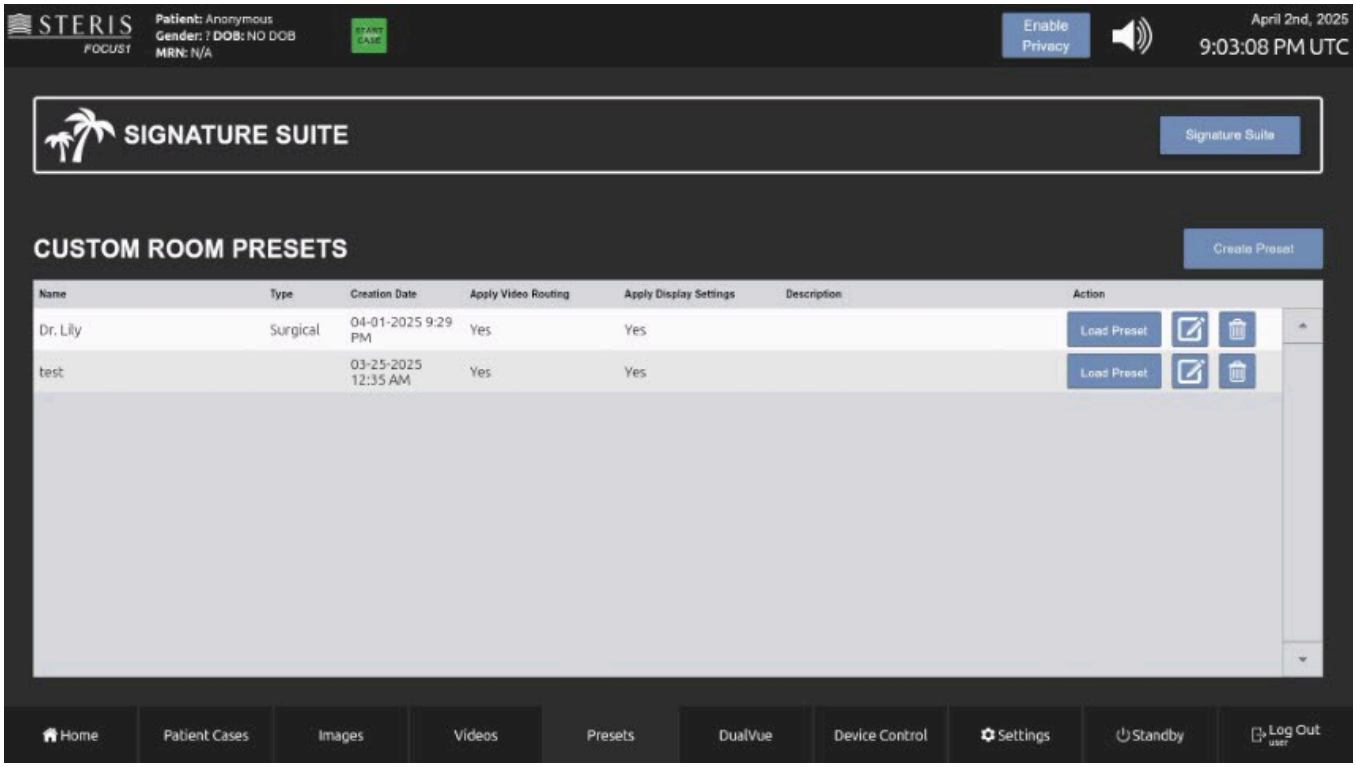


Figure 15-1. The Presets Screen

Each preset has an entry with these buttons:

Table 15-1. Preset Buttons

Button	Description
Load Preset	**Load Preset**: Load this preset's settings. See *Section 15.3, Loading a Preset*.
	**Pencil**: Edit this preset. See *Section 15.4, Editing a Preset*.
	**Trash Can**: Delete this preset. See *Section 15.5, Deleting a Preset*.

You may see buttons for Signature Suite on this screen, which lets you play soothing video and audio in the operating room before a procedure starts. For more information, see *Section 13.1, Signature Suite*.

15.2 Creating a Preset

1. Route sources to destinations and set up your displays as desired.

   To route sources, see *Section 9.3, Routing a Source to a Destination*.To set up the displays, use the controls on the display or ask your administrator to set them up as you want them.

2. Click the **Presets** tab.
3. Click **Create Preset**.

   The New Preset window appears.

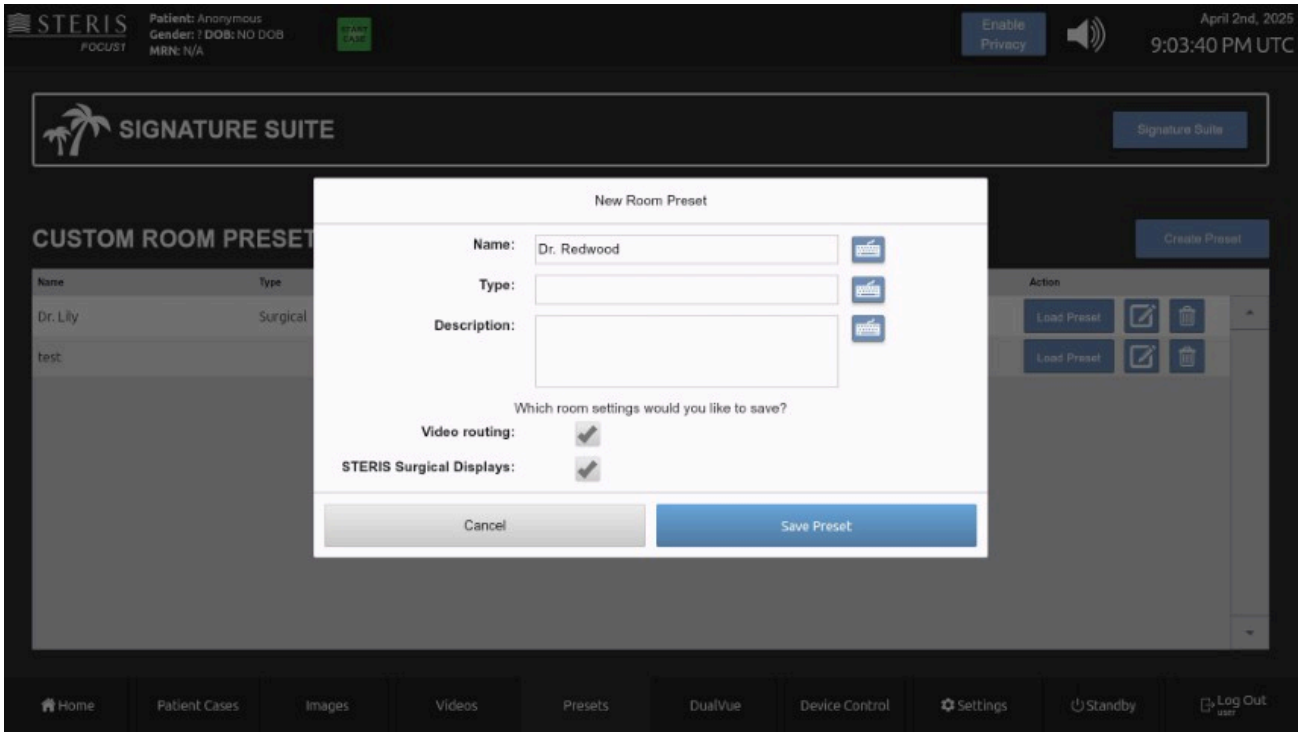


Figure 15-2. New Preset Window

4. Enter the preset's name and description,

   Click a field to select it. Click the keyboard icon to use the on-screen keyboard.

   The fields can contain any text you want. For example, **Name** could be the doctor's name, **Type** could be the type of procedure, and **Description** could be any additional information about the preset you'd like to add.

5. Choose what settings to apply when someone loads the preset later.

   To apply the video routing settings, select **Video Routing**. To apply monitor settings, select **STERIS Surgical Displays**.

6. When you're done, click **Save Preset**.

15.3 Loading a Preset

You can load a preset to implement its video routing settings.

1. Click the **Presets** tab.

   The list of presets appears. If a preset's entry says **Yes** under **Apply Video Routing**, the preset changes the video routing settings for the integration system. If a preset's entry says **Yes** under **Apply Display Settings**, the preset changes the settings for all the displays connected to the integration system.

2. Click the **Load Preset** button next to the preset to load.

   The Recall Preset window appears.

3. Click **OK**.

15.4 Editing a Preset

You may edit the name, type, or description of a preset, and which of its settings are applied.

1. Click the **Presets** tab.
2. Click the pencil button next to the preset you would like to edit.

   The Edit Preset window appears.

3. Enter the preset's name and description,

   Click a field to select it. Click the keyboard icon to use the on-screen keyboard.

   The fields can contain any text you want. For example, **Name** could be the doctor's name, **Type** could be the type of procedure, and **Description** could be any additional information about the preset you'd like to add.

4. Choose what settings to apply when someone loads the preset later.

   To apply the video routing settings, select **Video Routing**. To save monitor settings, select **STERIS Surgical Displays**.

5. When you're done, click **Save Changes**.

15.5 Deleting a Preset

1. Click the **Presets** tab.
2. Click the **Trash Can** button next to the preset to delete.
3. Click **OK**.

Conferencing

16.1 Conferencing

There are two ways to call others from a HexaVue™ Focus Integration System.

- If there's a Conferencing tab at the bottom of the screen, you can call someone at another HexaVue™ Focus Integration System. You can also call someone connected to the facility's intranet who has Linphone for Microsoft Windows.
- You may also be able to perform a conference with other HexaVue Integration Systems: using a conferencing application on a PC connected to the integration system or using the Linphone application on a personal PC or tablet. See *Section 16.6, Conferencing from the Nurse's PC* and *Section 16.7, Conferencing from a Linphone App*.

16.2 About the Conferencing Screen

To start a video conference, click the **Conferencing** tab at the bottom of the screen.

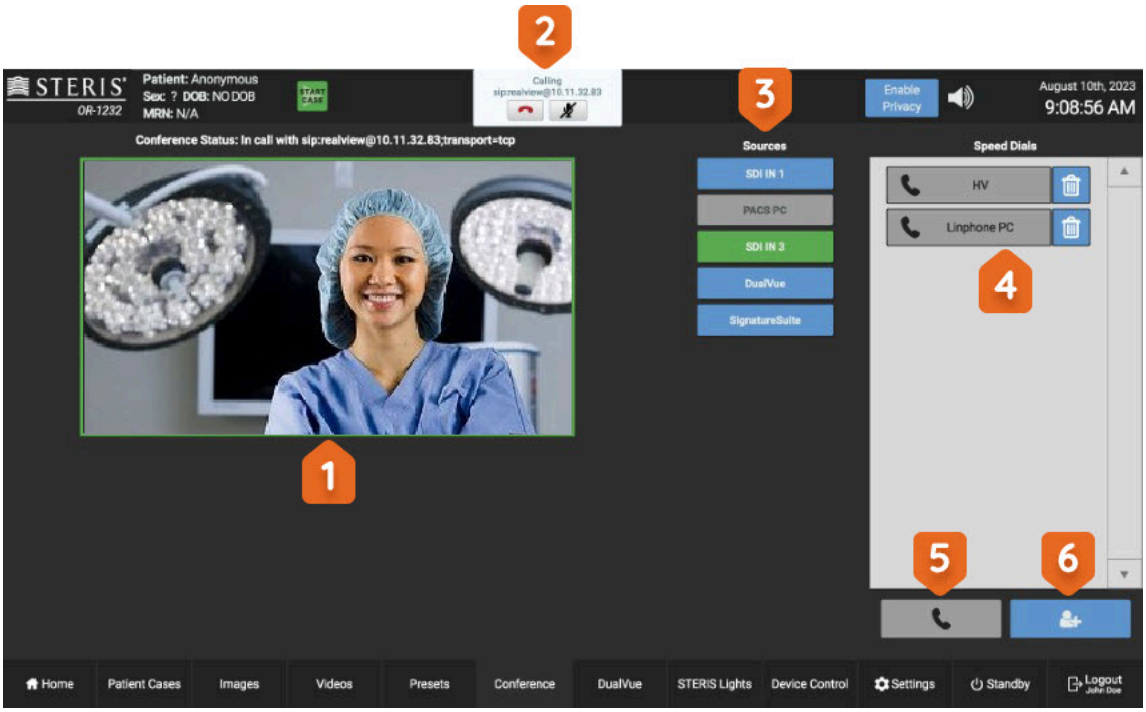


Figure 16-1. Conferencing Screen

Here are the controls in the Conferencing screen:

1. **Far-End Video**: Video of the party at the other end of the conference.
2. **Call Status Window**: The status of the conference, and buttons that let you end the call or mute your audio.
3. **Sources**: Select the source to send to the other party.
4. **Speed Dial Presets**: Press to call the party at this preset address.
5. **Manual Call**: Press to enter an IP or host address and call that party.

6. **New Speed Dial**: Press to enter an IP or host address and create a speed dial entry.

16.3 Starting a Conference Call

You can start a conference call by either clicking a speed dial button or by entering the address of the party you want to call.

Starting a conference call automatically switches the video preview to the Conferencing source, changes the audio source to Conference Audio, and stops Signature Suite if it's active.

Using a Speed Dial

To start a call with a speed dial:

1. Click the **Conferencing** tab.
2. Click a button in the Speed Dials list on the right
3. When a window appears asking you to confirm the call, click **OK**.

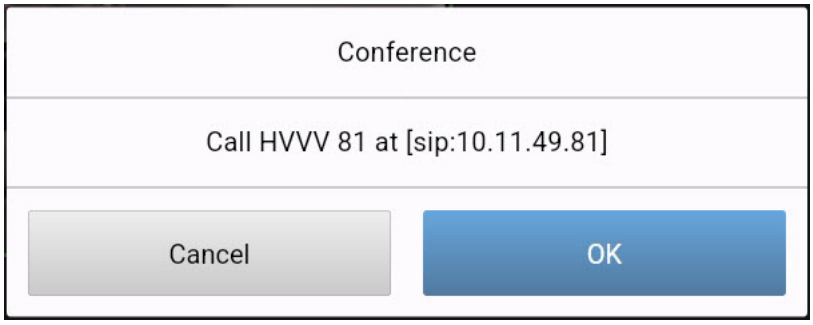


Figure 16-2. Conference Confirmation Window

The conference call status appears at the top of the screen.

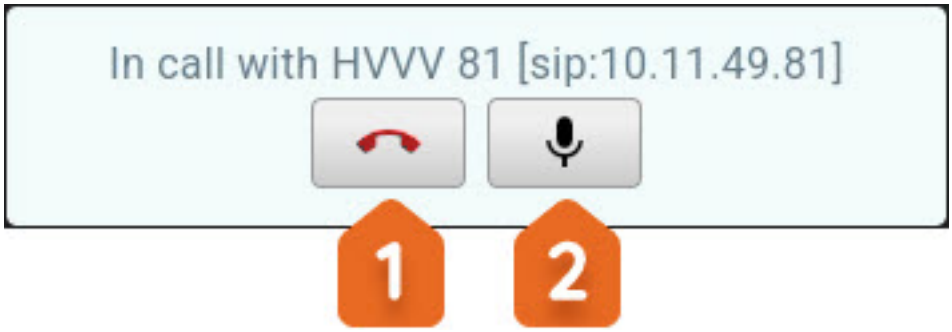


Figure 16-3. Conference Status Window

To cancel the call, click the Hangup button (#1). To prevent the other party in the call from hearing your audio, click the Mute button (#2).

When the other party answers the call, the conference call status changes.

4. When you're finished, click the Hangup button to end the call.

To create a new speed dial:

1. Click the **Conferencing** tab.
2. Click the **New Speed Dial** button.

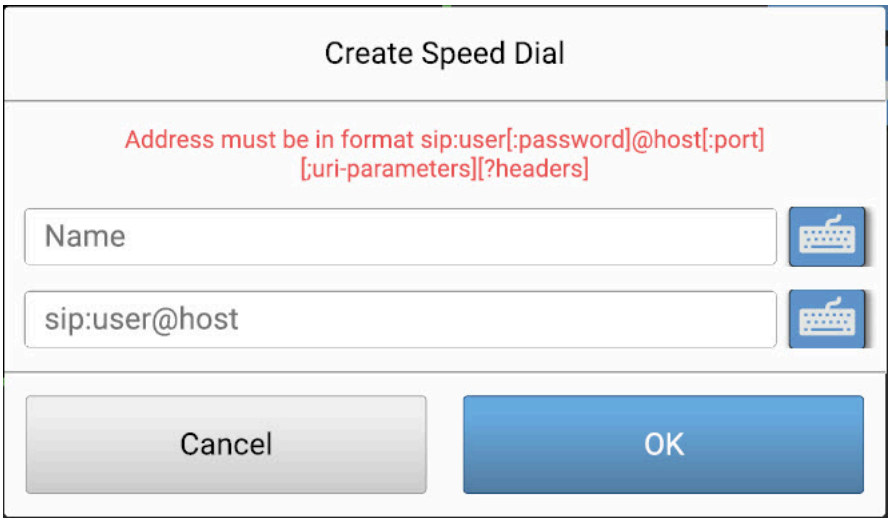


Figure 16-4. Create Speed Dial Window

3. Enter the Name and Host or IP address into the related fields and press **OK**.

   A button for the preset appears in the Speed Dial list at the right.

Using Manual Call

To start a call by entering the IP or host address:

1. Click the **Conference** tab.
2. Click the Manual Call button at the bottom of the screen.

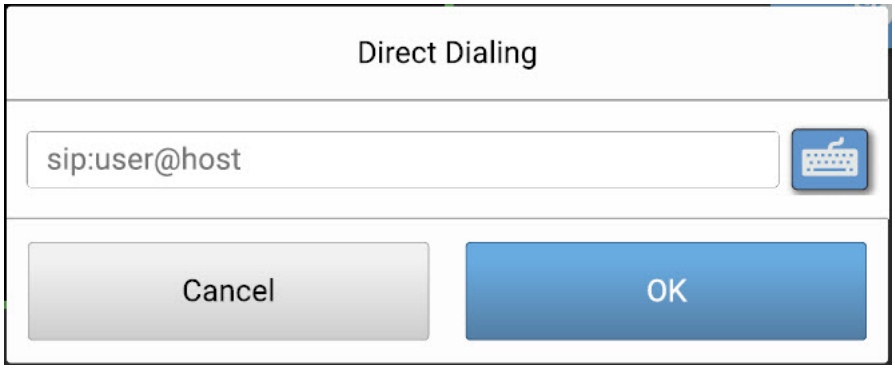


Figure 16-5. Direct Dialing Window

3. Enter the host address, and then click **OK**.

   The conference call status is displayed at the top of the Conference screen.

16.4 Receiving a Call

When a conference call comes in, a tone plays over the integration system's speakers, and a status message appears at the top of the screen with the caller's name along with buttons that let you answer or decline the call.

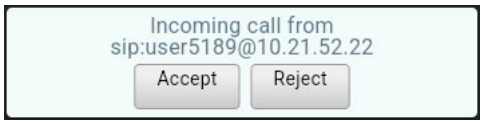


Figure 16-6. Incoming Call Window

To accept the call, click **Accept**. To decline the call, click **Reject**.

Accepting a conference call automatically switches the video preview to the Conference source and changes the audio source to Conference Audio, and stops Signature Suite if it's active.

16.5 While You're in a Call

When you're in a call, the Call status window appears at the top of the screen no matter which screen you're viewing.

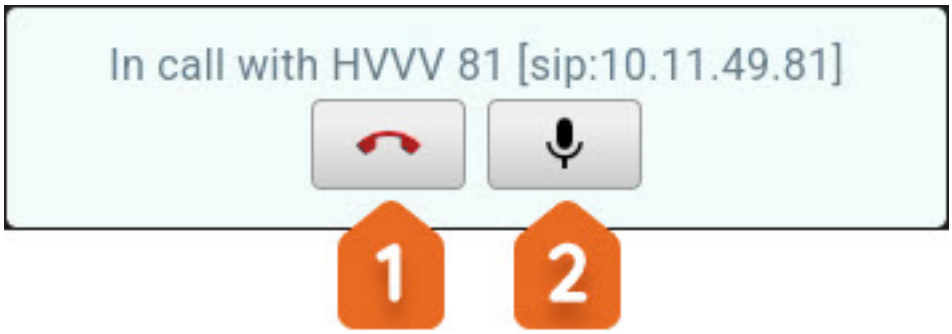


Figure 16-7. Call Status Window

To end the call, click the Hangup button (#1).

To prevent the other party from hearing your room, click the Mute button (#2). Click it again to let the other party hear you.

To prevent the other party from hearing or seeing your room, click the **Enable Privacy** button. The button's name changes to **Disable Privacy**, and the other room sees either a black screen or a gray screen containing a picture of a eye with slash through it . To allow the other room to hear and view your room again, click **Disable Privacy**.

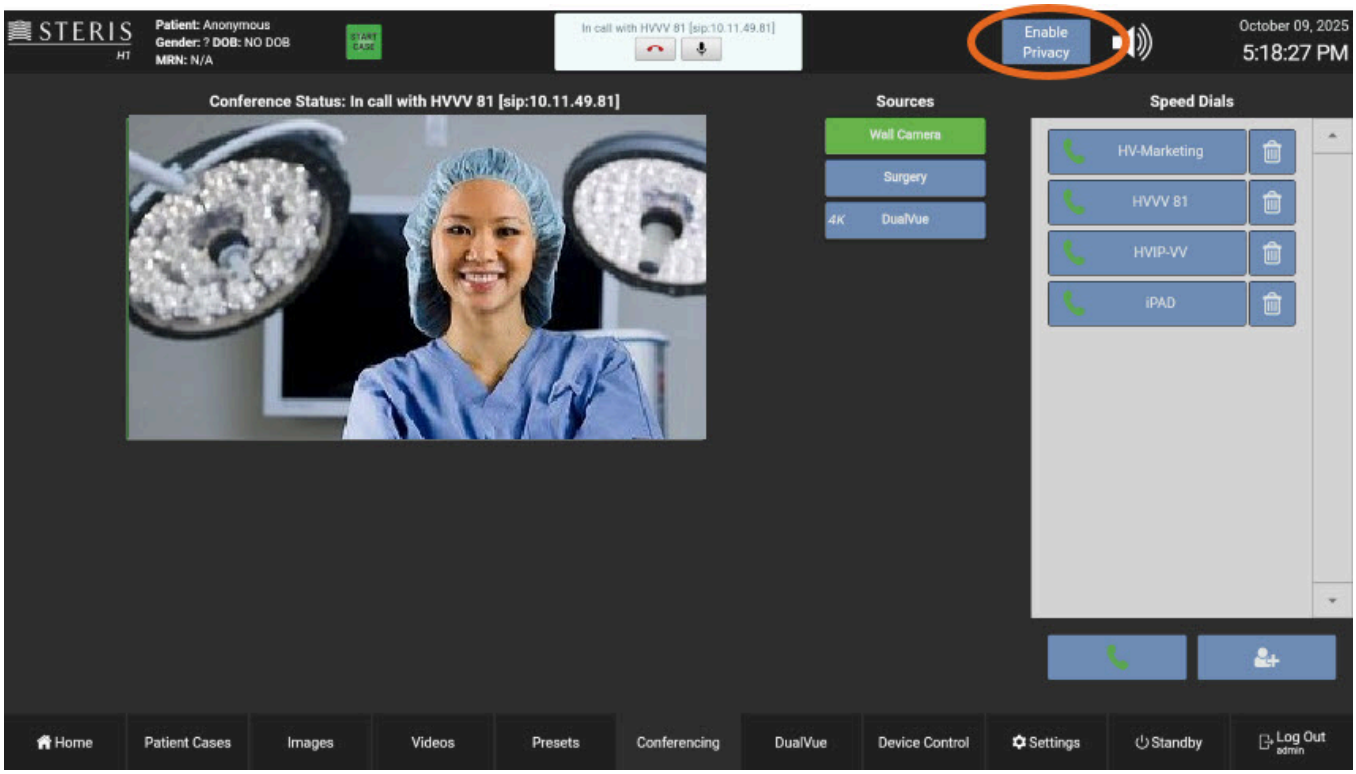


Figure 16-8. Enable Privacy Button

Choosing the Video Source to Share

You can choose which of your video sources is shown to the other caller. If you make the selection when there's no ongoing call, the source is used for the next call. You can also change which video source is used during a call.

To change the video source from the Home screen:

1. Click the **Home** tab.
2. In the Sources list, click the button for the source to share.
3. In the Destinations list, click the **Conference** button.

To change the video source from the Conferencing screen:

1. Click the **Conferencing** tab.
2. Click the button for the source button on the left.

16.6 Conferencing from the Nurse's PC

If the Home screen contains a Universal Conferencing button in the Sources list, you can use the conferencing software to call other hospital personnel who have accounts for that software

1. On the Home screen of the integration system, do the following:
    a. Route a source to the Universal Conferencing destination.
    b. Click the Audio button on the top of the touch panel and select the nurse's PC as the audio source.
    c. Click the nurse's PCin the Sources list, and then click the preview window to display it full-screen on the touch panel.
2. On the Nurse's PC, do the following:

a. Open the conferencing application.
b. Select ElGato as the camera.
c. Select the audio “line in” as the microphone.
d. Start or join a conference call.

16.7 Conferencing from a Linphone App

If you’ve been told you can call a HexaVue Focus Integration System from the Linphone app on your PC or tablet, here’s how to set up the app and start a call.

Setting Up Linphone

In the SIP Accounts settings page.

- You may want to change the **Display name** to a relevant name such as “Pathology Lab”. This is the name that appears on a HexaVue Focus Integration System when making a call.
- Don’t change any of the other default settings.

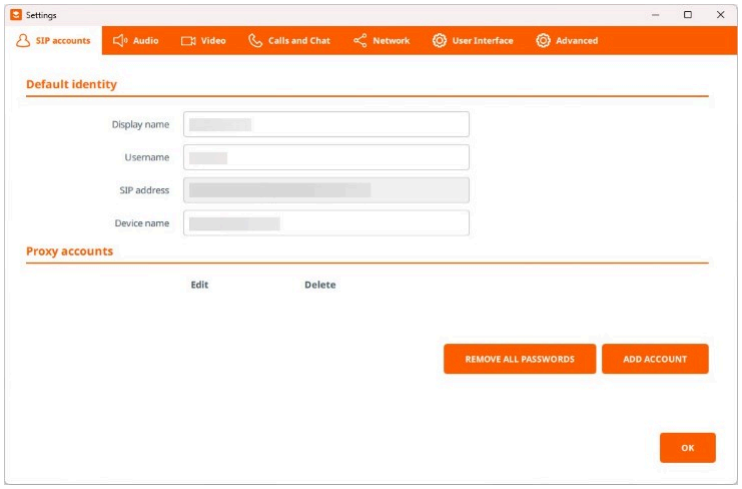


Figure 16-9. Linphone SIP Account Settings

In the Audio settings page.

- In the Audio codecs section, enable **The G.722 wideband codec** and leave all the other codecs disabled
- In the Audio parameters section. you may leave the default settings or change them if needed.

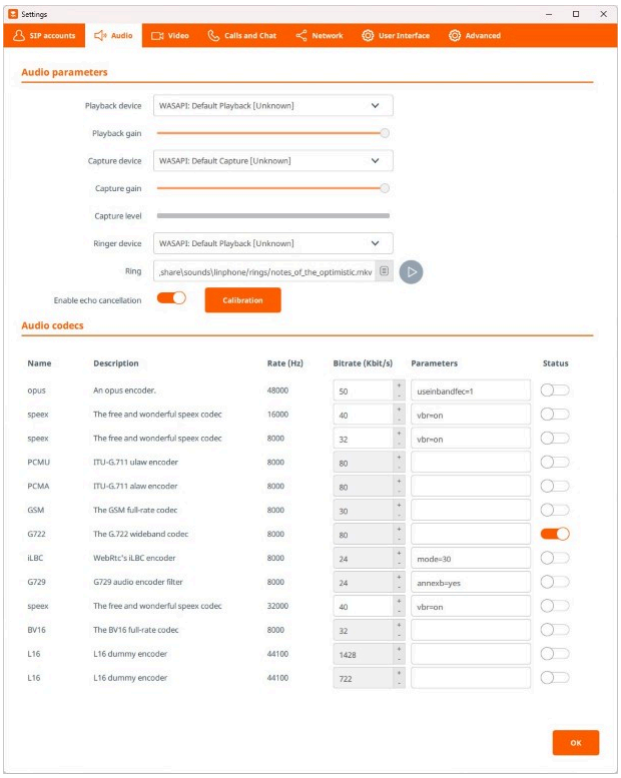


Figure 16-10. Linphone Audio Settings

In the Video settings page:

- In the Video codecs section, enable **VP8**. If **H264** is available, you may enable if needed. Disable **AV1** and all other codecs.
- In the Video display and Video capture parameters sections, you may leave the default settings or change them if needed.

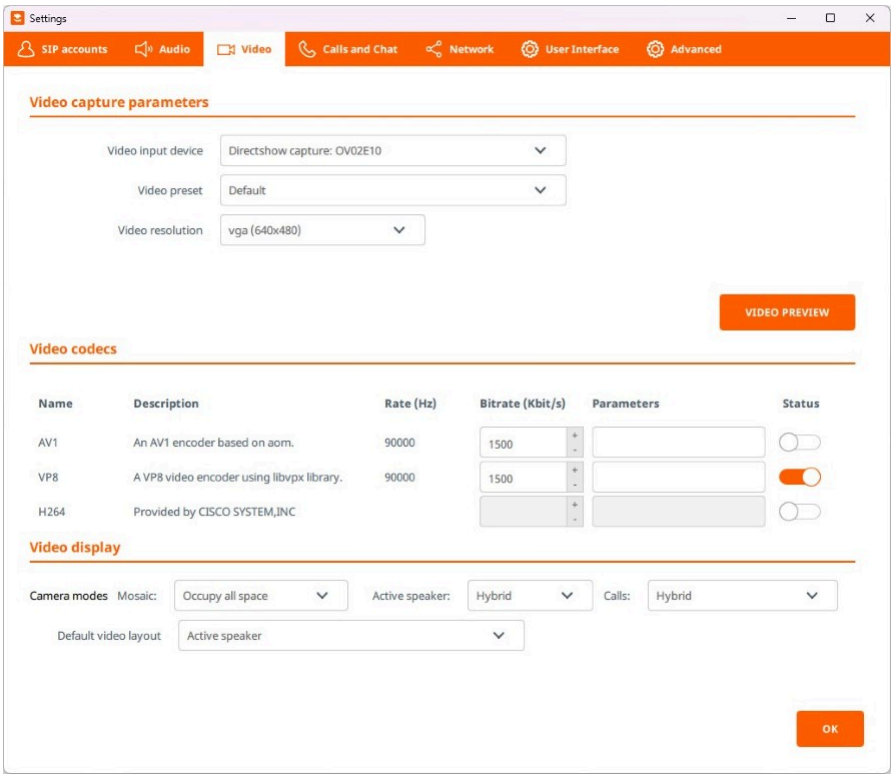


Figure 16-11. Linphone Video Settings

In the Calls and Chat settings page:

- In the Calls section, select **None** from the **Encryption** pop-up menu, and disable **Encryption is mandatory**.
- In the Chat sections, you may leave the default settings or change them if needed.

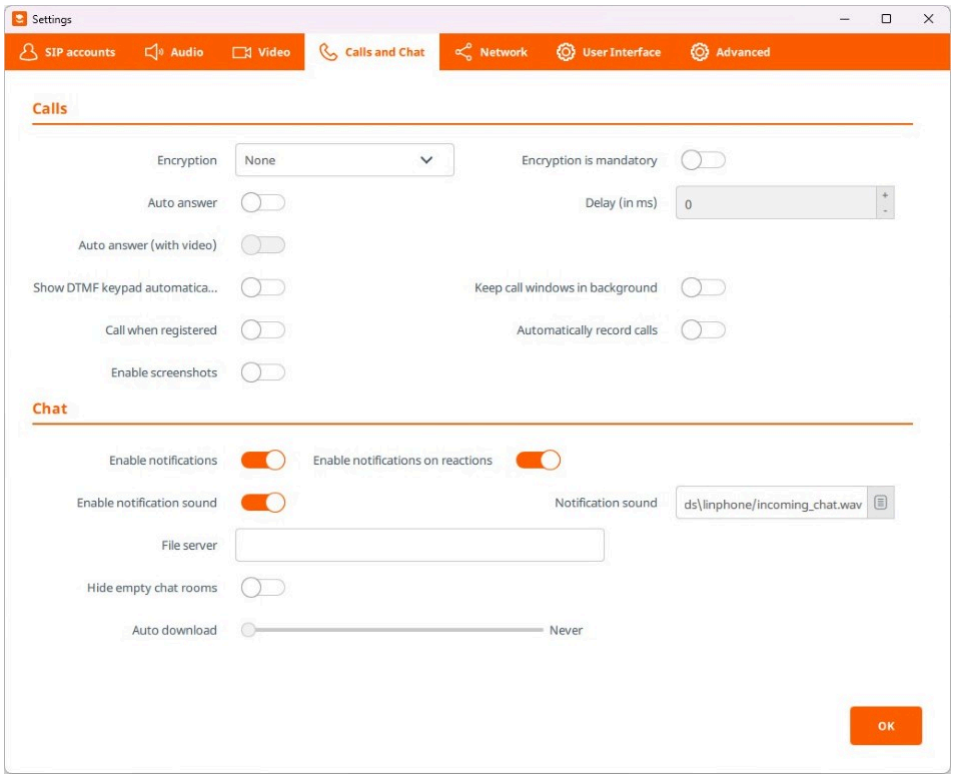


Figure 16-12. Linphone Calls and Chat Settings

In the Network settings page

- In the transport section, select **DTMF send method** as **SIP INFO**, and disable **Allow IPv6**.
- In the Network protocol and Ports section, enable both **Set SIP/UDP listening port** and **Set SIP/TCP listening port**, and choose **5060** from their pop-up menus.
- Leave all other settings at their default values.

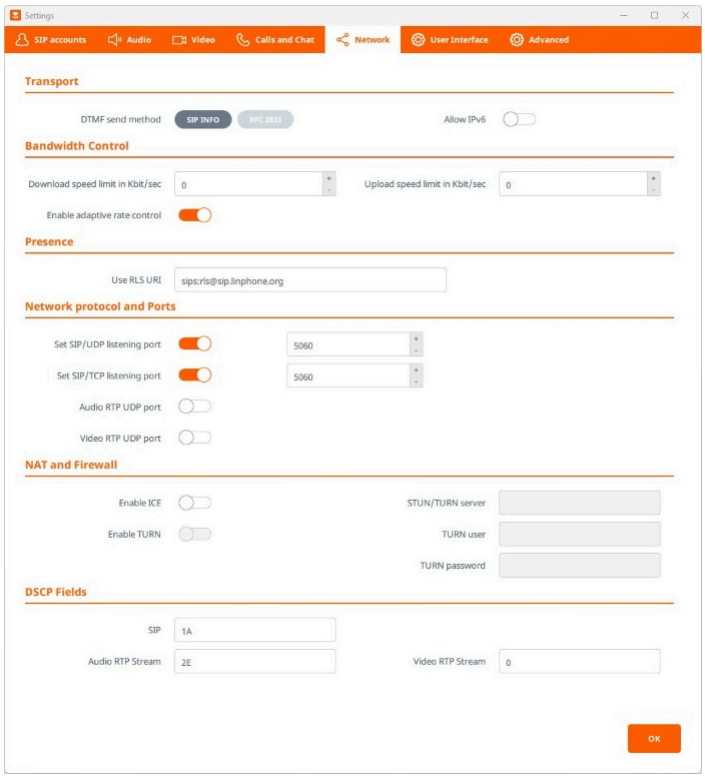


Figure 16-13. Linphone Network Settings

On the User Interface settings page

- You may leave the default settings or change them if needed.

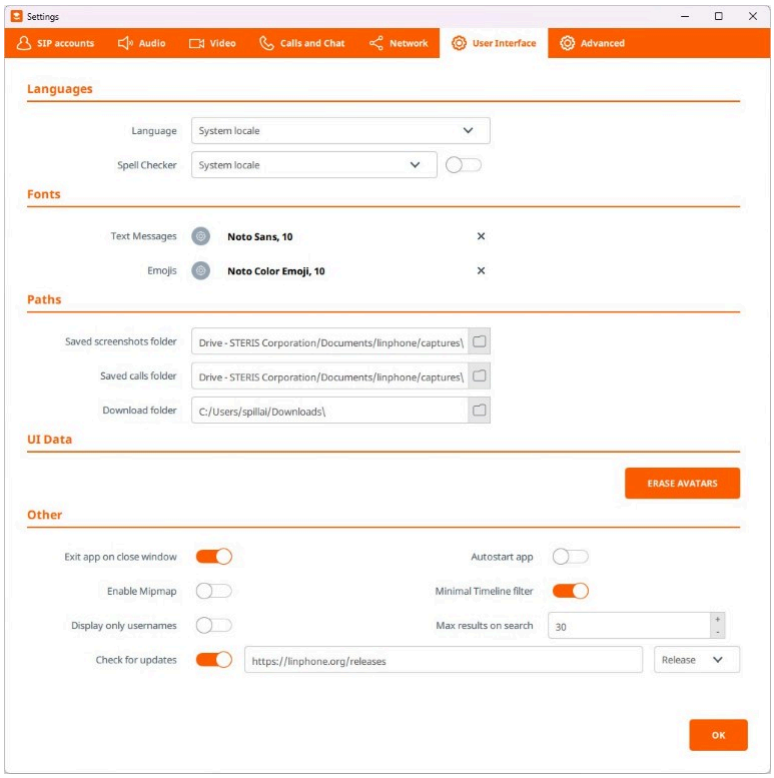


Figure 16-14. Linphone User Interface Settings

Starting a Call from a PC

Enter the address of the HexaVue Focus Integration System in the field at the top of the window in the format **sip:** *user*@*IPAddress* (for example “sip:bdv@10.11.7.75”), and then click on the Video button.

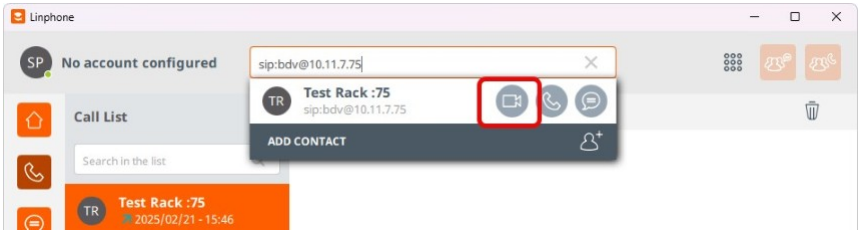


Figure 16-15. Linphone Calling From a PC

Starting a Call from an iPad or Android device

Click the dialpad button at the bottom of the screen, enter the address in the format ***user***@*IPAddress*, and click the Call button.

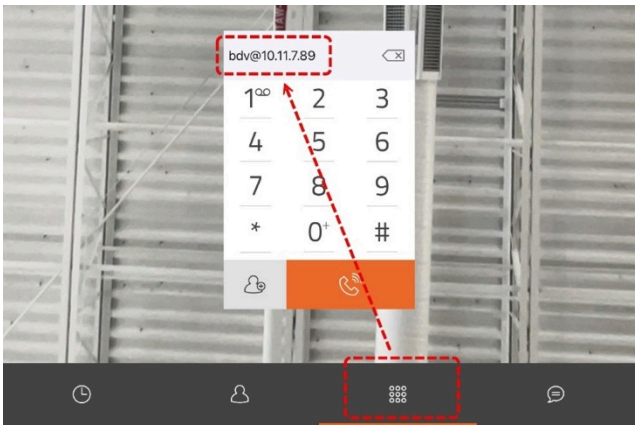


Figure 16-16. Linphone Calling From an iPad or Android Device

Routine Maintenance

17.1 Cleaning the Base Unit

Clean the base unit as needed by wiping the surface with a soft cloth moistened with a disinfectant. It has been tested with a solution of 80% isopropyl alcohol, 3% hydrogen peroxide, or 8% vinegar.

Do not spray cleaner directly onto the base unit.

17.2 Maintaining the Base Unit

The following preventative maintenance steps should be performed quarterly by the facility's biomed team:

- Visually check the overall condition of the equipment, looking for signs of physical damage, such as broken cables.
- Wipe off any dust that has accumulated on the electronic components with a dry cloth.
- Verify there is no excessive heat buildup inside base unit. The base unit's temperature should not exceed 104° F or 40° C.

At least once a year, turn off and restart the base unit.

Troubleshooting

18.1 Cannot Access a USB Storage Device

Condition

You cannot access a USB storage device inserted into one of the integration system's USB ports,

General Troubleshooting	Additional Information
You see an alert saying "An attached USB storage device has been detected but is blocked by system settings."	1. If you have an encrypted USB storage device, try using it instead. 2. If you're trying to copy media files from the integration system, you may be able to copy them to your hospital's DICOM server. ▪ If the Images or Videos screen has a **Save to Server** button, select the media to save and click that button. ▪ If the Patient Cases screen has an **Archive Entire Case** button, select the case containing the media and click that button. Ask your OR integration support staff how to access the saved files.
If you don't see an alert saying a USB device has been detected, the USB device may not inserted properly	1. Make sure the USB device is inserted properly into the USB port by the touch panel. 2. If issue is not resolved, contact STERIS Service.
The USB storage device uses an incompatible format	1. Confirm that the USB drive is formatted as FAT, FAT32, or NTFS. 2. Plug the USB device into the USB port by the touch panel. 3. If issue is not resolved, contact STERIS Service.

18.2 No Audio from the Speakers

Condition

No audio is coming from the speakers.

General Troubleshooting	Additional Information
The wrong audio source is selected or is muted.	1. Click the Audio button on the top of the screen. 2. Make sure the correct audio source is selected, audio isn't muted, and the volume is not too low.

18.3 Cannot Print Images

Condition

You cannot print images from the touch panel.

General Troubleshooting	Additional Information
The printer is not turned on.	1. Make sure the printer is turned on. 2. Make sure the power cables to the printer are connected properly.

18.4 Quality of Printed Images Is Poor

Condition

The printer is printing poor quality images

General Troubleshooting	Additional Information
The printer is using the wrong paper.	1. Make sure the paper matches the settings on the printer.

18.5 A Trigger Is Not Working

Condition

A trigger does not capture an image or video when pressed.

General Troubleshooting	Additional Information
A capture device isn't selected.	1. Select a device from the Capture & Record drop-down menu
The trigger cables are not connected properly	1. Check to make sure that trigger cables are connected tightly to the camera and the trigger wall plate or the base unit.

18.6 Cannot Control a STERIS Lighting System from the Touch Panel

Condition

You cannot control a STERIS lighting system from the touch panel .

General Troubleshooting	Additional Information
The base unit is not communicating with the lighting system.	1. Turn the base unit off and back on, and then turn the lighting system off and back on. 2. Call STERIS ORI Support. Even if rebooting temporarily fixes the problem, it is likely to reoccur.

18.7 Cannot Control a Display from the Touch Panel

Condition

A display does not power off when the system goes into standby mode, or turn on when the system goes out of standby mode.

General Troubleshooting	Additional Information
The display is powered off.	1. Make sure the display is not in standby mode by pressing the standby or power button. 2. Make sure the main power switch is in the On position. It may be on the back of the display.

18.8 Cannot Control a Connected PC from the Touch Panel

Condition

You cannot control a connected PC from the touch panel when viewing the PC's input full-screen.

General Troubleshooting	Additional Information
The facility's biomed or IT department needs to check the equipment.	Contact your facility's biomed or IT department for help.

18.9 No Video Appears on a Display

Condition

Video appears in the touch panel's preview window, but it isn't shown on a display.

General Troubleshooting	Additional Information
The display is powered off.	1. Make sure the display is not in standby mode by pressing the standby or power button. 2. Make sure the main power switch is in the On position. It may be on the back of the display.
The wrong input is selected on the display.	1. At the display, cycle through all the inputs to see if the video appears.

18.10 Quality of Images on a Display Is Poor

Condition

Video appears to be formatted incorrectly on the displays

General Troubleshooting	Additional Information
The display's settings have been changed.	1. Check the display's settings from the touch panel or at the display.
The video source isn't connected to the wall plate correctly.	1. Make sure the cable between the video source and the wall plate is plugged in correctly and not damaged. 2. Turn the display off and on again.

18.11 A Video Input Does Not Display Video

Condition

A video input does not display video and its Source button on the touch panel does not turn blue

General Troubleshooting	Additional Information
The video input is not turned on or is not connected properly.	1. Make sure the device is turned on. 2. If it's connected to a guest port, make sure the cable is securely plugged in. Try connecting it to a different guest port.

18.12 A Video Output Does Not Receive Video

Condition

A video output does not receive video and its Destination button on the touch panel does not turn green.

General Troubleshooting	Additional Information
No source is routed to the output.	1. Make sure a source is routed to the output.
The video output is not turned on.	1. Make sure the output has been turned on.

Reference

19.1 Supported Resolutions

Here are the video resolutions that the HexaVue™ Focus Integration System supports.

Table 19-1. Supported Resolutions

Signal	Supported by	Resolution and Frequency	Color Space(s)	Aspect Ratio Adjustments
12G SDI	SDI Plate	3840x2160 50Hz	YCbCr 4:2:2 10 BIT	
12G SDI	SDI Plate	3840x2160 59Hz	YCbCr 4:2:2 10 BIT	
12G SDI	SDI Plate	3840x2160 60Hz	YCbCr 4:2:2 10 BIT	
3G SDI	SDI Plate	1920x1080P 60HZ	YCbCr 4:2:2 10 BIT	
Display Port	Native HDMI Plate w/ Display Port Adaptor	1920x1080P 60Hz	RGB 4:4:4 8 BIT	
Display Port	Native HDMI Plate w/ Display Port Adaptor	3840x2160 30Hz	RGB 4:4:4 8 BIT, YCbCr 4:2:2 8 BIT (12 Bpc)	
Display Port	Native HDMI Plate w/ Display Port Adaptor	3840x2160 50Hz	RGB 4:4:4 8 BIT, YCbCr 4:2:2 8 BIT (12 Bpc), YCbCr 4:4:4 8 BIT	
Display Port	Native HDMI Plate w/ Display Port Adaptor	3840x2160 59.94Hz	RGB 4:4:4 8 BIT, YCbCr 4:2:2 8 BIT (12 Bpc), YCbCr 4:4:4 8 BIT	
Display Port	Native HDMI Plate w/ Display Port Adaptor	3840x2160 60Hz	YCbCr 4:2:2 8 BIT (12 Bpc), YCbCr 4:4:4 8 BIT	
Display Port	Native HDMI Plate w/ Display Port Adaptor	4096x2160 50Hz	RGB 4:4:4 8 BIT, YCbCr 4:2:2 8 BIT (12 Bpc), YCbCr 4:4:4 8 BIT	Cropped to 16:9 when sent to SDI or HD HDMI destinations
Display Port	Native HDMI Plate w/ Display Port Adaptor	4096x2160 59.94Hz	RGB 4:4:4 8 BIT, YCbCr 4:2:2 8 BIT (12 Bpc), YCbCr 4:4:4 8 BIT	Cropped to 16:9 when sent to SDI or HD HDMI destinations

Table 19-1. Supported Resolutions (continued)

Signal	Supported by	Resolution and Frequency	Color Space(s)	Aspect Ratio Adjustments
Display Port	Native HDMI Plate w/ Display Port Adaptor	4096x2160 60Hz	RGB 4:4:4 8 BIT, YCbCr 4:2:2 8 BIT (12 Bpc), YCbCr 4:4:4 8 BIT	Cropped to 16:9 when sent to SDI or HD HDMI destinations
HD SDI	SDI Plate	1920x1080i 30HZ	YCbCr 4:2:2 10 BIT	
HD SDI	SDI Plate	720P 60Hz	YCbCr 4:2:2 10 BIT	
HDMI / DVI	Native HDMI Plate / Multi Format Plate	1280x1024 60HZ	RGB 4:4:4 8 BIT	Fit to 16:9 (black bars inserted)
HDMI / DVI	Native HDMI Plate / Multi Format Plate	1600x1200 60Hz	RGB 4:4:4 8 BIT	Fit to 16:9 (black bars inserted)
HDMI / DVI	Native HDMI Plate / Multi Format Plate / HDMI -> SDI Conversion Plate	1920x1080i 30Hz	RGB 4:4:4 8 BIT	
HDMI / DVI	Native HDMI Plate / Multi Format Plate / HDMI -> SDI Conversion Plate	1920x1080P 50HZ	RGB 4:4:4 8 BIT	
HDMI / DVI	Native HDMI Plate / Multi Format Plate / HDMI -> SDI Conversion Plate	1920x1080P 59.94HZ	RGB 4:4:4 8 BIT	
HDMI / DVI	Native HDMI Plate / Multi Format Plate / HDMI -> SDI Conversion Plate	1920x1080P 60HZ	RGB 4:4:4 8 BIT	
HDMI / DVI	Native HDMI Plate / Multi Format Plate / HDMI -> SDI Conversion Plate	1920x1080P 60Hz	RGB 4:4:4 8 BIT	
HDMI / DVI	Native HDMI Plate / Multi Format Plate / HDMI -> SDI Conversion Plate	720P 50HZ	RGB 4:4:4 8 BIT	
HDMI / DVI	Native HDMI Plate / Multi Format Plate / HDMI -> SDI Conversion Plate	720P 59.94 HZ	RGB 4:4:4 8 BIT	
HDMI / DVI	Native HDMI Plate / Multi Format Plate	720P 60HZ	RGB 4:4:4 8 BIT	

Table 19-1. Supported Resolutions (continued)

Signal	Supported by	Resolution and Frequency	Color Space(s)	Aspect Ratio Adjustments
HDMI / DVI	Native HDMI Plate / Multi Format Plate / HDMI -> SDI Conversion Plate	720P 60HZ	RGB 4:4:4 8 BIT	
HDMI	Native HDMI Plate / HDMI -> SDI Conversion Plate	3840x2160 30Hz	RGB 4:4:4 8 BIT, YCbCr 4:2:2 8 BIT (12 Bpc)	
HDMI	Native HDMI Plate / HDMI -> SDI Conversion Plate	3840x2160 50Hz	RGB 4:4:4 8 BIT, YCbCr 4:2:2 8 BIT (12 Bpc), YCbCr 4:4:4 8 BIT	
HDMI	Native HDMI Plate / HDMI -> SDI Conversion Plate	3840x2160 59.94Hz	RGB 4:4:4 8 BIT, YCbCr 4:2:2 8 BIT (12 Bpc), YCbCr 4:4:4 8 BIT	
HDMI	Native HDMI Plate / HDMI -> SDI Conversion Plate	3840x2160 60Hz	YCbCr 4:2:2 8 BIT (12 Bpc), YCbCr 4:4:4 8 BIT	
HDMI	Native HDMI Plate	4096x2160 50Hz	RGB 4:4:4 8 BIT, YCbCr 4:2:2 8 BIT (12 Bpc), YCbCr 4:4:4 8 BIT	Cropped to 16:9 when sent to SDI or HD HDMI destinations
HDMI	Native HDMI Plate	4096x2160 59.94Hz	RGB 4:4:4 8 BIT, YCbCr 4:2:2 8 BIT (12 Bpc), YCbCr 4:4:4 8 BIT	Cropped to 16:9 when sent to SDI or HD HDMI destinations
HDMI	Native HDMI Plate	4096x2160 60Hz	RGB 4:4:4 8 BIT, YCbCr 4:2:2 8 BIT (12 Bpc), YCbCr 4:4:4 8 BIT	Cropped to 16:9 when sent to SDI or HD HDMI destinations
Quad SDI QL-3G A 4K 2SI	Quad SDI Plate (uses all 4 SDI inputs)	3840x2160 50Hz	YCbCr 4:2:2 10 BIT	
Quad SDI QL-3G A 4K 2SI	Quad SDI Plate (uses all 4 SDI inputs)	3840x2160 60HZ	YCbCr 4:2:2 10 BIT	
Quad SDI QL-3G A 4K 2SI	Quad SDI Plate (uses all 4 SDI inputs)	4096x2160 50Hz	YCbCr 4:2:2 10 BIT	Cropped to 16:9 when sent to SDI or HD HDMI destinations
Quad SDI QL-3G A 4K 2SI	Quad SDI Plate (uses all 4 SDI inputs)	4096x2160 60Hz	YCbCr 4:2:2 10 BIT	Cropped to 16:9 when sent to SDI or

Table 19-1. Supported Resolutions (continued)

Signal	Supported by	Resolution and Frequency	Color Space(s)	Aspect Ratio Adjustments
				HD HDMI destinations
RGsB	Multi-Input Plate	980x980 74Hz	YCbCr	Fit to 16:9 (black bars inserted)
RGsB	Multi-Input Plate	980x980 75Hz	YCbCr	Fit to 16:9 (black bars inserted)
S-Video	Multi-Input Plate	NTSC 59.94HZ	YCbCr	Fit to 16:9 (black bars inserted)
S-Video	Multi-Input Plate	PAL 50Hz	YCbCr	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1024x1214 69Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1024x768 49Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1024x768 59Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1024x768 60Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1024x768 70Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1024x768 74Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1024x768 75Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1024x768 84Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1024x768 85Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1064x600 59Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1064x600 60Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1064x600 75Hz	RGB PC	Fit to 16:9 (black bars inserted)

Table 19-1. Supported Resolutions (continued)

Signal	Supported by	Resolution and Frequency	Color Space(s)	Aspect Ratio Adjustments
VGA	Multi-Input Plate	1064x600 85Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1152x720 59Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1152x720 60Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1152x720 74Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1152x864 60hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1152x864 75Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1224x768 59Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1280x1024 50Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1280x1024 59Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1280x1024 60Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1280x1024 74Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1280x1024 75Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1280x1024 84Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1280x1024 85Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1280x1081 74Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1280x1081 75Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1280x1204 75Hz	RGB PC	Fit to 16:9 (black bars inserted)

Table 19-1. Supported Resolutions (continued)

Signal	Supported by	Resolution and Frequency	Color Space(s)	Aspect Ratio Adjustments
VGA	Multi-Input Plate	1280x1207 75Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1280x720 59Hz	RGB TV	
VGA	Multi-Input Plate	1280x720 74Hz	RGB TV	
VGA	Multi-Input Plate	1280x768 49Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1280x768 59Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1280x768 60Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1280x768 84Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1280x800 60Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1280x800 75Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1280x960 49Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1280x960 59Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1280x960 60Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1280x960 74Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1280x960 84Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1280x960 85Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1360x768 49Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1360x768 59Hz	RGB PC	Fit to 16:9 (black bars inserted)

Table 19-1. Supported Resolutions (continued)

Signal	Supported by	Resolution and Frequency	Color Space(s)	Aspect Ratio Adjustments
VGA	Multi-Input Plate	1360x768 60Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1360x768 74Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1360x768 74Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1360x768 84Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1400x1050 49Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1400x1050 75Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1536x960 49Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1536x960 59Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1536x960 74Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1600x1200 50Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1600x1200 56Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1600x1200 59Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1600x1200 60Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1680x1050 49Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1680x1050 59Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1704x960 59Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1864x1050 59Hz	RGB PC	Fit to 16:9 (black bars inserted)

Table 19-1. Supported Resolutions (continued)

Signal	Supported by	Resolution and Frequency	Color Space(s)	Aspect Ratio Adjustments
VGA	Multi-Input Plate	1864x1050 60Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1864x1050 75Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1920x1080 49Hz	RGB TV	
VGA	Multi-Input Plate	1920x1080 59Hz	RGB TV	
VGA	Multi-Input Plate	1920x1081 49Hz	RGB TV	
VGA	Multi-Input Plate	1920x1200 49Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	1920x1200 60Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	640x400 85Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	640x480 59Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	640x480 60Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	640x480 72Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	640x480 74Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	640x480 75Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	640x480 84Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	720x400 85Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	720x480 60Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	720x480 75Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	720x576 60Hz	RGB PC	Fit to 16:9 (black bars inserted)

Table 19-1. Supported Resolutions (continued)

Signal	Supported by	Resolution and Frequency	Color Space(s)	Aspect Ratio Adjustments
VGA	Multi-Input Plate	720x576 75Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	768x480 74Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	768x480 84Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	800x600 49Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	800x600 56Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	800x600 59Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	800x600 60Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	800x600 70Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	800x600 72Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	800x600 74Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	800x600 75Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	800x600 84Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	800x600 85Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	848x480 59Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	848x480 60Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	848x480 74Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	848x480 84Hz	RGB PC	Fit to 16:9 (black bars inserted)

Table 19-1. Supported Resolutions (continued)

Signal	Supported by	Resolution and Frequency	Color Space(s)	Aspect Ratio Adjustments
VGA	Multi-Input Plate	960x600 49Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	960x600 59Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	960x600 60Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	960x600 84Hz	RGB PC	Fit to 16:9 (black bars inserted)
VGA	Multi-Input Plate	960x600 85Hz	RGB PC	Fit to 16:9 (black bars inserted)