



CA310 Telemedicine Cart

User & Installation Guide



AVZ-270920-A

© 2017 Avizia Inc. All rights reserved. | avizia.com

Table of contents

| | | | |
|---|----|---|----|
| Table of contents | 2 | Fleet Monitoring..... | 26 |
| Before getting started..... | 3 | Using the system | 27 |
| Indications for use..... | 4 | Adjusting the system height..... | 28 |
| Contraindications | 4 | Raising the work surface..... | 28 |
| Safety precautions..... | 5 | Lowering the work surface..... | 28 |
| Warnings | 5 | Navigating the menus..... | 29 |
| Environmental considerations..... | 5 | Controlling the camera..... | 30 |
| Waste handling..... | 5 | Camera controls..... | 30 |
| Warnings..... | 6 | Selfview | 30 |
| Operator safety summary | 7 | Controlling volume and microphone..... | 31 |
| Important safeguards | 8 | Adjusting the speaker volume..... | 31 |
| Equipment markings | 9 | Turning microphone on and off..... | 31 |
| Getting started | 10 | Making a video call | 32 |
| Best practices | 11 | Placing a call | 32 |
| System overview | 12 | Presenting a laptop | 33 |
| Network considerations..... | 13 | Presenting an optional PC | 34 |
| QuickBoot™ feature..... | 14 | Presenting an auxiliary device..... | 35 |
| Console overview | 15 | Maintaining the system..... | 36 |
| Control overview | 15 | Displaying system information..... | 37 |
| Power indicator LED states | 15 | Cleaning and maintenance guidelines | 38 |
| Connections overview..... | 16 | Cleaning the system | 38 |
| Setting up the system | 17 | Maintaining the system..... | 38 |
| Initial system setup..... | 17 | Battery guidelines | 39 |
| Connecting an auxiliary device..... | 18 | Installing updates..... | 40 |
| Connecting an electronic or digital stethoscope | 19 | Factory defaulting the system..... | 42 |
| Connecting a laptop..... | 20 | Storing the system..... | 43 |
| Connecting a second display..... | 21 | Short-term storage..... | 43 |
| Turning the system on and entering QuickBoot™ | 22 | Long-term storage..... | 43 |
| Connecting to network..... | 23 | Troubleshooting..... | 44 |
| Connections overview..... | 23 | Technical Specifications | 45 |
| Connect to a wired network..... | 24 | | |
| Connect to a wireless network..... | 25 | | |

Before getting started



- Indications for use
 - Contraindications
- Safety precautions
 - Warnings
 - Environmental considerations
 - Waste handling
- Warnings
- Operator safety summary
- Important Safeguards
- Equipment markings

Indications for use

The Avizia CA310 enables secure and effective audio/video communication between multiple healthcare providers and between providers and patients. The system transmits real-time audio and video captured by a high-definition camera and integrated microphone. It also receives real-time audio and video from a similar system in a remote location. Finally, the CA310 supports transmission of real-time audio and video from peripheral audio/visual medical devices, which may be connected to standard audio and video inputs provided on the system.

The CA310 is intended to facilitate remote provider/patient and provider/provider consultations. These consultations should always be conducted with a licensed medical professional physically in the room with the patient.

Contraindications

The CA310 is not intended to substitute for the in-person physical examination of a patient or as a substitute for direct medical intervention. It is also not intended for real-time, active, or online patient monitoring, nor is it intended to provide time sensitive data or alarms. The CA310 does not support transmission of numerical telemetric/serial data and is not intended for use with non-audio/visual medical devices.



Safety precautions

Warnings

Do not modify this equipment without authorization from the manufacturer!

Precaution should be taken during transportation of the system. It is recommended that the operator use caution when wheeling the unit over doorstops and/or into elevators to ensure their safety and prevent damage to the unit.

For Customers In North America

This equipment complies to the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy, which may cause harmful interference to radio communications.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment

Environmental considerations

Thank you for buying a product which contributes to a reduction in pollution, and thereby helps save the environment. Our products reduce the need for travel and transport and thereby reduce pollution. Our products have either none or few consumable parts (chemicals, toner, gas, paper). Our products are low energy consuming products.

Battery Handling

Batteries for the Remote Control are Long Life Alkaline batteries; please follow guidelines on the packing material for handling and disposal of the batteries.

The system enclosed battery (rechargeable battery for use in temporary relocation) in this product is non-user replaceable and should be removed by a qualified service technician only.

CAUTION
RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO MANUFACTURER INSTRUCTIONS.

Production of Products

Our factories employ efficient environmental methods for reducing waste and pollution and ensuring the products are recyclable.

Waste handling

EU Battery and WEEE Directives

For product safety and data integrity reasons the permanently affixed battery should only be removed or replaced professionally by a repair technician or waste management professional. Please contact Avizia or an authorized service agent if the product fails to perform due to malfunction of the permanently affixed battery.



This symbol on the product, battery or packaging means that the product and/or battery should not be disposed of with your household waste.

It is your responsibility to dispose of your waste equipment and batteries separately from your household waste and in accordance with local laws and regulations. The correct disposal of your old equipment and batteries will help prevent potential negative consequences for the environment and human health.

Please use the nearest waste collection facility as directed by your municipality or your retailer.

Warnings

Not Intended For Dialing Emergency Medical Services

The CA310 is not intended to make emergency calls. In the event of an emergency, the user should use a telephone or device other than the CA310 to call local emergency services.

Use medically approved devices

Ensure that any device connected to the CA310 power outlets conforms to IEC 60601-1 standards in order to maintain compliance. Connecting electrical equipment to the CA310 effectively creates a new system, which can result in a reduced level of safety.

Loss of Connectivity

During the use of the CA310, a healthcare professional may lose connectivity with the system. Loss of connectivity can result from power outages, network outages, failure in the CA310 software/hardware, or other causes. Loss of connectivity can prevent a health care professional from completing a patient session in a timely manner. In cases where time is critical, the user should not use the CA310 and seek an in-person examination from a licensed health care professional.

Delay or Choppiness of Audio or Video Transmission

The CA310 may operate at a delay of up to 150 milliseconds, depending on network condition. This means that the provider may experience the audio and video transmissions later than they are really occurring. In cases where the remote health care provider needs to make time sensitive assessments or give instructions this delay may result in misalignment of audio and visual transmissions to the real-time procedure and/or inappropriate treatment or diagnosis.

Proper Training Is Required

Healthcare professionals using the CA310 should be sufficiently trained and familiar with the Installation and User Guide and the instructions for use. Please refer to this guide under “Troubleshooting”, “Safety Precautions” and “Operator Safety.”

See <http://avizia.com>.

Audio and Video Distortions

The CA310 can experience audio and video distortions due to network latency, software/hardware malfunction, insufficient bandwidth, or for other reasons. If audio or video is not of sufficient quality for the intended use of the CA310, please refer to:

- this guide under “Technical Specifications” and “Troubleshooting,” or visit: <http://avizia.com/support>
- Cisco SX20 codec documentation at: <http://cisco.com/go/sx-docs>

Network and Signal Input/Output

The network and signal input/output ports must only be connected to Low Voltage SELV connections.

Operator safety summary

For your protection, please read these safety instructions completely before operating the equipment and keep this manual for future reference. The information in this summary is intended for persons who operate the equipment as well as repair (servicing) personnel. Carefully adhere to all warnings, precautions and instructions on the apparatus, and the ones described in the operating instructions.

Also, adhere to safety guidelines found in manuals for any peripheral equipment.

**This system contains no user-serviceable**

parts: The system enclosed battery (rechargeable battery for use in temporary relocation) in this product is non-user replaceable and should be removed by a qualified service technician only.



To avoid risk of electric shock, this equipment must only be connected to a supply mains with protective earth.



Lower before transporting: For your safety and to protect the CA310, fully lower the work surface before transporting the system. Pushing or pulling the system with any part of the system other than its handle may result in damage to the system.

**Traversing thresholds and obstacles on the**

ground: Use the system handle to PULL the system safely across thresholds, cords, cables, and other potential obstacles on the ground. Always fully lower the work surface before transporting the system.

- **Water and moisture** - Do not operate the equipment under or near water - for example near a bathtub, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool or in areas with high humidity.
- **Cleaning** - Unplug the apparatus from the wall outlet before cleaning or polishing. Please adhere to the general cleaning guidelines found in this document's section: "Cleaning the System."
- **Power-Cord Protection** - Route the power cord so as to avoid it being walked on or pinched by items placed upon or against it, paying particular attention to the plugs, receptacles, and the point where the cord exits from the apparatus.
- **Mobility** - Before transporting the system unplug the power cord and wrap it around the cable hook. Also ensure that the camera and display are in the operational position (facing forward) and not in the maintenance position (facing upward). Use the system handle to maneuver the system. Pull the system over thresholds, cords, cables, and other obstacles on the ground. Fully lower the work surface before transporting the system.
- **Ventilation** - Do not block any of the ventilation openings of the apparatus. Install in accordance with the installation instructions. Never cover the slots and openings with a cloth or other material. Never install the apparatus near heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- **Attachments** - Only use attachments as recommended by the manufacturer.
- **Accessories** - Use only accessories intended for use with this system.
- **Lightning** - Unplug this apparatus during lightning storms or when unused for long periods of time.
- **Servicing** - Do not attempt to service the apparatus yourself as opening or removing covers may expose you to dangerous voltages or other hazards, and will void the warranty. Refer all servicing to qualified service personnel.
- **Opening the System** - Do not open system service panels while system is in use.
- **Storage** - If you need to store the system, ensure that it is stored in a controlled environment to avoid damage. Refer to the codec documentation for further guidelines.
- **Repacking** - We recommend you save and store the system's packing materials. They make for an ideal container with which to transport the system.
- **Damaged Equipment** - Unplug the apparatus from the outlet and refer servicing to qualified personnel under the following conditions:
 - When the power cord or plug is damaged or frayed
 - If liquid has been spilled or objects have fallen into the apparatus
 - If the apparatus has been exposed to rain or moisture
 - If the apparatus has been subjected to excessive shock by being dropped, or the unit has been damaged
 - If the apparatus fails to operate in accordance with the operating instructions.

Important safeguards

Using System in a Medical Environment

No currently available technology can completely substitute the in-person physical examination of an individual patient. Avizia Telemedicine products provide high quality audio and video experiences; when used properly, these products provide a valuable tool for medical professionals. The use and value of the system will vary depending on the specific circumstances of the patient condition, data transmission speeds, and the capabilities of the local environment. Ultimately, the local medical professional supervising the patient's care should judge how this system is to be utilized.



The leakage current could increase when connected to other equipment.

Warning on Power Connection

Use only with the supplied power cords or cords that meet local hospital-grade requirements. Users in the United States and Canada should use hospital-grade cords that meet the following requirements:

| | United States | Canada |
|------------------------|----------------|----------------|
| Plug Type | Hospital Grade | Hospital Grade |
| Cord Type | SJT3 x 16 AWG | SJT3 x 16 AWG |
| Minimum Cordset Rating | 13A/125V | 13A/125V |
| Safety Approval | UL | UL |

NEVER USE AN EXTENSION CABLE TO POWER THE SYSTEM.

ElectroStatic Discharge (ESD)

When subjected to an electrostatic discharge the Precision-HD camera image may suffer momentary interruption - this will self-recover in a few seconds after the discharge.

To avoid excess electrostatic discharge, floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.

Equipment markings



The “exclamation mark” within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions within literature accompanying the equipment.



Pushing or pulling the system with any part of the system other than the handle may result in damage to the system. Always fully lower the work surface before transport and use the system handle to maneuver.



Manufacturer



Use the handle to pull the system safely across thresholds, cords, cables, and other potential obstacles on the ground. Always fully lower the work surface before transporting the system.



Follow instructions for use.
Suivez les instructions d'utilisation.

CAUTION! This device contains a battery.
ATTENTION! Ce dispositif contient une batterie.

| | |
|--|---|
| <ol style="list-style-type: none"> 1. DO NOT expose battery to high temperatures. <i>NE PAS exposer la batterie à des températures élevées.</i> 2. DO NOT expose this battery to moisture. <i>NE PAS exposer cette batterie à l'humidité.</i> 3. DO NOT subject the battery to mechanical shock or vibration. <i>NE PAS soumettre la batterie à des chocs mécaniques ou des vibrations.</i> 4. DO NOT disassemble this battery. <i>Ne démontez pas la batterie.</i> 5. Turn OFF while not in use. <i>Coupez lorsqu'il n'est pas utilisé.</i> 6. If the battery will not be used for long periods of time, store in a shaded and dry area. Fully charge the battery every 60 days. <i>Si la batterie ne sera pas utilisée pendant de longues périodes de temps, magasin dans une zone ombragée et sec. Charger complètement la batterie tous les 60 jours.</i> 7. Use only dedicated charger. <i>Utilisez uniquement le chargeur dédié.</i> | <p>PRODUCT NAME: Li-Ion Battery <i>Nom du produit: Batterie Li-Ion</i></p> <p>BATTERY MANUFACTURER / ADDRESS: <i>Fabricant de la batterie / Adresse:</i></p> <p>ITM Semiconductor Co., Ltd. 82-7 Gwahaksaneop 1-ro, Oksan-myeon, Cheongwon-gun Ochang, Chungcheongbuk-do, Korea 363-911</p> <p>MADE IN KOREA / Fabriqué en Corée</p> <div style="display: flex; justify-content: space-around; align-items: center;"> </div> <p><small>This module contains no user-serviceable parts. Ce module ne contient aucune pièce réparable par l'utilisateur.</small></p> |
|--|---|

Located on Power Module housed within the worksurface.

NOTICE

No currently available technology can completely substitute the in-person physical examination of an individual patient. Avizia Telemedicine products provide high quality audio and video experiences; when used properly, these products provide a valuable tool for medical professionals. The use and value of the system will vary depending on the specific circumstances of the patient condition, data transmission speeds, and the capabilities of the local environment. Ultimately, the local medical professional supervising the patient's care should judge how this system is to be utilized.

NOTICE

The plug below has a 3 AMP max.

Located on the rear of the system at the bottom of the system column.

Getting started



- Best practices
- System overview
 - Network considerations
 - QuickBoot™ feature
- Console overview
 - Control overview
 - Power indicator LED states
 - Connections overview
- Setting up the system
 - Initial system setup
 - Connecting an auxiliary device
 - Connecting an electronic or digital stethoscope
 - Connecting a laptop
 - Connecting a second display
- Turning the system on and entering Quickboot™
- Connecting to network
 - Connections overview
 - Connect to a wired network
 - Connect to a wireless network
- Fleet Monitoring

Best practices

Enable Auto-answer

Setting your system to auto-answer can be a good way to make sure you don't miss a call. You can toggle auto-answer on by accessing the Cisco codec menu system with the system console controls.

Press (OK) to bring up the Home menu and use the Directional pad to navigate the system menu:

- HOME > SETTINGS > CALL SETTINGS...
- Configure the auto answer settings

We recommend you download the user documentation for details and advanced Cisco SX20 codec functions. Go to: <http://cisco.com/go/quickset-docs>.

Plug in when storing system

We recommend that the system is plugged in to an electrical outlet when storing the CA310. This ensures that Quick-Boot™ maintains a full charge and is ready when needed.

Use call history for quick redial

When calls are placed, missed or received, navigating to your Recent calls list allows you to utilize contacts quickly.

Press (OK) to bring up the Home menu and use the Directional pad to navigate the system menu:

- HOME > CALL > RECENT CALLS...
- Select contact to call

Save frequently called numbers

You can save frequently called or favorite video numbers to make them that much easier to call.

Press (OK) to bring up the Home menu and use the Directional pad to navigate the system menu:

- HOME > CALL... select **PHONE BOOK** or **RECENT CALLS...**
- Select contact and choose **SAVE TO MY CONTACTS**

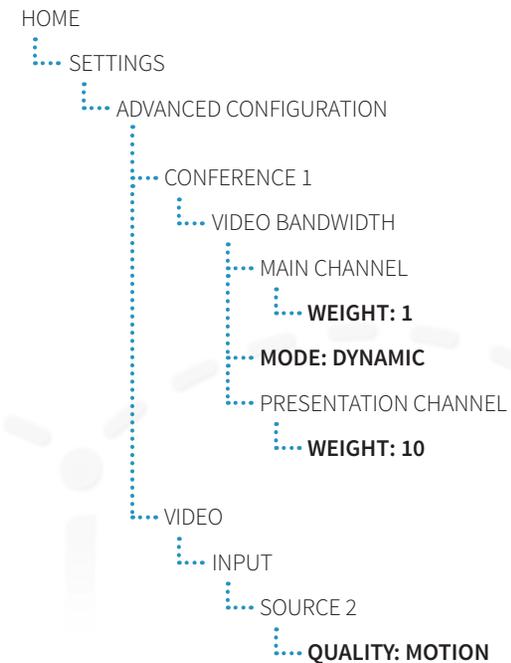
To place a call from the My contacts directory, press (OK) to bring up the Home menu and use the Directional pad to navigate the system menu:

- HOME > CALL > PHONE BOOK > MY CONTACTS...
- Select contact to call

Set peripheral sharing resolution

The CA310's content sharing settings are factory set to optimize the bandwidth allocation to the shared content source when in a video call. As call bandwidth decreases, the codec will allocate more bandwidth to the shared content stream from the main source stream. This allows the shared content (scope image, computer presentation, etc.) to be presented as clearly as possible in lower bandwidth situations.

The default settings are found in the following menu tabs, and can be adjusted as needed or desired:



System overview

What's included:

- CA310 system cart
- PrecisionHD Camera
- Display with integrated microphone
- Remote control with batteries
- Camera mounting screw (1)
- Display mounting screws (4)
- Hex wrenches and socket wrench
- Key for drawer
- 1Gig USB Flash Drive
- Cables
 - Ethernet cable (5m)
 - Power cord (5m)
 - Power share cord (10cm)
 - USB extension cable

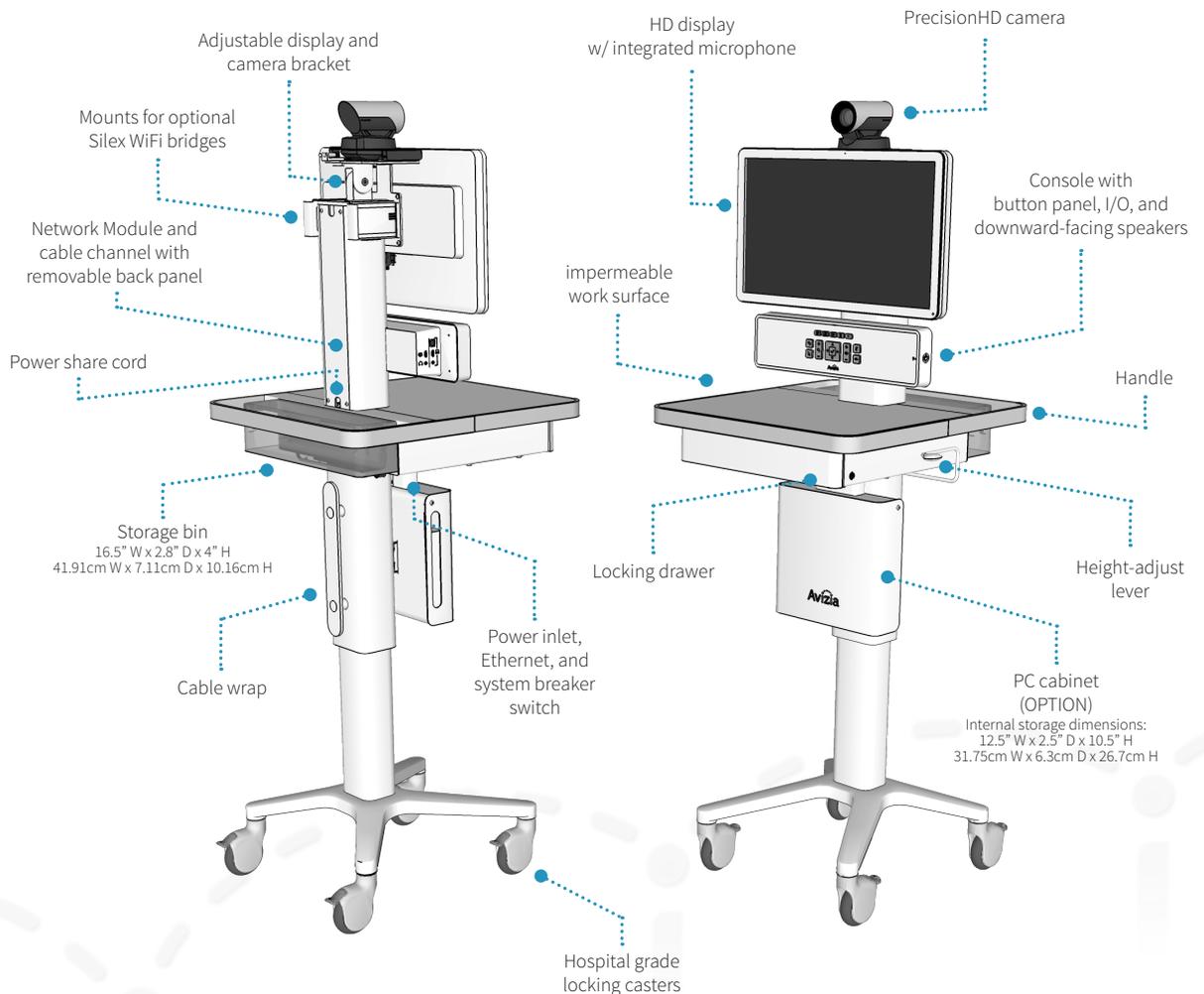
Options:

- 1 or 2 Silex WiFi bridges
- MultiSite certificate
- PC cabinet with cables (power, Ethernet, 3.5mm audio, and HDMI to HDMI) — to integrate a user-supplied Ultra-Small Form Factor (USFF) PC.
- HORUS Scope — hand-held video device for capturing images of the body. Optional interchangeable lenses make it ideal for multi-discipline medical applications.
- E-Scope II — electronic stethoscope to enhance ability to hear patient sounds locally and adds audio output capability through a telemedicine device.

Tools Required for Assembly

One Phillips head screwdriver (#2). All other tools and appropriate hardware are provided for assembly.

Refer to the **CA310 Quick Start Guide** (AVZ-CA310-DOC-QSG) included on the outside of the system packaging for initial assembly and setup.



System overview

Network considerations

The Network Module is built into the column and supports a Gigabit switch which passes network from wired or wireless infrastructure to other wired network devices, like the Cisco SX20 endpoint, Laptop or small form factor PC. The network module can be used in one of two ways: connected to the network infrastructure by Ethernet cable or over the Wi-Fi infrastructure.

Please refer to **Connecting to network** in this guide. For additional information and advanced network configuration, please see “CA310: Configuring the Wireless Network Module” found at <http://avizia.com/ca310support>.

Wireless connection

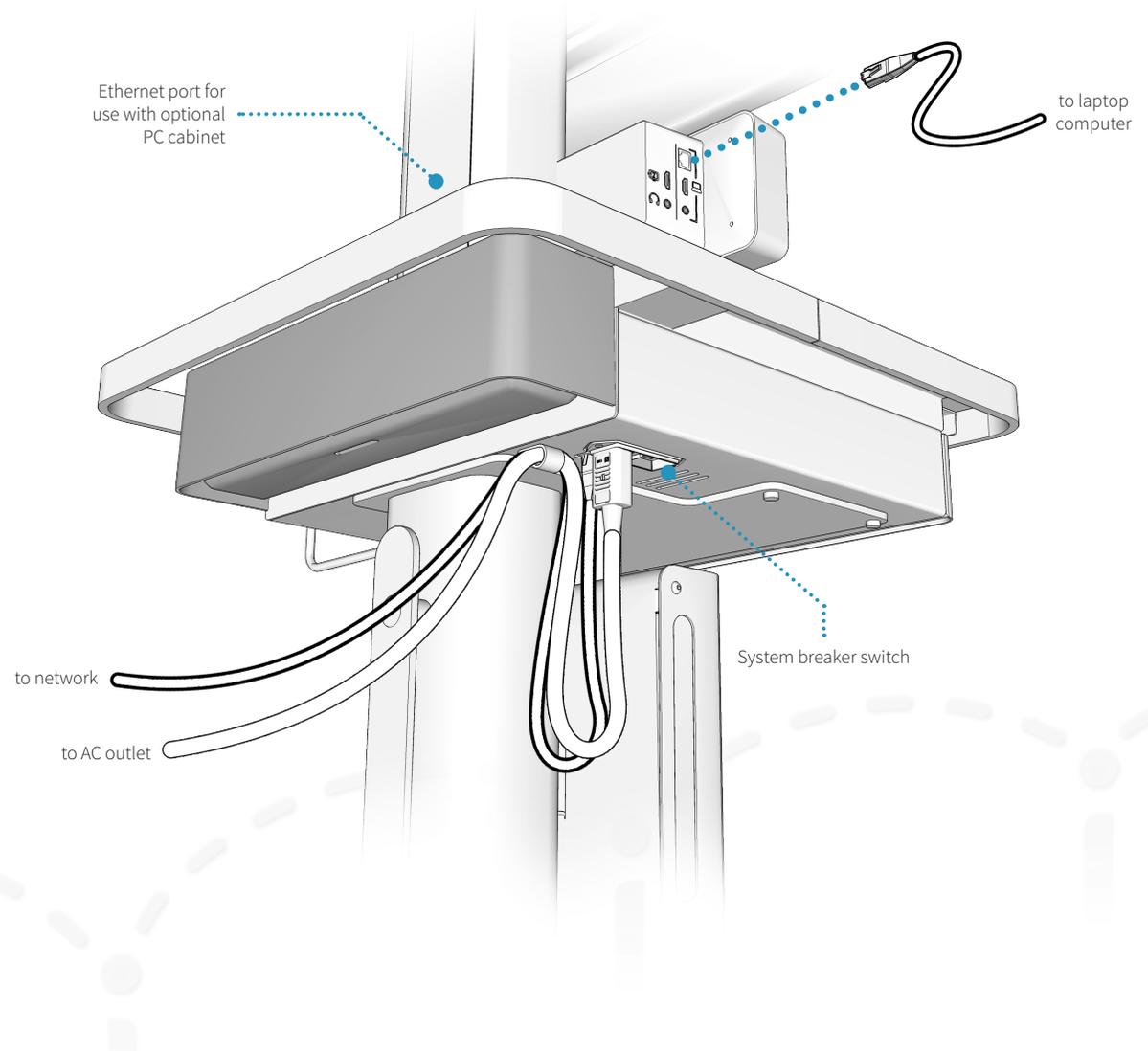
The CA310 can be configured to work on a wireless network with the optional Silex WiFi Bridge Module or customer provide WiFi Bridge. This provides network to the video codec, network out of the console port, and for an optional PC.

Wired connection (Ethernet)

An Ethernet connection from an active network jack into the Ethernet port under the work surface provides network to the video codec, network out of the console port, and for an optional PC.



The bridge ports of the network module are disabled when the system detects a wired network connection. To enable wireless, disconnect the Ethernet cable under the work surface.



System overview

QuickBoot™ feature

QuickBoot™ enables the system to go from powered off to ready for a call in under 10 seconds ensuring that it is ready to use when you need it to be.



The system must be plugged in for at least 30 minutes to achieve full transport time (15 minutes).

The QuickBoot™ battery charges while the system is plugged into an AC outlet and the breaker switch is in the ON position. When the system is disconnected from AC power, or if the breaker switch is in the OFF position, the power LED on the console will show a blinking blue light indicating that QuickBoot™ is engaged — the QuickBoot™ feature is now powering the critical components for system transport for up to 15 minutes.

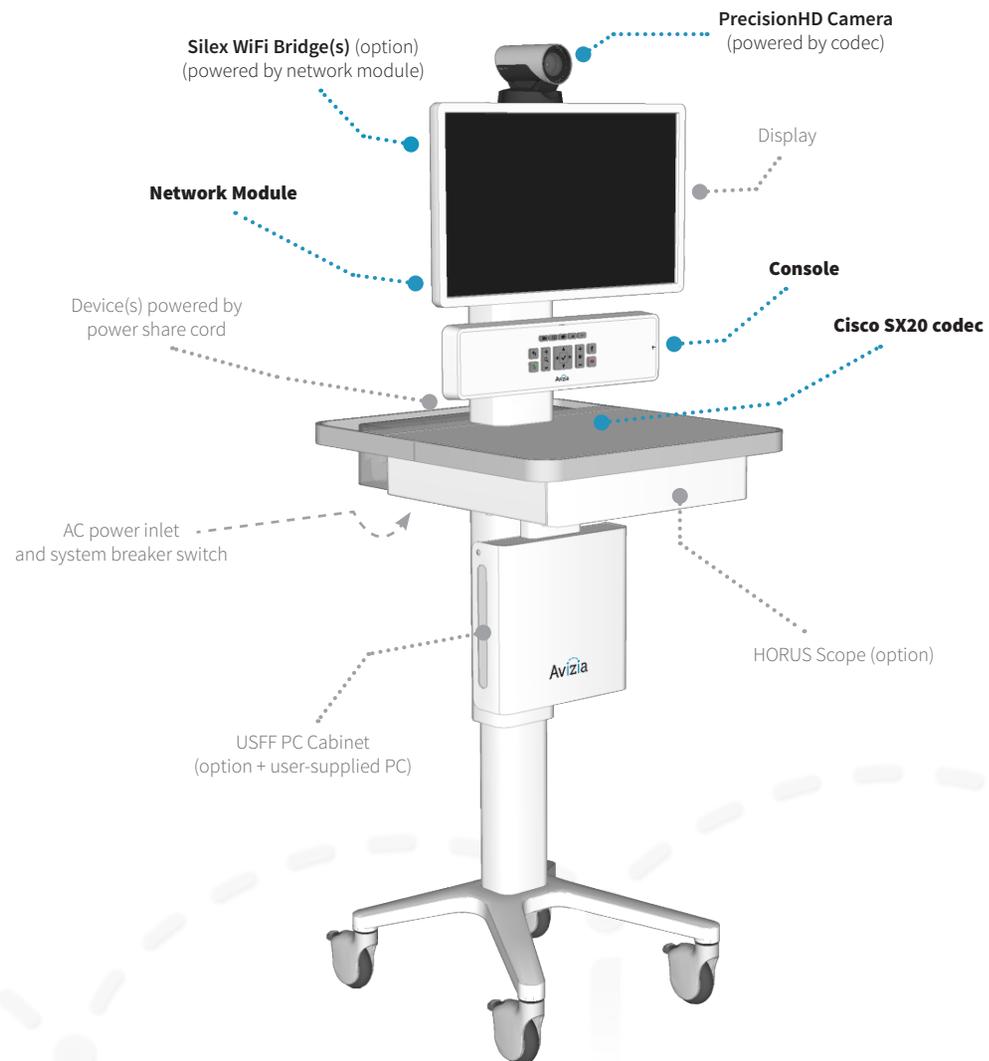
When AC power is restored then system will return to the previous state.



QuickBoot™ manages the power for three critical components: the Cisco SX20 codec, network module, and console. All other components using power will be powered down until the system's AC power inlet is supplied power and the breaker switch is in the ON position.



Ensure that all work is saved on the user-supplied PC and that the PC is properly shutdown before initiating QuickBoot™.



Console overview

Control overview

System navigation, call controls, and connectivity to peripheral sources can all be done through the system's console.

Please see [Using the system](#) to understand the console interface and how to use the CA310 system.

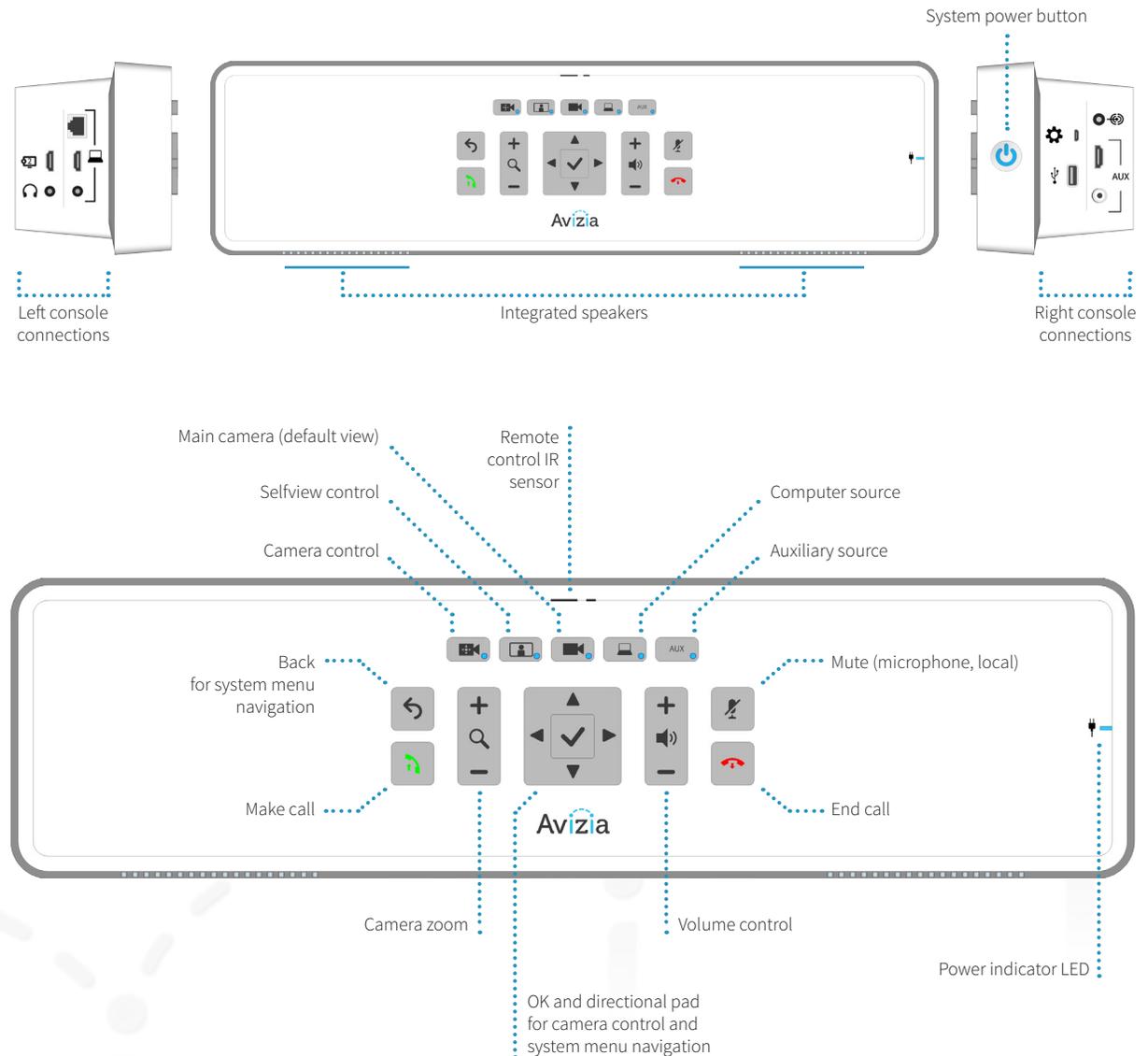
Power indicator LED states

- 

Dark
The system has no power and the QuickBoot™ battery is fully discharged.
- 

Solid Blue Light
The system is plugged in to an electrical outlet and the QuickBoot™ battery is charging.
- 

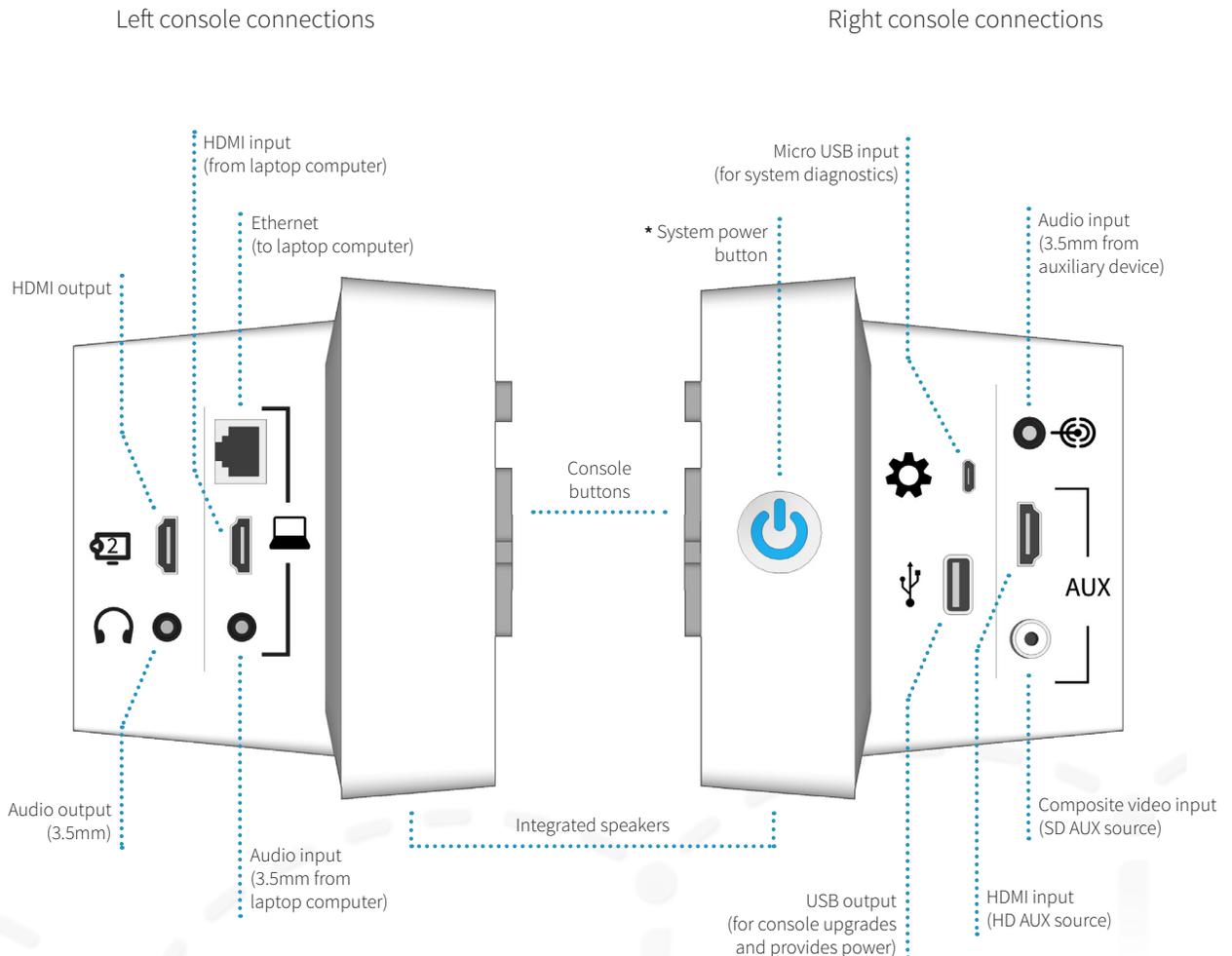
Blinking Blue Light
QuickBoot™ is enabled — the system is disconnected from AC power OR the System Breaker Switch is in the OFF position. The QuickBoot™ feature is now powering the critical components for system transport for up to 15 minutes. The system should be plugged in to an active power source as soon as possible to replenish and maintain the QuickBoot™ functionality.



Console overview

Connections overview

The left and right console connections allow the user to connect peripheral devices that will enhance the CA310 system's capabilities



* The Power Button will initially power on the system, but after that it will enable QuickBoot mode and reset the console when pressed for 10 seconds.

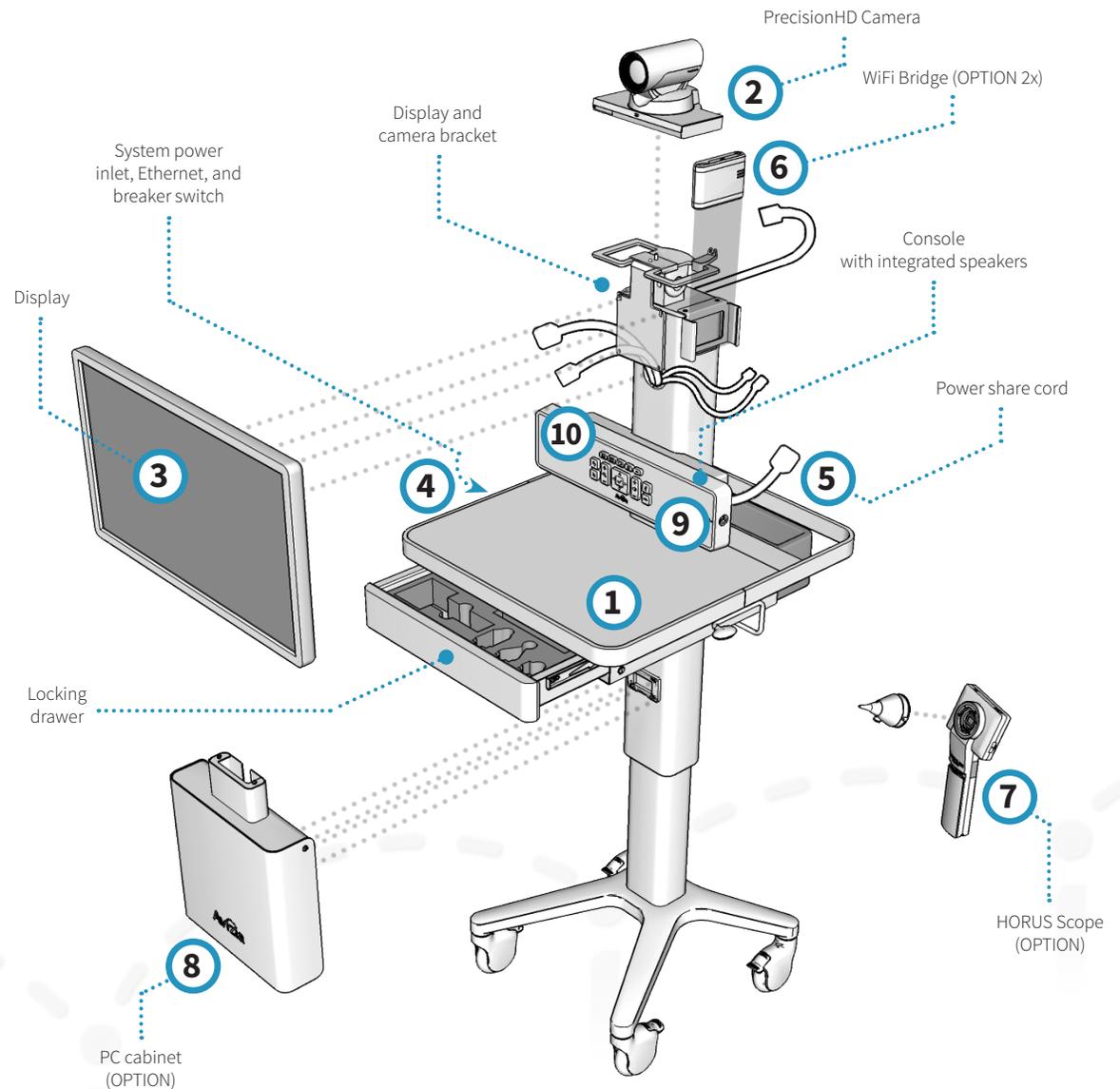
Setting up the system

Initial system setup

Refer to the **Avizia CA310 Quick Start Guide** (included with the system packaging) for procedures pertaining to initial system setup. The guide includes the following setup items:

1. Unpacking the system
2. Mounting and connecting the camera
3. Mounting and connecting the display
4. Attaching the power and Ethernet cables
5. Connecting the power share cord
6. Configuring and installing the Silex WiFi Bridge option(s)
7. Installing the HORUS Scope option
8. Installing the PC cabinet option
9. Powering ON the system
10. Configuring the system

The **CA310 Quick Start Guide** is included on the outside of the system packaging. It can also be found online at <http://avizia.com/ca310support>.



Setting up the system

Connecting an auxiliary device

Optional AV devices for transmitting images and video can be connected to the CA310.

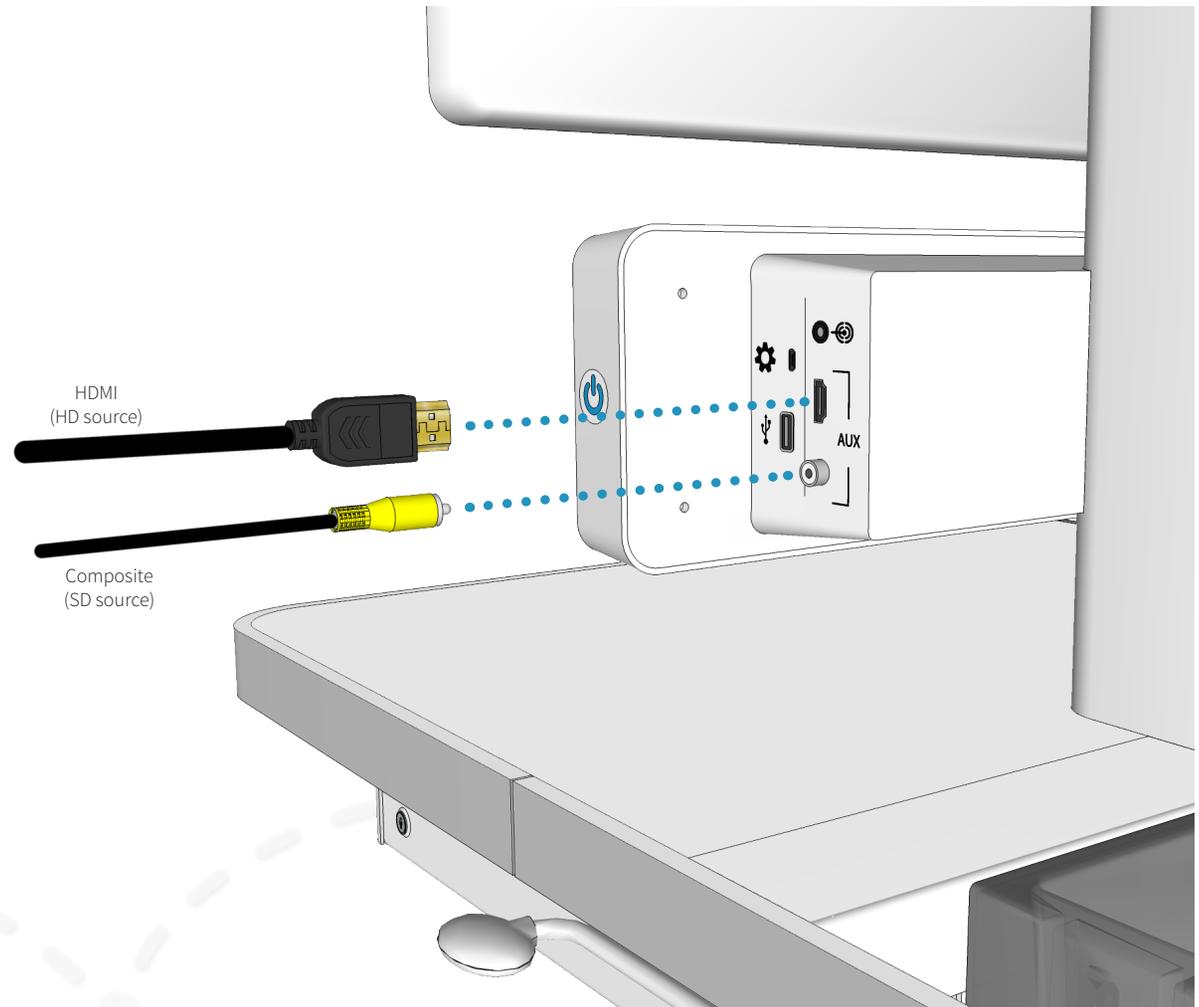
1. Connect an auxiliary device to the HDMI input and/or Composite input. Any device that provides video output and is connected to the system's HDMI or composite input can be displayed on the system: digital scope, examination camera, video feed from ultra sound, etc..
2. Ensure the AUX source(s) are appropriately powered and turned on to be viewed as the AUX source when selected.



Both HDMI (high definition) and Composite (standard definition) inputs can be connected simultaneously. Pressing the AUX button will allow you to toggle through the SD source first, the HD source second, and then to the default (main camera) source.



Audio is not transmitted over HDMI. Only video is transmitted over HDMI.



Setting up the system

Connecting an electronic or digital stethoscope

The optional E-Scope II and other electronic or digital stethoscopes can be connected to the CA310 to transmit the corresponding audio to remote participants.



The CA310 can experience audio distortions due to network latency, software/hardware malfunction, insufficient bandwidth, or for other reasons.

Connect the 3.5mm cable from the stethoscope to the 3.5mm audio input on the system. The audio from the stethoscope is now mixed into the video call.

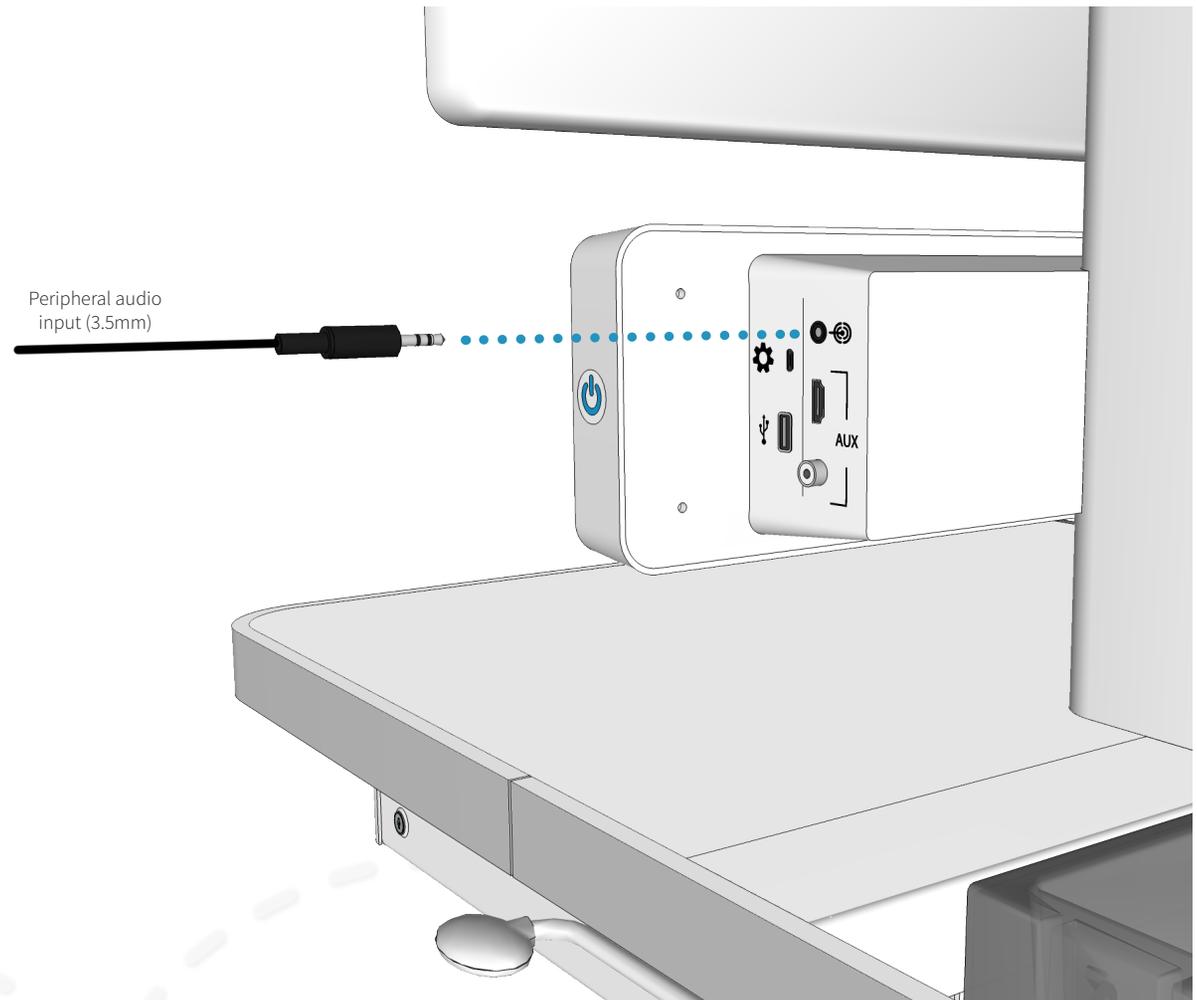


There are three audio inputs on the CA310 which follow a prioritization schedule:

1. Peripheral Audio Input
2. Laptop Audio Input
3. PC Audio Input (with PC cabinet option)

The audio input highest on the list will be the source presented in a video call. This is done to ensure that the peripheral audio input (stethoscope, ultrasound, etc.) can provide the best possible sound without interference from the other inputs.

Unplug the audio connection(s) higher up the prioritization schedule to present the desired audio.



Setting up the system

Connecting a laptop

A laptop computer can be connected to the CA310 to present the laptop's video and audio to video participants.

1. Connect the laptop video out to the CA310's HDMI input for PC. Use an appropriate HDMI adapter if needed.
2. If audio is also required for presentation, connect a 3.5mm cable from the laptop audio out to the 3.5mm PC audio input on the system. The audio from the laptop is now mixed into the video call.
3. If network is needed plug an Ethernet cable from the system to the laptop. The CA310 must first be connected to the LAN (Ethernet or wireless).



The laptop HDMI connection does not support audio. To enable laptop audio use the 3.5mm connector.

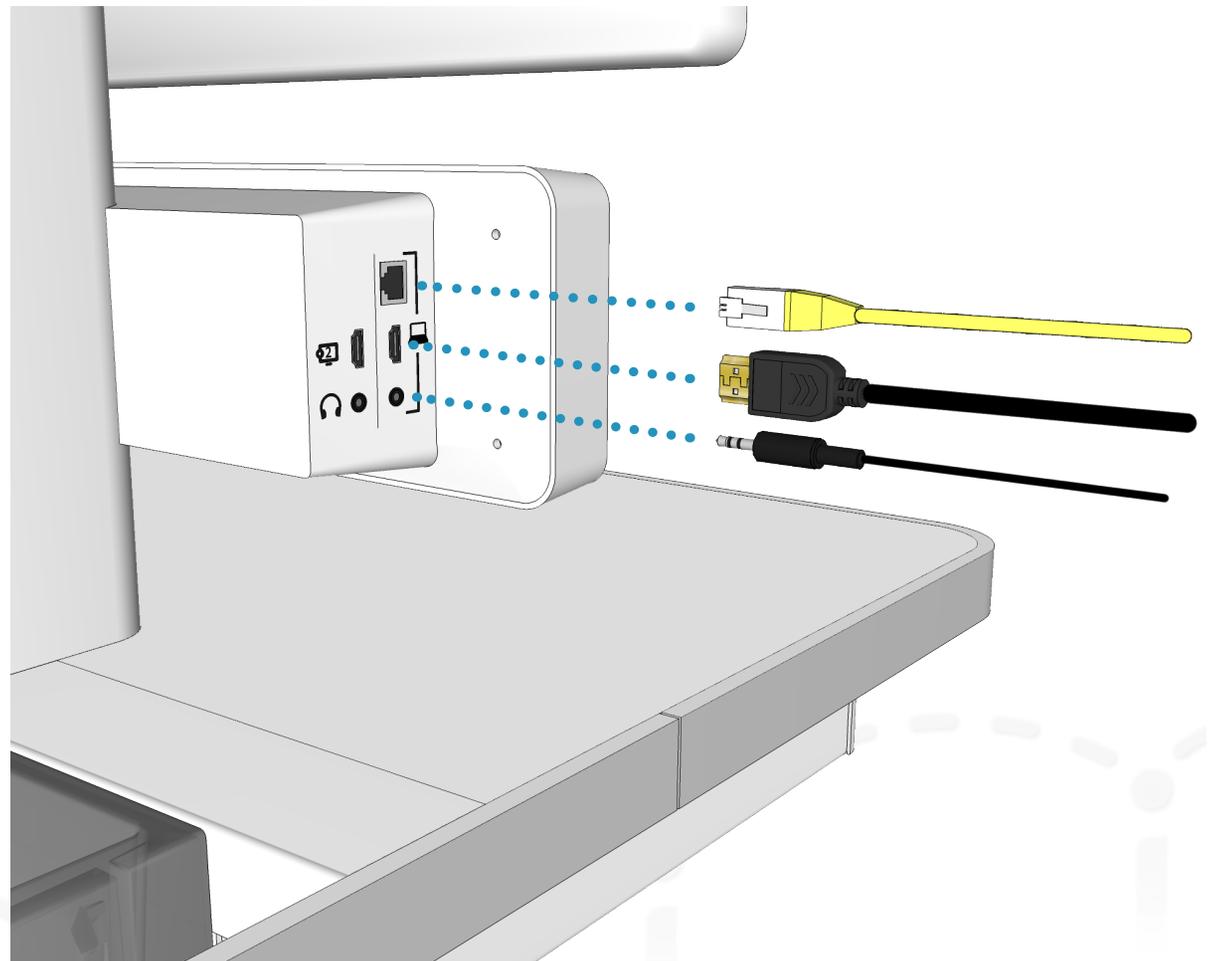


There are three audio inputs on the CA310 which follow a prioritization schedule:

1. Peripheral Audio Input
2. Laptop Audio Input
3. PC Audio Input (with PC cabinet option)

The audio input highest on the list will be the source presented in a video call. This is done to ensure that the peripheral audio input (stethoscope, ultrasound, etc.) can provide the best possible sound without interference from the other inputs.

Unplug the audio connection(s) higher up the prioritization schedule to present the desired audio.



Setting up the system

Connecting a second display

A secondary display can be connected to the CA310 to view both presentation (second display) and main video (main display) simultaneously.

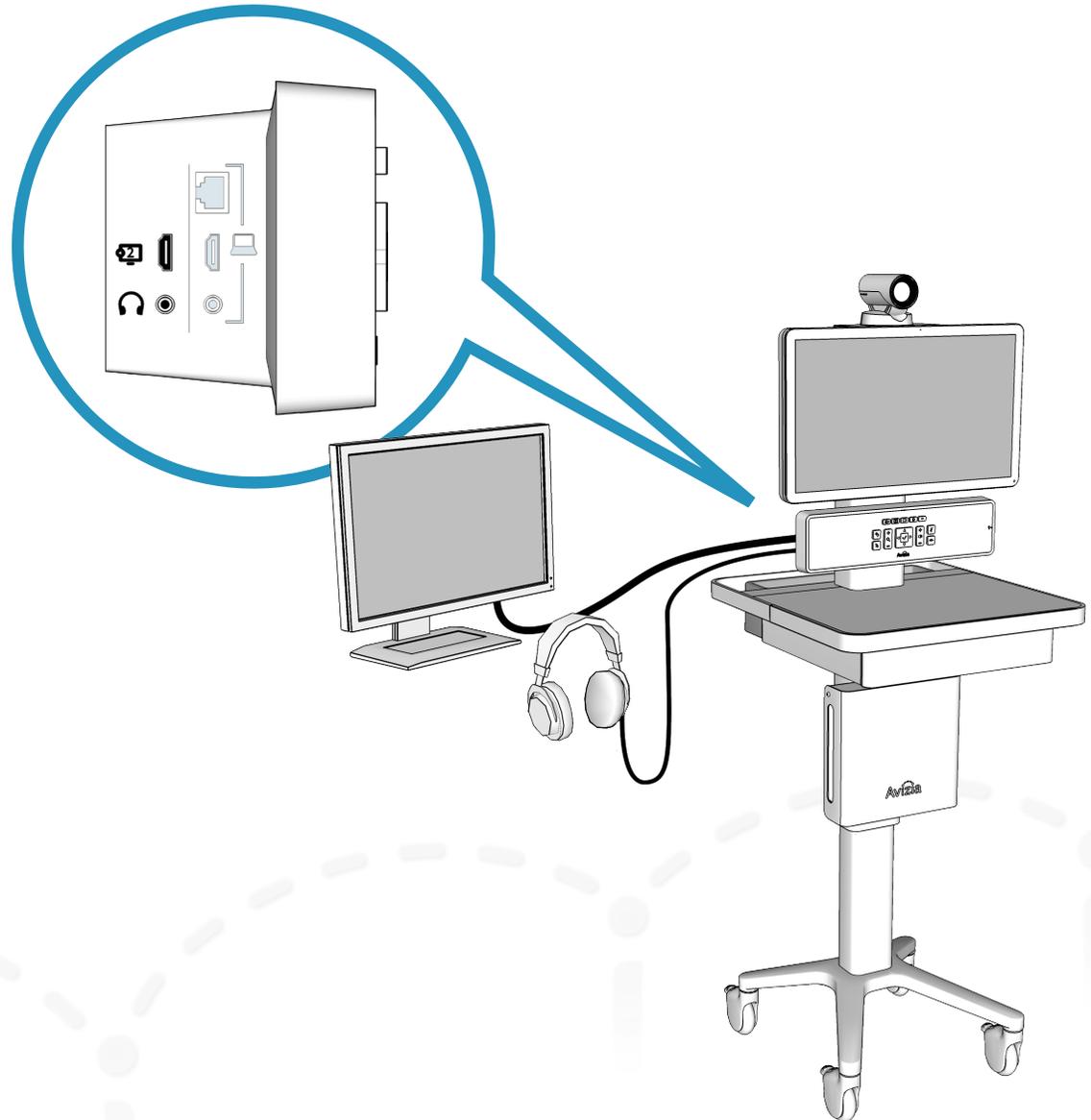
The system will auto detect the second display when you connect the HDMI cable from the second display to the console.

1. Connect the second display's video out to the CA310's HDMI input for Display 2 []. Use an appropriate HDMI adapter if needed.
2. If audio is also required for presentation, connect a 3.5mm cable from the laptop audio out to the 3.5mm audio input []. All audio is now directed through your headset.



When headphones are connected:

- audio can be heard through the headphone only; the cart's speaker will divert all audio to the headphone
- there is no MIC function available through the headphone jack



Turning the system on and entering QuickBoot™

1. Connect the 5m power cord to the power inlet on the bottom of the work surface of the cart.
2. Secure the cord to the cable strain relief (large). If you are intending to connect the system to your network with a network cable, secure the Ethernet cable with the smaller strain relief.
3. Connect the plug to an AC power outlet.
4. Ensure that the System breaker switch is in the ON position at the bottom of the worksurface. This supplies power to the entire system: QuickBoot™, display, codec, network module, and the system console..
5. Press the system power button ON at the side of the console until it illuminates blue. This will boot up the codec (approximately 90 seconds), power the camera, power the display, and provide power to an optional user-integrated PC.

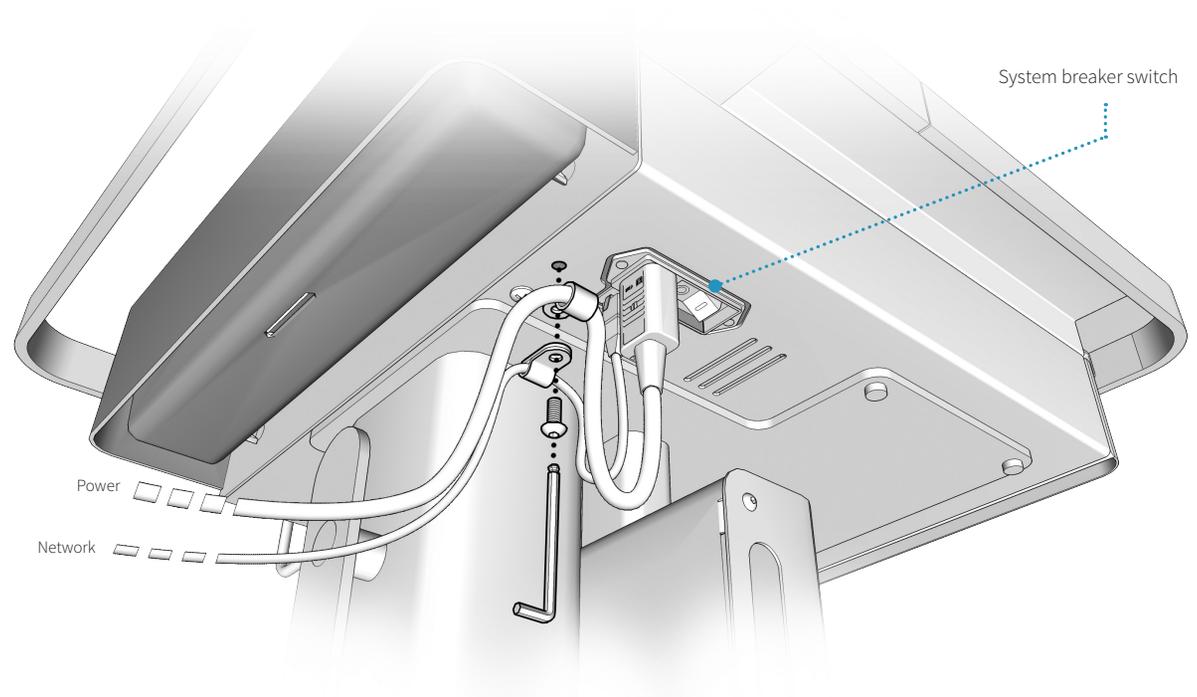


If the display does not turn on when the system is powered up, ensure that the display is powered on by pressing the display's power button.

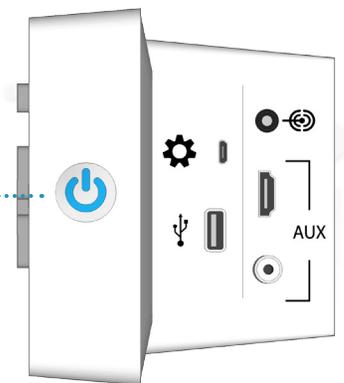
The power button will initially power on the system, but after that, pressing the power button will enable QuickBoot™ in contrast to powering the system OFF.



As long as the system is plugged into an AC outlet and the breaker switch is ON, QuickBoot™ will continue to charge and maintain readiness.



System power button

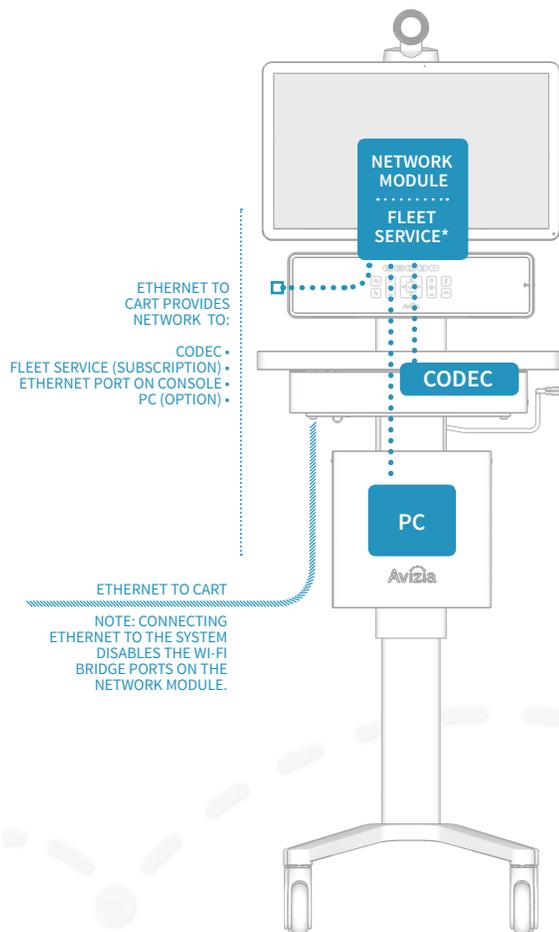


Connecting to network

Connections overview

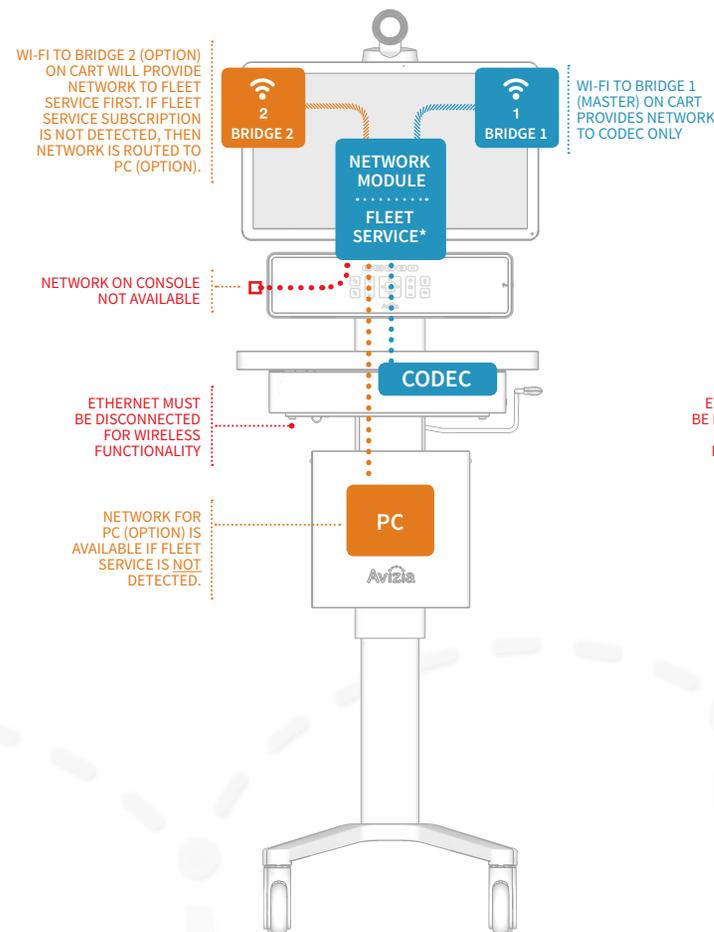
* Fleet Service requires subscription.

WIRED CONNECTION



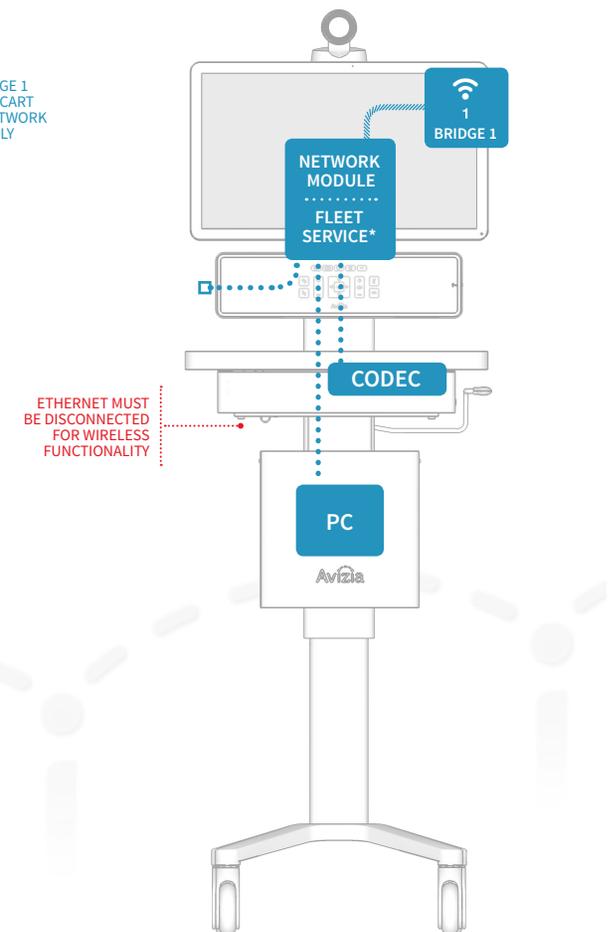
SINGLE-CLIENT WI-FI

Default mode.



MULTI-CLIENT WI-FI

Your wireless infrastructure must allow Client-Bridge access (e.g. passive client mode).



Connecting to network

Connect to a wired network

Connect the provided network cable to the LAN and the Ethernet port on the CA310. The Ethernet port is found under the work surface, left side (from front).



The Bridge port(s) on the Network Module will be disabled when the system detects an active wired Ethernet connection.

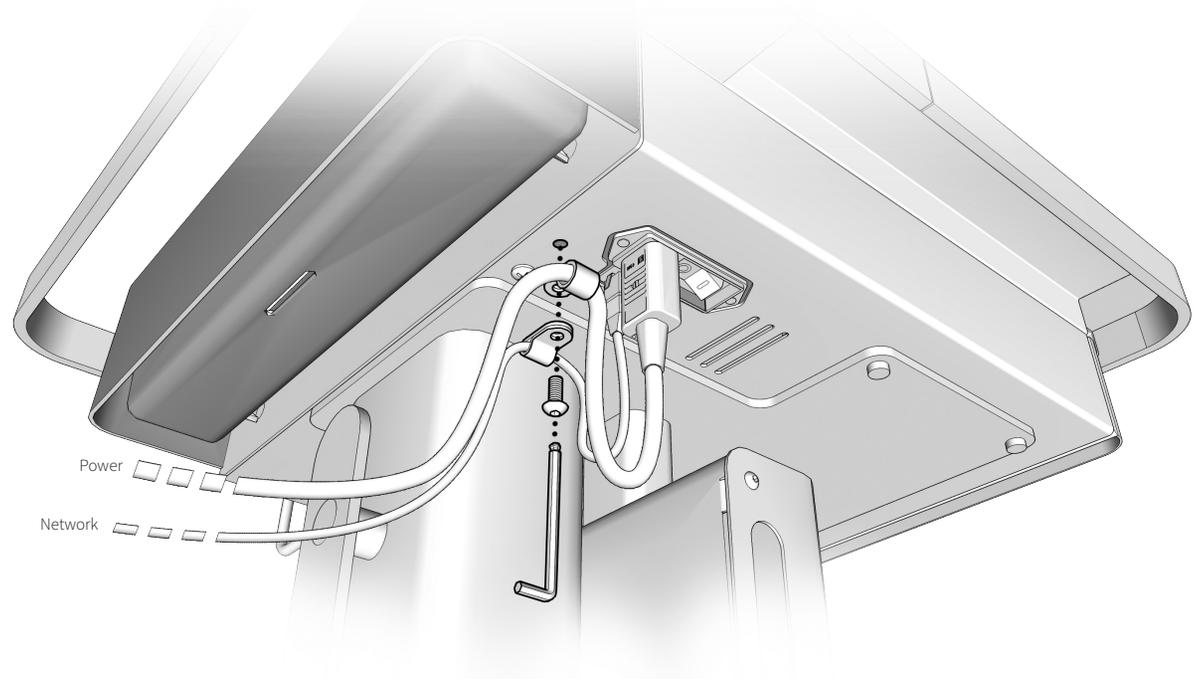
The Network Module will automatically switch between wired and wireless, but wired has priority. When a wired network is connected this will bypass the Wi-Fi Bridge ports and send network to all associated system devices: SX20 codec, laptop (via Console), PC (via PC Cabinet), and Fleet Service if subscribed.

If a wireless connection is preferred, then the cart wired connection must be disconnected from the wired infrastructure.

If the LAN has a DHCP service, the system will retrieve a DHCP IP address, which will be displayed in the upper left hand corner of the display.

If a static IP is required for the CA310 then this requires configuring the SX20 endpoint within the CA310.

For more information on setting a static IP address, please reference the Cisco TelePresence Video Systems Getting Started Guide for the SX20: <http://cisco.com/go/sx-docs>.



Connecting to network

Connect to a wireless network

The CA310 Network Module can support wired or wireless network connections. It can host up to two external Wi-Fi bridges. The recommended wireless bridge is the Silex SX-BR4600WAN2 or end-user preferred, such as the Cisco Aironet Access Point set for Work Group Bridge.

The Silex SX-BR4600WAN2 can be powered from the two USB ports next to the bridge Ethernet ports of the Network Module and can be configured for Single-Client mode (default) or Multi-Client mode. The Silex SX-BR4600WAN2 bridges slide into the mounting bracket attached to the top left and right sides of the cart's column.



The Wi-Fi Bridge port on the Network Module will be disabled if it detects an active network connection via Ethernet. Remove the Ethernet cable to enable the Wi-Fi radio.

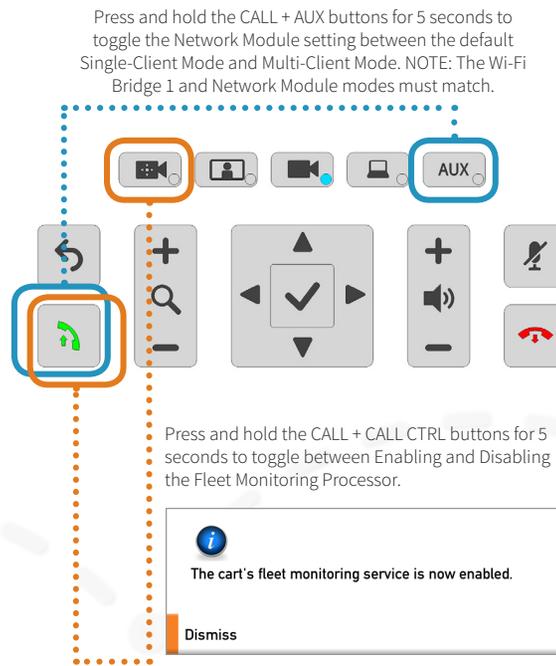
The Network Module will automatically switch between wired and wireless, but wired has priority. When a wired network is connected this will bypass the Wi-Fi Bridge ports and send network to all devices: SX20 codec, laptop (via Console), PC (via PC Cabinet), and Fleet Service if subscribed and enabled.

If a wireless connection is preferred, then the cart wired connection must be disconnected from the wired infrastructure.

Single-Client mode

Single-Client Mode (default) is a one-to-one setup and will send network to one and only one device. The primary Bridge Port [Wi-Fi] will provide network to the system's SX20 codec.

Setting up Bridge Port 2 [Wi-Fi] will send network to the PC Cabinet (option) if available. If Fleet Monitoring is enabled, then network is routed to the Fleet Monitoring processor within the Network Module.



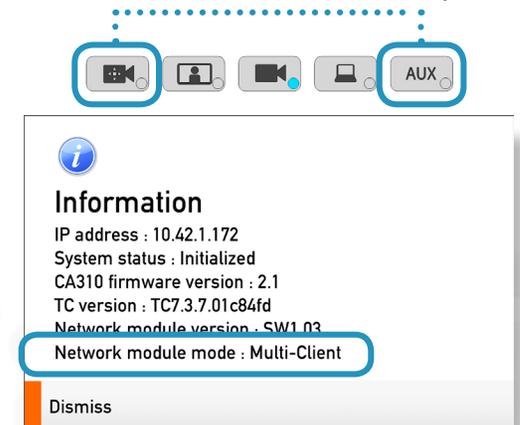
Multi-Client mode

Multi-Client mode is a one-to-many setup. Utilizing the Wi-Fi bridge connected to Bridge 1 [Wi-Fi] will send network to all devices connected to the cart: SX20 codec, laptop (via Console), PC (via PC Cabinet), and Fleet Service if enabled and subscribed.



The network mode of Bridge 1 must match the setting of the Network Module. If Bridge 1 is in Single-Client Mode, then the Network Module must be in Single-Client Mode. If Bridge 1 is in Multi-Client Mode, then the Network Module must be set to Multi-Client Mode

Press and hold the CAM CTRL + AUX buttons for 3 seconds to confirm which MODE the Network Module is currently set to.



Multi-Client mode may required changes to the wireless network infrastructure.

Fleet Monitoring

Fleet Monitoring on a CA310 is a subscription enabled feature that allows a remote administrator to monitor the status and health of an Avizia cart and send simple commands for diagnostic and troubleshooting purposes. The cart must also be connected to a network and have the Fleet Monitoring service enabled on the cart's Network Module.

Fleet enabled on a wired network (Ethernet)

When connected to a wired network and Fleet is enabled, the Network Module will provide the service with the cart's current state.

Fleet enabled on a Wi-Fi network in Single-Client mode

The primary Bridge 1 [] will provide network to the system's SX20 codec only. The Fleet Monitoring service is **unavailable** as there is no network provided to the Fleet processor in the Network Module.

Setting up a second bridge with Bridge 2 [] will provide network to the Fleet Monitoring service if it is enabled. If Fleet is not detected, the network will default to the PC Cabinet (option) if available.

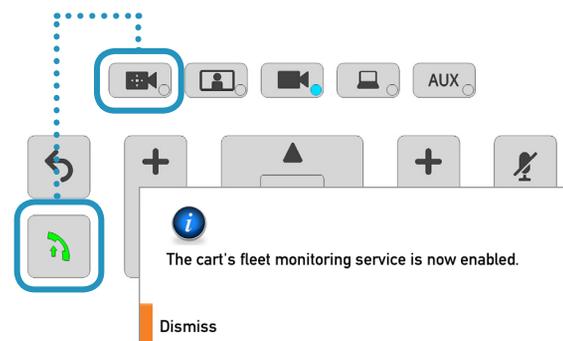
Fleet enabled on a Wi-Fi network in Multi-Client mode

When connected to a wireless network (Bridge 1), and Fleet is enabled, the Network Module will provide the service with the cart's current state once registered.

Enabling/Disabling Fleet on cart

Fleet Monitoring must be enabled on the cart before the cart is able to connect to the Fleet service. Press and hold the CALL + CALL CTRL buttons for 5 seconds to toggle between Enabling and Disabling the Fleet Monitoring Processor.

You will see a notification window informing you that the service is enabled or disabled.



Fleet device ID & Verification Code

The cart's Device ID and Verification Code must be provided to the administrator to register the cart to the Fleet Monitoring service.

Press CALL + SELFVIEW for 5 seconds to view the Device ID and Verification Code to relay to your Fleet Monitoring administrator.



You can refer to the Fleet documentation available online at avizia.com/fleetsupport. Please contact your Avizia representative for further assistance with Avizia's Fleet Monitoring service.

Using the system



- Adjusting the system height
 - Raising the work surface
 - Lowering the work surface
- Navigating the menus
- Controlling the camera
 - Camera controls
 - Selfview
- Controlling volume and microphone
 - Adjusting the speaker volume
 - Turning microphone on and off
- Making a video call
 - Placing a call
 - Presenting a laptop
 - Presenting an optional PC
 - Presenting an auxiliary device

Adjusting the system height

The CA310 can be height-adjusted using the HEIGHT ADJUST ARM at the right-side of the work surface.

Raising the work surface

Lift the height-adjust arm while raising the work surface to the desired height.

Lowering the work surface

Lift the height-adjust arm and firmly lower the surface to the desired height.

Lower before transporting

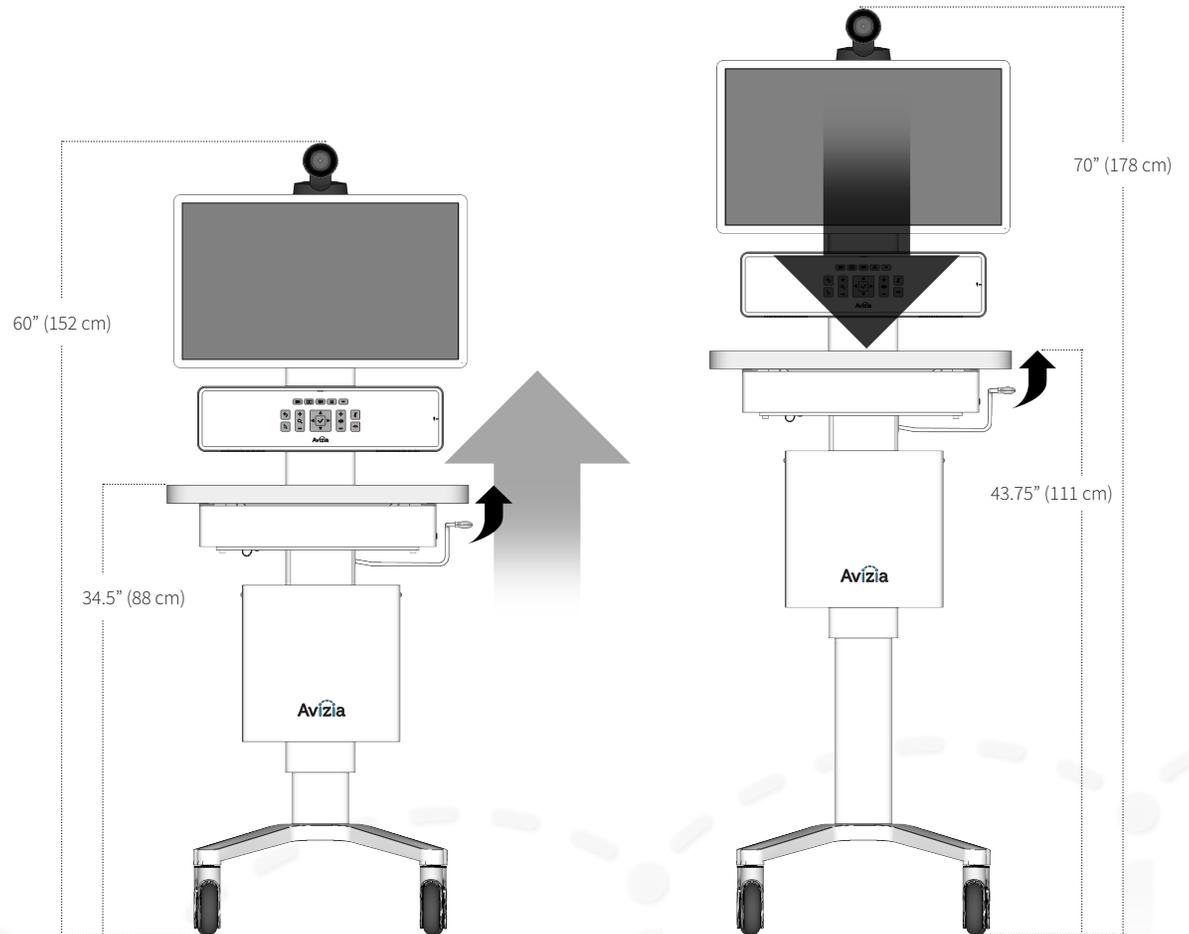


For your safety and to protect the CA310, fully lower the work surface before transporting the system. Pushing or pulling the system with any part of the system other than its handle may result in damage to the system.

Traversing thresholds and obstacles on the ground



Use the handle to PULL the system safely across thresholds, cords, cables, and other potential obstacles on the ground. Always fully lower the work surface before transporting the system.



Navigating the menus

The DIRECTIONAL BUTTONS on the CONSOLE provide navigational control when accessing the system menus. The accompanying remote control may also be used to navigate and control the system with its corresponding buttons.

Refer to the Cisco codec documentation for detailed information on advanced codec functionality, menu navigation, and using the remote control:

<http://cisco.com/go/sx-docs>

1. To show the system menu, press  (OK) at the center of the directional pad.
2. Use the arrow buttons to navigate through the menu structure.



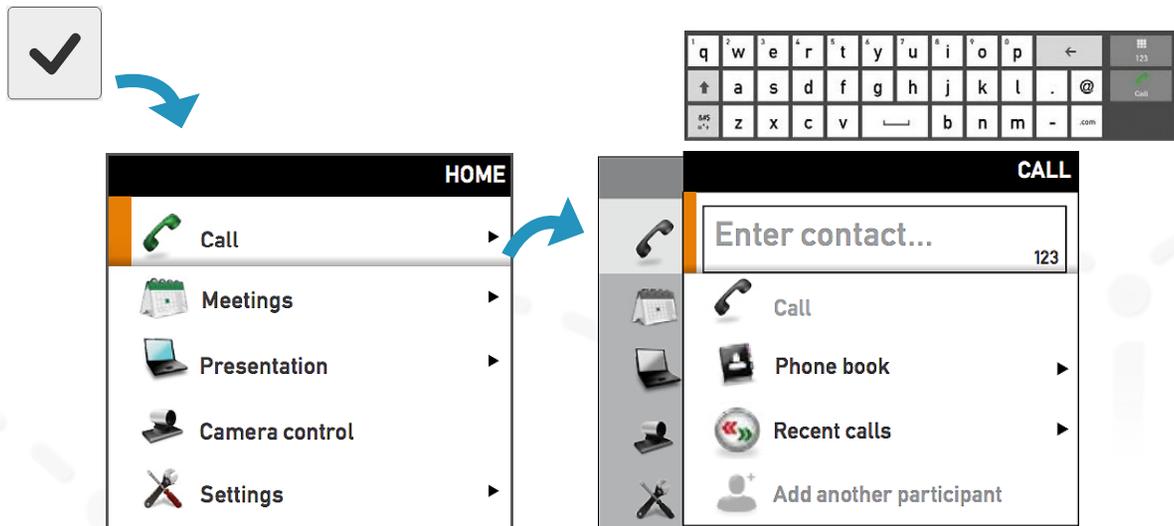
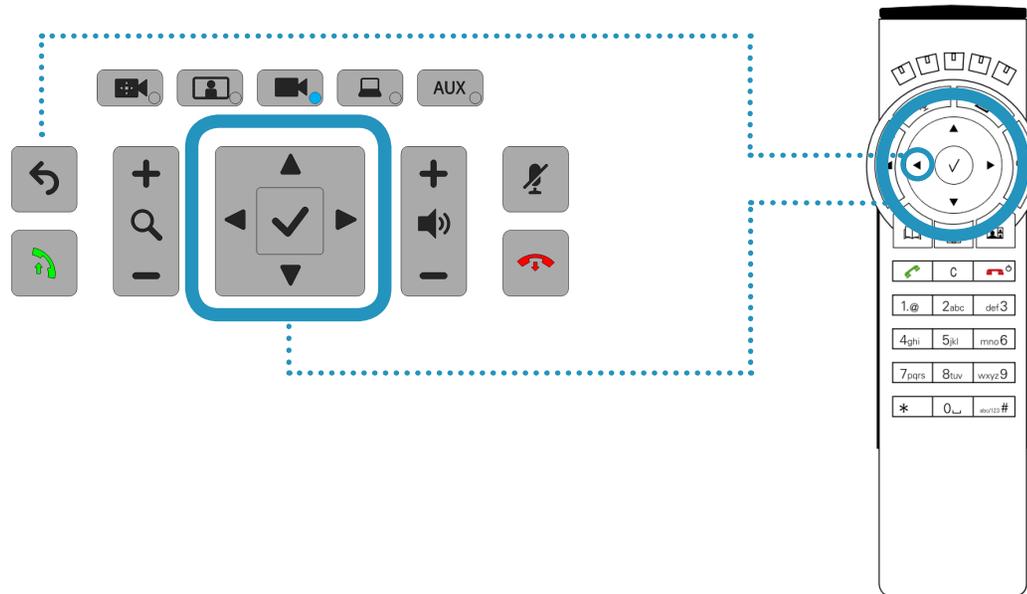
If a menu item shows an arrow, selecting RIGHT will navigate to the next menu level.

To “go back” in the menu structure, press LEFT or  (Back).

3. To type, use the onscreen keyboard or the keypad on the remote. Use the directional arrows to move to the appropriate letter, number, or symbol. Press  (OK) to select the desired character.
4. To quickly exit the menu structure, press  (Disconnect).



When navigating the menu structure while you are in a call, pressing  will not disconnect a call. Exit the menu system and then press  to disconnect a call.



Controlling the camera

Camera controls

Manage the camera's position and zoom by pressing  (Camera Control) to enable the DIRECTIONAL PAD to pan and tilt the camera. The ZOOM buttons adjust the camera's zoom level. Camera control times out after seven seconds.

When you have finished adjusting the camera, select the source you want to see on the display. If no button is pressed for seven seconds, the system will default back to the MAIN CAMERA source. Pressing the CAMERA CONTROL button again will also return the system to MAIN CAMERA.

Selfview

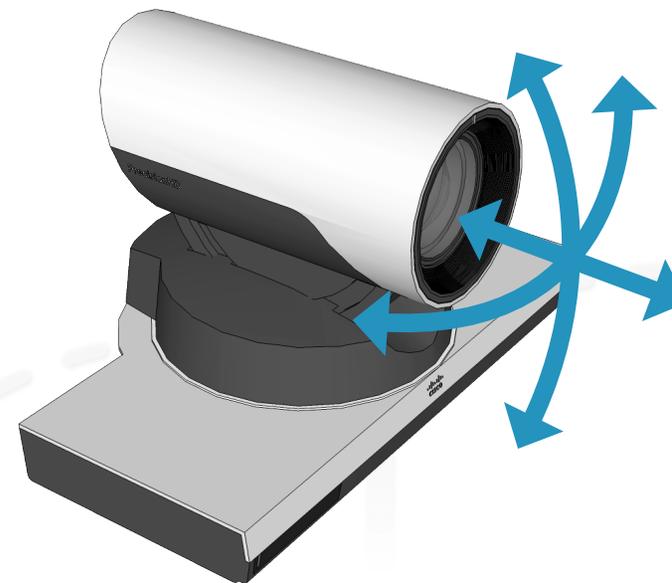
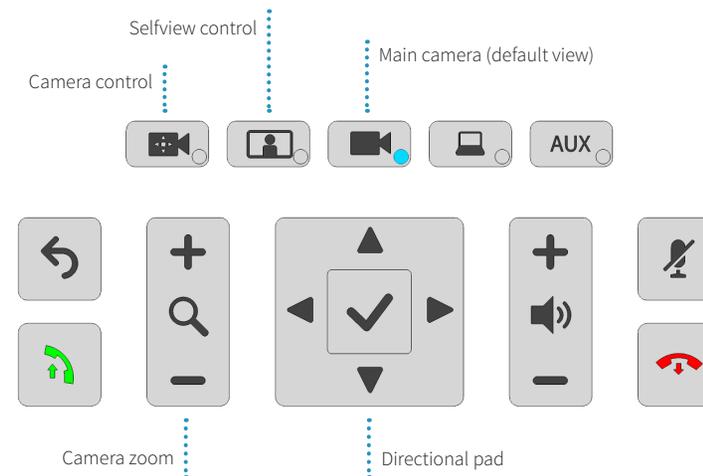
Selfview is the image remote participants will see of you — what is seen from your Main camera. Press  (Selfview) on the system console to see your selfview.

To adjust Selfview, use the DIRECTIONAL PAD to pan and tilt the camera. Use the ZOOM buttons to adjust the camera's zoom level.



When in a call, pressing  (Selfview) will present the Main camera view as a PIP (Picture-in-Picture) at the lower right of the display. Remove the PIP by pressing Selfview again.

You can enable the Selfview PIP to statically persist on the screen by pressing the Selfview button for five seconds. The Selfview button LED will be on and the PIP is present. You can now move the PIP around the edges of the display by pressing the Selfview button. To disabled this, press the Selfview button for five seconds.



Controlling volume and microphone

The system microphone is located on the front of the display and is extremely sensitive. Do not block or cover the microphone.

The system automatically manages echo cancellation.

The system speakers are located at the bottom of the system console. This is to ensure that the console is protected from foreign objects, dust, or liquids.

Adjusting the speaker volume

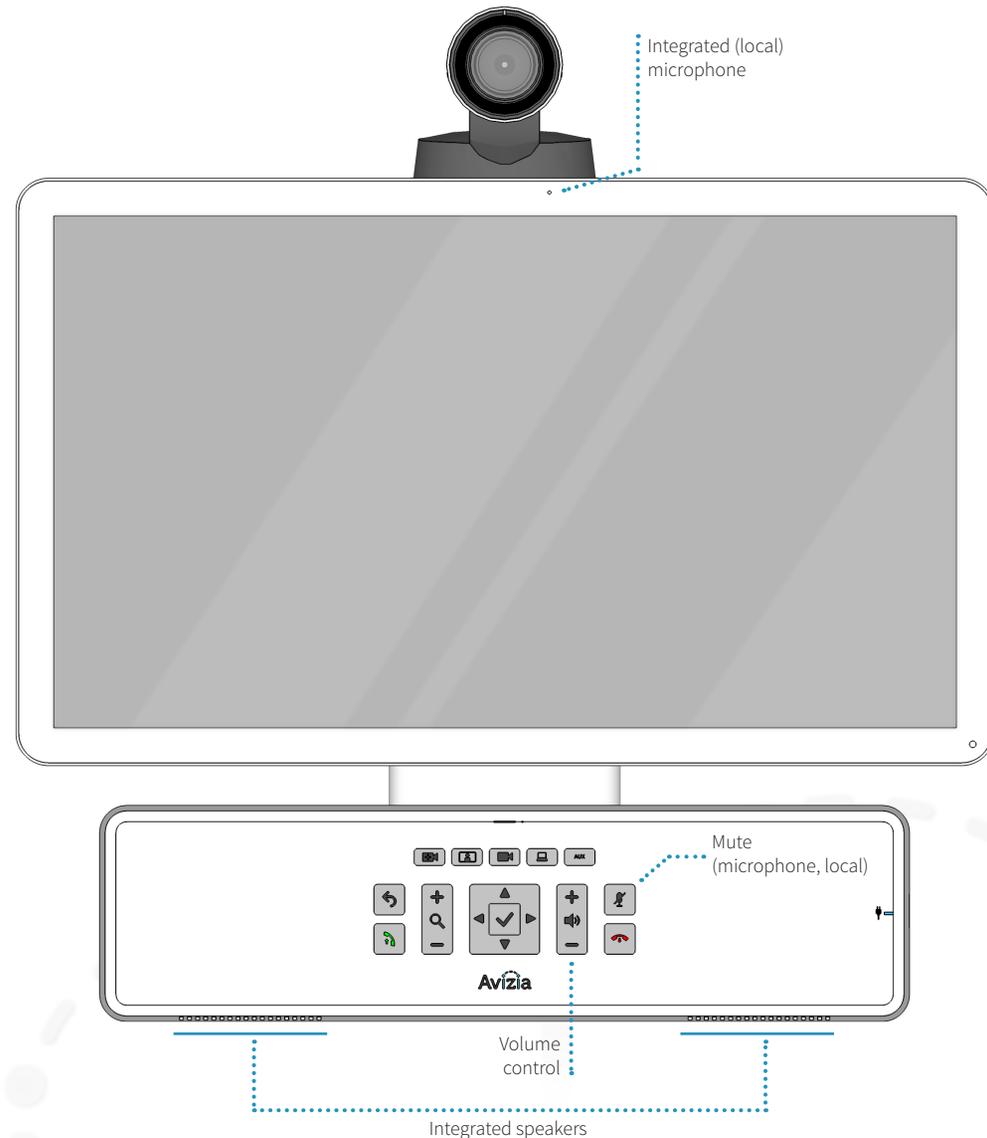
To adjust the volume, use the VOLUME CONTROL buttons on the console.

Turning microphone on and off

To mute your microphone, press  (Mute) to prevent remote participants from hearing you. Press again to toggle the mic back on.



Pressing  (Mute) shuts off the internal (local) microphone only; all connected audio sources, such as a digital stethoscope or laptop audio, will continue to be heard during a call.



Making a video call

Press  (OK) to bring up the Main Menu and select CALL for options to enter a contact number or address, select a phone book entry, or select from the Recent calls list.

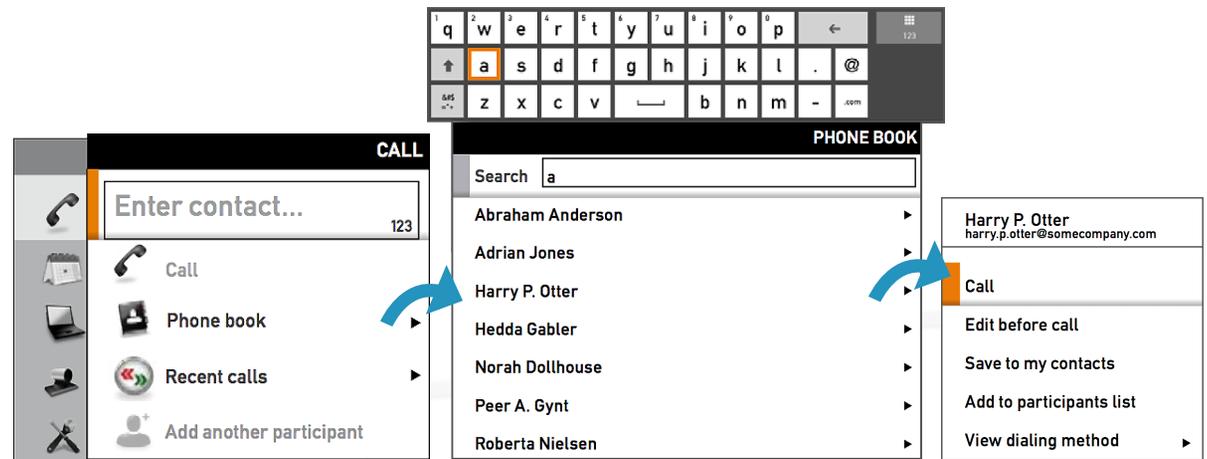
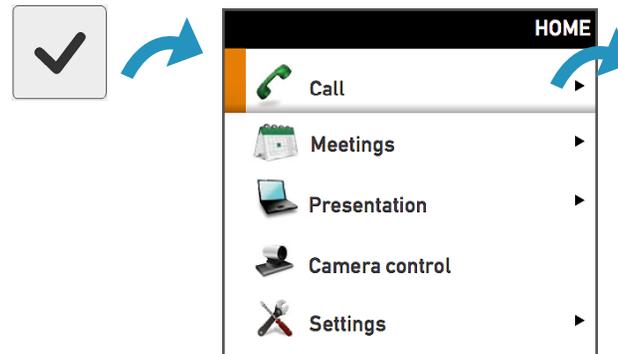
Placing a call

Enter or select the contact to call and press  (Connect) to place a call.

Each contact can be edited, added to personal contact lists, or added as participants to a Multisite call (optional feature). This is done by selecting a contact entry and pressing RIGHT to see these additional entry options, as seen in the images on the right.

Calling options

- **Specifying name, number, or address:** You can place a call by entering the contact number or address directly.
- **Using the phone book:** Navigate to Phone book by going to the Call menu option on the main menu. From the phone book, you can search, scroll through the directory, or create a directory entry, and then select the contact you wish to call.
- **Use the Recent calls list:** A list of recent calls can be accessed, from the Call menu option on the main menu, as a streamlined alternative to manually entering the contact information or using the phone book directory. **TIP:** When not in a call and not in the menu system, pressing  (Connect) will take you directly to the Recent calls list.



Making a video call

Presenting a laptop

A user-supplied laptop can be connected to the CA310 to present during a video call.

Press  (PC) to present the contents of your computer to the call participants. Press  (PC) a second time to toggle the source from laptop to optional PC. Pressing  (PC) a third time will return to Main camera.

NOTE An adapter may be needed to connect your computer to the HDMI port on the CA310's console.

The laptop's audio can be integrated into the call if its audio is connected to the 3.5mm laptop audio port. Audio is not transmitted over HDMI. Only video is transmitted over HDMI.

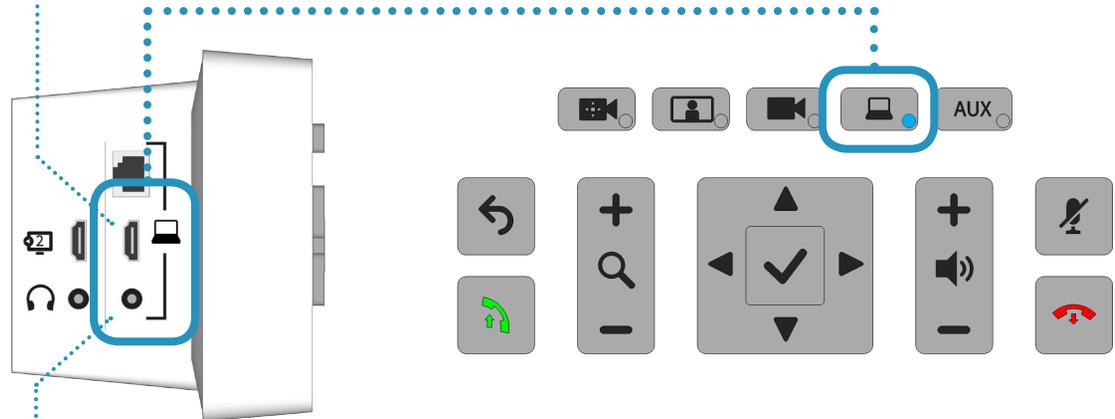
NOTE Unplug the auxiliary audio connection to present the laptop audio. There are three audio inputs on the CA310 which follow a prioritization schedule:

1. Peripheral Audio Input
2. Laptop Audio Input
3. PC Audio Input (with PC cabinet option)

The audio input highest on the list will be the source presented in a video call. This is done to ensure that the peripheral audio input (stethoscope, ultrasound, etc.) can provide the best possible sound without interference from the other inputs.

NOTE The PC source will time-out after 10 seconds and return to Main camera (default) if there is no laptop connected or detected.

An external monitor can be connected to the CA310 from the HDMI output on the side of the console. The system will automatically detect the second monitor and display shared source transmitted and or received and also split an Multi-Site (optional) connections.



In addition to mixing into the call your connected computer through the 3.5mm computer audio port, it can also support 3.5mm headphones — once a headphone is connected to the port this will disable the local speakers for privacy.

Making a video call

Presenting an optional PC

The PC Cabinet option (AVZ-CA310-ACC-PCC) provides a PC housing and cable kit to integrate an Ultra Small Form Factor (USFF) PC with the CA310. This enables a user-supplied PC to be presented during a video call.

Press  (PC) to toggle through laptop source to PC source to present the contents of your PC to the call participants. Pressing  (PC) a third time will present the Main camera.



Unplug the auxiliary and/or laptop audio connections to present the PC audio. There are three audio inputs on the CA310 which follow a prioritization schedule:

1. Peripheral Audio Input
2. Laptop Audio Input
3. PC Audio Input (with PC cabinet option)

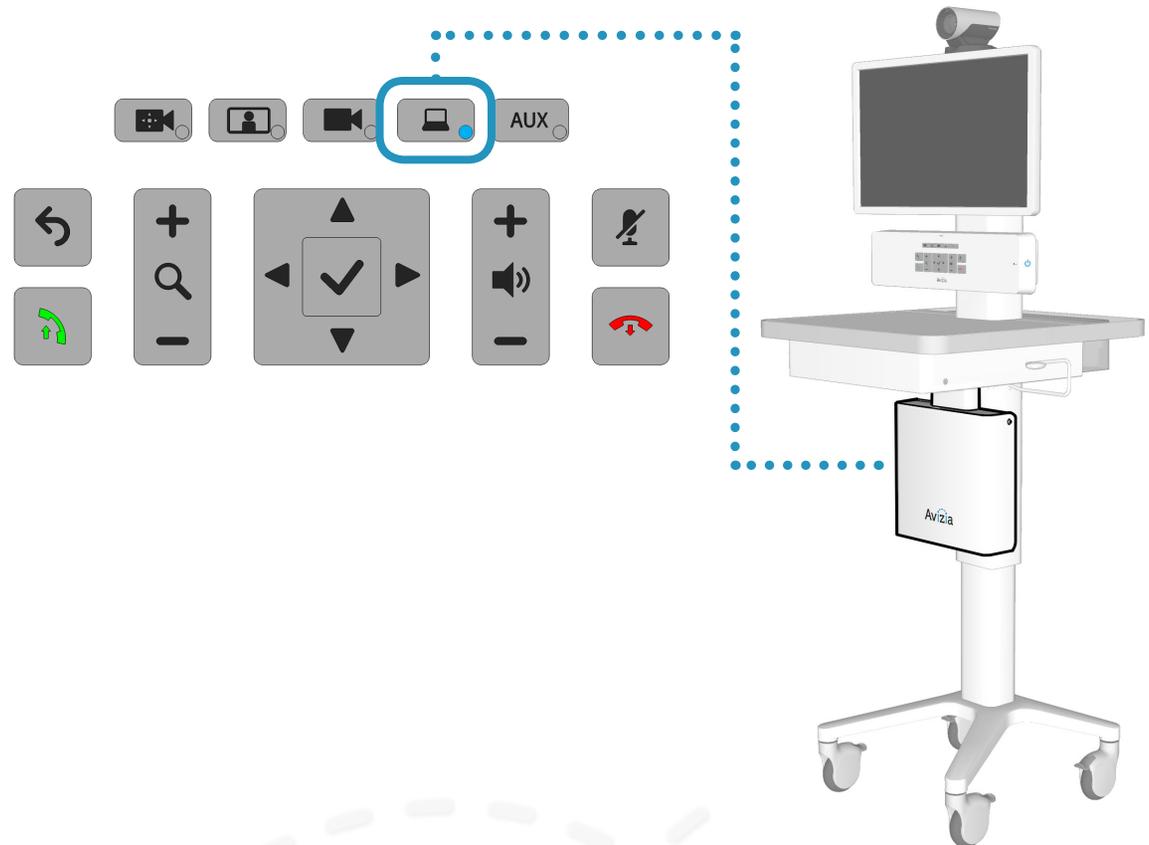
The audio input highest on the list will be the source presented in a video call. This is done to ensure that the peripheral audio input (stethoscope, ultrasound, etc.) can provide the best possible sound without interference from the other inputs.



The PC HDMI connection does not support audio. To enable PC audio use the 3.5mm connector.



The PC source will time-out after 10 seconds and return to Main camera (default) if there is no PC connected or detected.



Making a video call

Presenting an auxiliary device

A high definition and standard definition device can be connected to the CA310 to present during a video call.

Ensure that the connections are secure and powered on. Press **AUX** (AUX) to present the contents of your device to the call participants.



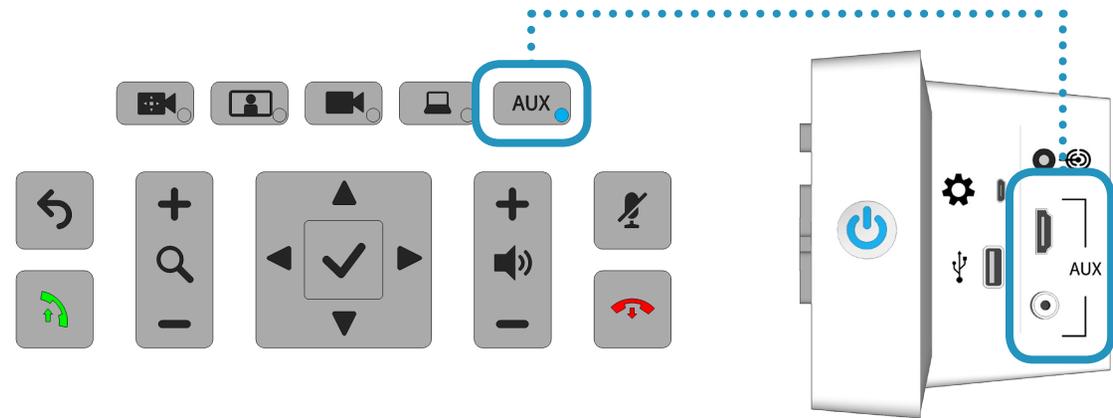
Both HDMI (high definition) and Composite (standard definition) inputs can be connected simultaneously, however, only one source can be presented at a time. Pressing the AUX button will allow you to toggle through the SD source first, the HD source second, and then to the default (main camera) source.



Audio is not transmitted over HDMI. Only video is transmitted over HDMI.



The AUX source will time-out after 10 seconds and return to Main camera (default) if there is no auxiliary device connected or detected.



Maintaining the system



- Displaying system information
- Cleaning and maintenance guidelines
- Battery guidelines
- Installing updates
- Factory defaulting the system
- Storing the system

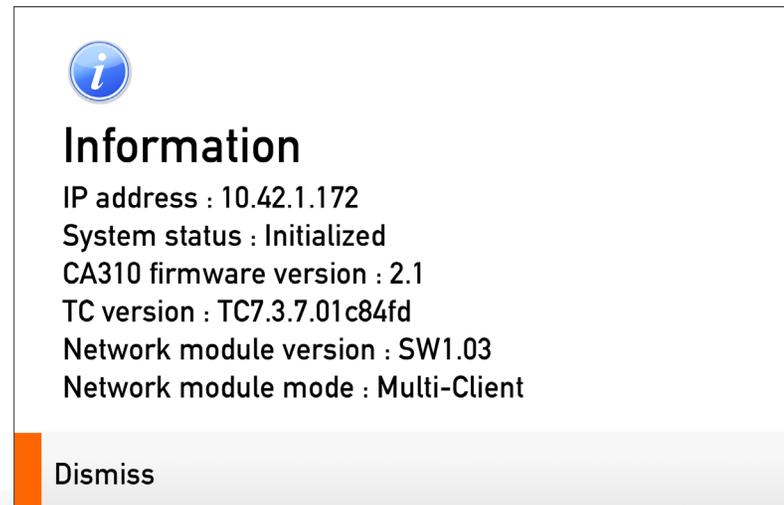
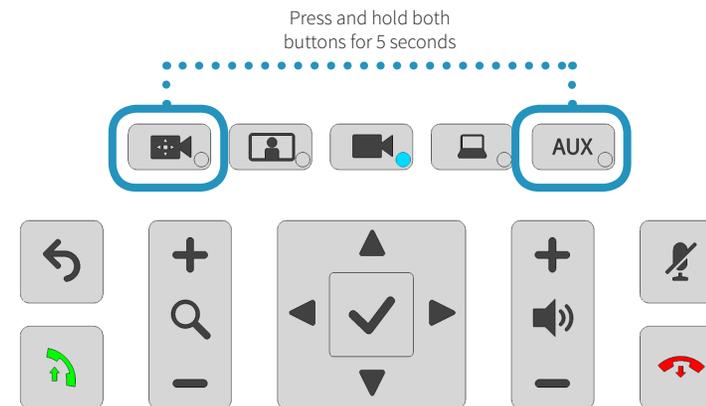
Displaying system information

CA310 system information can be viewed by pressing and holding both the  (Camera control) and the  (AUX) buttons, on the front of the console, for about 5 seconds.

Press  (OK) to close the information window.

The information provided:

- IP address
- System status
- CA310 firmware version
- TC version
- Network module version
- Network module mode Single-Client or Multi-Client



An example of the System Information window.

Cleaning and maintenance guidelines

Cleaning the system

The surface materials of the CA310 are durable and easy to maintain. Follow the general cleaning guidelines, found to the right.

Maintaining the system

The CA310 is designed with minimal maintenance requirements. However, a yearly check on system fasteners and cables (screws, nuts, bolts, cables) will ensure that the CA310 is in good operating order.



Avizia will make available, on request, such circuit diagrams, component part lists, descriptions, calibration instructions or other information which will assist appropriately qualified technical personnel to repair those parts of the equipment which are classified by Avizia as field repairable.

LCD monitor and Camera

- Always disconnect your monitor's power from the system before cleaning. Clean the camera and LCD monitor surface with a lint-free, non-abrasive cloth. Avoid using any liquid, aerosol or glass cleaners.
- Slots and openings on the back or top of the cabinet are for ventilation. They must not be blocked or covered. Your monitor should never be placed near or over a radiator or heat source, or in a built-in installation unless proper ventilation is provided.
- Never push objects or spill liquid of any kind into this product.



System

- All surfaces — painted and plastic cart components — will withstand cleaning by commonly available multi-purpose surface cleaners.
- To avoid risk of electric shock, do not expose electrical components to water, cleaning solutions or other potentially corrosive liquids or substances.
- Do not immerse system or system components in liquid or allow liquids to flow into the cart. Wipe all cleaners off surface immediately using a damp cloth. Thoroughly dry surface after cleaning.
- Do not use flammable cleaners on cart surfaces due to close proximity of electrical power and equipment.
- Never use steel wool or other abrasive materials that will damage the surface finish.
- Do not use strong solvents such as trichloroethylene and acetone. These solvents will damage the surface finish.
- It is recommended that any cleaning solution be tested on a small, inconspicuous area to ensure surface is not harmed.

Battery guidelines



This system contains no user-serviceable parts.

Battery Handling

Batteries for the Remote Control are Long Life Alkaline batteries; please follow guidelines on the packing material for handling and disposal of the batteries.

The system enclosed battery (rechargeable battery for use in temporary relocation) in this product is non-user replaceable and should be removed by a qualified service technician only.

CAUTION

RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO APPROPRIATE LOCAL REGULATIONS.



Installing updates

Updating firmware for System Console

The CA300/CA310 support the same version of firmware, and will determine which installation package to choose when upgrading to the latest firmware. Download the appropriate ZIP/PKG file to your computer: <http://avizia.com/ca310support> (see “CA310 Firmware Upgrade Instructions”).

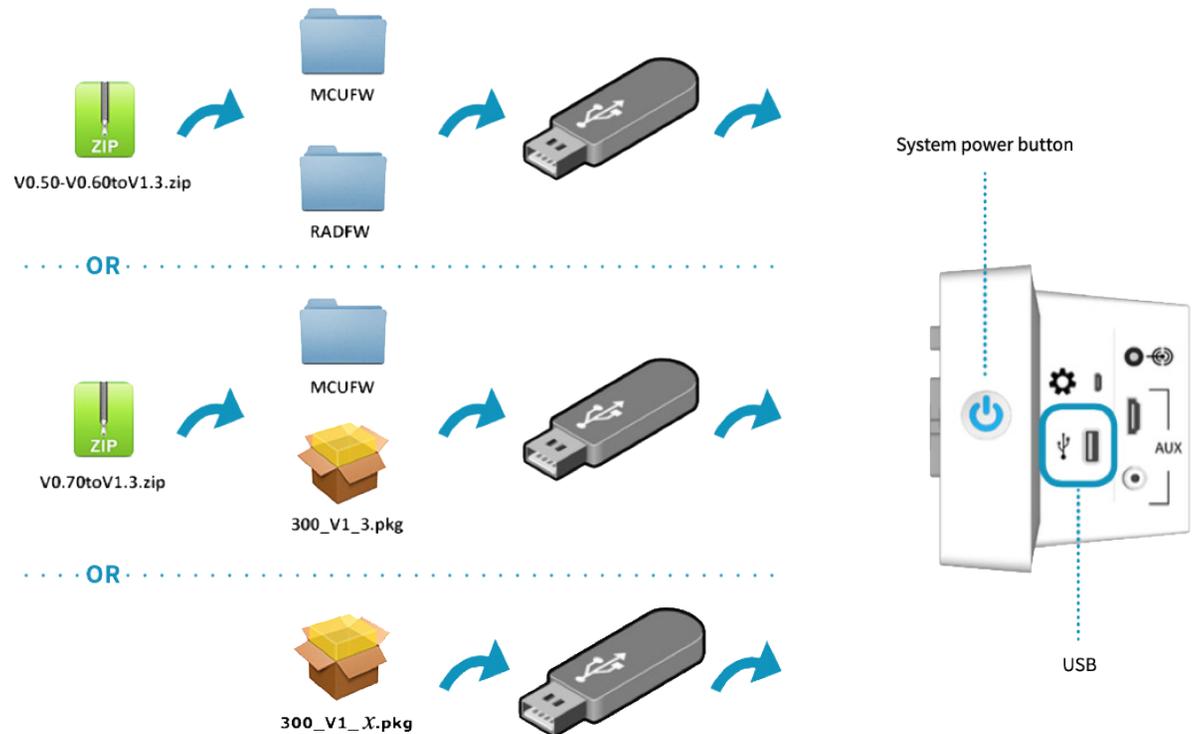
- If the CA310 has firmware version 0.50 or 0.60 then download ZIP file V0.50-V.60toV1.3.
- If the CA310 has firmware version 0.70 then download ZIP file V0.70toV1.3.
- If the CA310 has firmware version 1.3 or higher then download the latest PKG file: 300_V1_(*version*).pkg.

1. Use an appropriate file extraction application to extract the ZIP file contents (MCUFW and RADFW), or the PKG file as is, into the ROOT directory of a USB thumb/flash drive.
2. Ensure the CA310 is powered on and in an idle state (not in a call).
3. Insert the USB drive into the USB port on the side of system console and wait 5-10 seconds for an update prompt.
4. Use the directional pad to select YES and follow the onscreen prompts to update the firmware file(s).



The update process will take a little over two minutes to complete.
The firmware update is complete when the system power button turns off.

5. Remove the USB drive.
6. Press the power button to turn the system ON.



Installing updates

Updating firmware for Network Module

Download the appropriate ZIP/PKG file to your computer: <http://avizia.com/ca310support> (see “CA310 Firmware Upgrade Instructions”).

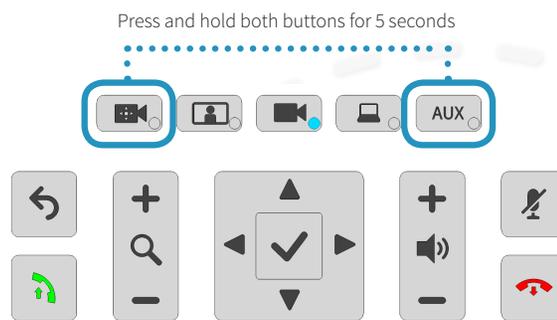
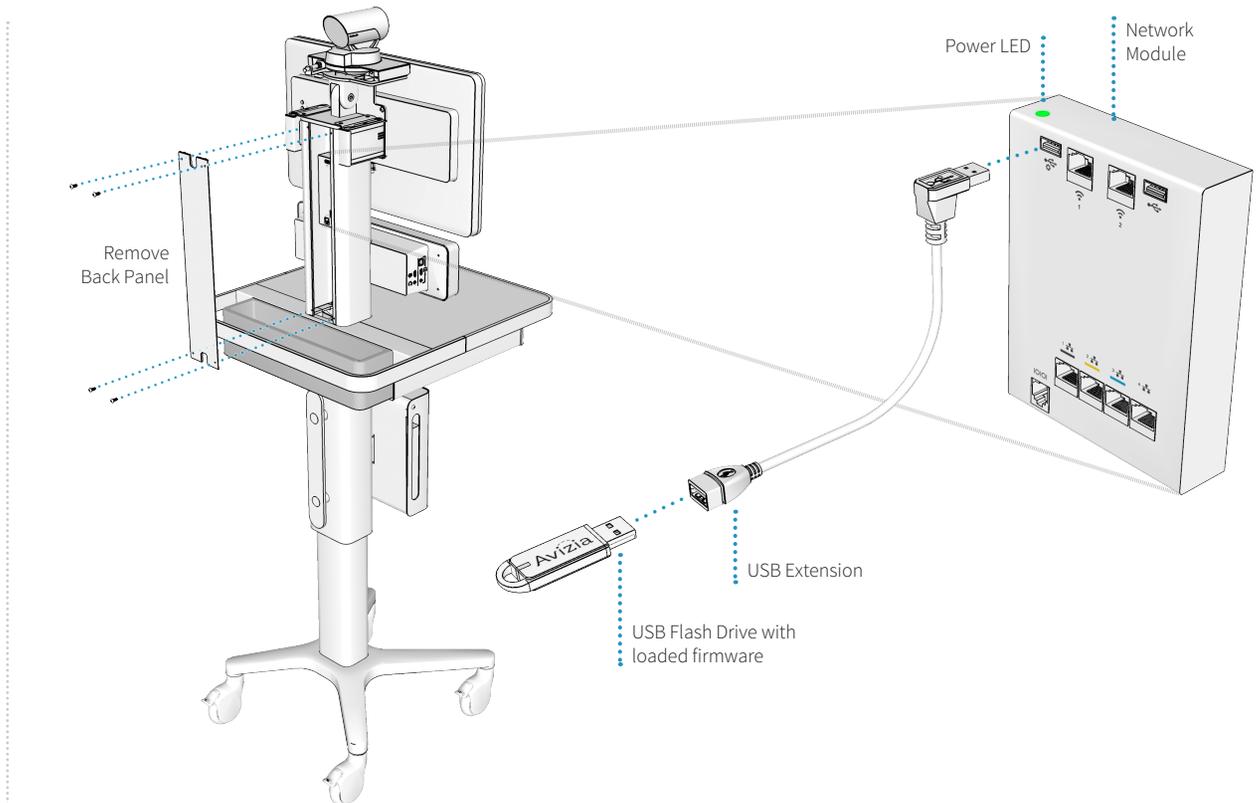
1. Copy the latest firmware file (e.g. Sw1.03.bin) to the root of the USB flash drive (supplied in the accessories kit).
2. Remove back panel of column with the 2.5mm HEX wrench.
3. Disconnect the USB cable, if any, from  (USB/Maintenance).
4. Connect a USB extension cable (provided) to  (USB/Maintenance).
5. Connect the USB flash drive into the USB extension cable.

The LED light on the Network Module will go out and the LED on the flash drive, if any, will flash. The Network Module’s power LED will come back on when the update is finished.

6. Remove USB flash drive and extension cable.
7. Reconnect USB power cable if removed.
8. The CA310 network module firmware version can be verified by holding down both the  (Camera control) and the  (AUX) buttons for about 5 seconds to view version information.



The Network Module’s firmware version may take up to a minute to refresh and display the new version.



 **Information**

IP address : 10.42.1.172
 System status : Initialized
 CA310 firmware version : 2.1
 TC version : TC7.3.7.01c84fd
 Network module version : SW1.03
 Network module mode : Multi-Client

Dismiss

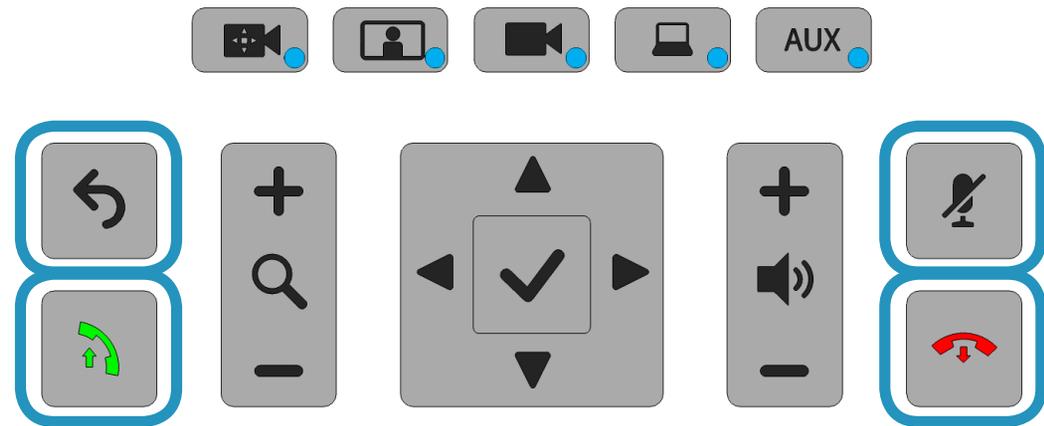
Factory defaulting the system

Should a need arise to remove ALL system configuration settings, press and hold the following buttons at the same time for 5 seconds:

BACK + MAKE CALL + MUTE + DISCONNECT

The source selection LEDs will light up one by one and blink three times before the entire system reboots.

Once the system has fully booted up, it is ready for setup and configuration.



Storing the system

Short-term storage

If the system is to be stored for a relatively short period of time, we recommend that the system be plugged in to an electrical outlet during storage. This ensures that Quick-Boot™ maintains a full charge and is ready when needed.

Long-term storage

If the system is to be stored for an extended period of time:

1. Flip the System breaker switch OFF
2. Unplug from electrical outlet
3. Wrap power cord on the cord wrap
4. Secure or appropriately store peripheral devices and cables
5. Store the system in a cool, dry environment



Troubleshooting



I can't turn the system on.

- Make sure the system breaker switch is in the ON position. This switch is by power inlet connector found on the underside of the worksurface. Then, press the Power button on the right side of the console until the button illuminates blue.
- Ensure the power cord is properly connected to the system and to the AC outlet. You should see the LED power indicator on the front of the console illuminate blue.

Why is the screen black?

- Ensure the system is powered on and the display's power cord and HDMI cable are properly inserted. Press the display's power button to turn on.
- The display setting may have been changed or set incorrectly:
 1. Ensure the display's HDMI cable is properly inserted.
 2. Press and hold the system power button on the side of the console until the blue LED turns off.
 3. Wait a few seconds and turn the system back on. The HDMI setting on the display should be automatically reset and no longer show a black screen.

- Pressing the PC or AUX source buttons when there are no devices connected to the corresponding connections will result in a black screen. The PC and AUX sources will time out after 10 seconds and return to the Main camera (default) view.

I can't make a video call.

- Ensure the system has network connectivity:
 - check Ethernet connection
 - check wireless connection
- Make sure the system codec's network configurations are properly set and registered. Contact your network administrator or refer to the Cisco SX20 codec documentation at:
<http://cisco.com/go/sx-docs>

When I try to show my laptop or other device I get a black screen.

- Check that the video cable from the laptop or device is in the appropriate connection on the console.
- Make sure the laptop display setting is appropriately configured to mirror or extend to another display.

Technical Specifications

UNIT DELIVERED COMPLETE WITH:

Base System (AVZ-CA310-A-IP40) with Cisco SX20 codec, Cisco 8x PrecisionHD camera, 24" widescreen LCD, integrated microphone and speakers, QuickBoot™, remote control, and cables.

Optional MultiSite

Optional PC Cabinet:

- cable kit (audio, HDMI, Network, and power)
- PC cabinet dimensions:
 - external: H 11.93in x W 13in x D 3.31in
H 30.3cm x W 33.04cm x D 8.4cm
 - internal: H 10.5in x W 12.5in x D 2.5in
H 26.7cm x W 31.75cm x D 6.3cm

DISPLAY

- 24 inch HD LCD LED backlit monitor w/ Integrated microphone
- Display position adjustment: tilt

VIDEO INPUTS

- Four (4) High-Definition Multimedia Interface (HDMI) inputs (one designated as main camera input; custom cable); supported formats:
 - 1920x1080
 - 1600x1050
 - 1280x720
 - 1440x900
 - 1280x768
 - 1280x1024
 - 1024x768
 - 800x600
 - 640x480
- One (1) composite input (RCA connector)
 - PAL/NTSC

VIDEO OUTPUTS

- Two (2) HDMI output (main and 2nd display); supported formats:
 - 1920x1080@50/60Hz(1080p60)
 - 1280x720@50/60Hz(720p60)

AUDIO INPUTS

- One integrated microphone with echo canceller
- Three (3) 3.5-mm audio inputs, line level:
 - Auxiliary
 - Laptop computer
 - PC computer

AUDIO OUTPUT

- One 3.5-mm audio output, for Headphones

CAMERA

- Cisco TelePresence PrecisionHD Camera 4xS2
- One-third-inch complementary metal oxide semiconductor (CMOS Sensor)
- 8x zoom (4x optical, 2x digital)
- +15° and -25° tilt, +/- 90° pan
- 43.5° vertical field of view
- 70° horizontal field of view
- Focus distance 0.3m-infinity
- 1920x1080 pixels progressive@60 frames per second (fps)
- Automatic or manual focus, brightness, and white balance
- Far-end camera control
- Kensington Lock Connection

USER INTERFACE

“One-touch” tactile control panel for call control, volume, camera, and video sources
TRC 5 IR remote control for remote system control

BANDWIDTH

- H.323 and Session Initiation Protocol (SIP) up to 6 Mbps point-to-point
- 720p30 from 768 kbps
- 720p60 from 1152 kbps
- 1080p30 from 1472 kbps

VIDEO STANDARDS

H.263, H.263+, H.264

VIDEO FEATURES

- Native 16:9 widescreen
- Advanced screen layouts
- Intelligent video management
- Local auto layout

LIVE VIDEO RESOLUTIONS (ENCODE and DECODE)

- 1920 x 1080@30, 60 fps (HD1080p)
- 1280 x 768@30, 60 fps (WXGA)
- 1280 x 720@30, 60 fps (HD720p)
- 1024 x 768@30, 60 fps (XGA)
- 1024 x 576@30, 60 fps (w576p)
- 800 x 600@30, 60 fps (SVGA)
- 768 x 448@30, 60 fps (w448p)
- 704 x 576@30, 60 fps (4CIF)
- 640 x 480@30, 60 fps (VGA)
- 576 x 448@30, 60 fps (448p)
- 512 x 288@30, 60 fps (w288p)
- 352 x 288@30, 60 fps (CIF)
- 176 x 144@30, 60 fps (QCIF) (Decode only)

AUDIO STANDARDS

G.711, G.722, G.722.1, 64 kbps MPEG4 AAC-LD

AUDIO FEATURES

- CD-quality 20-kHz mono
- One Acoustic echo canceller
- Automatic Gain Control (AGC)
- Automatic noise reduction
- Active lip synchronization

DUAL STREAM

- H.239 (H.323) dual stream
- Binary Floor Control Protocol (BFCP) (SIP) dual stream
- Support for resolutions up to 1080p

PROTOCOLS

H.323, SIP

NETWORK INTERFACES

- Three (3) LAN or Ethernet (RJ-45) 10/100/1000 Mbps
- Wireless client bridge: IEEE 802.11b/g/n
- Supports up to two external (2) Wireless Bridges

OTHER INTERFACES

- Three (3) USB inputs:
 - 1 in drawer for charging
 - 1 for upgrades and charging
 - 1 MicroUSB for diagnostics

IP NETWORK FEATURES

- Network module web server
- Domain Name System (DNS) lookup for service configuration
- Differentiated Services (quality of service [QoS])
- IP adaptive bandwidth management (including flow control)
- Auto gatekeeper discovery
- Dynamic playout and lip-sync buffering
- H.245 dual-tone multifrequency (DTMF) tones in H.323
- Date and time support with Network Time Protocol (NTP)
- Packet loss-based downspeeding
- Uniform Resource Identifier (URI) dialing
- TCP/IP
- Dynamic Host Configuration Protocol (DHCP)
- IEEE 802.1x network authentication
- ClearPath

FIREWALL TRAVERSAL

- Cisco TelePresence Video Communication Server Expressway
- H.460.18 and H.460.19 Firewall Traversal

EMBEDDED ENCRYPTION

- H.323 and SIP point-to-point
- Standards-based: H.235v3 and Advanced Encryption Standard (AES)
- Automatic key generation and exchange
- Support in dual stream
- Auto NAT
- SIP ICE

CODEC SECURITY FEATURES

- Management through Secure HTTP (HTTPS) and Secure Shell (SSH) Protocol
- IP administration password
- Menu administration password
- Disable IP services
- Network settings protection

SYSTEM MANAGEMENT (CISCO SX20)

- Support for Cisco TelePresence Management Suite
- Total management through embedded Simple Network Management Protocol (SNMP), Telnet, SSH, XML, and Simple Object Access Protocol (SOAP)
- Remote software upload: Through web server, Secure Copy Protocol, HTTP, and HTTPS
- Remote control and on-screen menu system

DIRECTORY SERVICES

- Support for local directories (My Contacts)
- Corporate directory
- Unlimited entries using server directory
- Lightweight Directory Access Protocol (LDAP) and H.350
- Unlimited number for corporate directory (available with Cisco TelePresence Management Suite local directory: 200 numbers)
- Received calls
- Placed calls
- Missed calls with date and time

PHYSICAL DIMENSIONS

- Depth: 20.5 in. (52 cm)
- Width: 19.4 in. (49.3 cm)
- Height: 60-70 in. (152.4-177.8 cm)
- Weight: 120 lb (54.43 kg)

SHIPPING DIMENSIONS

- With pallet and Accessories Box
- Depth: 32 in. (81.28 cm)
- Width: 32 in. (81.28 cm)
- Height: 82 in. (208.28 cm)
- Weight:
 - with PC Cabinet option: 187 lb (84.82 kg)
 - without PC Cabinet option: 164 lb (74.39 kg)

POWER

- INLET: 100-240VAC, 50-60Hz 6 amp maximum
- AUXILIARY (Power share): back of system: one country-specific outlet, 3 amp. Maximum

OPERATING TEMPERATURE AND HUMIDITY

- 50 to 95°F (10 to 35°C) ambient temperature
- 20 to 90% relative humidity (RH)
- Atmospheric pressure: 700 to 1060 hPa

STORAGE AND TRANSPORT TEMPERATURE

- 14 to 140°F (-10 to 40°C) at RH 10 to 80% (noncondensing) at RH 20 to 90%
- Atmospheric pressure: 700 to 1060 hPa

APPROVALS AND COMPLIANCE

- ANSI/AAMI 60601-1-3rd edition
- CAN/CSA C22.2 No. 60601-1-08 (2013)
- Compliance with FCC 47 CFR Part 15 Class A
- FDA Class I Medical Device Data System (MDDS)
- Medical Device Directive EN 60601-1 Class I Equipment

THE SPECIFICATIONS AND INFORMATION REGARDING THE PRODUCTS IN THIS MANUAL ARE SUBJECT TO CHANGE WITHOUT NOTICE. ALL STATEMENTS, INFORMATION, AND RECOMMENDATIONS IN THIS MANUAL ARE BELIEVED TO BE ACCURATE BUT ARE PRESENTED WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. USERS MUST TAKE FULL RESPONSIBILITY FOR THEIR APPLICATION OF ANY PRODUCTS.

THE SOFTWARE LICENSE AND LIMITED WARRANTY FOR THE ACCOMPANYING PRODUCT ARE SET FORTH ON THE AVIZIA WEBSITE: [HTTP://AVIZIATECH.COM/SUPPORT.HTML](http://aviziatech.com/support.html). ADDITIONALLY, A COMPONENT OF THIS PRODUCT IS SUBJECT TO THE SOFTWARE LICENSE AND LIMITED WARRANTY SET FORTH AT [HTTP://WWW.CISCO.COM/GO/TELEPRESENCE/DOCS](http://www.cisco.com/go/telepresence/docs).

NOTWITHSTANDING ANY OTHER WARRANTY HEREIN, ALL DOCUMENT FILES AND SOFTWARE OF THESE SUPPLIERS ARE PROVIDED "AS IS" WITH ALL FAULTS. AVIZIA AND THE ABOVE-NAMED SUPPLIERS DISCLAIM ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, THOSE OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OR ARISING FROM A COURSE OF DEALING, USAGE, OR TRADE PRACTICE.

IN NO EVENT SHALL AVIZIA OR ITS SUPPLIERS BE LIABLE FOR ANY INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES, INCLUDING, WITHOUT LIMITATION, LOST PROFITS OR LOSS OR DAMAGE TO DATA ARISING OUT OF THE USE OR INABILITY TO USE THIS MANUAL, EVEN IF AVIZIA OR ITS SUPPLIERS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Avizia and the Avizia Logo are trademarks of Avizia, Inc. and/or its affiliates in the U.S. and other countries. Third party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Avizia and any other company. (1005R)

Any Internet Protocol (IP) addresses and phone numbers used in this document are not intended to be actual addresses and phone numbers. Any examples, command display output, network topology diagrams, and other figures included in the document are shown for illustrative purposes only. Any use of actual IP addresses or phone numbers in illustrative content is unintentional and coincidental.

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.



Avizia, Inc.
12018 Sunrise Valley Dr.
Suite 315
Reston, VA 20191 USA

Australia Sponsor
Emergo Australia
Level 20
Tower II, Darling Park
201 Sussex Street
Sydney, NSW 2000
Australia

