CLINiC™ 12x Clinical Care Device User Guide

Document Version 1.5
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Introduction

The CLINiC from Iron Bow Healthcare Solutions is a purpose-built telehealth video and consultation device that enables the delivery of clinical healthcare at a distance.

The CLINiC includes a video codec, a high definition video camera, built-in microphone, 27” display, audio speakers and an intuitive touch-control panel. The CLINiC enables high quality video and audio calls between two or more parties. Examination devices such as electronic stethoscopes and Horus Scope systems can be connected directly to the CLINiC.

The CLINiC can be interchangeably mounted on a table top, wall, extensible arm, or on a medical cart.

This user guide covers the functionality of the CLINiC 12x model.

You can find additional CLINiC resources and information about support and other related telehealth services at www.ironbowhealthcare.com.
System Description

The primary components of the CLINiC 12x are shown below:

Figure 2. CLINiC 12x system components

Description:
1. 12X/12X Optical/Digital Pan/Tilt/Zoom Camera
2. Integrated 27” LED Display with 16:9 Aspect Ratio
3. Integrated Cisco Webex Room Kit Plus (In custom enclosure)
4. Call Status Indicator
5. Integrated Microphone
6. Tactile Membrane control panel with downward-facing speakers
7. Sound Deflector
System Installation

The CLINiC should be mounted on a stable supporting structure (table top, wall, extensible arm, or medical cart) before you begin using it. Refer to Appendix 1 - Mounting Information for mounting holes locations and dimensions.

Installing the Camera

Before using the system for the first time, you need to mount and connect the camera to the mounting panel located on top of the CLINiC 12x display.

To install the camera on the CLINiC 12x:

1. Remove camera assembly from packaging and place carefully on a tabletop.
2. Identify the camera mounting plate as shown below:

3. Line up the four feet of the camera with the large holes in the Camera Mounting Plate
4. Carefully attach the camera mounting plate to the base of the camera with the three provided screws, as shown in Figure 4 below.
5. Gently place the camera assembly on top of the support bracket, ensuring the locating holes on the base plate line up with the holes on the mounting plate.

6. There are two sets of holes available for attaching the mounting plate to the system (see Figure 3 above). The selection of which holes allows the camera to overhang more at the front or the rear, depending upon how the system is to be installed:
   - Using the front mounting holes, the camera will overhang more at the rear of the system, which is ideal for cart, arm or table-top mounting
   - Using the rear mounting holes the camera will overhang more at the front of the system, which may be more suitable for direct wall mounting of the system.
7. Connect the three cables that come out at the top of the CLINiC to the corresponding connectors on the rear of the camera as shown in Figure 8.
8. Attach the rear camera cable cover using the two screws provided.

   Figure 8 – Attaching Camera Rear Cover

9. Gently remove any packaging foam and tape from camera to complete system assembly.
**Sound Deflector**

The CLiNiC includes a removable sound deflector, installed underneath the control panel enclosure, as shown in the following figure.

The sound deflector improves the audio quality for CLiNiC installations that are either wall-mounted or mounted on an arm, by deflecting the audio forward.

**Installing the Sound Deflector**

1. Locate the three central Phillips head screws on the base section of the sound bar at the rear of the chassis.

2. Remove the three Phillips head screws and align the deflector, pointing forward, with the three screw holes and replace screws to secure shield in place.
Connections

The 12x CLINIC includes Multiple user ports on either side of the system chassis, plus audio ports on the front panel. Please note ports designated for engineering usage, future expansion and for optional accessories should only be used with the appropriate equipment connected. Refer to accessory user manual for connection details.

Figure 12 - CLINIC 12x Left and Right side Connectors.

Description:
1. AC Input Connector (IEC)
2. DB9 Expansion Control Port (Future use)
3. 10/100/1G Ethernet Port (RJ45)
4. Dual USB 3 Ports (Power only for optional accessories)
5. USB 2 Port (Supplied with blanking cover – Future use)
6. Codec maintenance Port (For qualified engineering usage)
7. Auxiliary HDMI Input (Designated for PC Connection)
8. Auxiliary HDMI Input (Designated for Horus Scope usage)
9. Auxiliary Microphone Input
10. RJ45 Connection for optional Cisco Touch 10 control panel
Figure 13 - CLINiC 12x Audio Ports on Integrated Control Panel

Description:
1. Headphones Audio Output
2. Electronic Stethoscope Audio Input
Getting Started

Powering On and Off

Powering On the CLINiC

Connect the peripherals to the HDMI port(s) of the CLINiC before connecting the CLINiC to AC power.

To power on the CLINiC:

- Connect the CLINiC to AC power. This will automatically power on the codec, camera, display and control unit of the CLINiC. A splash screen is displayed within several seconds.
- There is a codec power indicator set inside the rear chassis of the system that can be used to confirm AC connectivity and codec operation, if needed.

![Figure 14 – Rear Codec Power Indicator](image)

Placing the CLINiC in Standby Mode

The system goes into standby mode after two hours with no activity. This value can be changed from the web interface to the codec (see Change Standby Settings under CLINiC Administration).

Waking Up the CLINiC

To wake up the CLINiC:

- Press any button on the integrated control panel.
- The CLINiC will automatically wake up when an Incoming call is received.

Powering Off the CLINiC

Powering off the CLINiC is typically unnecessary. Most video endpoints remain connected to the network and in stand-by mode until a call is placed or received. If you need to move the CLINiC to a different location, simply disconnect and re-connect the AC power, as needed.
Control Panel Functions

The CLINiC control panel buttons and associated functions are described below:

**Figure 15 – Control Panel Functions**

Description:

1. Answer incoming call/place call to defined contact. (See CLINiC Administration)
2. End or reject call
   - Secondary function: press and hold for 5 seconds then release to temporarily display codec information on screen
3. Enable video privacy from the CLINiC camera during a call, or revert to normal video transmission. Video from a connected PC, medical video device, or other video peripheral will still be shown to local and remote participants.
4. Display and transmit images and data from connected peripheral device connected to side HDMI port designated with Horus Scope symbol. By default, pressing this button displays the images and data of peripheral device connected.
5. Display and transmit images and data from connected peripheral device connected to side HDMI port designated with PC symbol. By default, pressing this button displays the images and data of peripheral device connected.
6. Zoom camera out.
7. Zoom camera in.
8. Pan and tilt the camera
   - Secondary function: moves self-view PIP around the screen when PIP mode is activated.
9. Enable or disable self-view mode
   - Secondary function: press and hold for 5 seconds then release to enter PIP location mode – press second time to clear PIP location function
10. Decrease speaker volume.
11. Increase speaker volume
12. Mute or unmute microphone.
13. Enable or disable headphone mode for private listening.
14. Enable or disable stethoscope mode.
15. “On Air” Indicator – Illuminates when system is in an active call
Managing Calls

This section describes how to manage calls by using the integrated control panel. For instructions on how to manage calls using the optional Cisco Touch 10 Control Panel, please refer to the Cisco Webex Codec User Guide:


NOTE: If you are managing the Cisco Webex Room Kit Plus Codec integrated into the CLINiC using Cisco Unified Communications Manager (CallManager) or TelePresence Management Suite (TMS), please ensure that the template used for the codec has the Serial Port Login Required set to Disabled.

Answering a Call

The default behavior of the CLINiC is to answer all incoming calls automatically.

This behavior can be changed from the web interface to the codec (see Change Conference Settings under CLINiC Administration)

The Connect control is used to make a call and accept an incoming call. You may place a call to a pre-defined address. Before you can place a call to an address, it must be added in the codec as a favorite contact, see Manage Favorites

The Hang Up control is used to end a call. If the system is not in auto answer mode, then the Hang Up control can be used to reject an incoming call from a remote site.
Managing Video Settings

This section describes how to manage video settings by using the integrated control panel. For instructions on how to manage video settings please refer to the Cisco Webex Codec plus Administrator Guide:


Enabling and Disabling Video Privacy Mode

**Video Privacy** selection stops the image from the system main camera being transmitted to the remote site. A second selection resumes the camera transmission. Video from a connected PC, medical video device, or other video peripheral will still be shown to local and remote participants. When Video Privacy is active, the LED associated with this control will illuminate.

System Camera Reset Function

Manually moving the pan and tilt position of the camera while under power will cause a position detection error and a light on the front of the camera will blink. The camera will become unresponsive and remain in Standby mode until reset. This can occur during cleaning of the camera, jarring a cart during movement or a user manually attempting to reposition the camera by hand.

In this event, the camera can be reset by selecting and Holding the Video Privacy control for 5 seconds. The camera will then go through a short reset routine and resume normal pan/tilt operation.
Main Camera Pan/Tilt and Zoom Functions

The Arrow keys control the main system camera up/down/left/right movement

The main system camera zoom in and out functions are controlled by the + and - signs

Enabling and Disabling Self-View Mode

Self-View selection brings up a small window on the main screen showing the image being transmitted from the main system camera. A second selection removes the self-view window.

Self-View Mode Image Location “PIP Location Mode”

Pressing and holding the Self-View control for 5 seconds, then releasing, activates the PIP location mode which is indicated by an on screen message: Use the arrows to move the pip, press the ‘self view’ button to exit

The arrow keys can now be used to move the self-view PIP to the required location on the screen.

A second selection of the Self-View control will turn off the on-screen message and the PIP will stay in the selected location every time self-view is activated
Sharing Content from Connected Devices

**Transmit PC** sends the image from a connected PC or HDMI device to the remote site as a second image in conjunction with the main system camera. The image will automatically be shown as a window on the main screen. To end transmission, select the control again or select the Horus Scope input, which will replace the PC image with the Horus Scope image. When the PC transmission is active, the LED associated with this control will illuminate.

**Transmit Horus Scope** sends the image from a connected Horus Scope or HDMI device to the remote site as a second image in conjunction with the main system camera. The image will automatically be shown as a window on the main screen. To end transmission, select the control again or select the transmit PC input, which will replace the Horus Scope image with the PC image. When the Horus Scope transmission is active, the LED associated with this control will illuminate.

Managing Audio Settings

This section describes how to manage audio settings by using the integrated control panel. For instructions on how to manage audio settings, please refer to the *Cisco Webex Codec plus Administrator Guide*:


**Enabling and Disabling Microphone Mute Mode**

**Microphone Mute** selection stops the room audio from being transmitted to the remote site and the LED indicator illuminates. A second selection resumes the room audio transmission. This function mutes both the integrated microphone and optional auxiliary Cisco microphone, if connected, but does not affect transmission of an electronic stethoscope.
Adjusting Speaker and Headphone Volume

The volume functions are controlled by the + and – signs. A volume indicator bar is displayed on the top right hand side of the screen indicating the volume level.

Enabling and Disabling Headphone Operation

The remote site audio is always available through both the system speakers and available for listening using connected headphones. By activation of the Headphone mode, the audio is only available through connected headphones for private listening. On activation, the associated LED illuminates above the control button.

Enabling and Disabling Stethoscope Mode

Stethoscope Mode optimizes audio transmission of the stethoscope signal connected to the stethoscope audio input, while automatically muting the internal system microphone and auxiliary Cisco microphone, if connected, to minimize room audio interference. If it is required to transmit the microphone(s) as well as the stethoscope, select the microphone mute button to “un-mute” the microphones. In Stethoscope Mode, the stethoscope signal is only sent to the remote end and will not play through the speakers. On activation, the associated LED illuminates above the control button.
CLINiC Administration

You can modify the default functions of the CLINiC codec by logging in as an administrator to the codec web interface and performing the desired changes.

For the complete set of instructions, please refer to the *Cisco Webex Codec plus Administrator Guide*:


Accessing the Codec Web Interface

*To access the web interface:*

1. In your web browser address line, enter the system IP address, for example, http://10.11.12.13.

   To display the system IP address, press and hold the Hang Up button on the CLINiC control panel for 5 seconds or more, and then release. This will display the system information on the CLINiC screen, including the system IP address.

2. Enter the Admin ID as the user name (default is: admin), and enter the Admin Remote Access Password, if one is set.

3. The Admin screen can now be used to navigate through the menus to the required location to change a setting, as outlined in the following pages.

4. It is important that after any changes to the configuration are made these are saved using the SAVE button in the top right hand corner.
Change Standby Settings

The default system configuration goes into standby mode after two hours with no activity. You can change this setting to disable standby mode or change the delay after which the system goes into standby.

To change standby settings, navigate to **Setup>System Configuration>Standby**.

**To disable stand-by mode:** Set **Standby Control** to **Off**.  

**To enable stand-by mode:** Set **Standby Control** to **On** and set a Standby delay time. 

**Set Standby Delay:** Input the required number of minutes between 1 and 480. 

**Save Configuration changes:** Select **Save**.
Change Conference Settings

The default setting is set for the CLINiC to auto answer incoming calls. This can be changed to manual answering using the connect button on the system control panel

To change conference call settings, navigate to Setup>Configuration>Conference.

To Disable Auto Answering of Incoming Calls: Set AutoAnswer Mode to Off.

To Enable Auto Answering of Incoming Calls: Set AutoAnswer Mode to On.

Save Configuration changes: Select Save

![Configuration Settings Image]
**System Auto-Dial**
A single contact can be auto-dialed from the CLINiC using the connect key.

*To add an auto-dial contact, navigate to Setup > Configuration > Facility/Service.*

*Locate Service 5 and select Call Type: Video*  
*Input a identifying User name and associated URL*  
*Select Type: Other*  
*Select: Save*
Adjusting Audio Level

You can adjust the level of each audio input transmitted from the codec to optimize the audio experience at the remote end.

To adjust individual audio level inputs, navigate to: Setup > Configuration > Audio
(Suggested changes and adjustments screen shot is shown on following page)

**Microphone 1:** Integrated System Microphone (Default value: 18) Adjust as required

Set Mode to: ON
Set Dereverberation to: OFF
Mode to: ON
Noise Reduction to: ON

**Microphone 2:** Electronic Stethoscope Input (Default value: 18) Adjust as required

Set Mode to: OFF
Set Dereverberation to: OFF
Mode to: OFF
Noise Reduction to: OFF

**Microphone 3:** Auxiliary Microphone Input (Default value: 18) Adjust as required

Set Mode to: ON
Set Dereverberation to: OFF
Mode to: ON
Noise Reduction to: ON

Following changes to any levels or settings, Select: SAVE
<table>
<thead>
<tr>
<th>Microphone</th>
<th>Level</th>
<th>Mode</th>
<th>EchoControl</th>
<th>Dereverberation</th>
<th>Mode</th>
<th>NoiseReduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microphone 1</td>
<td>18 (0 to 24)</td>
<td>On</td>
<td></td>
<td>Off</td>
<td>On</td>
<td>On</td>
</tr>
<tr>
<td>Microphone 2</td>
<td>18 (0 to 24)</td>
<td>Off</td>
<td></td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
</tr>
<tr>
<td>Microphone 3</td>
<td>18 (0 to 24)</td>
<td>On</td>
<td></td>
<td>Off</td>
<td>On</td>
<td>On</td>
</tr>
</tbody>
</table>
Enabling WiFi operation

As a default, the codec is configured to use wired Ethernet primarily, with a fallback to WiFi when Ethernet is not available. This can be changed in the administrative portal, Network Services Setting section. See details here:


Important: WiFi setup to access the local access point (login SSID, password, etc.) can only be done one of two ways:

1) Use the Touch10 (p/n CS-TOUCH10) control panel available from Cisco. Customers wishing to utilize WiFi should purchase a Touch10 for use in configuration and setup of the system. This is plugged into the touch 10 input jack on the codec. Go to the device name on the home screen, and select Settings. Go to Network Connection, and Open Wi-Fi settings. Select the WiFi you want to connect to. If the network requires authentication, type in the passphrase, and select Connect.

2) An administrator can use an API command to enter the SSID and password using the administration portal accessed via a web browser

   a. The LAN connection (left side) must not be connected. WiFi only works if the wired LAN is not in use.
   b. The person configuring the system must be hard wired via the Ethernet port on their PC/Laptop and the Touch Panel port on the right side of the system for initial config (think about it...I need to be connected to the device over the network, but the network must be disconnected in order to enable the WiFi network.
   c. If properly connected, the CODEC will provide the PC with an IP address that begins with 169.254.x.x. It may be helpful to disable the wireless capabilities of the laptop during configuration.
   d. With a browser on the PC navigate to 169.254.1.1 which is the local-link address for the CODEC (in this case it is acting as a router).
   e. Login with the credentials assigned to the unit (default is admin with an empty password field)
   f. Navigate to Setup/NetworkServices/Wifi and make sure Allowed and Enabled are both set to “True” which is the default state for the CODEC. Hit “Save” at the top of the screen if changes were made.
   g. Navigate to Integration/Developer API
   h. Use the xCommand Network Wifi Configure command to configure the WiFi to match the settings of the desired SSID which has the following format:

       xCommand Network Wifi Configure [AllowMissingCA: AllowMissingCA] 

       Your network may not require all variables for configuration. Check with your administrator.
An example of a basic configuration would be (single space between words, commands are not case sensitive):

**xCommand Network Wifi Configure** SSID: *mynetwork* Type: *WPA2-PSK* Password: *mypassword*

i. The “xCommand Network Wifi Configure” command is described in the Cisco Collaboration Endpoint Software API Reference Guide (CE9.12 or later).

Cisco supports the following authentication types:

- Open
- WPA-PSK (AES)
- WPA2-PSK (AES)
- WPA-EAP-PEAP
- EAP-TLS
- EAP-TTLS
- EAP-FAST
- PEAP
- EAP-MSCHAPv2
- EAP-GTC

The system only remembers one network at a time. If you change between different networks, you have to type in the credentials again.
Appendix 1 - Mounting Information

The following figure is not to scale and provided for dimensional information only.

Figure 16 – CLINIC 12x rear view mounting holes
Appendix 2 – Tethered Volume Control

For specific applications, the CLINiC can be wall mounted at high level making it difficult to reach the Tactile Membrane control panel. Generally, in these circumstances, the system is set to auto-answer and the camera is controlled from the remote location. The only local room user controls that are required are Volume adjustments for which an optional Tethered Remote Control is available.

The Tethered Remote Volume control has a volume up and down button, which when pressed, raises or lowers the volume until the button is released. A volume indicator bar is displayed on the top right hand side of the screen showing the volume level when either of the + or – keys are being pressed.

Camera Reset Function

It is important to instruct cleaning staff to be very gentle with the camera. Manually moving the pan and tilt will cause a position detection error in the camera. The camera will then be unresponsive and the Standby light will blink.

In this event, the user can use the Tethered Remote Volume Control to reset the camera by selecting and holding both the Volume + and Volume – buttons simultaneously for 5 seconds.

The camera will then go through a short reset routine and resume normal pan/tilt operation.
The Tethered Remote is connected to a USB port on the left hand side of the CLINiC. Prior to connection, it is necessary to simply pull out the cover plate that is fitted over the USB port.

As the Volume control is tethered and uses a Tactile Membrane panel, it does not require batteries, is not easily lost or misplaced and can easily be cleaned.

Figure 18 – Connecting the Tethered Remote Volume Control