



ONSIGHT 400R COLLABORATION HUB GUIDE



Librestream
Onsight 400R Collaboration Hub Guide
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Name of Librestream Software Onsight Connect

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INTRODUCTION

The OnSight 400R Collaboration Hub is a portable accessory that accepts video and audio from various video sources and links it to the Librestream OnSight Connect application running on smartphone (iOS or Android).

Using the OnSight Hub and OnSight Connect, technicians can share video and audio from external video sources for real-time collaboration with remote experts.

The OnSight Hub supports the following inputs:

- HDMI: up to 1080p30
- USB 2.0: USB Video Class (UVC) v1.1 or higher compliant devices
- USB 2.0: USB Audio Class (UAC) for basic audio devices v1.0
- VGA (up to XGA: 1024x768@70 Hz)
- S-Video: NTSC and PAL
- Composite Video (using an S-Video Adapter)

This manual describes the OnSight Hub and how to use it with OnSight Connect for smartphones.



ONSIGHT 400R COLLABORATION HUB

REQUIREMENTS FOR USE

- OnSight 400R Collaboration Hub
- OnSight 400R external battery charger
- OnSight Connect for smartphones software
- iOS or Android Smartphone
- Apple Lightning to USB Cable
- Android Smartphone USB Cable

PORTS & INDICATORS



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1. Power and Stream Status Indicator

- Blue: OnSight Hub is on.
- Pulses Blue: OnSight Hub is streaming media.
- Blinking Rapidly White: OnSight Hub is updating firmware.

2. Ethernet Port

For Future Use (Not currently active.)



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5. USB Media Input

Supports USB video or audio class devices.

6. HDMI Media Input

Standard sized HDMI port supports non-protected (non-HDCP) HDMI video and audio up to 1080p60.

7. Power Port

The power adapter plugs into this port to supply power and charge the battery.

8. Power Button

Turns the OnSight Hub on and off. From the off state, the OnSight Hub will take about 8 seconds until ready.



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3. S-Video Media Input

Supports NTSC and PAL S-Video sources.

4. VGA Media Input

Supports analog VGA sources to a maximum of 1024x768@70 Hz.

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9. Link Indicator

- Glows Green when linked to OnSight Connect running on an iOS device.
- Pulses Red when OnSight Hub is updating firmware.

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10. Charge/Battery Indicator

Charging state with power adapter connected:

- Green: fully charged
- Orange: charging
- Red: charger fault occurred

Battery capacity without power adapter connected:

- Green: battery capacity over 40%
- Orange: battery capacity 20%-40%
- Red: battery capacity 10%-20%
- Flashing Red: Less than 10%
- Auto Shutdown: 4%

11. iOS Device Port

Links the Onsight Hub to Onsight Connect for smartphones.

The USB Device Port also provides power to an attached Smartphone if the Onsight Hub is powered on and running off the AC power adapter.



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SETUP & USE

Internal Battery

The internal battery makes the Onsight Hub a portable solution. A fully charged battery supports 4 to 5 hours of streaming when using the High Media Configuration (720x480, 10 fps). Battery Life may vary depending on the selected Media configuration.

Before using your Onsight Hub, connect the power adapter to the Power Port and allow the battery to fully charge. When the Onsight Hub is powered off, charging will take approximately 4 hours. The battery will also charge if the Onsight Hub is powered on but at a slower rate.

Charge Status:

- Orange: battery is charging.
- Green: battery is fully charged.

You can also operate the Onsight Hub while it is plugged into the power adapter.

Power Button and Status Indicator

Press the Power Button for one second to turn on the Onsight Hub.

- The status indicator glows solid Blue when the Onsight Hub is on.
- The status indicator pulses Blue to show that the Onsight Hub video is being streamed by the Onsight Connect application.
- The status indicator rapidly blinks White when the Onsight Hub firmware is being updated by the Onsight Connect application.
- When the Status Indicator is off, the Onsight Hub is off.

Turn off the Onsight Hub by pressing the Power Button. When running on battery, the Onsight Hub automatically powers off after 5 minutes of inactivity. To perform a manual reset of the Onsight Hub, press the power button for 10 seconds.

Connecting to a Smartphone

1. Using a USB cable, connect the Onsight Hub to a Smartphone.
2. Turn on the Onsight Hub by pressing the Power Button. The Smartphone will automatically pair to the Onsight Hub. If the Onsight Connect application is not already running, the following dialog appears:

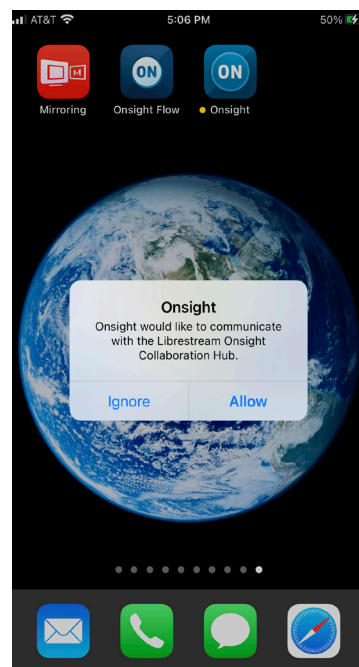


Figure 4.1 Connecting

3. Select Allow to launch OnSight Connect immediately.
4. Select Ignore to prevent OnSight Connect from launching immediately. Start OnSight Connect when needed by clicking on the OnSight icon.
5. From the OnSight Connect Dashboard, you can check the status of the OnSight Hub by pressing the Health button.
 - If an OnSight Hub is not attached, the Accessory will show Not Present.
 - The System Health screen will also show the OnSight Hub as Not Present if it is powered off while attached to a smartphone.

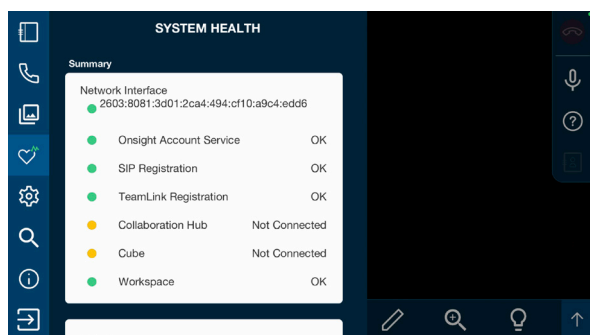


Figure 4.2 System Health (not connected)

6. If an OnSight Hub is connected, the System Health screen shows the Accessory as "Connected". Press "Details" and scroll to the OnSight Collaboration Hub Details section to view the battery status and firmware version. The Link Indicator on the OnSight Hub turns green to show a successful connection to OnSight Connect.

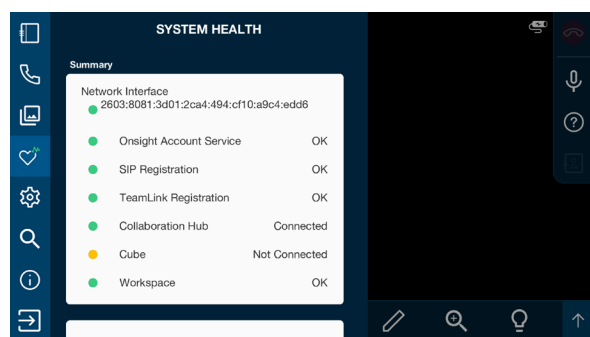


Figure 4.3 System Health (connect)

7. View the System Health-Details screen at any time to check the battery level and to decide when the battery requires charging. The Charge Indicator on the OnSight Hub turns red when the battery discharges to 20%; this is an indication that charging is required.

Updating the Firmware

You can check for updates by going to Settings-OnSight Collaboration Hub. Press "Check for Updates".

- If an update is available follow the onscreen instructions.
Note: The OnSight Hub must be plugged into the power adapter to proceed with an update.
- If the OnSight Collaboration Hub firmware is up to date press "Close".

Powering a Smartphone

When the OnSight Hub is running on internal battery, it does not provide power to the connected smartphone. That means the OnSight Hub will not charge the internal battery of the smartphone.

However, the OnSight Hub will provide power to a smartphone under the following conditions:

- The OnSight Hub is plugged into the power adapter (not running on internal battery).
- The OnSight Hub is powered on.

Under the above conditions, the OnSight Hub can charge the internal battery of a smartphone.

OnSight Hub Video: Viewing and Streaming

The External Video Source icon appears at the top right of the OnSight Connect Viewer whenever the OnSight Hub is successfully paired with OnSight Connect running on an iOS device.

When connected, video that is captured by the OnSight Hub is automatically displayed in the OnSight Connect Viewer. The video can then be shared in an OnSight Connect call (and/or recorded).

If the OnSight Hub does not have an active external video source connected, the No Signal message appears in the Viewer (see the OnSight Hub Media Sources section for instructions on connecting external video sources).

During a call, shared video can be switched between Front, Back and External Video Sources. To select the OnSight Hub as a Video Source, choose External from the Video Source list. The other video source options refer to the front or back camera of a smartphone.

Figure 4.4 shows the OnSight Hub connected to the OnSight Connect application running on an iOS device.



Figure 4.4 Onsight Connect Application running on an iOS device

Whenever the Onsight Hub is disconnected from a smartphone, Onsight Connect will automatically switch back to an internal camera of the smartphone as the video source.

Onsight Hub Media Sources

Video Source Selection

The Onsight Hub supports multiple video inputs which may be simultaneously connected to the Onsight Hub. However, only one video input will be active at a time. The order of video source selection is as follows:

- HDMI (unprotected sources only, non-HDCP)
- USB video class devices (UVC USB Video Class v1.1 or higher compliant)
- USB audio class devices (UAC for basic audio devices v1.0)
- VGA (up to XGA: 1024x768 @ 70 Hz)
- S-Video (NTSC and PAL)
- Composite Video using an S-Video Adapter (NTSC and PAL)

If the active source is removed from the Onsight Hub, it searches for the next available source and selects it automatically.

The video source devices can be hot swapped. It is not necessary to stop streaming before connecting or disconnecting any video source.

Audio Source Selection

In addition to video, the Onsight Hub streams subject audio if it is available. Subject audio is synchronized with the active video stream. The availability of subject audio is summarized below for each media input:

HDMI Media Input: HDMI supports both video and audio so subject audio is available from HDMI sources that transmit audio.

USB Media Input: This input can simultaneously support video and audio endpoints. Subject audio is available from USB cameras that support it.

Note some USB audio devices have non-standard interfaces and may not be compatible with the Onsight Hub.

S-Video and VGA Media Inputs: These video sources do not carry audio signals and therefore do not support subject audio.

NOTE: Any video source can be augmented with subject audio by connecting a supported USB audio device to the Onsight Hub. The USB media input captures audio when another media input is selected as the video source. USB audio takes precedence and replaces HDMI audio if HDMI is the selected source.

Changing Stream Settings

The Onsight user may select video stream settings using the Audio/Video Settings screen. However the inputs available to the Onsight Hub can vary in available resolutions, aspect ratio, and frame-rate. For this reason, the Onsight Hub automatically adjusts the settings to remain consistent with the capabilities of the active video source.

For example:

If the user selects D1 (720x480) at 30 frames per second (FPS) and the Onsight Hub is connected to a USB camera that provides a maximum of 640x480 @ 10 FPS, then the settings are adjusted to 640x480, 10 FPS. If the user then unplugs the USB camera and attaches an HDMI source of 1080p60, the Onsight Hub re-adjusts the settings to 720x400, 30 FPS. The 720x400 resolution matches the HDMI aspect ratio of 16:9 while not exceeding the original requested frame size.

Video Specification

The Onsight Hub supports multiple video inputs which may be simultaneously connected to the Onsight Hub. However, only one video input will be active at a time. The order of video source selection is as follows:

- HDMI (unprotected sources only, non-HDCP): up to 1080p30
- USB 2.0: USB Video Class (UVC) v1.1 or higher compliant devices
- USB 2.0: USB Audio Class (UAC) for basic audio devices v1.0
- VGA (up to XGA: 1024x768@70 Hz)
- S-Video: NTSC and PAL
- Composite Video (using an S-Video Adapter)

Media Configuration

The Onsight Audio/Video status panel displays the current media configuration when streaming video.

Media Configurations range from Low (320x240) up to 1080p. When a Media Configuration is selected, the Onsight Collaboration Hub will provide H.264 video at the closest matching resolution the video source supports. In most cases, the resolution of the video sent by the Onsight Collaboration Hub will match the resolution of the selected Media Configuration.

The Onsight Collaboration Hub may produce video at slightly different resolutions than set in the Media Configuration to ensure the aspect ratio is correct. The actual resolution of the video being streamed will be displayed at the top of the Audio/Video status panel.

To achieve the best quality images when sharing HD Video in an Onsight Session, set the output resolution of the video source attached to the Onsight Collaboration Hub to match the Onsight Connect Media Configuration being used.

For example, if the selected Media Configuration is streaming 720p video, then set the output resolution of the video source attached to the Onsight Collaboration Hub to 720p as well. Note: When making changes to the video source, most cameras change their output resolution immediately; however, some cameras may require the cable to be re-connected to the Onsight Collaboration Hub after the resolution is changed.

Again when using High Definition resolutions: it is best practice to always match the resolution of the Media Configuration to the resolution of the native video source attached to the Onsight Hub. If the resolution is not matched, the Onsight Hub must resize each video frame. This can cause excessive overhead at higher frame rates and may introduce latency into the stream.

TROUBLESHOOTING

The following section describes possible issues and how to resolve them.

Onsight Connect Not Pairing with the Onsight Hub

Symptoms

The Onsight Connect application does not show the External Video icon in the Viewer and the System Health screen reports that the Onsight Hub is Not Present.

Issue

Onsight Hub is not physically connected to the smartphone. The Onsight Hub is off or the internal battery is not charged.

Solution

1. Connect the Onsight Hub to the smartphone using the appropriate USB cable.
2. Make sure the Onsight Hub is being powered by the power adapter.
3. Press and hold the power button for 1 second to turn on the Onsight Hub and wait for the status indicator to pulse blue.
4. Reconnect the Onsight Hub to the smartphone.
5. Confirm that the Onsight Connect application recognizes the Onsight Hub.

Onsight Hub Shows No Signal

Symptoms

The Onsight Hub has been selected as the video source and one or more of the media inputs are connected but the Viewer shows No Signal.

Possible Issue

None of the connected media inputs is active or valid.

Solution

• USB

Unplug and reconnect the USB camera. Some USB cameras can take up to 10 seconds to start sending video. If no video appears, then it is possible that the particular device is not supported by the Onsight Hub. If this is the case, please contact Librestream Support.

• HDMI

Unplug and reconnect the HDMI cable. If no video appears, then it is possible that the HDMI source is protected using HDCP. Examples of HDMI devices that are protected are DVD/Blu-ray players, satellite receivers, Apple TV or similar boxes.

• VGA

Unplug and reconnect the VGA cable. If no video appears, then the VGA source may be configured to output an unsupported resolution or refresh rate (maximum is 1024x768 at 70 Hz).

• S-Video

Confirm that the S-Video source is on and configured to output video.

Video from Onsight Hub is Rolling or Distorted

Symptoms

The video from the Onsight Hub that appears on the Onsight Connect Viewer is rolling or distorted.

Issue

Some video sources or the intervening cables may supply weak or noisy signals to the Onsight Hub causing poor initial synchronization.

Solution 1

Disconnect and reconnect the video source.

Solution 2

From Onsight Connect, select a video source other than the Onsight Hub (e.g. Front or Back camera) and then reselect the Onsight Hub.

Onsight Hub is Non-responsive

Symptom

The Onsight Hub appears to be powered on (some or all indicators are lit) but will not connect to a smartphone and will not power off.

Solution

1. Disconnect the Onsight Hub from the smartphone.
2. Make sure the Onsight Hub is connected to the power adapter.
3. Press and hold the Power Button for 10 seconds to reset the Onsight Hub.
4. Power the Onsight Hub back on and reconnect to the smartphone.

CONTACT SUPPORT

If your issue is not listed, then follow the steps in for "Onsight Hub is Non-responsive". If this does not resolve your issue, please contact support@librestream.com or call **1.800.849.5507** or **+1.204.487.0612**.