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Liberty AV PHHOBSC0001 HRT Huddle Hub One Wireless Collaboration Hub

Huddle Hub One / Huddle Hub One+

Installation Guide

Product version 1.21 – Manual version 01

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1 Introduction

Huddle Hub™ product family is the answer to the needs of modern teamwork, which is increasingly based on content presentation and video conference. Thanks to Huddle Hub, these activities can be performed everywhere in your organization without the need of dedicated huddle rooms, large displays, webcams or other devices.

In fact, Huddle Hub gives you access to a new and unprecedented collaboration mode. By using Huddle Hub, you can make your presentations and share your documents from the screen of your PC (desktop or laptop) directly to the screen of other devices (desktop PCs and laptops, tablets or smartphones), with no need for a specifically equipped place. Additionally, the camera streams of your devices can be collectively combined into a Multicam single feed to be used during videoconferences.

The result is that every place in your company / organization can be used as a Virtual Huddle Room.

The Huddle Hub solution is made of two components:

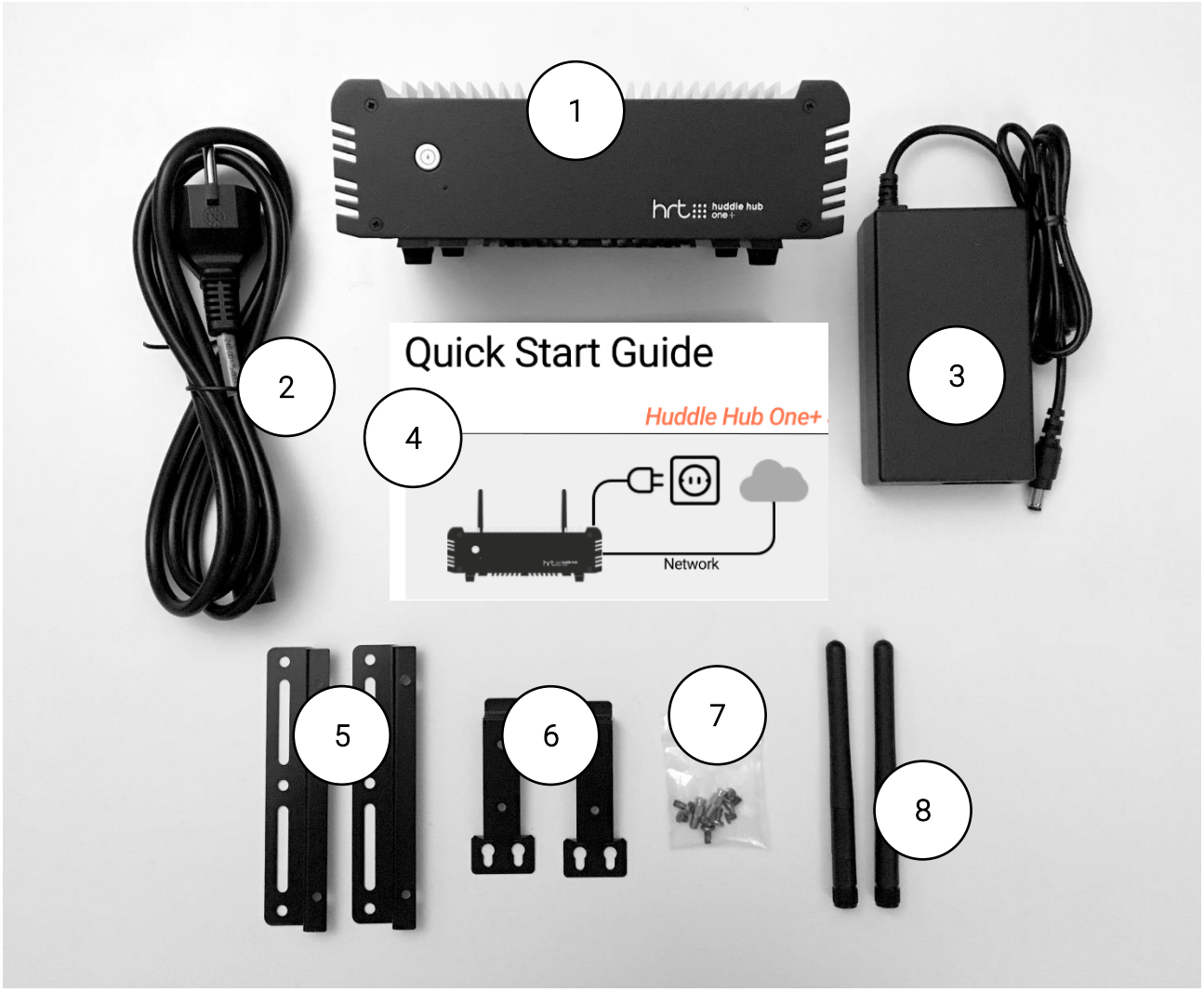
- The Huddle Hub unit, currently available in two versions: Huddle Hub One (HHO) and Huddle Hub One+ (HHO+);
- The Huddle Hub App (HHApp), a companion software available for Windows, MacOS, iOS and Android devices.

Given that HHO+ includes all the functionalities of HHO, when this guide refers to HHO it means HHO or HHO+. HHO+ specific features will be highlighted with the *HHO+ only* marker.

This guide will help you to get install your HHO or HHO+ unit. Please refer to the *Configuration Guide* to understand how to configure HHO to better suit your needs, and to the *User Guide* to understand how to use the companion software.

2 Product description

2.1 Unpacking HHO / HHO+



1 Huddle Hub One / Huddle Hub One+ unit
2 Power cord (localized)
3 AC-DC Adapter
4 Quick start guide
5 L-shape mounting kit
6 VESA mounting kit
7 Screws kit
8 Wi-Fi antennas (*HHO+ only*)

Huddle Hub One / Huddle Hub One+ unit

When installing HHO, please follow these important guidelines:

- The product should not be located in a place where it will be exposed to moisture or excessive heat.
- Place HHO in a well-ventilated place, far from any heater or heating vent.
- Avoid direct irradiation of any strong light (such as sunlight) and keep at least 2 inches (5 cm) of clear space around your device.
- Place HHO horizontally for optimal heat dissipation. HHO can be installed vertically with front panel up. **Vertical installations with front panel facing left or right don't allow correct heat dissipation and must not be used**.
- Do not place this equipment on an unstable cart, stand, or table. The product may fall, causing serious damage to it.
- Place HHO in a location where it can be connected to multiple devices as well as to a power source.
- Make sure the cables and power cord are safely placed out of the way, so they do not create a tripping hazard.
- Keep the product away from devices with strong electromagnetic reference, such as cordless phones and microwaves. To access your HHO through its Ethernet interface, the unit must be connected to the company LAN using an Ethernet cable.

Power Cord and AC-DC Adapter

The power cord is country specific.

The supplied AC-DC adapter input voltage range is 90 – 264 VAC and the output is 12V – 5A - 60W.

Warning: You are required to use the supplied AC-DC adapter only.

Quick start guide

The quick installation guide describes the installation procedure from unpacking the unit to hardware connections and power on.

L-shape and VESA mounting kit, screws kit

The L-shape mounting kit can be used to secure the unit on walls, tables, rack cabinets, etc.

The VESA mounting kit allows to install HHO+ on TV screens or any other device which follows the VESA mounting standard.

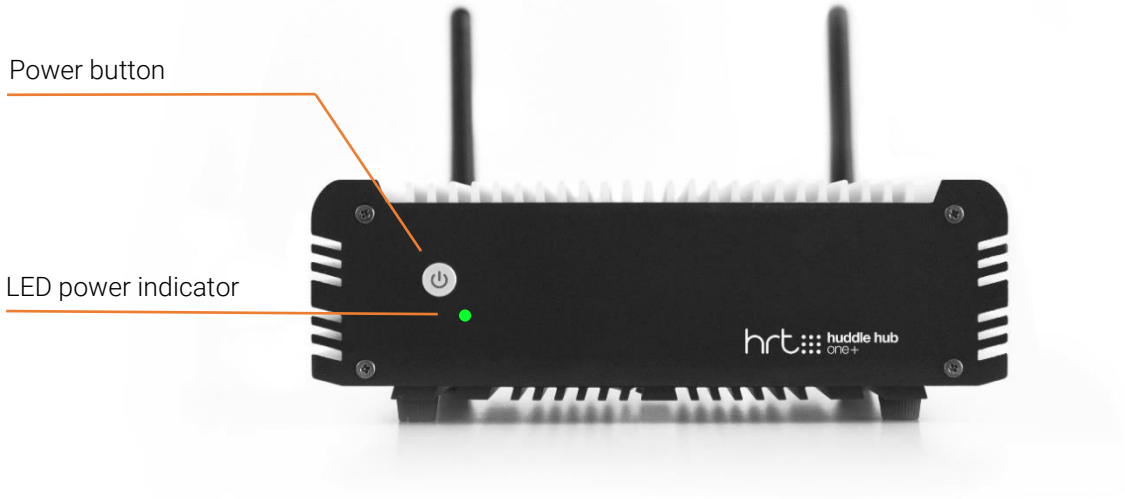
The screws kit contains screws for both the mounting kits.

Wi-Fi antennas

The two supplied antennas work for both 2.4 and 5GHz Wi-Fi bands. The gain is 2.0db and the impedance is 50ohm.

Warning: You are required to use the supplied antennas only.

2.2 Front panel



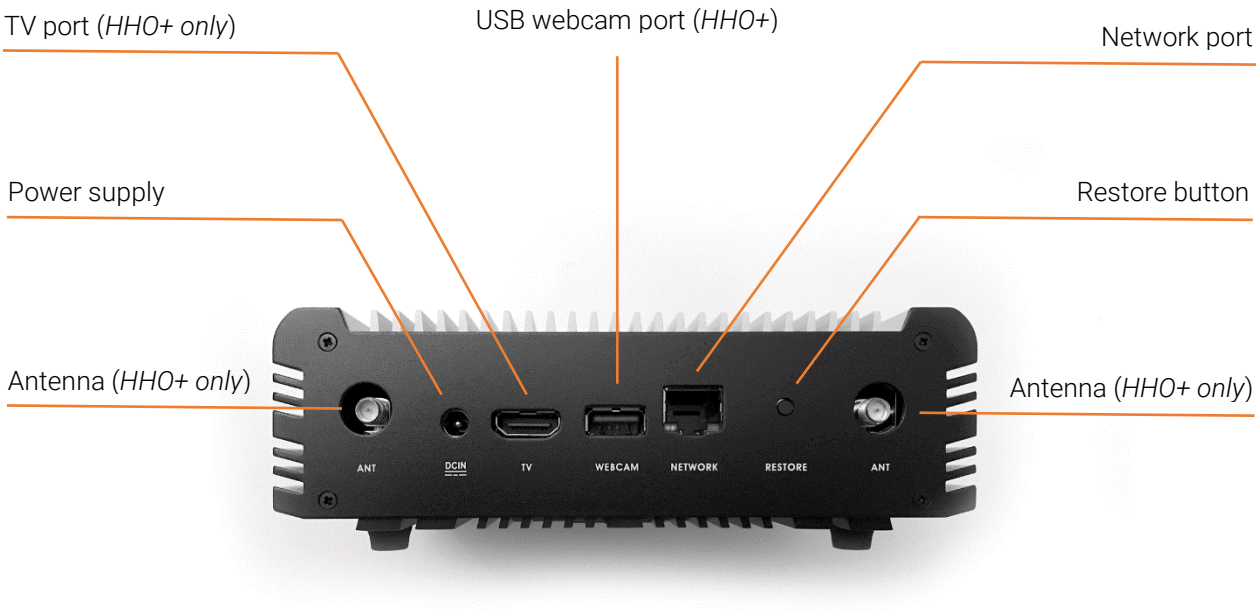
HHO powers on automatically when connected to the wall socket. The LED power indicator on the front panels turns from red to green.

To switch HHO off, keep the power button pressed for more than 5 seconds: the LED on the front panel will turn from green to red.

To switch HHO on again, simply press the power button.

> *Warning: at the very first power-on, HHO starts the automatic firmware installation procedure. This operation takes few minutes. After the first installation, and at every power-on or reboot, HHO connects to the HRT software repository to check for firmware updates and automatically installs its own latest release. For this reason, HHO may appear unresponsive for few minutes after power-on or reboot. The effective time required for the update depends on the speed of the Internet connection. Please see the Configuration Manual if you want to disable the auto-update feature.*

2.3 Rear panel



Power supply

Plug the power cord to the AC-DC power supply and connect the power supply to the DCIN connector. Connect the power supply to the wall socket.

Verify that the green LED on the front panel is on and solid to confirm that the hardware is connected correctly.

Network port

The network connector is a standard RJ45 and the network interface is a Gigabit Ethernet standard. Connect HHO to the company LAN using an Ethernet cable (not supplied).

Warning: Use shielded cat 6 SSTP Ethernet cable to connect HHO to the company LAN.

Tip: HHO must be able to connect to Internet in order to download the latest release of its software. Internet connection is also necessary if you want to connect your devices to HHO+ using its embedded access point and want to use the multicam feed to video conference.

Restore button

This button has two functions:

- Restore: to force the system to restore the factory default configuration, press it for more than 5 seconds, while the unit is turned on. After the restore procedure the unit will restart.
- Recovery: this procedure reinstalls the original factory firmware and restores the factory default configuration. To start recovery, turn the unit on and, within 2 seconds, press the restore button for 15 seconds. After the recovery operation, HHO connects to the HRT software repository to check for firmware updates and automatically installs its latest release.

USB webcam port (*HHO+ only*)

The USB webcam port can be connected to any standard UVC webcam (USB Video Device Class). The USB port is a standard USB 3.0 Type-A.

TV port (*HHO+ only*)

The TV port output can be connected to a TV screen using a standard HDMI cable (not supplied).

Antennas (*HHO+ only*)

Gently hand-tight the supplied Wi-Fi antennas on the two ANT connectors. Antennas should stand vertically, thus if you place your HHO unit on a surface, gently bend them at their hinge as shown in the picture below:

3 Deployment

3.1 Usage scenarios

As explained in the Introduction, the Huddle Hub product family gives you access to a new and unprecedented collaboration mode, called the Virtual Huddle Room. This means that you can make your presentations and share your documents from the screen of your computer (desktop or laptop) directly to the screen of other devices (computers, tablets or smartphones), with no need for a specifically equipped place. Same applies to the Multicam feed feature, where the camera streams of your devices can be combined into a single one to be used during videoconferences.

The Virtual Huddle Room concept is supported by the entire Huddle Hub family. Additionally, Huddle Hub One+ can be used also in traditional huddle rooms, equipped with webcam and TV.

3.1.1 Virtual Huddle Room

A virtual huddle room is any place in your company where you want to benefit of HHO collaboration facilities. In this configuration, you do not need to be close to the HHO unit, but you must be able to reach it through your company LAN. This means that you have to respect two conditions:

1. The HHO unit must be connected to the LAN.
2. The devices you want to use with HHO must be connected to the same LAN (through an access point).

Provided that these two conditions have been met, HHO can be placed anywhere in the company, typically in a data center, server room or any other place under IT Manager's control.

3.1.2 Traditional Huddle Room (*HHO+ only*)

HHO+ has all the features of HHO. Additionally, it can be plugged to a display and/or to an external USB webcam.

These features make it suitable to be used in traditional A/V equipped huddle rooms, so as to send Presenter's screen to a TV and to include the stream of the webcam in the multicam feed.

When installed in a huddle room, you have different options to reach it with your devices:

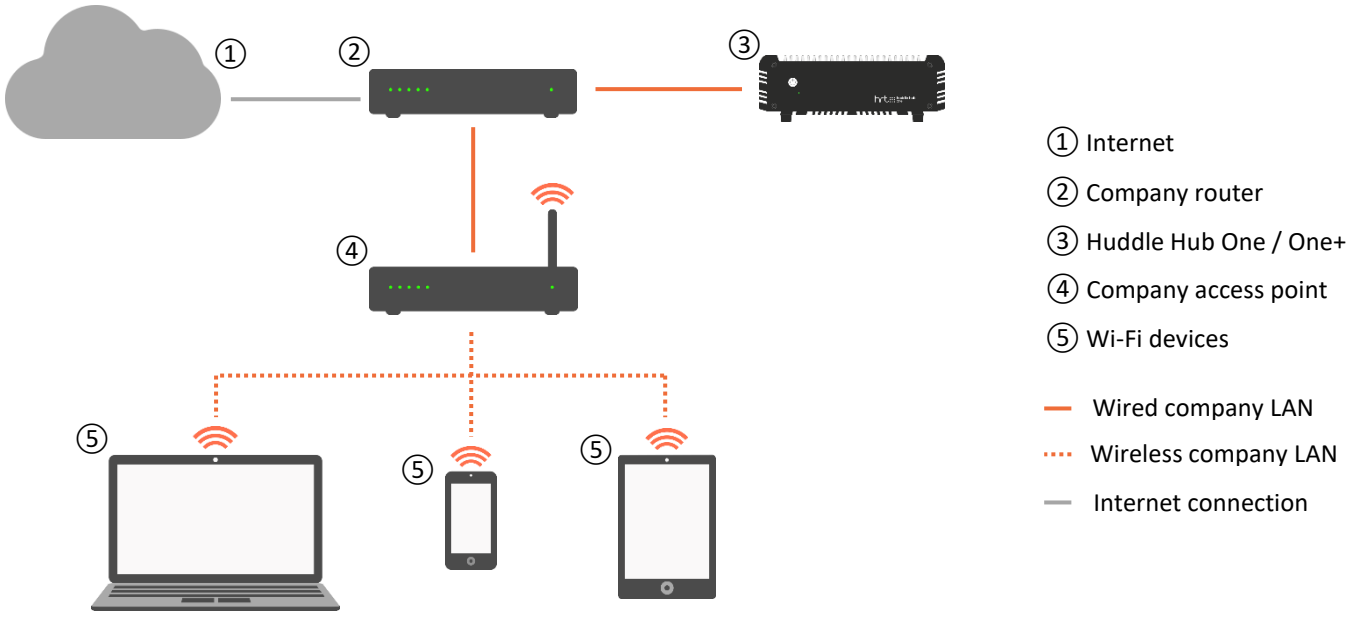
- Connect HHO+ and its client devices to the company LAN.
- Connect HHO+ to company LAN and devices to its embedded access point.
- Mix the previous configurations, having part of the devices connect directly to HHO+ and part through the company LAN.

Please see next section to explore the possible network topologies in detail.

3.2 Network topology

There are some possible network topologies allowed by HHO and especially by HHO+, described in the following chapters.

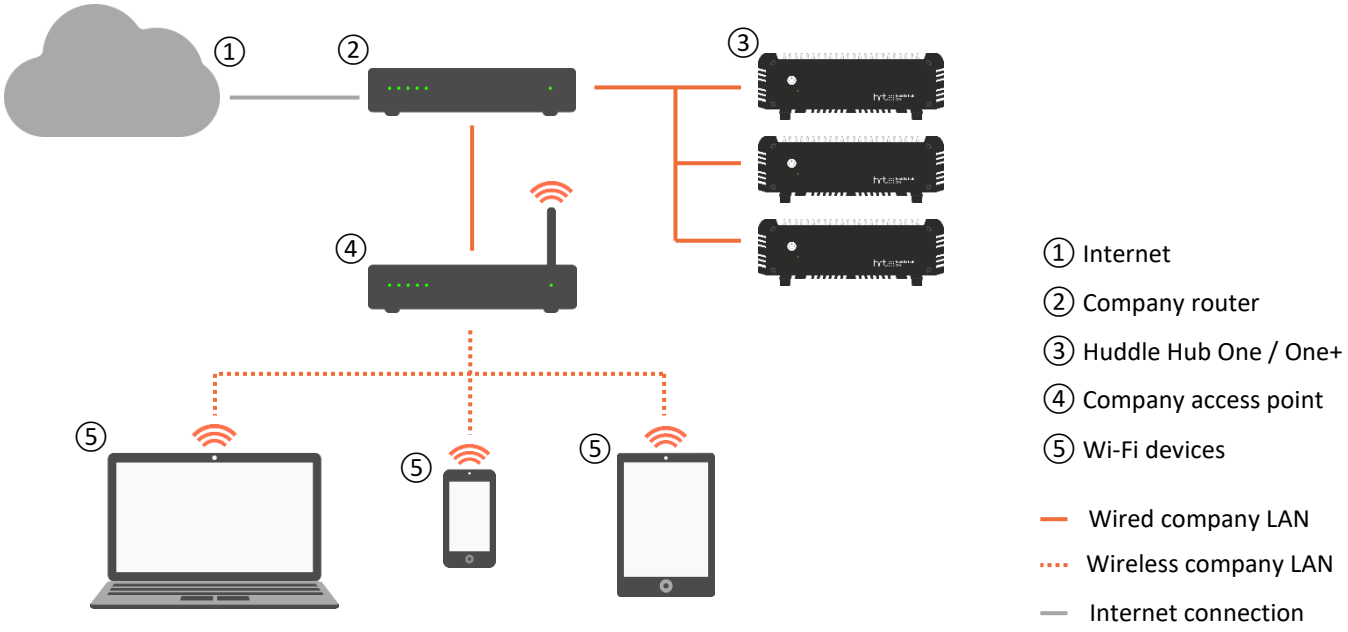
3.2.1 Company LAN



In this configuration, HHO ③ is connected to the company LAN. The Wi-Fi devices ⑤ reach HHO through a company access point ④.

To be used by the devices, HHO doesn't need any Internet access. However, Internet access is necessary to allow HHO to download its updates.

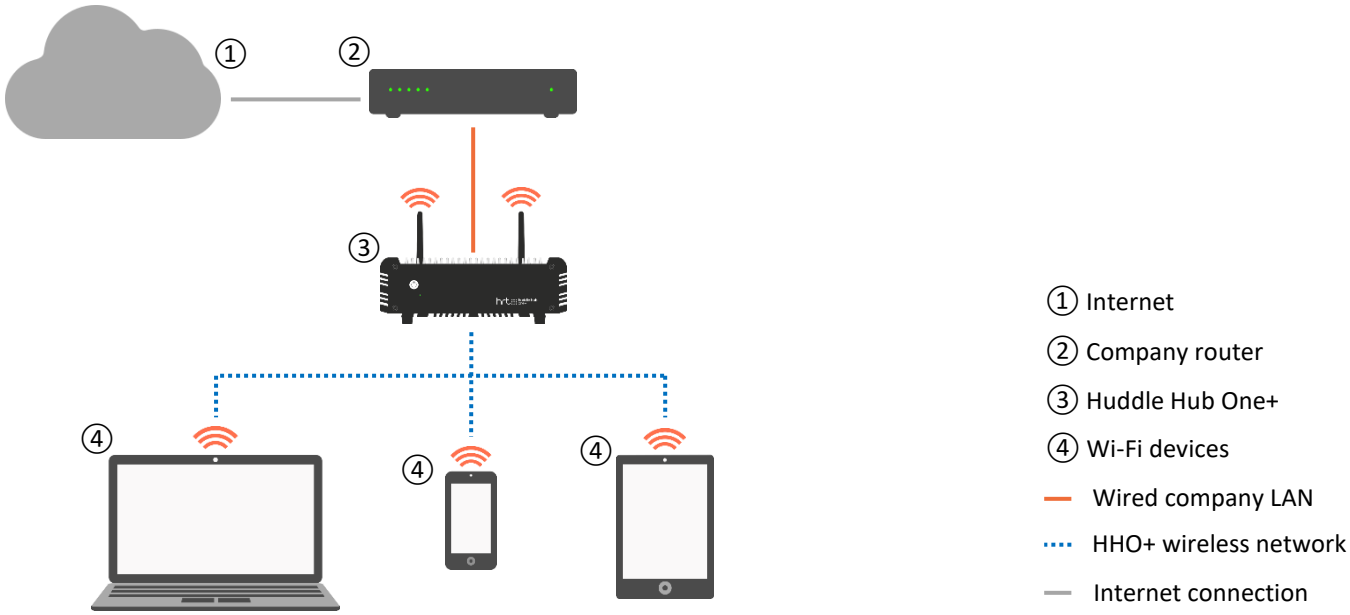
3.3 Company LAN – Clustered



This configuration is similar to the previous one, but describes the case where you have multiple HHO units in the same LAN.

As explained in the *Configuration Guide*, each HHO must have a unique name.

3.3.1 Dedicated network (*HHO+ only*)



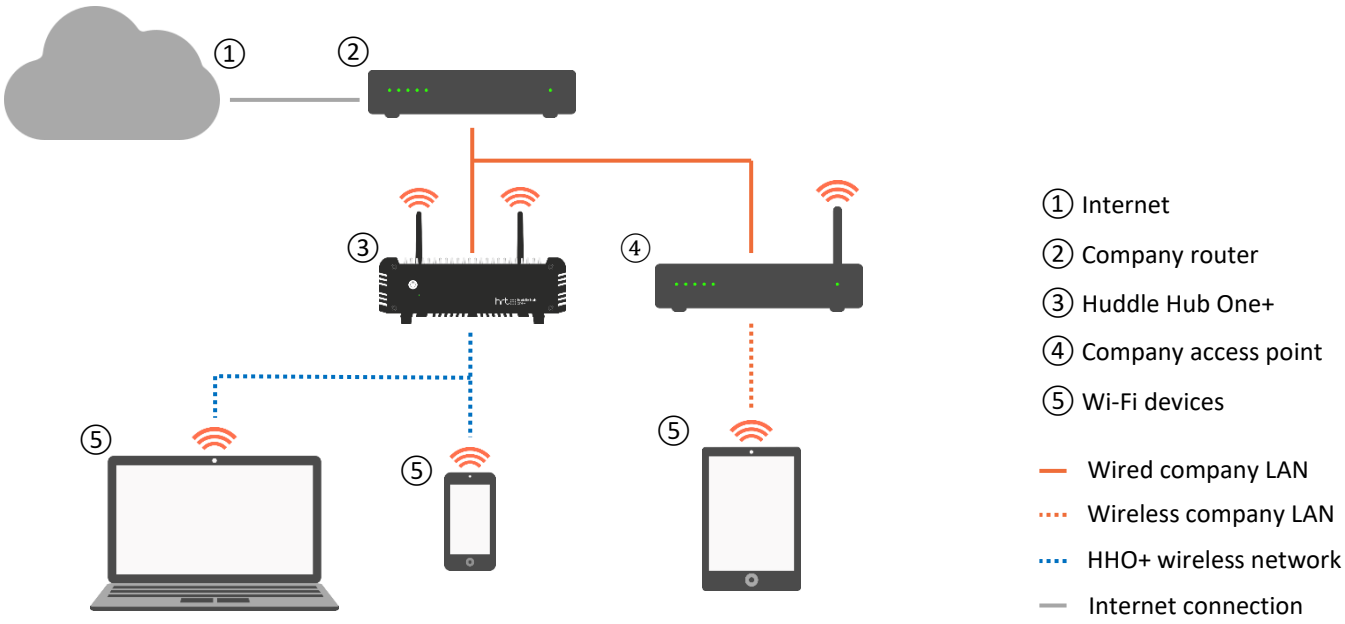
HHO+ features an on-board access point, which the Wi-Fi devices can connect to.

In this configuration HHO+ ③ is wired to the company LAN, and the devices ④ connect directly to HHO+.

To provide Internet access to the devices, HHO+ must have Internet access itself. Otherwise, presentation will still be possible, but the devices will not be able to make a videoconference because they won't be able to reach the far end.

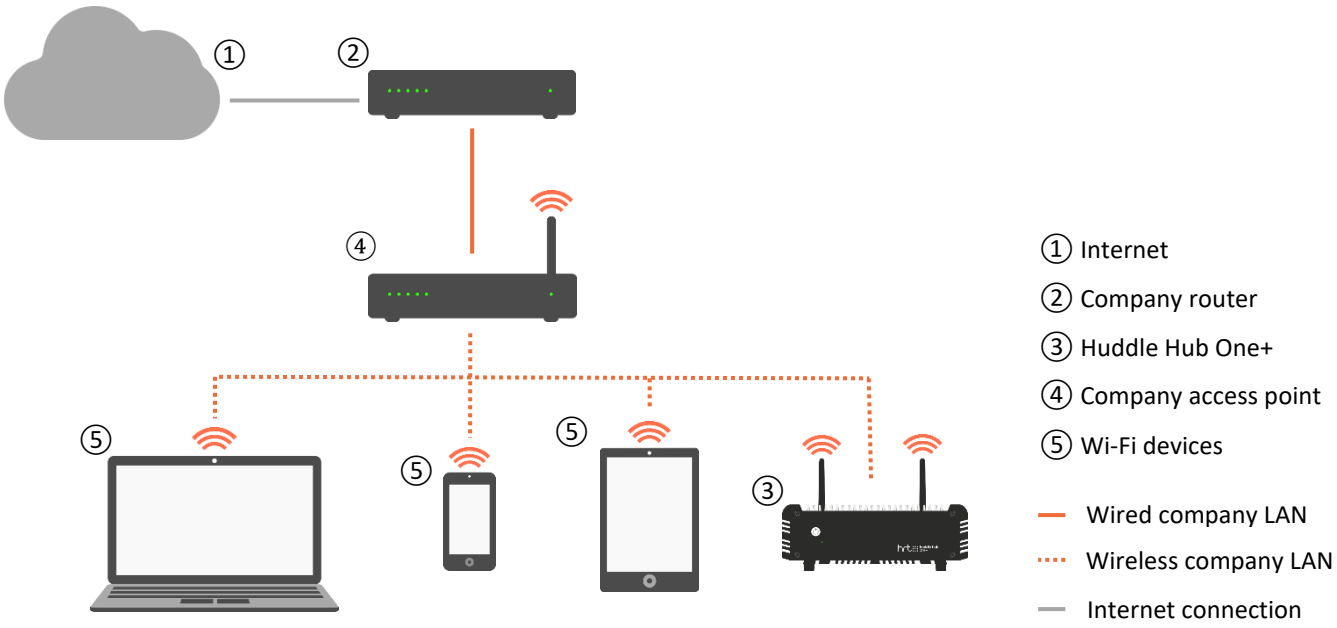
Internet access is necessary also to allow HHO to download its updates.

3.3.2 Mixed configuration (*HHO+ only*)



In a mixed configuration, part of the devices ⑤ reach HHO+③ via a direct connection, and another part via the company LAN through an access point ④.

3.3.3 Station mode (*HHO+ only*)



Station mode is useful when you have no way to connect HHO+ to the company LAN with an Ethernet cable. In this configuration, HHO+③ is connected to the company LAN via its Wi-Fi module, through an access point ④, as the devices ⑤ do.