User Guide

HBox® 200-
HBV-PDL
v01.01.00-0

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Thank you for selecting the NANTHEALTH HBox. This user guide is intended to serve as an aid in the proper set-up, installation, and operation of the HBox device. We ask that you read this user guide carefully before proceeding to work with the equipment for safe usage of this product. Please retain this user guide available for ready reference if needed.

General Description

HBox is a small, durable, medical-grade product platform supporting device connectivity. It hosts NANTHEALTH's software for sending data from a wide range of data generating in-home medical devices to a location accessible by the care team.

HBox extends NANTHEALTH connectivity to any location within Verizon Wireless 3G cellular coverage. Connection to a devices is supported via Bluetooth or USB for standalone devices to connect to HBox via a Device Escort serial-to-USB converter cable. Measurement data is thus delivered to the care team in near real-time.

Indications for Use

The NANTHEALTH HBox is intended for use in connecting medical devices including Personal Health Devices (PHD) to a server for transferring measurement data.

Intended Audience

The intended audience for this guide is any individual utilizing HBox in the home for medical device connectivity. Target audiences are general consumers, patient care technicians and/or assistants, nurses, biomedical technicians and administrative IT personnel.

Client Support Contact Information

NantHealth Client Support contact information and hours of operation:

The support line hours are 24/7.
The number is 866-202-2124
Support can be accessed online at
www.nanthealth.com/

Included in the HBox Package

Qty	Item	Part Number
1	HBox with Tabletop Bracket	200-HBV-PDL
1	AC/DC Power Supply Cable	100-HPS-PVL HK-AD-050A500-US mfg
1	User Guide	HBV-v01.01.00-0-Operating_Instructions-R01

Safety Information

Symbol	Meaning
	Manufacturer
	Consult Operating Instructions
	Serial Number
	Wireless Module MEID Number for Cellular Activation

Caution Statement

CAUTION Do not attempt to plug in any devices to the HBox's USB port which are not intended to be used with the HBox (i.e. USB storage devices).

CAUTION Do not use a power supply other than that provided by NANTHEALTH.

CAUTION Do not attempt to remove or replace the HBox internal battery. The lithium-ion battery in HBox should be serviced only by NantHealth, and must be recycled or disposed of separately from household waste.

HBox System Figures

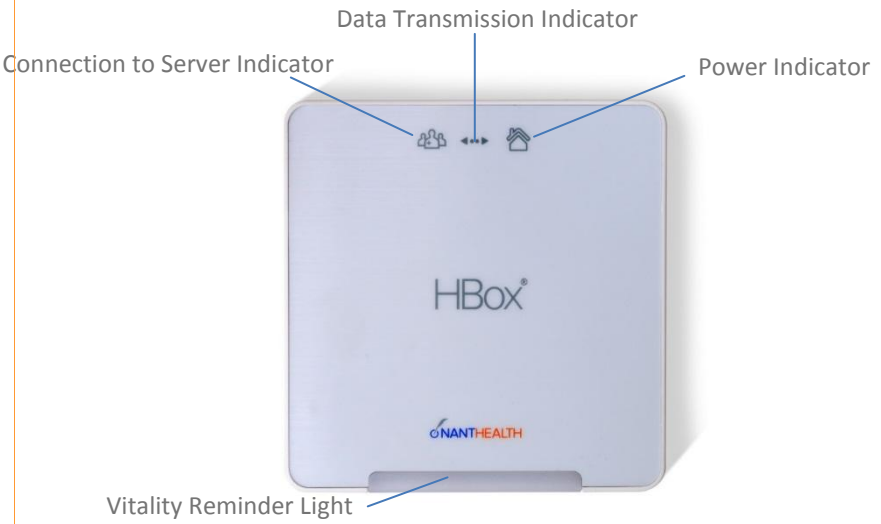

Figure 1: HBox Front Panel

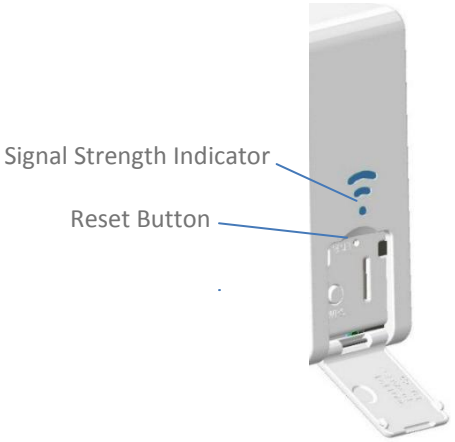

Figure 2: HBox Side Panel

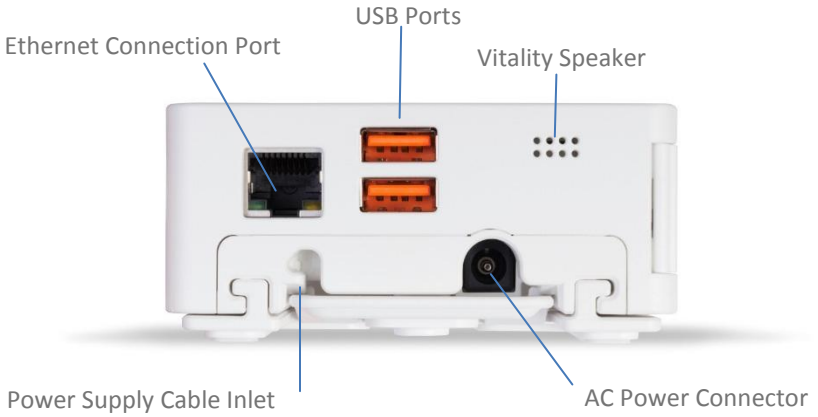

Figure 3: Rear and Bottom View

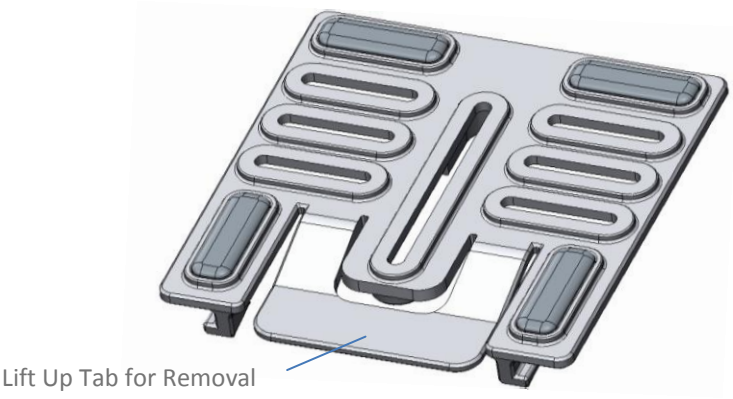

Figure 4: Removable Tabletop Bracket

HBox Set Up

Installation / Placement

Identify a location for HBox placement on a flat surface like a tabletop, countertop, nightstand or desktop near to an AC power outlet. HBox has a bracket with rubber feet which allows it to lay flat on a dry table.

Assembly

Assemble the HBox by lifting up the tab on the Removable Tabletop Bracket on the bottom of the HBox and sliding it out (Figure 4). Insert the AC power connector into the barrel plug on the back of HBox and rotate it 90 degrees so that the cord can be secured in the inlet, and out of the way of the bracket (Figure 3).

Place the Removable Tabletop Bracket back on the device by sliding it in. It will click into place. HBox should always be used with the Removable Tabletop Bracket to hold the Power Supply cord in place.

Connecting Power

Plug in the AC power connector to a nearby electrical outlet.

HBox powers on and boots up automatically when it is plugged in. A power button is not required. Once the HBox establishes connectivity, it is ready for use. Follow any included Quick Start Guide materials for setting up other devices to connect to HBox.

HBox Battery

The AC power should always remain connected. However, in the event that AC power is disconnected, the internal lithium-ion battery functions to assist in the safe shut down of the HBox and to finish any in-progress data transmission.

Master Reset Button

The master reset button is for the purpose of rebooting the HBox in the event it becomes unresponsive. The button is located inside the plastic door on the side of HBox. When the door is opened, the master reset button is accessible by paperclip or pin.

- HBox will immediately power down when master reset button is pressed. There is no need to wait for several seconds, the reset happens right away.
- HBox will begin normal startup when master reset button is released (i.e. un-pressed).

Indicator Lights

Power Indicator

Once powered on, and while in the process of booting, the power indicator light on the forward face panel will blink green. After the boot process completes, the power indicator light displays as solid green, visible from a distance of up to 5 feet.

Connection to Server Indicator

Located on the face panel is a light that indicates server connection status.

- When connected to the server, the connection to server indicator displays as green

- When there is no connection to the server, the connection to server indicator displays as blue

Data Transmission Indicator

HBox contains a single light on the face panel that indicates when data is being transmitted from HBox to the server. When data is being transmitted from HBox to the server, the data transmission indicator light displays as blinking green.

Cellular Signal Strength Indicator

Located on the right side panel there are three signal strength bars which indicate signal strength.

- The first bar indicates the lowest signal strength.
- The second bar indicates greater signal strength than the first bar.
- The third bar indicates the highest signal strength.

Figure 5: Signal Strength Indicator

Vitality

Escalating Reminders

HBox uses light, then light + sound to subtly remind Vitality user using the light bar on the front-center of HBox, (Figure 1).

Cloud Connected

Vitality wirelessly uploads its data to a secure data-center. No separate computer or data-plan is required. Just plug in the HBox.

After pairing with HBox, Vitality will play a startup tone at power on along with Vitality Reminder Light glowing orange which changes to glowing blue.

Remotely Programmable

During scheduled dosage window, Vitality Reminder Light will blink orange until medication is taken and the GlowCap or GlowPack is re-closed.

General Handling Instructions

General Cleaning

HBox is water resistant and ingress protected (IP) and may be wiped down or sterilized with alcohol or liquid cleaners that contain up to 10% bleach without degrading.

IP Rating

- HBox has an IP rating of IP52
- Vertically dripping water has no harmful effect when HBox is tilted at an angle of up to 15° from its upright position

Note: Ingress of dust is not entirely preventable but will not interfere with proper functioning of the device

HBox Specifications

3G Cellular Connectivity	3G CDMA (800 MHz and 1900 MHz) Connectivity HBox supports connectivity to a 3G CDMA wireless networks with the following standards: • EV-DO Rev A • EV-DO Rev 0 • IxRTT / IS-95A
Bluetooth Connectivity	Bluetooth 4.0 Low Energy (BTLE) Connectivity
USB Connectivity	Built-In USB Port • HBox USB ports are type A female • USB ports are version 2.0 compliant HBox connects two USB devices without the need of a USB hub
Processing Power	Processor Specifications • 32-bit ARM • One core • Clock speed of up to 1.0 GHz
Memory	• 2 GB RAM • 8 GB solid state storage space • Expandable Storage via internal memory card
Vitality Connectivity	Vitality GlowCap®, GlowPack™ communication uses specific channels in 900 MHz range.
Operating Temperature	• Range of +5 deg C to +40 deg C • Range of +41 deg F to +104 deg F
Atmospheric Pressure	• Range of 700 hPa to 1060 hPa
Storage Temperature	• Range of -25 deg C to +70 deg C • Range of -13 deg F to + 158 deg F
Humidity	• Range of 0% to 93% Relative Humidity (RH), non-condensing

Regulatory information

HBox is currently designed to meet regulations for use in the United States only.

Federal Communications Commission (FCC)

FCC ID: IFU1001011 and contains **FCC ID**: QISMC509

This device complies with part 15, 22 and 24 of the Federal Communications Commission (FCC) Rules.

Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Increase the separation between the equipment and the receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

This device is restricted to indoor use only when operating in the 5.15 to 5.25 GHz frequency band (U-NII 1).

FCC Radiation Exposure Statement

The Equipment must be installed to provide a separation distance of at least 7.9 inches (20cm) from all persons during operation, and must not be co-located or operated in conjunction with any antenna or transmitter subject to the conditions of the FCC Grant.

Important Handling Information

Only use the provided AC power cable to connect the power supply to a main power outlet that is properly installed and grounded, in accordance with all local codes and ordinances. If the power supply cord is damaged, contact NantHealth for a replacement.

As a safety measure to prevent potential adverse results to data transmission, users should not plug personal electronics into an HBox USB port.

Disposal and Recycling Information

Dispose of HBox in accordance with the Standard Waste Procedures in your geographic area. Ultimate disposal of this product should be handled according to all national laws and regulations.

Because it contains a battery, HBox must be disposed of separately from household waste. Contact your local authorities to learn about recycling options.

Table of Figures

Manufacturer Contact

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NANTHEALTH