

VHC25 Cellular STAX VeeaHub: Quick Start Guide



Thank you for choosing VeeaHub, the intelligently connected wireless hub that makes edge computing a reality.

This guide describes how to set up and start your model VHC25 STAX cellular VeeaHub.

Before you Start

Important safety and regulatory warnings

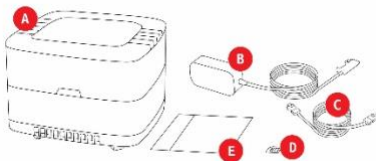
To prevent the device from overheating or being damaged you must ensure **CAUTIONS** are adhered to as follows:

-  **Ambient Temperature.** Do not operate the VHC25 STAX in an area that exceeds an ambient temperature of 40°C (104°F).

-  **Air Flow.** The airflow around your Veeahub must not be obstructed.
 -  **Mechanical Loads.** Be sure that the device is level and stable to avoid any hazardous conditions and that it is secure to prevent it from sliding or shifting out of position. Do not place anything on top of the device, as excessive weight may damage it.
 -  **Connector Damage.** To avoid damage when fitting RJ45 Ethernet connectors, gently press down on the neck of the Ethernet cable while inserting it into the Ethernet port.
 -  **Power Supply Limitations.** Only use the Veeahub supplied Power Supply Unit (PSU). Use of a different power supply may damage the Veeahub.
 -  **Environment.** The VHC25 STAX must not be used in outdoor environments. It must not come into contact with any fluids or substances which might otherwise cause damage or present a fire or electrical hazard to the Veeahub or personnel.
 -  **Usage.** Do not use near your body. The unit requires at least 33 cm distance to users when in normal use.
 - Questions? Go to veea.com/support
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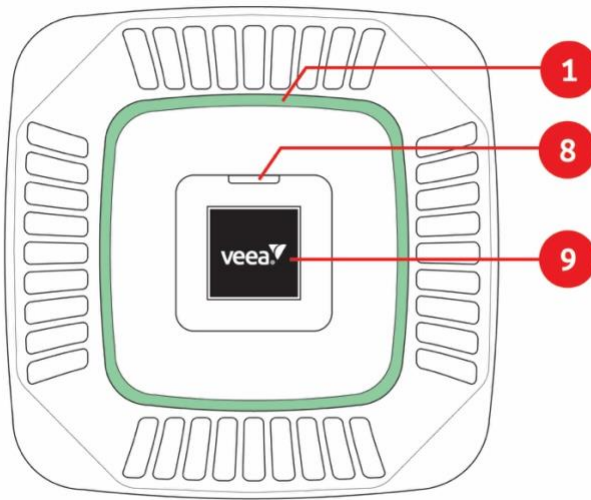
Your Veeahub at a Glance

What's in the Box

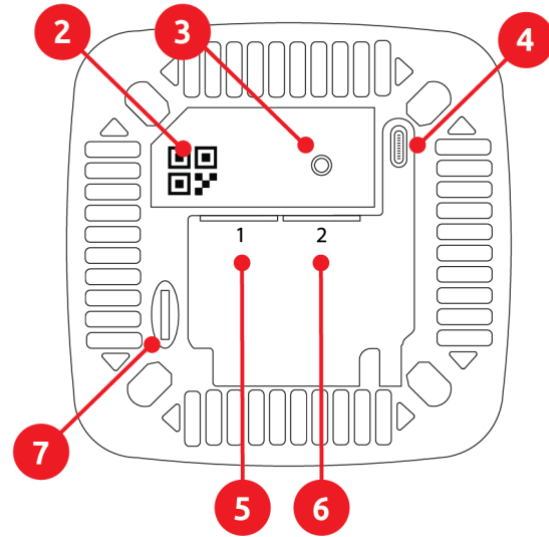


- A** 1 x Veeahub VHC25 base unit
- B** 1 x Custom power supply unit (PSU) adapter plug (US Compatible)
- C** 1 x CAT-5E ethernet cable
- D** 1 x SIM card [RK1]
- E** 1 x Quick start guide

Base/Cellular Unit - Top View



Base Unit - Bottom View



Item	Description	Item	Description
1	LED light segments around cap	5	Port 1 ethernet WAN or LAN
2	QR code	6	Port 2 ethernet WAN or LAN
3	Reset button	7	Micro SD for external storage
4	DC power input	8	OLED status screen
		9	OLED Status button

VHC25 STAX Connections and Lights

Connections

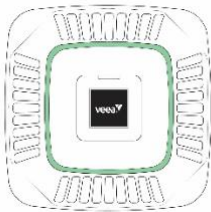
The VHC25 STAX has two Ethernet sockets Port 1 and Port 2. Automatic detection (at power up) allows either socket to be used for the WAN or LAN connections.

A PSU is provided which connects to the VHC25 DC Power Input.

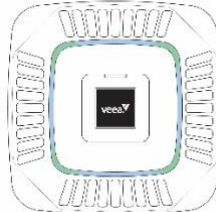
Lights

When the Veeahub is connected and powered on as described in Getting Started (Steps 1 to 4) below, LED lights shine through a diffuser which is located at the top cap of the unit. After 20 minutes (dependent on your internet connection speed), the initialization process is completed, and the lights change to a steady blue color which signifies the Veeahub is connected to the internet and ready to use.

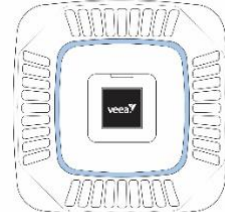
Lights for VHC25 power up sequence:



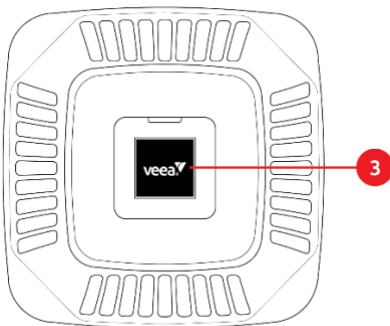
Green



Cyan



Blue - Ready to use



OLED display screen

The display screen can show various status and error conditions during the operation of the cellular unit. There is a button on the screen to select various status displays.

Controls

Reset Button

A reset button is located on the bottom of the VHC25 - This is not used in normal operation.

Mounting

The VHC25 Cellular STAX is designed to be mounted on a flat surface. It requires no fixings or fixtures to install.

Place the VHC25 on its four rubber feet. Make sure there is nothing around the unit, as it uses passive air flow to keep cool. Covering or blocking the vents will cause it to malfunction.

Antennas

The VHC25 antennas are built in and require no installation or fixing.

SIM Card

The VHC25 cellular unit requires a SIM card to operate the cellular functions. Insert the SIM card prior to powering up the unit.

Getting Started

Complete steps **1** to **4** as follows:



Download Veeahub Manager

This is available for iOS and Android phones.

Veeahub Manager enables you to activate Veeahubs on your mesh and to manage the mesh from a mobile device.

Download **Veeahub Manager** app to your mobile device from Apple Store or Google Play Store.



Veeah Edge Platform (VEP)

Manual contains complete information on what you can do using Veeahub Manager.

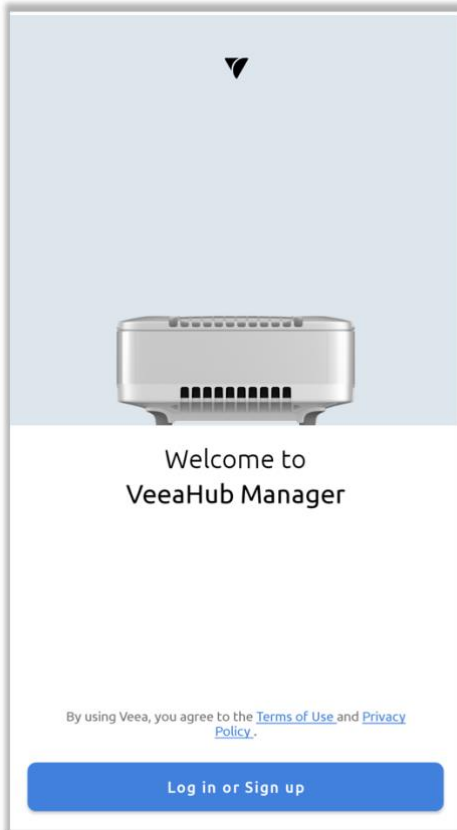
Download the VEP Manual from the Veeah Support website, see:

veeah.com/support > downloads



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Add your Veeahub



Create an Enrollment Account

If you do not already have a Veeahub enrollment account, please create one as follows:

1. Open the Veeahub Manager App.
2. Tap the '**Log in or Sign Up**' button.
3. Select '**Veeahub (Default)**' for a single user, or '**Add a new Organization**' for an organization².

For Default users:

1. At the login prompt, tap on '**Sign Up**'.
2. Fill in the form then tap '**Sign Up**' to submit.
3. A Veeahub email confirmation message is sent to the email address you provided in the form. Follow the instructions in the confirmation email to confirm your email account.
4. The account email address and password form your enrollment account credentials - Keep them safe and use them to log into the Veeahub Manager App.

For Organization users:

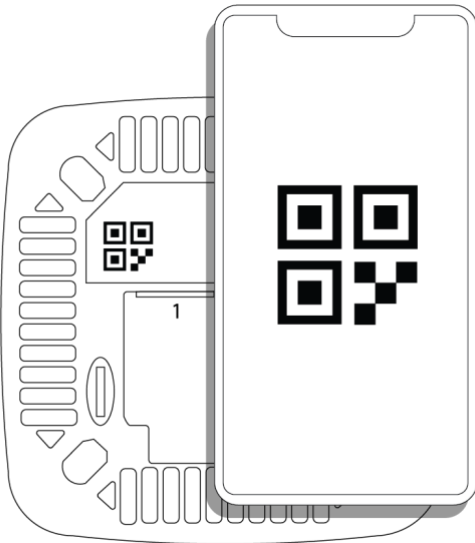
1. On the '**Add Organization**' screen, enter the organization name².

2. If you do not have organization login credentials, at the login prompt, tap on '**Sign Up**'.
3. Fill in the form then tap '**Sign Up**' to submit.
4. A Veeva email confirmation message is sent to the email address you provided in the form. Follow the instructions in the confirmation email to confirm your email account.
5. The account email address and password form your enrollment account credentials - Keep them safe and use them to log into the VeevaHub Manager App.

²Contact your company for organizational enrollment credentials.

Add a First VeevaHub to Your Enrollment Account

Log into the VeevaHub Manager (VHM) as follows:



1. Open the VeevaHub Manager App.
2. Tap the 'Log in or Sign Up' button.
3. Select 'Veeva (Default)' or your organization. Enter the credentials and tap the 'Login' button.
4. Tap on the '**+ Add VeevaHub**' button.
5. Follow the on-screen instructions. When prompted, scan the **QR code** on the back of the unit.
6. Every VeevaHub must be part of a mesh. When prompted, you can add this VeevaHub to an existing mesh (if you have any yet) or else create a new mesh. The first VeevaHub added to a mesh automatically becomes the Gateway for that mesh. The Gateway VeevaHub is the one that must be connected to the internet.

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Connect your VeevaHub

Connect to the Internet

The unit can be connected to the internet by one of two ways. First by direct connect to an ethernet cable by a wired connection or by connecting using the cellular function. The description assumes that you have a valid SIM card for your cellular carrier and that you have a data plan for that carrier.

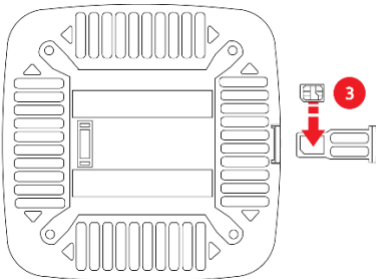
Cellular connection method

The unit is programmed to enable the SIM card for your particular data service and once the unit is booted with the correct SIM card it will attempt to establish a connection using cellular data.

Once the unit connects, you may then use the enrollment methods described below.

Insert the SIM card in the unit as shown

Insert the SIM card for your carrier into the tray located on the side of the main unit. Take care not to force the tray into the device and slide it in carefully. The SIM contacts go down in the tray towards the ethernet connectors. It is keyed to allow it to be inserted only one way.



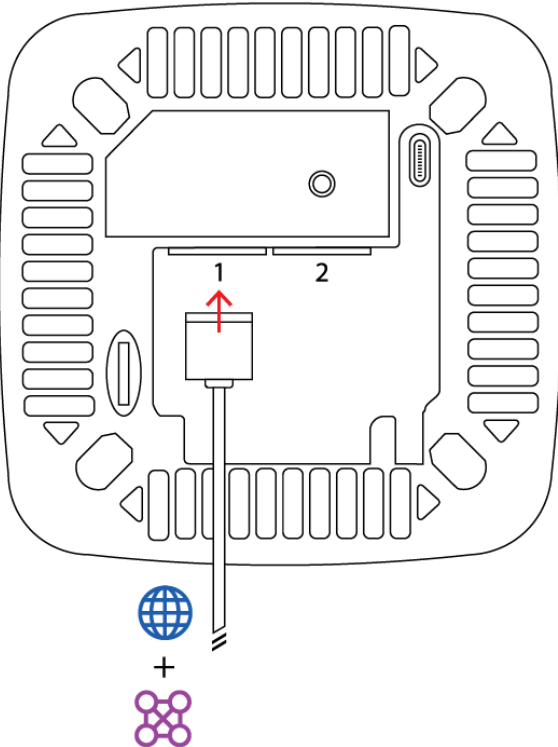
Ethernet connection method



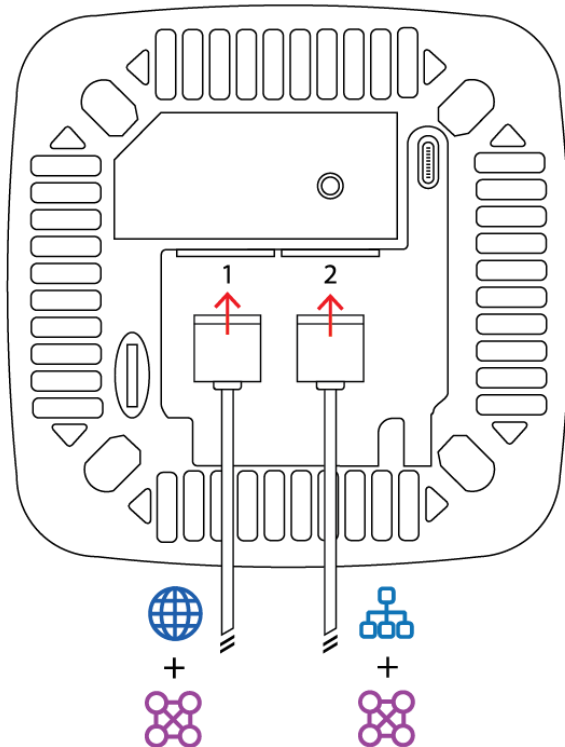
CAUTION: Connector Damage. To avoid damage when fitting RJ45 Ethernet connectors, gently press down on the neck of the Ethernet cable while inserting it into the Ethernet port.

Connect an Ethernet cable either to Port 1 or Port 2 on the VHC25 hub, and your Internet Service Provider (**ISP**) Wide Area Network (**WAN**) Ethernet connection to the Internet.

Internet Only Connection



Internet with LAN Connection



Mesh Connection - LAN (Ethernet Cabled)

If you intend to create a Mesh with other VHC25 hubs, always connect the first Veeahub to be enrolled to the internet (this forms the Gateway hub). You can connect the hubs with an Ethernet cable from any open Ethernet port on one hub to any open port on the other hub.

To Mesh the Gateway hub with other VHC25 non-gateway hubs, connect an Ethernet cable to the vacant Ethernet socket port on the Gateway hub and the other end to either Port on the additional (non-gateway) hub.

It is also possible to mesh using the WAN Port, for more information go to veea.com/support

Connect to a Power Outlet

Connect the Veea supplied PSU to the connector on the underside of the VHC25. Plug the power connector into a suitable mains power wall socket.

Power up the VeeaHub after you have completed steps one to three above.



Check the status of your VeeaHub

Once your VeeaHub is connected to power and Internet through the Ethernet port, the initial setup starts. You can use VeeaHub Manager to follow the progress.

After it is powered on, your VeeaHub will download the latest software and set it up with the required configuration. The size of the download can be as much as 300 Mbytes of data, so insure that your cellular data plan can support this.

This can take up to 30 minutes to finish. Do not unplug your VeeaHub until the process is complete. This is when the VeeaHub Manager shows it is finished.

The LED lights visible on the top of the VeeaHub will show green after the boot up process has successfully completed - This is the normal state of the VHC25 STAX.

A notification email is also sent from Veea to confirm VeeaHub setup is complete (**Note.** The email is sent to the address that was supplied in the VeeaHub enrollment process).

You can now move the unit to its desired location. For information on how to position your VeeaHubs and optimize your network, go to veea.com/support

VeeaHub basics



Mesh Networking

Your VeeaHubs operate in a Mesh. A Mesh is a connected group of VeeaHubs working together to provide a self-healing, self-configuring network.

You must create a mesh, even if you have only one VeeaHub. You can create more than one mesh in your enrollment account.

The first VeeaHub activated on a mesh is the Gateway node that must be connected to the Internet. Additional VeeaHubs may be used to extend the range of your mesh network. To interconnect VeeaHubs in a mesh, just add another unit to a mesh you created earlier.



Services and Subscriptions

Some services available on your VeeaHub require a subscription, sold separately through [Control Center](#).

The same account credentials used for the VHM App are used to log into the Control Center.

What's next?

When the VeeaHub is active on your mesh, you can:



Install additional services

Visit [Control Center](#) to add services to your mesh.

If your VeeaHub is supplied by a business or an organization, you may have been provided a specific address to use – such as `mycompany.controlcenter.veea.co` – if so, please use this address. If not, go to controlcenter.veea.co

Connect Devices

After you have activated your Veeahubs and your mesh setup is complete, you can connect devices such as laptops, printers and phones to your Veeahub.

Your Veeahub has many capabilities and options that can be configured using the Veeahub Manager app or the online Node Manager. The Veeahub Edge Platform (VEP) Manual contains complete information on what you can do with these software tools. Download the VEP Manual from the Veeahub Support website, see: veeahub.com/support > downloads



Connecting via Wi-Fi



Connection to Devices

To connect a device to the Veeahub(s) in the Mesh via Wi-Fi, select the network name (SSID) and enter the Wi-Fi password that you created and set during enrollment. You can create additional wireless access points.

See the VEP Manual for Node Manager and Veeahub Manager full details.



Connection to a Mesh

See the VEP Manual for Node Manager and Veeahub Manager full details.



Connecting via Ethernet

To connect wired devices to your Veeahub, connect an Ethernet cable to an available Ethernet port on the Veeahub and then to your wired device.

What you can connect to an Ethernet port:



Internet connection on the gateway Veeahub

Port 1 or Port 2.



Connection to devices

You can connect devices such as computers and printers to the network using Ethernet.



Connection to a Mesh

You can connect additional Veeahubs into a mesh using Ethernet. Any single Ethernet Port can be used at the same time for both Mesh and LAN devices.

Note. These uses may need specific configurations. For full details, see the VEP Manual for Node Manager and Veeahub Manager full details.

Troubleshooting

If you are having problems with your Veeahub, go to veea.com/support and contact Veea support.

VHC25 STAX Specifications

Electrical	Specification
Power Supply	12VDC @ 2.5A
Power Consumption (Max/Typical)	19W/14.1W
Physical	
Dimensions	107 mm x 107 mm x 91 mm
Weight	0.56 Kg
Environment	
Indoor/Outdoor	Indoor
Operating Temperature	0°C (Min), 40°C (Max)

VHC25 Supplied Power Supply Specifications

Electrical	Specification
Power Supply Input	(100-250) VAC, (50-60) Hz
Power Supply Output	12 VDC @ 2.5 A

Regulatory Information

FCC Interference Statement: 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 of the following measures: (1) Reorient or relocate the receiving antenna. (2) Increase the separation between the equipment and

receiver. (3) 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. FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. For product available in the USA market, only channel 1~11 can be operated. Selection of other channels is not possible. This device is restricted for indoor use.

FCC Radiation Exposure Statement: This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 29cm between the radiator and your body.

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EU Regulatory Compliance

Compliance with the RE Directive

Veea Inc. declares that this device VHC25-5G is in compliance with the essential requirements and other relevant provisions of the RE Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address:
<https://www.veea.com/>

RF Exposure Information

RF exposure information: The Maximum Permissible Exposure (MPE) level has been calculated based on a distance of 20 cm between the device and the human body. To maintain compliance with RF exposure requirement, use product that maintain a 20cm distance between the device and human body.

Legal information

This device may be operated in all member states of the EU.

Observe national and local regulations where the device is used.

The device is restricted to indoor use only when operating in the 5250 to 5350 MHz.

AT	BE	BG	CH	CY	CZ	DE	
DK	EE	EL	ES	FI	FR	HR	
HU	IE	IS	IT	LI	LT	LU	
LV	MT	NL	NO	PL	PY	RO	
SE	SI	SK	TR	UK(NI)			

Frequency Bands and Power

The maximum radio-frequency power transmitted in the frequency bands in which the radio equipment operates: The maximum power for all bands is less than the highest limit value specified in the related Harmonized Standard.

UMTS Band 1/8: 25 dBm

LTE FDD Band 1/3/7/8/20/28: 25 dBm

LTE TDD Band 34/38/40/42/43: 25 dBm

5G NR band n1/n3/n7/n8/n20/n28/n38/n40: 25 dBm

5G NR band n41/n77/n78: 28 dBm

Bluetooth: 20 dBm

Zigbee: 20 dBm

WLAN 2.4GHz: 20 dBm

WLAN 5150~5350MHz: 23 dBm

WLAN 5470~5725MHz: 30 dBm

WLAN 5725~5850MHz: 14 dBm