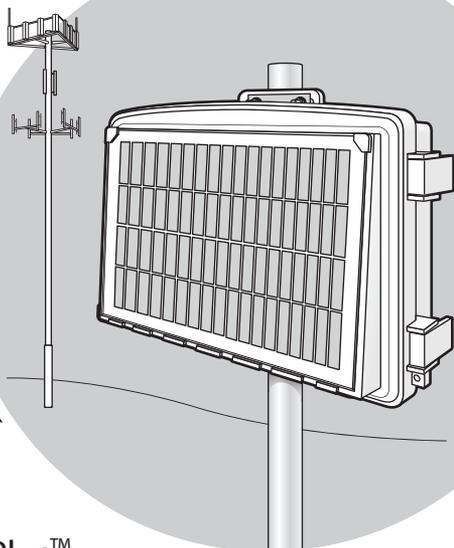


# USER MANUAL

**Vantage  
Connect<sup>®</sup>**

For Vantage Pro2<sup>™</sup>, Vantage Pro2 Plus<sup>™</sup>,  
Vantage Vue<sup>®</sup> and Weather Envoy<sup>™</sup>

Product numbers 6621, 6621C, 6622 & 6622C



**DAVIS**  <sup>®</sup>

Davis Instruments, 3465 Diablo Avenue, Hayward, CA 94545-2778 U.S.A. • 510-732-9229 • [www.davisinstruments.com](http://www.davisinstruments.com)



# Welcome to Vantage Connect (6621, 6621C, 6622 and 6622C)

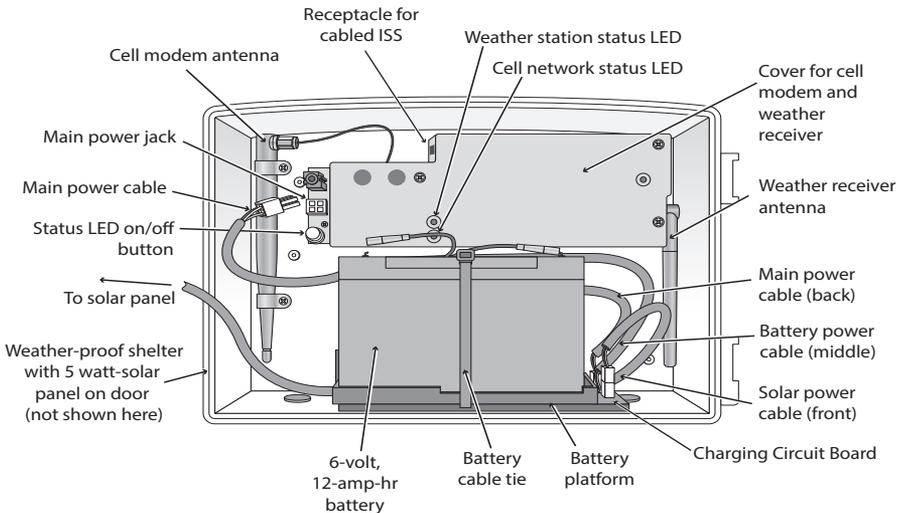
---

Vantage Connect allows you to automatically upload data from a Davis Vantage Pro2™, Vantage Vue®, or other Vantage Pro2-compatible transmitting station to WeatherLink.com through the cellular network. You can view data online or through a smartphone, receive alarm e-mails or texts when preset weather conditions occur, or download data into your PC with WeatherLink® Computer Software.

Vantage Connect comes in several models, both cabled and wireless, and is available in different packages depending on country of use.

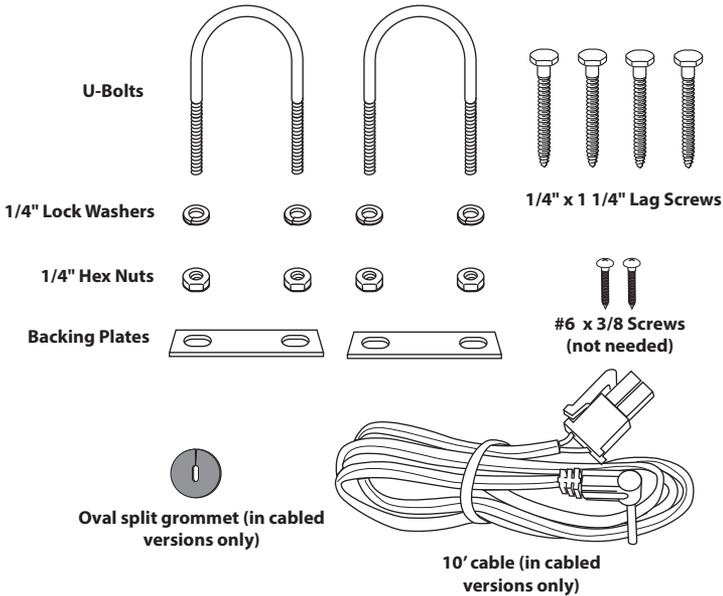
- 6621 operates on CDMA networks in the United States. In the United States, CDMA offers a larger coverage footprint, making it an excellent choice for rural installations.
- 6622 operates on GSM, 2G-3G.

## Contents of Package (all versions)



---

Hardware kit (as shown below)



## Requirements

- A Davis Vantage Pro2 or Vantage Vue integrated sensor suite (ISS) or other Vantage-Pro2 transmitting station (all sold separately)
- CDMA, GSM/2G, 3G cellular network coverage in the area
- Vantage Connect service plan (sold separately)

## Register & Configure Your Vantage Connect

### Purchase a Vantage Connect Service Plan.

Vantage Connect requires an annual service plan. Choose #6632, 6634, or 6636 in the version appropriate for your region (A or B). Each plan offers a different update interval (5, 15, or 60 minutes). For more information see your Davis reseller or purchase a plan during your registration process on [WeatherLink.com](http://WeatherLink.com). After purchase, you will receive an e-mail with an Activation Code that you will use to register online.

### Register, set up and configure your Vantage Connect Online

---

**Note:** Register your Vantage Connect online and wait 5 to 10 minutes BEFORE you power it up to avoid a delay in uploading data. If you already powered up before registering, remove power from the Vantage Connect, register, then repower.

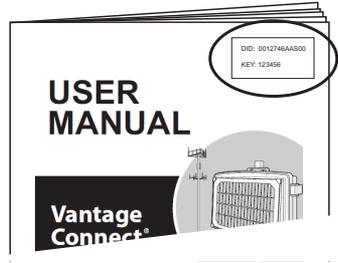
---

---

**Note:** You will need to know the transmitter IDs of each transmitting station before you configure your Vantage Connect.

---

1. When you receive the e-mail with the Activation Code, follow the instructions in the e-mail. Or, go to [www.weatherlink.com](http://www.weatherlink.com) and log in (or create your free account). Click the green **Add Devices** button at the top of your bulletin page. Click Install below the **Vantage Connect** option.
2. Enter the station name and usage.
3. Enter the DID and KEY located on the sticker on the cover of this manual and on the sticker inside the Vantage Connect shelter.
4. Enter the Activation Code received in the e-mail. Click Next.
5. Set the location of your station. You can type in an address or move the pin on the map. Enter or change your yearly rain season start, time zone, country, and barometer elevation.



---

**Tip:** *For accurate barometric pressure data, enter the elevation at which your Vantage Connect will be mounted. Fine tune this sensor by entering the local barometric pressure reading. (Sources of this information include your local airport or radio station)*

---

6. You can also add sea-level barometer and input yearly rain to date. Click Next.
7. In the Station Type field, choose each of the transmitters which will report to your Vantage Connect (up to 8). Choose a station type for each. (For example, Vantage Pro2 ID: 1, Leaf and Soil Moisture Station: ID 2.) If using repeaters, check the “Enable Repeaters” box and choose the **final** repeater’s ID letter for each transmitter using repeaters., and their corresponding ID codes.
8. Your Vantage Connect will now appear in the list of your stations under your name on the right side of the bulletin.
9. You can change the device settings at any time by clicking the Utilities icon  under your name on the right hand side of the page. Click **Device Info** to:
  - Change the station name, type, use, time zone, location, see when your subscription ends, or change your choice of Public or Private for viewing on WeatherLink.com.

---

Click **Device Settings** to:

- Change the rain season start or year to date rainfall, elevation, barometer settings, or anemometer or rain collector type.
- Calibrate, if needed, wind direction, humidity, or temperature.

---

*Tip: Be careful when deciding to calibrate; Davis weather stations are factory-calibrated for accuracy and may not match less accurate or less local data such as reported on television or a web page.) Enter the amount of offset you want the temperature or humidity reading to be reported. For example, if you believe your outside temperature data is consistently 2 degrees too low, enter +2. If you believe the outside humidity data is consistently 5% too high, enter -5. You must calibrate the wind direction if your anemometer cannot be mounted so that the arm points true north. Enter the direction the arm points, if not zero, in degrees from 1° to 359°.*

---

Click **Device Configuration** to add or edit transmitters reporting to the Vantage Connect.

Click **Historical Data** to clear highs, lows and totals.

Click **Alarms** to set up notification when specific conditions exist. See “Set Alarms and Configure Alarm E-mail” on page 9.

Click **Notifications** to get a daily summary sent via email, or to set up email or text alarm notifications.

10. Set unit measurements options by clicking the Account icon  , then choose Unit Measurements.

---

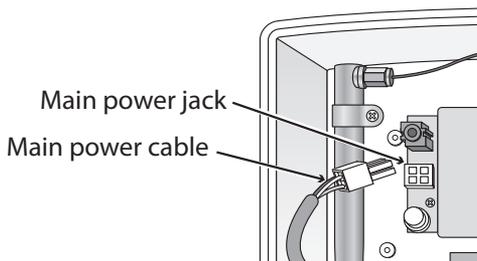
**Note:** These settings and configurations will be pushed to the Vantage Connect at the first update after it is set up and powered. The changes will then be sent to your WeatherLink.com page at the *next* update. So the changes will not appear on your page after at least 2 update intervals. (Update intervals are 5, 15 or 60 minutes depending on your service plan). With high network traffic, this may take longer.

---

## Prepare for Installation

Remove all cardboard and packing materials from inside the shelter.

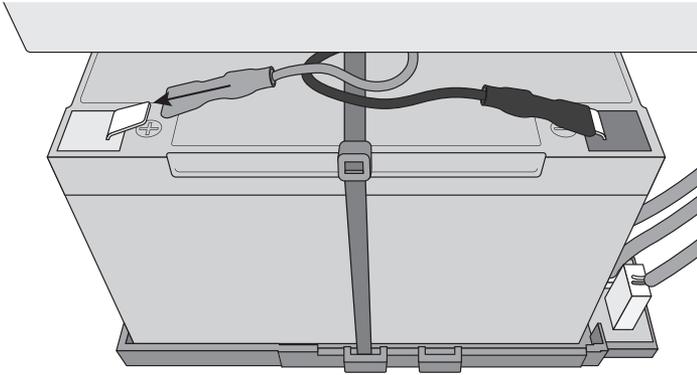
Before proceeding with installation, make sure the main power cable is disconnected from the main power jack.



---

## Connect the battery

The Vantage Connect is shipped with one battery cable (the red, or positive cable) disconnected to prevent battery drain. Connect the red cable to the red terminal.



---

Note: **IMPORTANT:** When putting your Vantage Connect into cold storage, disconnect the red cable.

---

## Install the Vantage Connect

If you have not already set up your ISS or additional station, do so first. (See the instruction manual that came with your ISS or additional station.)

### Mount the Vantage Connect shelter

---

Tip: *Mounting the shelter may be easier if done by two people.*

---

Choose a location for your Vantage Connect. It can be mounted on a pole or a flat surface such as a wall or a wooden post. The shelter should be mounted within transmission range of your ISS. (Maximum of 1000 feet (300 m), line-of-sight, open air.)

It is important that the shelter be mounted so that the solar panel gets the greatest amount of sunshine -- the solar shelter should be facing south (in the Northern Hemisphere) or north (in the Southern Hemisphere).

---

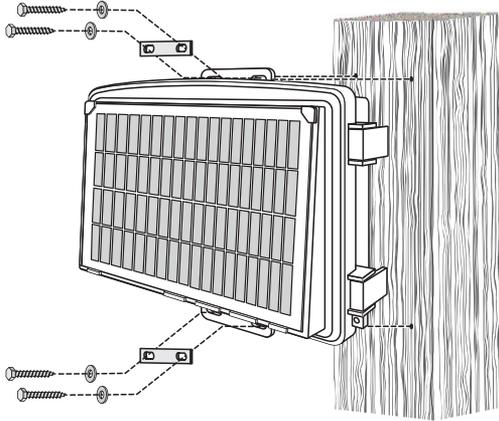
Tip: *While south is generally appropriate for the Northern Hemisphere (and north in the Southern Hemisphere), your goal is to maximize direct sunlight on the solar panel. If your location does not have a full sunrise-to-sunset exposure arc when the panel faces south, you should face your solar panel toward a point midway in the existing arc to maximize panel charging.*

---

---

### Mounting on a Flat Surface

Attach the shelter to the mounting surface in the desired location using the lag screws and backing plates as shown below. Use a pencil or a center-punch to mark the location of the pilot hole.



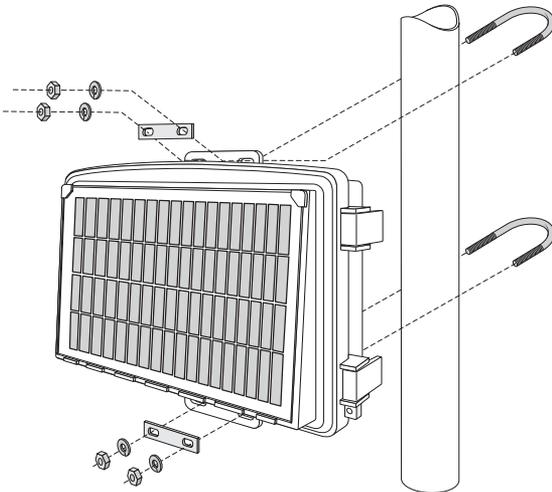
### Mounting On a Pipe

Mount the Vantage Connect onto a pipe with an outside diameter of 0.84" to 1.84" (21 mm to 27 mm) using the U-bolts, backing plates, washers, and hex nuts provided.

---

**Note:** For mounting on larger diameter pipes, the housing can accommodate U-bolts with 5/6" (8 mm) threads for pipes up to 2.40" (61 mm) outside diameter (not provided).

---



---

## Mounting the Vantage Connect with a Sensor Suite

If your installation is between 0° and 45° latitude, North or South, and you mount the Vantage Connect and a Vantage Pro2 or Vantage Vue sensor suite on the same pole, it is important to make sure the sensor suite does not shadow the Vantage Connect's solar panel at midday, especially in the summer. If possible, mount the sensor suite and Vantage Connect so that they are at least 4 feet (1.2 m) apart. You can also rotate the Vantage Connect 45° to the east or west (depending on your location). If you do rotate the Vantage Connect, you may need to return it to face south (Northern Hemisphere) or north (Southern Hemisphere) in the winter. You can also add a Davis Angle Shelter Bracket, product number 6671, which will increase the Vantage Connect's tilt to 30°.

## Power Up the Vantage Connect

---

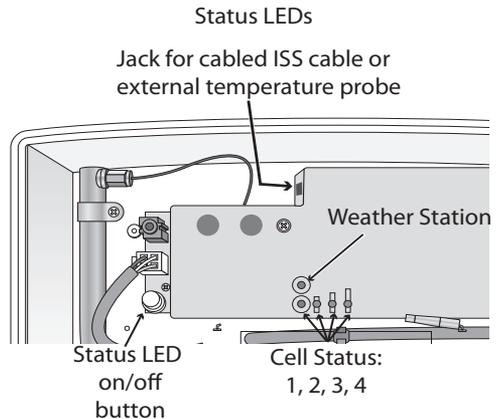
**Note:** It is important to register your Vantage Connect before powering it up to avoid a delay in uploading data. If you accidentally power the unit before registering, it will automatically go to sleep. After 24 hours, it will wake up and check for registration again. If you already powered up before registering, remove power from the Vantage Connect, register, then repower.

---

1. If using cabled Vantage Connect (6621C or 6622C) with a **cabled** ISS, remove the plug from one of the holes in the bottom of the shelter. Run the ISS cable up through the hole. Outside the shelter, wrap a split grommet around the cable and push the grommet securely into the hole. Plug the cable into the ISS cable jack.
2. For both wireless and cabled versions, plug the main power cable back into the jack. You should hear two beeps.

Vantage Connect will now begin to acquire both the radio signal from the weather station as well as the cell signal. As this is occurring, you may see the lights go on an off or blink, but after about a minute, the lights will begin to

indicate the status of your connections. You will be able to use the lights to verify connection or troubleshoot connection problems by watching the LED lights. See Vantage Connect: Normal and Error LEDs on page 12 to ascertain what error is



---

being indicated and to report to Tech Support, or refer to the chart on the inside of the Shelter door.

The show when Vantage Connect is searching for a signal from the weather station (upper LED) or a cell signal (lower LEDs). Once the signal is detected, all four cell status lights will turn green and stay on for a few minutes, indicating success. It can take several minutes to acquire all signals.

## Access Data

### See Current Data Online

Once your Vantage Connect is registered on the network, powered up, and connected to both signals, it will begin uploading the latest data to your page on WeatherLink.com along with daily highs and lows.

- The **Bulletin** page shows the weather conditions uploaded at the last upload interval. (5, 15 or 60 minutes, depending on your service plan.)
- Click the **Chart** page to chart and graph your weather data.
- Click the **Data** page to see your raw data.
- Click the **Map** page to see your station, as well as all the Public stations, on the WeatherLink.com map. Clicking on any dot “drills” down to that location. You can see a snapshot of the current conditions of the stations, and click through to see the bulletin page for that station. Choose  to see the bulletin dashboard, or  to see the data as a summary. (You can choose to print this page by clicking the printer icon.)

### Download Data From WeatherLink Network to PC

You can download your data stored online to your PC through the WeatherLink software and use WeatherLink to create graphs and reports. Downloading can be done manually, or you can set up automatic downloads in WeatherLink software.

#### *Download the Software*

The software is free to download on your WeatherLink.com page.

1. Click the Account icon  under your name on the right hand side of your page.
2. Click **Computer Software** below that.
3. Select the version of software you want.

#### *Set Up the Software*

To set up a communication link between WeatherLink software and your WeatherLink.com account, you must first set up the software.

1. Start WeatherLink. In the **File** pull-down menu, choose **New Station...** Enter a name for the database that will store this station’s data.
2. When prompted, click **Yes** to start the Walkthrough Setup.
3. Configure weather station: Enter station configuration information.
4. Set Communication Port: select **TCP/IP**. Click on **Web Download** and then enter your weatherlink.com user ID and password.

- 
5. Choose units you want your software to display.
  6. You may set up optional automatic downloads. In order to use automatic downloads, the PC must always be on with the software running. Click **Download At** and pick download times (from once a day to once an hour).

To manually download: In the WeatherLink software, under the **File** menu, select **Download** to download data.

---

*Tip:* See the software's *Help files* for more information on using the features of WeatherLink software.

---

## Set Alarms and Configure Alarm E-mail

You can set alarms for high and low weather conditions, and be notified when an alarm is triggered via email or text/sms. You will receive an e-mail or text when an alarm condition begins, even if it is outside the interval set by your plan, and another when an alarm condition ends. You can receive up to 20 start or stop alarm e-mail/texts per day (midnight-to-midnight). The alarm also appears on your WeatherLink.com summary page.

1. Log in to your WeatherLink.com page.
2. Click the wrench icon  under your name on the right hand side of the page. Make sure this station is selected, if you have more than one station in your account.
3. In the black bar at the top of the page, click Alarms.
4. Set up any alarms you want, then click Notifications
5. Enter the email to which you want the Daily Summary sent. Click Email Notifications to enter the email to which you want alarm notifications sent. Click Text/SMS to enter a phone number for alarm notifications.
6. Click Exit.

## Appendix: Using AC Power to Charge the Battery

If your installation is in a low-light area or an area with prolonged periods of time where temperatures stay below -4°F (-20°C), charging may be inhibited. You may use Davis's Optional AC Charger Kit, product number 6710, to charge the battery. The kit allows you to replace the solar charger with AC power. The adapter has a universal input (100 -240V, 50-60 Hz) and will work anywhere in the world. (A wall-plug adapter may be necessary for use in some countries.) In a cold environment, you will need to bring the Vantage Connect into a warmer environment (above -4°F/-20°C) to charge the battery with the AC Charger Kit.

---

# Troubleshooting

**? *How can I tell if my battery voltage is getting too low?***

Our server will monitor your battery voltage and will trigger an e-mail warning if it should get low (approximately 14 days of power). The e-mail will go to both the registered customer's e-mail address as well as the alarm e-mail address (if one has been set up).

**? *My installation is in a low light area. Can I add another solar panel?***

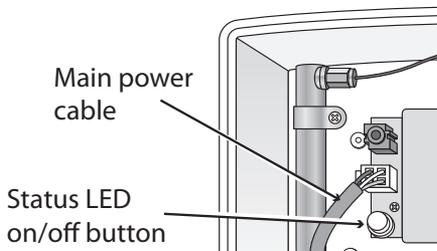
Yes. You can add an Extra Solar Panel Kit (product number 6616).

**? *Can I add another battery? Can I charge the battery on AC power?***

Yes. You will also need a Universal Shelter (product number 6618) in which to mount the extra battery. Contact Tech Support for parts and instructions on adding batteries. You may also use AC power to charge the battery. See Appendix: Using AC Power to Charge the Battery on page 9.

**? *My status LEDs are not blinking.***

Make sure the power cord is connected. If power is connected and the LED is still off, press and release the blue **Status LED ON/OFF** button shown in the diagram. It can take up to 30 seconds for the lights to turn on. If the LEDs are still off, try repowering your Vantage Connect (unplug the main power cable, wait one minute, then plug it in again). If the LEDs still do not come on, contact technical support.



**? *No data is being uploaded.***

Try these steps:

- Make sure status LED is showing normal function, otherwise the device has not registered on the network. (See above to test LEDs.)
- Check power to the weather station. Make sure all cables are securely plugged in.
- Measure battery power with volt meter.
- Repower by unplugging the main power cable, waiting one minute, then plugging it in again.

If data still is not uploaded, contact Tech Support.

---

**? *If I lose cell connectivity, but my Vantage Connect is still powered, how much data will be stored?***

The amount of data it can store is similar to a standard data logger and dependent on your archive interval or subscription plan interval.

When the cell connection resumes, Vantage Connect will send this old data to weatherlink.com in what we call “catchup mode.” In catchup mode, Vantage Connect will send 15 records about every 2 minutes.

<b>Archive Interval</b>	<b>Amount of Data Stored</b>	<b>Amount of data sent every 2-minutes in “Catchup Mode”</b>
5-minute	7 days	75 minutes
15-minute	22 days	3.75 hours
60-minute	90 days	15 hours

**? *How can I access my data if I am on site but don't have a PC with an internet connection?***

If you urgently need to access your weather data at your remote site but have no access to a PC with an internet connection, you can connect a laptop (or PC) directly to the Vantage Connect and download all of the archive records in its memory using the supplied WeatherLink software. You will need an interface cable. Please call Technical Support to request a Vantage Connect interface cable.

**? *Can I replace my battery?***

Yes. Your Vantage Connect comes with a battery designed to charge in temperatures as low as -4°F/-20°C.

If you need to replace the battery and your installation is in a location with low temperatures, you should replace the battery with a Davis battery, product number 7011.025.

If your installation is in a warmer climate, you may replace the battery with a 6-volt, 12 Ah, gel cell battery which will only charge at temperatures above 0°C. See Specifications on page 13.

(With either battery, your Vantage Connect can function down to -40°F/C.)

**? What do the LED lights indicate?**

If there is an error in getting a signal, the status LEDs will indicate the type of error.

Refer to the table below to ascertain what the LEDs mean so that you can report the problem to Technical Support.

**Vantage Connect: Normal and Error LEDs**

<b>Vantage Connect Status LEDs</b>			
<b>LED Position and What it Indicates</b>	<b>Color Indicates</b>		
	<b>Green</b>	<b>Yellow</b>	<b>Red</b>
<b>Upper LED:</b> Weather Station Status 	Receiving weather station packets, normal function.	Searching for weather station signal.	No weather station signal. Contact Tech Support.
<b>Cell Status 1:</b> Modem Activation 	Modem activated.	Modem is activating.	Modem not activated. Contact Tech Support.
<b>Cell Status 2:</b> Cellular Signal Strength 	Strong signal.	Low signal. Vantage Connect will function in this location, but move if possible.	No signal. Vantage Connect will not function in this location.
<b>Cell Status 3:</b> Network Registration 	Registered.	Searching for tower.	Registration failed. Contact Tech Support.
<b>Cell Status 4:</b> Communication with WeatherLink.com 	Good.	Waiting for connection.	Communication error. Contact Tech Support.

---

# Contacting Davis Technical Support

For questions about installing or operating your Vantage Connect, please contact Davis Technical Support. We'll be glad to help.

**Online**            [www.davisnet.com](http://www.davisnet.com)

See the Weather Support section for copies of user manuals, product specifications, application notes, software updates, and more.

**E-mail**            [support@davisnet.com](mailto:support@davisnet.com)

**Telephone**      (510) 732-7814  
Monday - Friday, 7:00 a.m. - 5:30 p.m. Pacific Time.

## Specifications

Cellular Bands	850, 900, 1800, 1900 MHz
Operating Temperature	-40° to +140°F (-40° to +60°C)
Charging Temperature	-4° to +120°F (-20° to +49°C)
Storage Temperature	-40° to +140°F (-40° to +60°C)
Current Draw	25mA typical, 1A peak GPRS class 10: 146mA typical
Transmitter Power	2W @ 850/900 MHz (Class 4) 1W @ 1800/1900 MHz (Class 1)
Transmission frequency: North America	902 - 928 MHz FHSS
EU, UK, and OV models	868.0 -868.6 MHz FHSS, power output less than 10mW
Housing Material	Rugged ASA Plastic
Dimensions (width x length x height)	13.75 X 10 X 4.15 inches (34.9 X 25.4 X 10.5 cm)
Weight	8.14 lbs. (3.69 kg)
Battery	6 volt, 12 Ah, gel cell with quick disconnect 0.250" x 0.032" (6.35 mm x 0.81 mm) tabs
Dimensions without tabs	5.95" L x 3.70" H x 2.00" D; 151 mm L x 98 mm H x 51 mm D
<b>Certifications:</b>	FCC PTCRB CE Carrier



### **FCC Part 15 Class B Registration Warning**



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.

FCC ID: R17GE865

IC: 5131A-GE865

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment on and off, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and 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.

Changes or modification not expressly approved in writing by Davis Instruments may void the warranty and void the user's authority to operate this equipment.



### **EC-Declaration of Conformity**

#### **Radio Equipment Directive 2014/53/EU**

**Vantage Connect** 6622 (overseas models) complies with the essential protection requirements of the Radio Equipment Directive 2014/53/EU. The complete Declaration of Conformity is on our website at <https://www.davisinstruments.com/legal>. RoHS Compliant.

---

### **Vantage Connect®**

Product Numbers 6621, 6621C, 6622 & 6622

Document Number: 07395.325 Rev. K 2/15/19

For use with Vantage Pro, Vantage Pro2, and Vantage Vue and Weather Envoy.

Vantage Connect®, Vantage Pro®, Vantage Pro2™, Vantage Vue®, WeatherLink® and Weather Envoy™ are trademarks of Davis Instruments Corp., Hayward, CA.

© Davis Instruments Corp. 2019. All rights reserved.

Information in this document subject to change without notice. Davis Instruments Quality Management System is ISO 9001 certified.



3465 Diablo Avenue, Hayward, CA 94545-2778 U.S.A.

510-732-9229 • Fax: 510-732-9188

E-mail: [info@davisinstruments.com](mailto:info@davisinstruments.com)

[www.davisinstruments.com](http://www.davisinstruments.com)