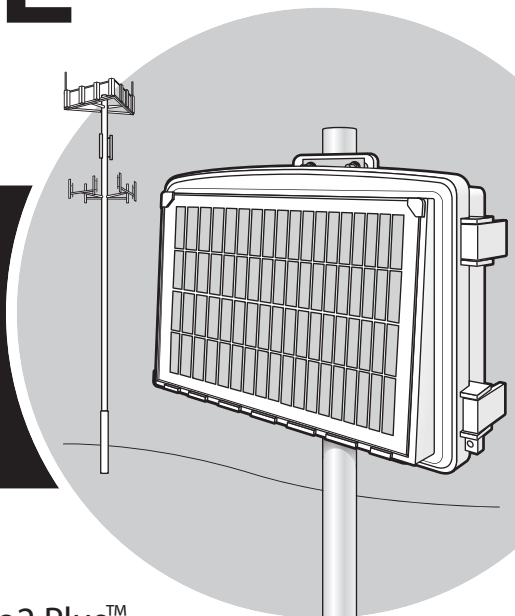


USER MANUAL

Vantage Connect[®]

For Vantage Pro2[™], Vantage Pro2 Plus[™],
Vantage Vue[®] and Weather Envoy[™]

Product numbers 6621, 6621C, 6622 & 6622C



DAVIS  [®]

Davis Instruments, 3465 Diablo Avenue, Hayward, CA 94545-2778 U.S.A. • 510-732-9229 • www.davisnet.com

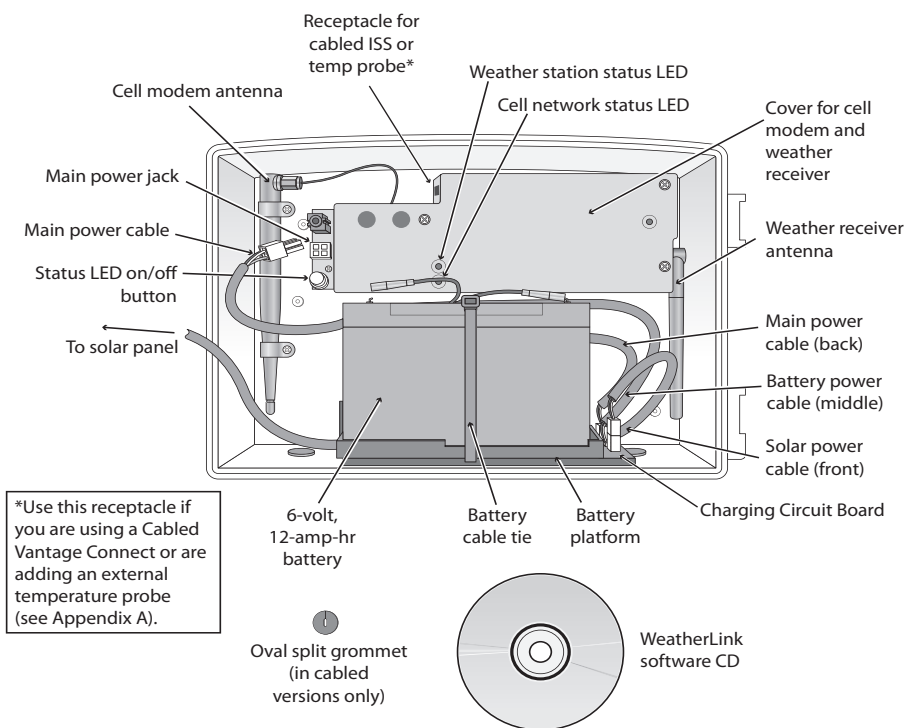
Welcome to Vantage Connect (6621, 6621C, 6622 and 6622C)

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® software.

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

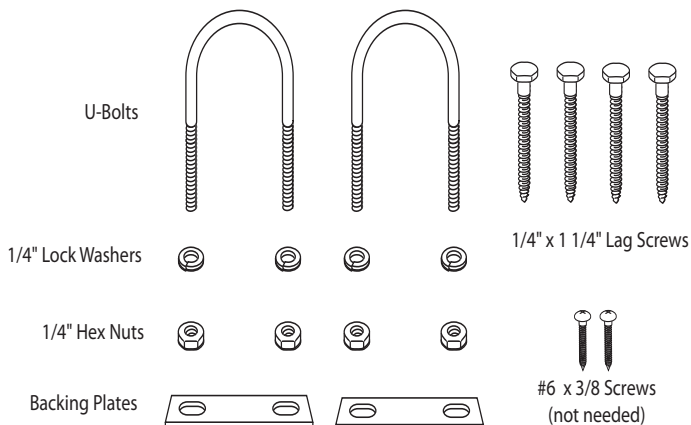
- 6621 operates on CDMA networks in the United States. In the United States, CDMA offers a larger coverage footprint, making it an excellent choice for rural installations.
- 6622 operates on GSM, 2G-3G.

Contents of Package (all versions)



The package contains the following:

- Vantage Connect in weather-proof shelter with 5-watt solar panel
- WeatherLink software CD
- 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.

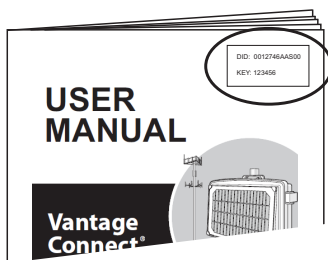
Vantage Connect requires an annual service plan. Choose #6632, 6634, or 6636 in the version appropriate for your region (A or B). Each plan offers a different update interval (5, 15, or 60 minutes). For more information see your Davis reseller or purchase a plan during your registration process on WeatherLink.com.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

Register 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.

1. When you receive the e-mail with the Activation Code, follow the instructions in the e-mail. (Or, go to www.weatherlink.com; click on **Register**. Select the **Vantage Connect** option.)

2. Read and agree to the Terms of Use.
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. Create and enter a user name and password, and enter your e-mail address to create a new user account.



Note: Your user name will become part of your web page's URL. For example if your user name is JohnSmith, your URL will be www.weatherlink.com/user/JohnSmith

5. Enter your time zone and indicate your Daylight Saving Time preference.
6. Enter the Activation Code received in the e-mail.
7. Click **Continue with Registration**.
8. Agree to the Service Agreement.
9. Click **Create Account**.

Configure and Set Up Your Vantage Connect

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

Follow the prompts to enter setting and configuration:

1. Reporting Stations & Units of Measure

- Enter the transmitter ID number of each of the transmitters that will be reporting 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.
- Choose your preferred units.
- Click **Save**.

2. Device Settings

- 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)
- Select your anemometer and rain collector types.
- For accurate year-to-date rain data, enter the year-to-date rainfall as of today, and when your rain season starts.
- Station Alarms (Optional): Set alarms for high and low weather conditions. Vantage Connect will send up to 20 (counting both activate and deactivate) email or text alarm notifications per day, outside of the plan's intervals, when these conditions exist.

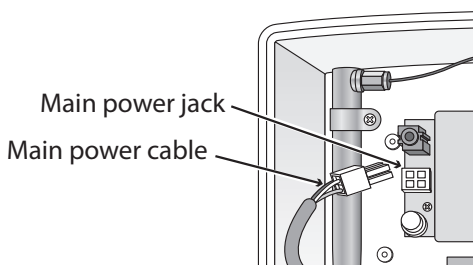
-
- If necessary, you may calibrate temperature, humidity, and wind readings. (Be careful when deciding to calibrate; Davis weather stations are factory-calibrated for accuracy and may not match less accurate or less local data such as reported on television or a web page.) Enter the amount of offset 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 **Save**.
3. **My Account.** Enter your account information.
 - Enter your City, State, Country, and latitude & longitude
 - Enter a name for your station (this will become your web page title)
 - Choose a station type and usage from the pull-down menus
 - Choose whether to show display 24-hour time
 - Check the “Keep ‘My Weather’ private” box if you do not want your current weather to be seen without a password. (No private information appears on this screen.)
 4. If any erroneous data has been logged during setup and installation, you should clear highs and lows. (For example, while setting up, the wind cups and vane were spun. This false “high wind” data should be cleared.) To clear, click **Manage Stored Data**.
 5. Click **Save**.
 6. You can edit these settings at any time by logging in to your account and clicking **My Account** then **[edit]** (to edit account information or change your password); or, in the My Device box: **Edit Configuration, Edit Settings**, or **Manage Stored Data**.
-

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

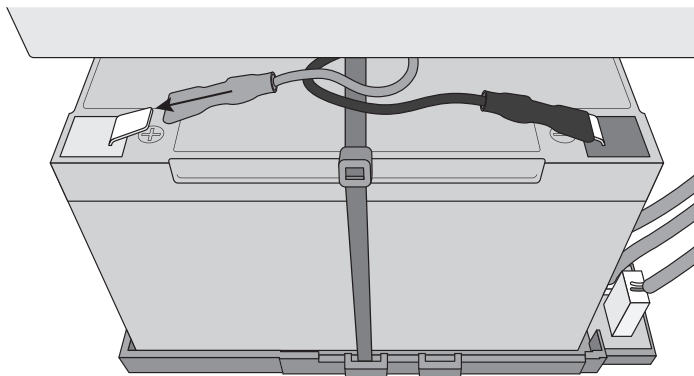
Remove all cardboard and packing materials from inside the shelter.

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.*

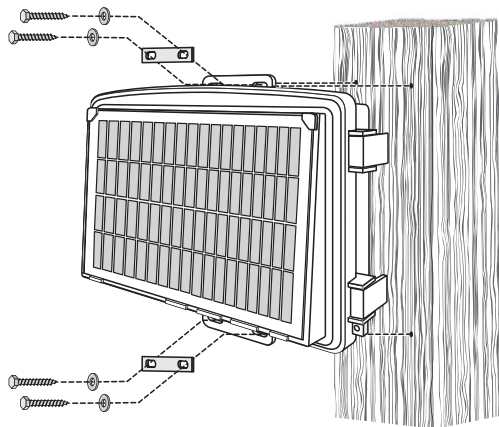
Choose a location for your Vantage Connect. It can be mounted on a pole or a flat surface such as a wall or a wooden post. The shelter should be mounted within transmission range of your ISS. (Maximum of 1000 feet (300 m), line-of-sight, open air.)

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

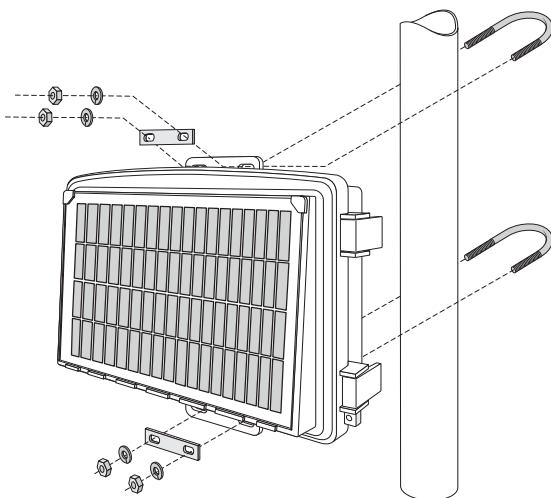
Attach the shelter to the mounting surface in the desired location using the lag screws and backing plates as shown below. Use a pencil or a center-punch to mark the location of the pilot hole.



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

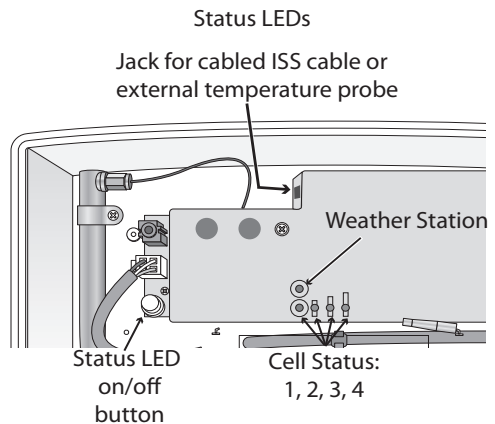
Note: It is important to register your Vantage Connect before powering it up to avoid a delay in uploading data. If you accidentally power the unit before registering, it will automatically go to sleep. After 24 hours, it will wake up and check for registration again. If you already powered up before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

The lights flash 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 solid and stay on for a few minutes, indicating success. It can take several minutes to acquire all signals.

See Vantage Connect: Normal and Error LEDs on page 12 to ascertain what error is being indicated and to report to Tech Support.

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 the server.

Data is uploaded to your page on WeatherLink.com along with daily highs and lows.

The **My Weather** page shows the weather conditions uploaded at the last upload interval. (5, 15 or 60 minutes, depending on your service plan.)

The **Summary** page will show additional data and data from extra sensors as well as highs and lows.

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. If you choose manual downloads, remember that the amount of data stored on the server depends on the update interval of your service plan. Be sure to download within the time period below for your service plan, otherwise older data will be lost.

Data Plan	Apprx. Max Data Stored
5-minute plan	1 month
15-minute plan	3 months
60-minute plan	1 year

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

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

-
7. 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.

Configure Alarm E-mail

You can set up alarm e-mails or texts for console alarm conditions. 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 and click **My Account**.

Note: Set up alarms first, if you have not already done so. In the **My Device** box, click **Edit Settings**. Click the **+** by **Station Alarms** to expand. Set alarms for high and low conditions. Click **Save**.

2. Click **E-mail Settings** on the top of the page.
3. Enter the e-mail address to which the alarm summaries should be sent. You can add multiple addresses separated by a semi-colon (;). Make sure the "Enable" box is checked.
4. Click **Save Changes**.

Appendix A: Using an External Temperature Probe with Vantage Connect

You may use an external temperature probe (product numbers 6475 or 6477) with your wireless Vantage Connect. This reading will replace the Vantage Connect's "inside temperature" reading. You will need an oval split grommet available upon request from Davis instruments (part number 7342.805). Remove the plug from of the holes in the bottom of the shelter and feed the probe cable up through the hole. Plug the cable into the jack (see illustration on page 2). Attach the grommet to the cable and insert it snugly into the hole.

Appendix B: 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 critically 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?*

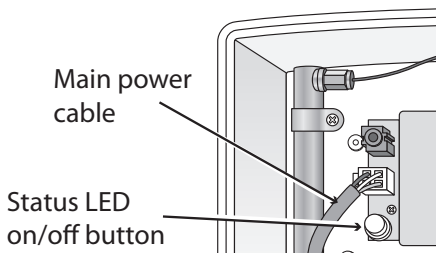
Yes. You can add an Extra Solar Panel Kit (product number 6616).

? *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 B: 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.

Archive Interval	Amount of Data Stored	Amount of data sent every 2-minutes in “Catchup Mode”
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 flash to 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

Vantage Connect Status LEDs			
LED Position and What it Indicates	Color Indicates		
	Green	Yellow	Red
Upper LED: Weather Station Status 	Receiving weather station packets, normal function.	Searching for weather station signal.	No weather station signal. Contact Tech Support.
Cell Status 1: Modem Activation 	Modem activated.	Modem is activating.	Modem not activated. Contact Tech Support.
Cell Status 2: 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.
Cell Status 3: Network Registration 	Registered.	Searching for tower.	Registration failed. Contact Tech Support.
Cell Status 4: 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**

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

E-mail **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
Certifications:	FCC PTCRB CE Carrier

Vantage Connect®

Product Numbers 6621, 6621C, 6622 & 6622

Document Number: 07395.325 Rev. J, 1/12/18

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.



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: RI7GE865

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.davisnet.com/legal>. RoHS Compliant.

© Davis Instruments Corp. 2018. 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@davisnet.com • www.davisnet.com