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# Ambient Weather WeatherBridge Nano Weather Station Server for Davis Instruments Quick Start Guide



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## 1. Introduction



**Note:** For technical issues, please email the developer: [info@meteohub.de](mailto:info@meteohub.de).

Please reference Section 7.1.1 for instructions on providing remote access to the developer. Provide the URL and your password.

The following quick start programming guide provides basic instructions for connecting your nano to your weather station, router and the Internet. This is a supplement to the detailed information provided at [www.MeteoBridge.com](http://www.MeteoBridge.com).

**Note:** Ambient Weather uses the terms WeatherBridge and MeteoBridge interchangeably. WeatherBridge is the complete product, including the Linux computer (TP-LINK), and operating system. The operating system is referred to as MeteoBridge, developed by smartbedded UG, on the web at [www.MeteoBridge.com](http://www.MeteoBridge.com).

**Note:** The WeatherBridge has been programmed and licensed by Ambient Weather before you receive it. For warranty replacement, please contact Ambient Weather directly. Ambient Weather warranties

this product for 1 year.

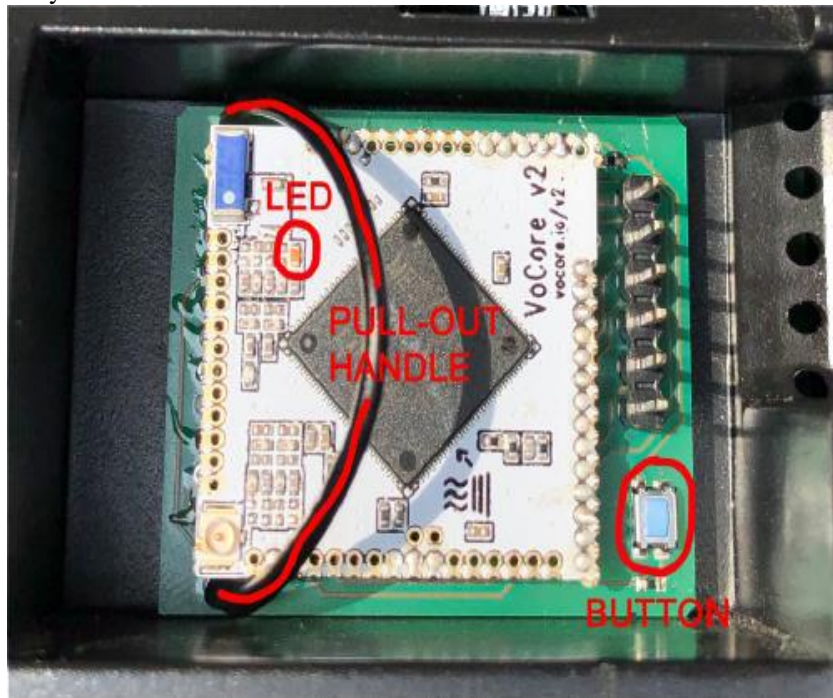


Figure 1

## 2. Packing List

The packing list is as follows:

No	Description
1	WeatherBridge nano
2	Instruction Card

## 3. Preparing the Console or Envoy

Before inserting the Nano into the console or Envoy, set up your console or Envoy. This includes setting the correct date and time, configuring the transmitter channels (if you have more than one sensor array), rain bucket size, and station altitude. Make sure the weather station is receiving data from all of the sensors. Please refer to the console or Envoy manual for details. The manuals are available at [www.davisnet.com](http://www.davisnet.com).

## 4. Plug the Nano into the Console or Envoy

1. Power down the display console by removing the batteries and AC adapter. Failure to remove power to the console or Envoy before installing or uninstalling any data logger may cause damage to the data logger or console.
2. Open the battery compartment door.

3. Look for the **EXPANSION** connector inside the battery compartment. Figure 2 is an example for the Davis Vantage Vue.

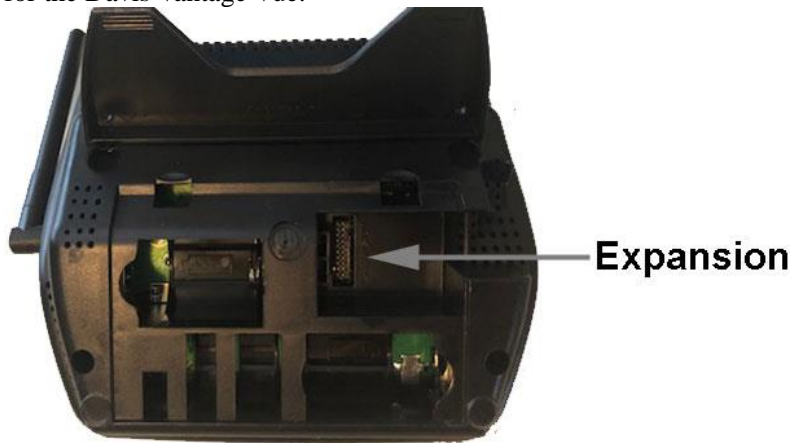


Figure 2

**Note:** For Weather Envoy: See the Weather Envoy User Guide instructions for opening the Envoy and installing the data logger. (The manual is available online at [www.davisnet.com](http://www.davisnet.com).)

4. Firmly insert the Nano into the large receptacle marked **EXPANSION** inside the battery compartment. Do this with firm but not brute force. If it does not align properly, try again.



Figure 3

5. Reconnect the AC adapter and then reinsert the batteries. Leave the battery door open in the event additional diagnosis is required.

6. Wait about two minutes for the Nano to completely boot up.
7. For consoles, the console will power up in Setup Mode. Press and hold the **DONE** button for two seconds to exit the console setup mode.

## 5. Accessing the Nano over your Local Network

The Nano broadcasts a WiFi signal. To connect your computer or smart device to the Nano for programming, open your WiFi settings from your computer or smart device, and connect to **meteobridge-xxxxxxxxxxx** (where xxxxxxxxxxxx is the MAC address of your device).

When prompted, enter the password: **meteobridge**

Below is an example for Windows and an iPhone.

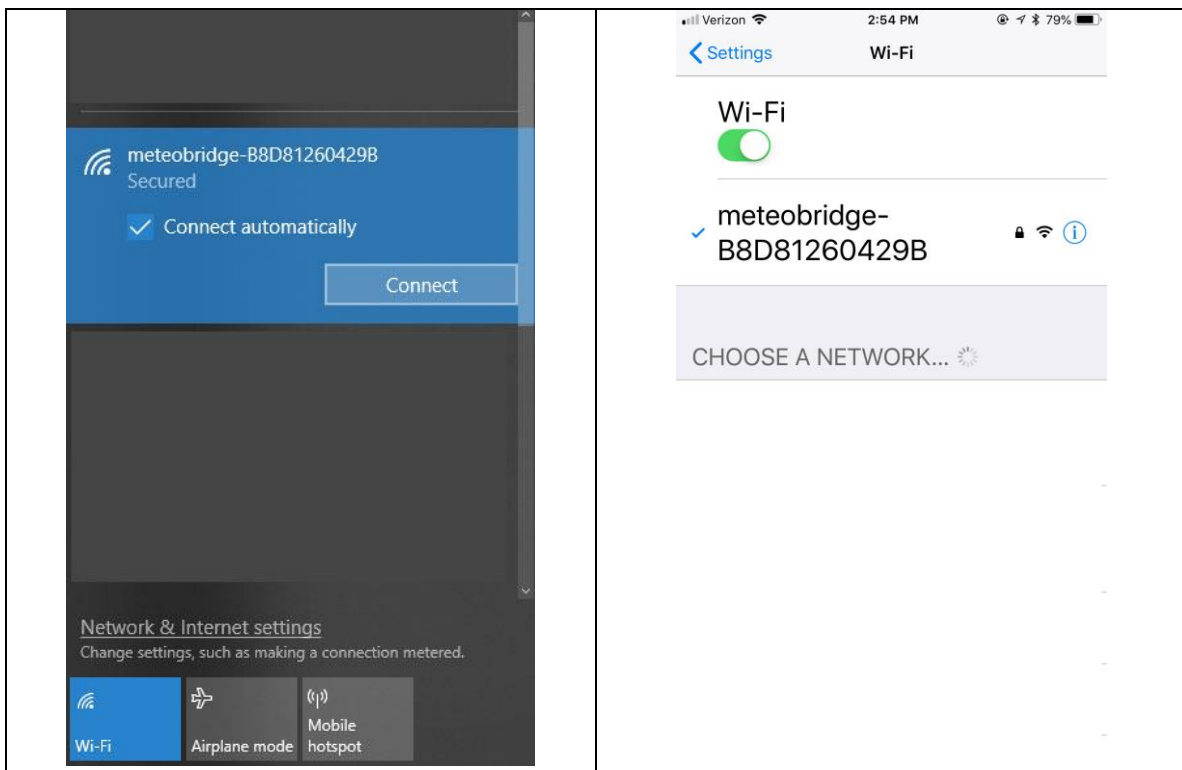


Figure 4

Once you are connected to the Nano, open a web browser and type in the following URL:

<http://192.168.169.1>

You will be prompted for a Username and Password. Enter:

Username: **meteobridge**

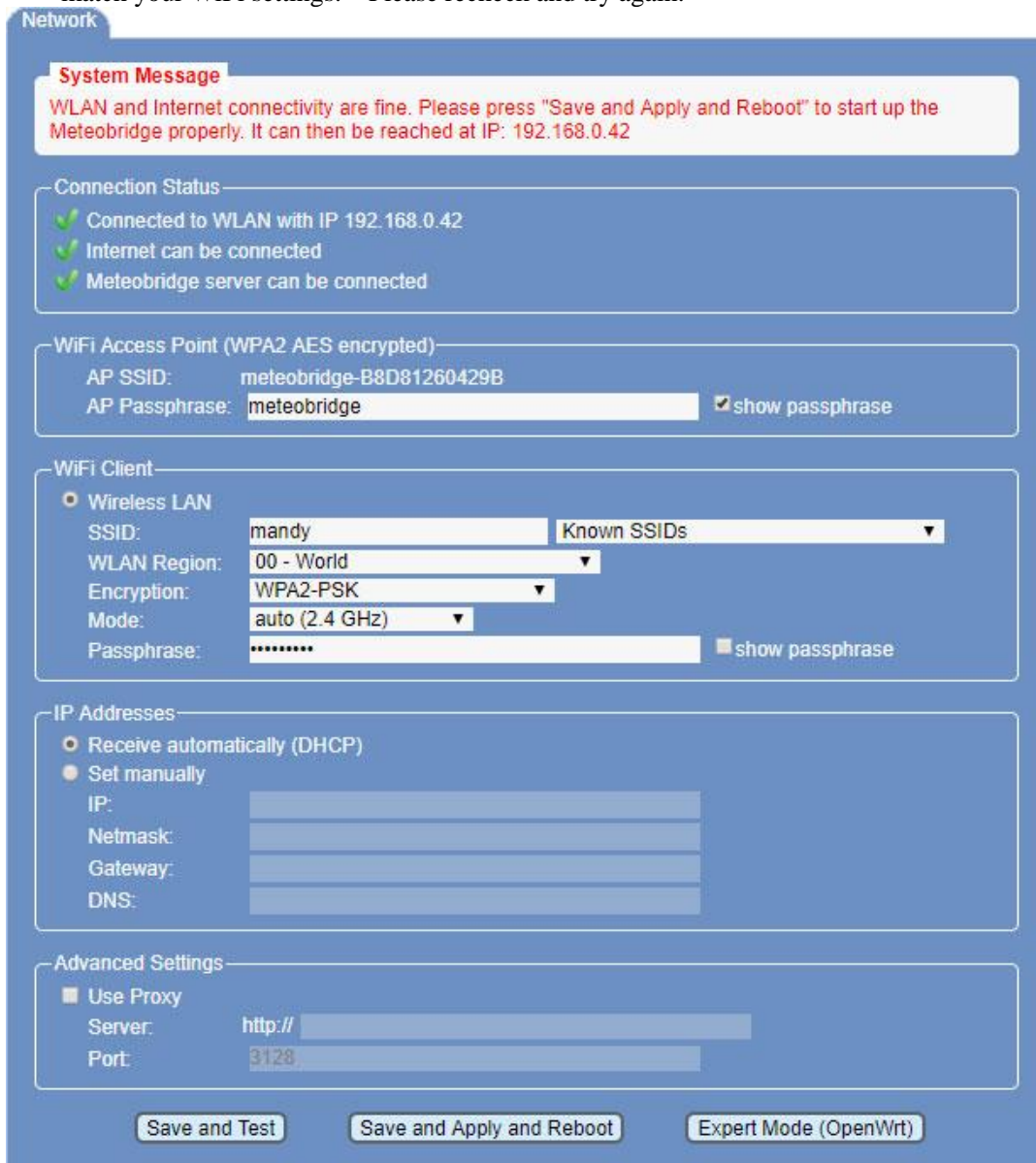
Password: **meteobridge**

The Nano will scan your WiFi network. This may take a few minutes to display the Network Administration Page.

## 6. Network Administration and Connecting to your WiFi Router

1. Under **WiFi Client**, enter your wireless router settings.  
Select the AP SSID from the pull down menu **Known SSIDs**.  
Enter your router's WiFi password (AP Passphrase).
2. Tap **Save and Test**. Wait about one minute. Look for the **System Message** as shown in Figure 5.

If successful, you will see the **System Message** below. If not successful, your settings did not match your WiFi settings. Please recheck and try again.



The screenshot shows the 'Network' configuration page. At the top, a 'System Message' box states: 'WLAN and Internet connectivity are fine. Please press "Save and Apply and Reboot" to start up the Meteobridge properly. It can then be reached at IP: 192.168.0.42'. Below this, the 'Connection Status' section shows three green checkmarks: 'Connected to WLAN with IP 192.168.0.42', 'Internet can be connected', and 'Meteobridge server can be connected'. The 'WiFi Access Point (WPA2 AES encrypted)' section shows 'AP SSID: meteobridge-B8D81260429B' and 'AP Passphrase: meteobridge' with a 'show passphrase' checkbox checked. The 'WiFi Client' section has 'Wireless LAN' selected, 'SSID: mandy' (with a 'Known SSIDs' dropdown), 'WLAN Region: 00 - World', 'Encryption: WPA2-PSK', 'Mode: auto (2.4 GHz)', and a masked 'Passphrase' field with a 'show passphrase' checkbox. The 'IP Addresses' section has 'Receive automatically (DHCP)' selected, with empty fields for IP, Netmask, Gateway, and DNS. The 'Advanced Settings' section has 'Use Proxy' unchecked, with 'Server: http://' and 'Port: 3128'.

**Figure 5**

3. The Nano is now part of your wireless network. Please note the Nano's IP address as you will need it to login from your WiFi network later on:

**System Message: It can be reached at IP:** \_\_\_\_\_

4. Advanced network settings are available for statically assigning an IP address to the Nano, or using the Nano with a proxy server.
5. Press **Save and Apply and Reboot** to leave finish the network admin access, and to restart the Nano.
6. After a few minutes, the Nano will be available for configuration at the IP address in **Step 3**.
7. Watch the LED on the Nano module. It will begin blinking.  
It will begin flashing rapidly, which indicates that it is trying to connect to the Internet.  
When the light stops flashing and stays on, the Nano has successfully connected to the Internet.
8. You can now close the console's battery cover.
9. Open your favorite Web Browser and enter the IP address obtained in Step 3.

In the example above, you would enter: <http://192.168.0.42> (your IP address will be different).  
Don't forget to enter the http header (http://)/


You will see the Nano's System Page, as shown in Figure 6.

## 7. System

From the Menu tab, select **System**.

Network
Weather Station
Weather Network
Services
System
License
Live Data

**System**

Platform: Meteobridge NANO (ambientweather Version) 

RAM: 125568 kB total, 86792 kB free (30% used)

SW Version: Meteobridge 3.7 (Aug 29 2018, build 1017), FW 1.0

Uptime: 20 hours, 32 minutes Buffer: 0 items (0%)

**Maintenance**

Version Control: get newest on boot ▼

Configuration Data: Choose File No file chosen Restore Backup


**Security**

New HTTP Password:

Confirm New HTTP Password:

Internet Remote Login:  Allow login from the Internet via [this URL](#)

**Localization**

IP-based Location:  United States / Arizona / Tempe

UTC: 2018-08-30 17:37

Local Time: 2018-08-30 10:37

Language: English ▼ Download Language File

Timezone: America/Phoenix ▼

Latitude: 33.4357 i

Longitude: -111.9171 i

Annual Rain: starts at January ▼

**Network**

MAC:	B8:D8:12:60:42:9B		
LAN IP:	—	WLAN IP:	192.168.0.42
LAN Mask:	—	WLAN Mask:	255.255.255.0
Gateway:	192.168.0.1	TX Traffic:	—
DNS:	192.168.0.1	RX Traffic:	—
WAN IP:	71.35.12.116	Provider:	CenturyLink

**Messages**

```

logger (29.08.2018 14:06:23): SERVICES parsed.
logger (29.08.2018 14:06:32): gettime request sent.
logger (29.08.2018 14:06:42): message above repeats 1 time.
logger (29.08.2018 14:06:42): no Vantage time offset.
logger (29.08.2018 14:06:42): eeprom request sent.
logger (29.08.2018 14:06:42): rain collector size 0.01 inch per tick.
logger (29.08.2018 14:06:42): transmitter 1 active as station type #0 "ISS".
logger (29.08.2018 14:06:42): firmware version request sent.
logger (29.08.2018 14:06:42): firmware version 3.00 (supports LOOP2)
logger (29.08.2018 14:06:42): no reading of Vantage's internal logger.
logger (29.08.2018 14:08:20): give up waiting for sensors after 120 secs.
logger (29.08.2018 14:08:20): services activated.
logger (29.08.2018 14:16:07): Bad thb0(0) sensor data, "pressure x18" (0) out of range [4000:13000]
logger (29.08.2018 14:22:31): Bad th0(0) sensor data, "humidity" (255) out of range [0:100]
logger (29.08.2018 14:23:03): message above repeats 8 times.
                
```

Save and Apply
Reboot

Figure 6

## 7.1 Security (password)

The default username and password is meteobridge and meteobridge. There is likely no need to

change this, but you can enter a new username and password. If you change it, write it down:

<b>Username:</b> (default is meteobridge)
<b>Password:</b> (default is meteobridge)

To make the changes permanent, select **Save and Apply**.

### 7.1.1 Remote Login

To login remotely, from the System Tab, select the checkbox Allow login from the internet via [this URL](#).

Note: It can take up to one hour for this remote login URL to become active.



Figure 7

## 7.2 Advanced System Settings

For advanced settings, please visit:

[https://www.meteobridge.com/wiki/index.php/Meteobridge\\_NANO](https://www.meteobridge.com/wiki/index.php/Meteobridge_NANO)

## 8. Weather Station

Enter your weather station receiver type as shown in Figure 8 and Select **Save**.



Network
Weather Station
Weather Network
Services
System
License
Live Data

Weather Station

- Davis: Vantage Pro2, Vue, Envoy
- Davis: Envoy8x

Davis Station Setup

- Sync station's date/time with the Internet
- Apply longitude/latitude/altitude/timezone/rain season settings of Meteobridge
- Transfer rain totals for day, month and year from console to Meteobridge
- Transfer sensor min/max data from console to Meteobridge (Recommended for initial setup only!)
- Configure console logging interval, rain collector, wind cup, date and time format
- Configure sensors and mapping to transmitter IDs

Meteobridge Weather Cam

- none
- Ubiquiti Cam
 

IP:	<input type="text"/>
Version 1.1	Password: <input type="password"/>
<input type="radio"/> External Picture	URL: <input type="text"/>

Local Settings

Station Altitude: <input type="text" value="1280"/> feet	Pressure Correction: <input type="text" value="0.000"/> mbar/hPa
Tolerated age of data: <input type="text" value="10 minutes"/>	Temperature Offset: <input type="text" value="0.0"/> °C <input type="checkbox"/> no windchill
Save historical data: <input type="text" value="every 10 minutes"/>	Multiplier: Rain <input type="text" value="1.00"/> Wind <input type="text" value="1.00"/>
Wind Direction Adder: <input type="text" value="0"/> °	Humidity Stretch: <input type="text" value="0.0"/> →0% <input type="text" value="100.0"/> →100%
Serial USB Switch: <input type="text" value="none"/>	Indoor Temp Offset: <input type="text" value="0.0"/> °C

**Figure 8**

For advanced settings, please visit:

[https://www.meteobridge.com/wiki/index.php/Meteobridge\\_NANO](https://www.meteobridge.com/wiki/index.php/Meteobridge_NANO)

## 9. Live Data

Select the **Live Data** Page to view a summary of your live data.



Figure 9

## 10. Weather Network

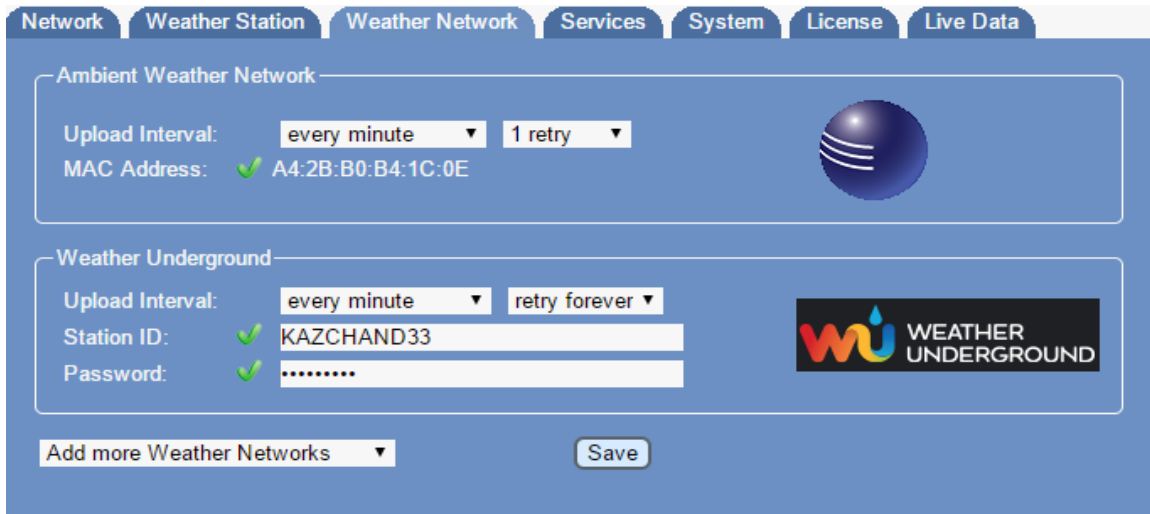


Figure 10

## 11. Services (Email, Twitter, http, ftp and mysql)

To upload the live data via email, twitter, http, ftp and mysql, select the Push Services tab.

WeatherBridge provides some additional "push services", which can send weather information via email, twitter, HTTP requests, FTP uploads, mysql queries or by implementing a user defined script.

All of these services can be triggered by certain alarm conditions, at a certain time of the day or in periodic intervals ranging from a few seconds to minutes or hours.

Configuring push services is done in two steps.

When you want to use a email, twitter, mysql or FTP you have to configure the basic authentication for these services fist.

Having configured the service, you can then define a specific event that uses of one of the services.

For additional information on Push Services, please visit:

[http://meteobridge.com/wiki/index.php/Push\\_Services](http://meteobridge.com/wiki/index.php/Push_Services)

[Network](#)
[Weather Station](#)
[Weather Network](#)
[Services](#)
[System](#)
[License](#)
[Live Data](#)

Event Definition

New

Services Configuration

**Twitter** Authentication:

**Email** Authentication:

SMTP Host:  Port:

User:  Password:

To-Addr.:  From-Addr.:

**MYSQL** Host:  Port:

inactive Database:  Password:

User:

**SMS** Originator:

Access Key:   show [Link to MessageBird.com](#)

**FTP** FTP Host:  Port:

User:  Password:

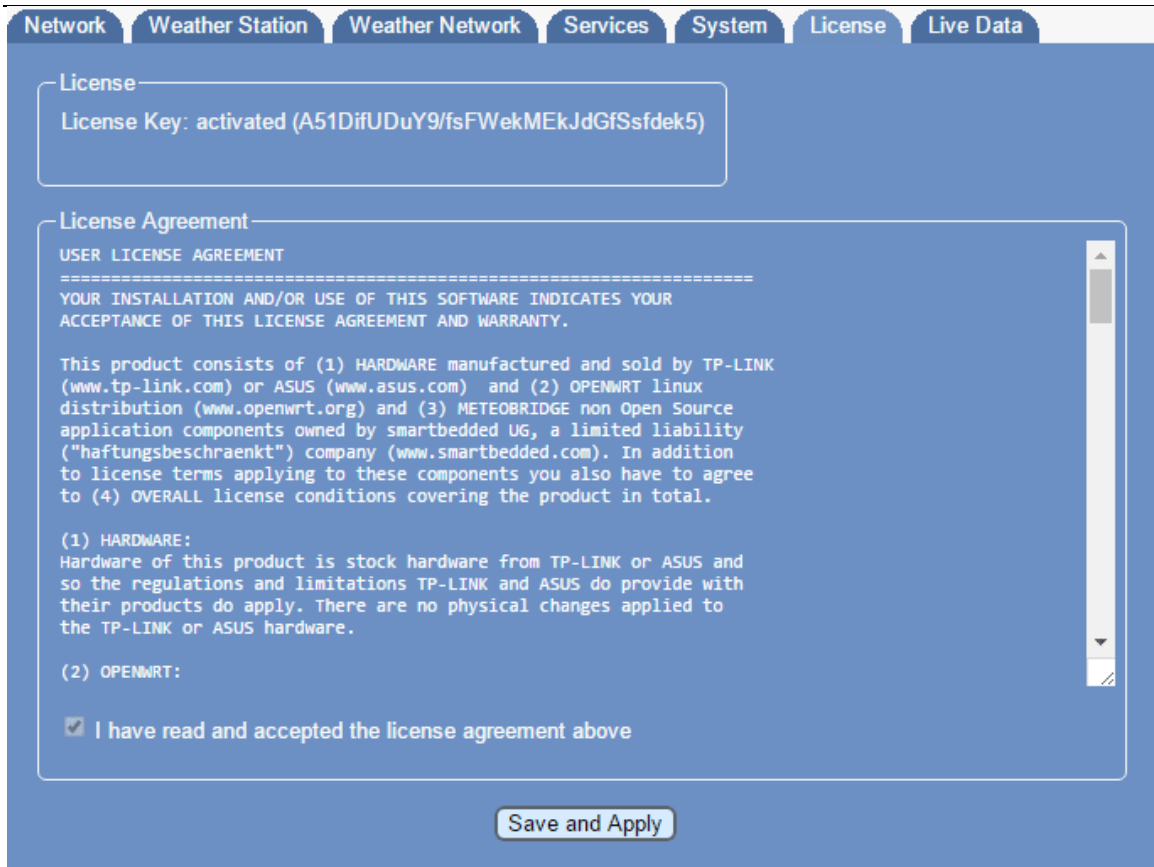
Test Path:

Figure 11

## 12. Licensing

From the Menu tab, select **License**, as shown in Figure 12. Record the **License Key** for warranty purposes:

**License Key (case sensitive):**



**Figure 12**

### **13. Resetting the Nano for Lost IP Address, Passwords and Factory Reset**

If the Nano LED continues to blink and does not remain on, press the small blue button on the Nano (Figure 1).

Press and hold the reset button and the LED will begin blinking. Let go to perform the following operations:

<b>Number of Blinks</b>	
Before First Blink	If you have forgotten the Nano's IP address, or it changed, the Nano will indicate it's IP by a series of blink sequences. Please read:  <a href="https://www.meteobridge.com/wiki/index.php/Getting_Started">https://www.meteobridge.com/wiki/index.php/Getting_Started</a>  to decipher the <b>IP Signaling</b> .
1 Blink	If you have forgotten the Nano's Wireless Access Point (WAP) password, the Nano will reset it's WAP password.  The default password is <b>meteobridge</b> . The Nano will reboot.
2 Blinks	Resets Nano's login password to <b>meteobridge</b> and reboots.
5 Blinks	Resets Nano to factory default (all settings are lost) and reboots.

## 14. Automatic Software Updates

The Nano will automatically update to the latest application stack after each reboot.

## 15. Hardware Specifications

- Size: 35mm x 30mm x 20mm (width x height x depth)
- Weight: 10g
- Operating temperature: 0 - 50°C, non-condensing
- Power consumption: max 300 mA / 4.2 V
- WiFi 2.4 Ghz, 802.11g/n,
- Reset button
- VoCore2 CPU board
- Signal LED
- 16 MB flash / 128 MB RAM
- Mediatek 7628 AN SOC
- Internal chip antenna

## 16. More Information

MeteoBridge is a Copyright of smartbedded UG (haftungsbeschränkt), all rights reserved. Please visit [www.MeteoBridge.com](http://www.MeteoBridge.com) for online documentation which will give more detail on features and lately added functions.

Note: WeatherBridge can only handle one weather station at a time. Parallel use of multiple weather stations is not supported.

**Questions or comments about this manual?** We are always striving to improve our documentation. Please send your comments to [support@ambientweather.com](mailto:support@ambientweather.com).

## 17. Liability Disclaimer

The electrical and electronic wastes contain hazardous substances. Disposal of electronic waste in wild country and/or in unauthorized grounds strongly damages the environment.

Reading the “User manual” is highly recommended. The manufacturer and supplier cannot accept any responsibility for any incorrect readings and any consequences that occur should an inaccurate reading take place.

This product is designed for personal use as indication of weather conditions. This product is not to be used for medical purposes or for public information.

The specifications of this product may change without prior notice.

This product is not a toy. Keep out of the reach of children.

No part of this manual may be reproduced without written authorization of the manufacturer.

Ambient, LLC WILL NOT ASSUME LIABILITY FOR INCIDENTAL, CONSEQUENTIAL, PUNITIVE, OR OTHER SIMILAR DAMAGES ASSOCIATED WITH THE OPERATION OR

## **18. Warranty Information**

Ambient, LLC provides a 1-year limited warranty on this product against manufacturing defects in materials and workmanship.

This limited warranty begins on the original date of purchase, is valid only on products purchased and only to the original purchaser of this product. To receive warranty service, the purchaser must contact Ambient, LLC for problem determination and service procedures.

Warranty service can only be performed by Ambient, LLC. The original dated bill of sale must be presented upon request as proof of purchase to Ambient, LLC.

Your Ambient, LLC warranty covers all defects in material and workmanship with the following specified exceptions: (1) damage caused by accident, unreasonable use or neglect (lack of reasonable and necessary maintenance); (2) damage resulting from failure to follow instructions contained in your owner's manual; (3) damage resulting from the performance of repairs or alterations by someone other than an authorized Ambient, LLC authorized service center; (4) units used for other than home use (5) applications and uses that this product was not intended.

This warranty covers only actual defects within the product itself, and does not cover the cost of installation or removal from a fixed installation, normal set-up or adjustments, claims based on misrepresentation by the seller or performance variations resulting from installation-related circumstances.