

Comparison of the various cloud providers for the visualization of local PWS weather data (GW1x00/DP1500 etc.)

Warning!

This is a personal assessment and does not claim to be complete.

The application scenarios, personal demands, weightings and tastes can be different. This compilation can only offer a first (and rough) overview.

If there are any ambiguities or inaccuracies, I look forward to your comments. I will then be happy to adapt this text. There is a thread in German in the [Wetterstationsforum](#) and in English in the [WXForum](#). Most of the services mentioned here can be accessed via the menu of [my PWSDashboard installation](#) with real data from a DP1500/GW1000. Simply click on the menu at the top left and on the desired service under Extras - the page will then open in a separate window.

Out-of-the-box the GW1x00/DP1500 (like all other current stations from Fine Offset/Ecowitt except the WH6006) can send the weather data to 4 different preset online services: Ecowitt, Wunderground, Weathercloud and Weather Observations Network (WOW).

In addition, there is the possibility of sending the data to any other service, if this can process data in WU or Ecowitt format (custom server).

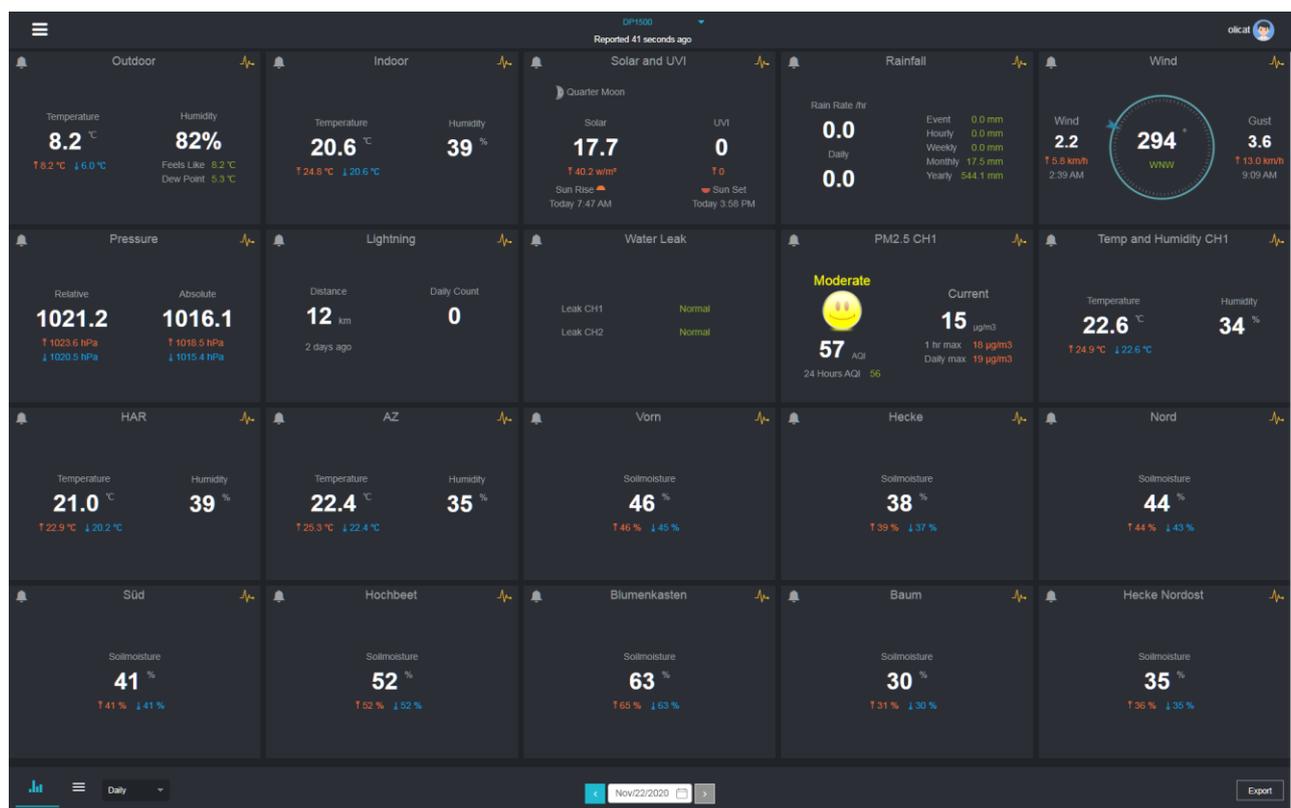
Service	App	Web	Inside	Private	Forecast	German	Data	Comment
Ecowitt	Yes	Yes	Yes	Yes	No	No	1 year	
Wunderground (WU)	Yes	Yes	No	?	Yes	No	?	few sensors (WU)
Weathercloud	No	Yes	Yes	No (Yes with subscription)	No	Yes	1 year (5 years with subscription)	Aufforderung zum Abo;kein PM2.5, keine Bodenfeuchtesensoren
Weather Observations Website (WOW)	No	Yes	No	?	No	No	1 month	repeatedly problems with Chrome & OAUTH2, few sensors (WU)
Custom Server	depending on the software used and your own skills							

- App: availability of an app (Android)
- Web: Web access
- Inside: display of values from inside sensors (WH31)
- Private: Possibility to block other viewers
- Forecast: availability of a weather forecast
- German: Localization (here German)
- Data: Duration of data archiving
- Comment: abnormalities, additional information

Ecowitt

Ecowitt is the only service that can process and visualize all sensors connected to the GW1x00 / DP1500. No wonder - here the manufacturer of the weather stations (Ecowitt) is also the hoster. This means that its own data format / protocol (Ecowitt) can be defined for the transmission of the measured values and also implemented in their own weather stations.

The graphic preparation is functional and clear. The tiles can be rearranged by the user on the desktop website - but unfortunately not on the mobile page. Battery values are displayed and you can be informed about special events by email. These can be configured by the user himself using simple threshold values.



Units on the web interface can be changed. However, the interface itself is only available in Chinese or English.

On an [overview map](#), you can quickly see the various private weather stations in the area and access them with a click. However, comparisons with your own data are not possible.

The user can decide for himself whether his data can be viewed privately or publicly. Registration with Ecowitt is required to display public weather stations. There is also the option of defining individual sensors as private and thus hiding them from the public.

Data can be exported to Excel (xlsx) using the export button. Unfortunately there is no weather forecast. I do not have any information about the duration of the data storage, but I assume that it will only be archived for 12 months.

Webcams can be integrated - but currently there are no cameras compatible with the service available to buy - the announced Ecowitt HP10 for approx. 50USD has still not been released.

A smartphone app ("Ecowitt") is available for both [iOS](#) and [Android](#). However, the app for setting up the WS View weather station also offers rudimentary functions - in the case of the GW1x00, it even displays real-time data via the API interface. The service can be used free of charge. I am not aware of any services that can be purchased.

Ecowitt is currently working on an API interface that can be used to access the data of its own weather station stored on ecowitt.net from other programs. This also includes history data - which would be very useful for the subsequent creation of a CSV file or your own visualization of the

weather data. In this context, I now read for the first time about the use of aggregated data (30 minutes) for a period of 2 years. Accordingly, the data should be collected for at least 2 years. It is annoying that at least GW1000 / DP1500 have a built-in watchdog that restarts the WIFI every 10 minutes if there was no successful connection to the Ecowitt server. This forced connection is technically absolutely unnecessary and should be changed. This problem has not yet been observed with the GW1100.

Weather Underground (WU)

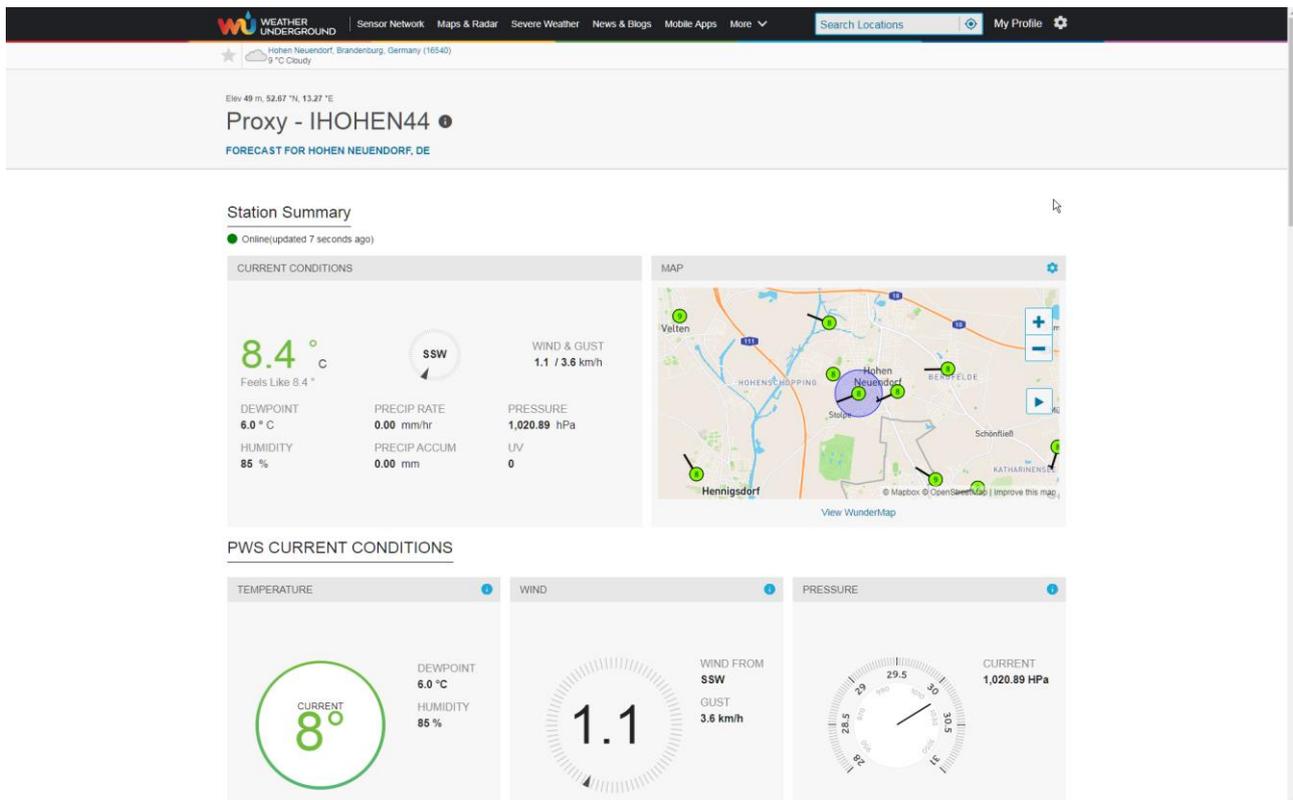
As a "dinosaur" among the providers, WU has made a name for itself with its WU format for uploading weather data. Today, this format is a quasi-standard, quite well documented and is used by a large number of providers.

Unfortunately, this format has not been updated for a long time, which is why a number of sensors (e.g. WH51, WH57, WH31, WH55, WN34) cannot be processed. No battery data or values from the internal sensors (WH31) are transmitted here either.

In fact, I am amazed that an extended version of the WU format has not yet caught on. One could just add a few fields to the existing format!

With tempNf and humidityN, the WH31 data would be easy to transfer. The keys for the lightning data could also be easily taken from the Ecowitt format. A couple of software developers should maybe coordinate with each other.

The biggest advantage - in addition to the widespread use of the format and thus the widespread use and hardware basis - is the weather report that made WU known (if not even popular) with its API capability in the "good times" before the takeover by IBM and the existence of an app (even if it can still only be used to a limited extent after another major version change).



The website is clear and only in English. There is no option to export the data via the website - but there is an extensive API function, which various apps make use of.

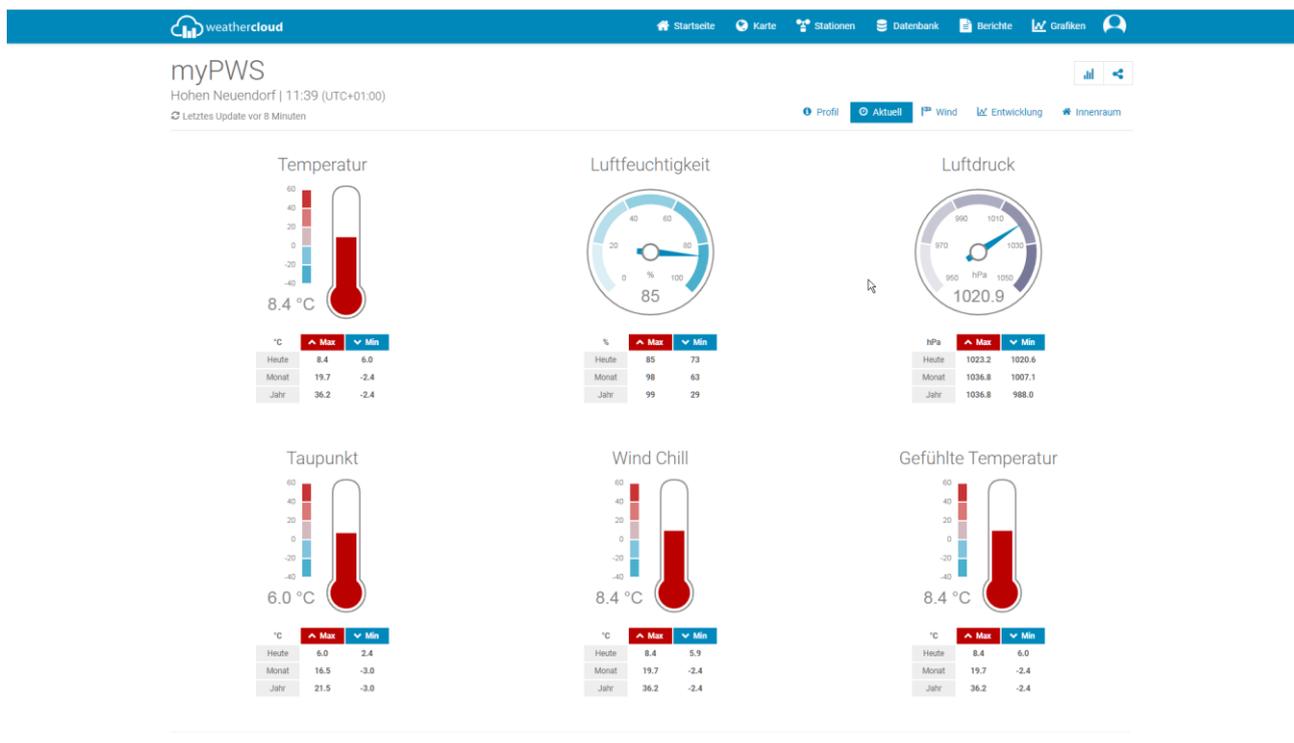
The biggest shortcoming (see above) is the inadequate support of modern sensors. Interestingly, you can, for example, upload the data from the soil moisture sensors or a PM2.5 sensor, but you cannot see them on the website.

Weathercloud

Weathercloud has its own data format and can therefore also display indoor sensors; but does not currently support the upload of PM2.5 values or the lightning sensor, for example. The data from the soil moisture sensors are uploaded, but not visualized on the website. This should follow - as well as the support of other sensors. In spring 2021, the company's own API solution was expanded so that additional sensors (such as air quality) can now also be uploaded. However, the display of these new sensors is (still) reserved for paying customers - these sensors are not displayed in free-Plan.

Otherwise, Weathercloud is the only online service that is multilingual and can display values of inside sensors. Unfortunately, there is no app or a forecast here.

Weathercloud would like users to switch from the free service to a subscription model (5 EUR / month). This is displayed very frequently and concisely on the websites. This then gives you an advertising-free service with editing functions, alarm options and the option of operating the weather station "privately". In the free service, the station is always public.



The data retention period is 12 months in the free plan (5 years in the subscription). The upload interval in the free model is a minimum of 10 minutes; With a subscription you can provide data every 60 seconds. The data can be exported to CSV.

I like the service. However, the lack of a weather forecast is difficult to compensate for. An app has been announced for a long time, but it is still a long time coming.

Weather Observations Website (WOW)

At WOW, I haven't really understood why one should use this service. The graphic preparation is not particularly great, nor is this service characterized by advantages that I can recognize.

The screenshot shows the WOW website interface. At the top, there is a navigation bar with the Met Office logo and the WOW logo. The main header displays the observation site name, "Hohen Neuendorf, Brandenburg, Germany", and the observation time, "11:44 | 22 Nov 2020 (GMT+01:00)". Below this, there are tabs for "Dashboard", "Table", "Graph", and "Webcams". The main content area is divided into two columns. The left column displays the latest weather observation information, including Temperature (8.4 °C), Dew Point (6.0 °C), Humidity (85.0 %), Wind Speed (1.2 kn), Wind Direction, Wind Gust Speed (2.9 kn), Rainfall Amount (0.0 mm), and Rainfall Rate (0.00 mm/hr). The right column displays a map of the location, a search for users sites, and site details. The site details include Site Active (Yes), Website, Reasons for running the site (Personal), Timezone (W. Europe Standard Time), Observation id, User id, and Local Attributes.

Perhaps I have simply overlooked the essential things so far. I repeatedly had problems with login / authentication, which did not increase the pleasure of using the service.

For users in the United Kingdom, however, it is THE [site](#) for weather reports from private weather stations. But the data is not only used by the national meteorological service of the United Kingdom - the KNMI (Koninklijk Nederlands Meteorologische Instituut) in the Netherlands also uses the [data](#) from WOW.

Since the measurement data is also transmitted in the WU protocol with this service, only a few sensors are visible on the site.

The data can be exported as CSV for a period of max. 31 days. A comparison with neighboring stations is possible. However, the selection - outside of the UK - is modest. There is no weather forecast.

Custom Server

With the custom server function, the data can be sent to a configurable server either via WU or Ecowitt data format. The destination URL and port can be freely selected.

In this way, the services that natively support one of the two formats can also be connected directly. Unfortunately, apart from Ecowitt itself, I am currently not aware of any online service that can process the Ecowitt format. This is a shame, as unfortunately not all sensor data can be transmitted in WU format.

Services that require the WU format are Awekas, Windy or PWSWeather.

Service	App	Web	Inside	Private	Forecast	German	Data	Comment
Awekas	No	Yes	No	Yes	Yes	Yes	forever	Subscription possible; few sensors (WU)
Windy	Yes	Yes	No	?	Yes	Yes		colorful, somewhat overloaded, few sensors (WU), wind-oriented
PWSWeather	No	Yes	No	?	Yes	No		few sensors only (WU)

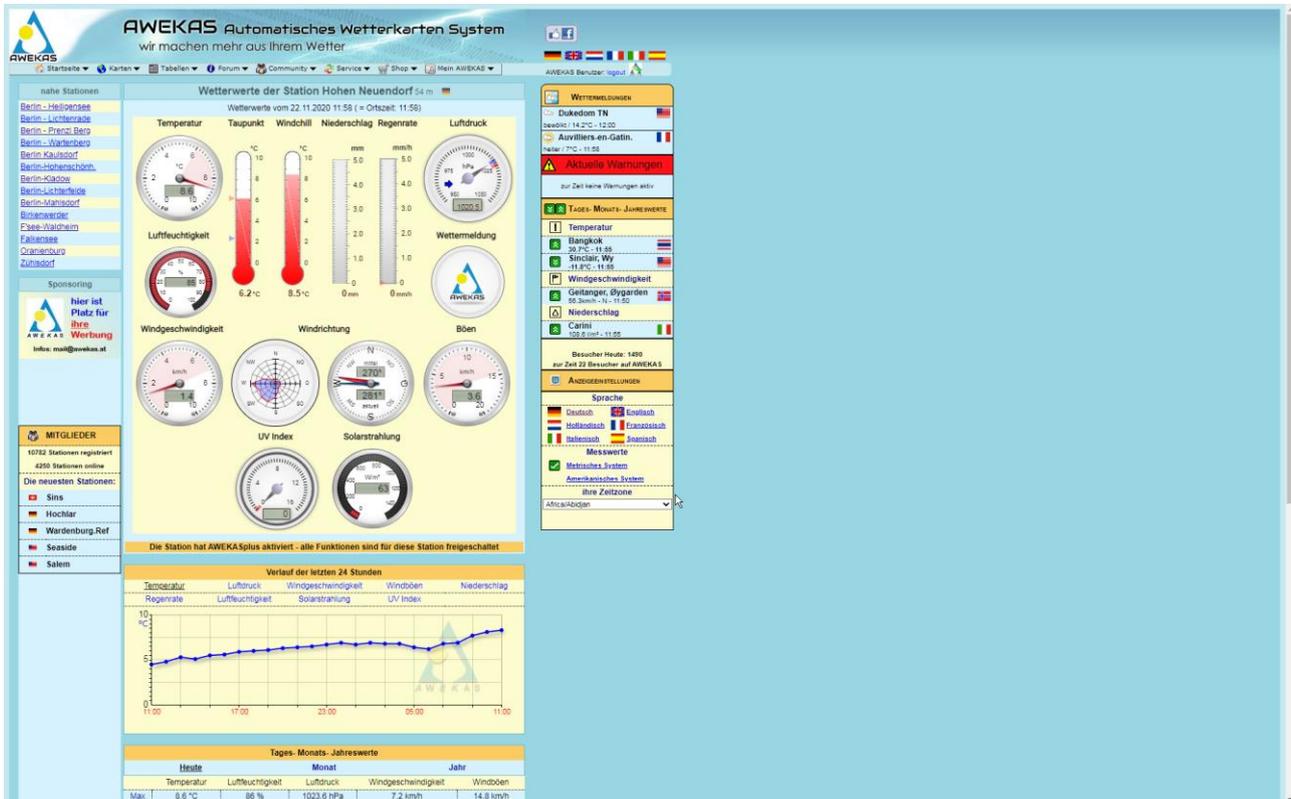
All WU-compatible services can be supplied directly from the weather station by specifying the appropriate URL - including any authentication data via a custom server.

Awekas

Awekas simplifies the comparison to weather stations immensely. You can compare your own data with the average data of the surrounding stations in a selectable area.

A station page is available free of charge, on which the current data and the history are displayed.

If you make your data available to the general public, AWEKASplus is activated, which enables a few more display instruments and other advantages - such as exporting the data to Excel or the option of building the instrument panel on your own website.



In addition, a paid service "Awekas Stationsweb" is offered, which generates a weather page without having to have any programming knowledge or web space.

A big advantage of Awekas is the unlimited archiving time. At this point in time, all data that has ever been uploaded to Awekas can be viewed, edited and exported.

Awekas is fed in WU format - so we have the problem here too that not all sensors are displayed. In addition to the WU format, a dedicated API solution has also been supported since the end of 2020, which can also be used to upload additional sensors. However, these sensors are not displayed in the free service.

At least on the station side, there is also the restriction that only 4 of the 8 possible soil moisture sensors are displayed. It is currently not possible to display the PM2.5 data.

An API is available that can be used to access your own data from external systems. Awekas is multilingual.

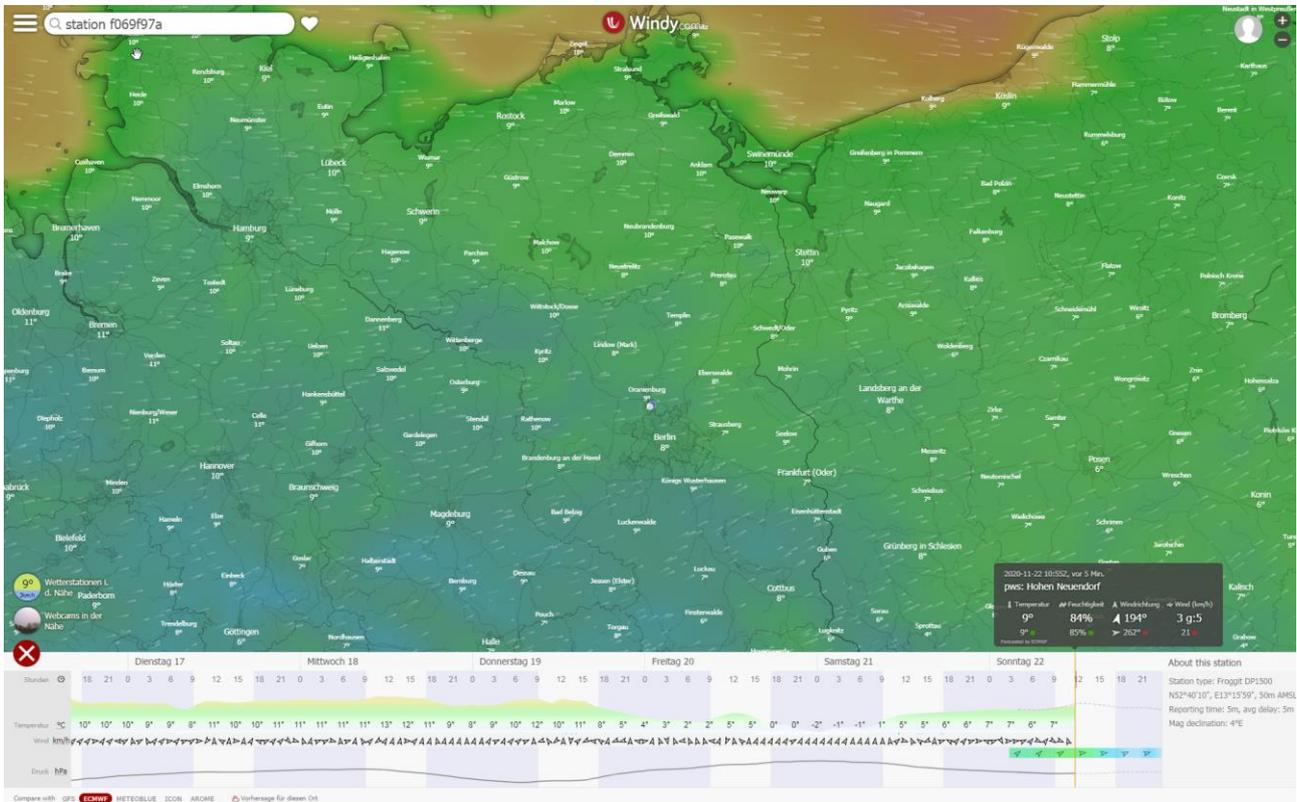
There is also a graphic for the weather forecast.

URL for Awekas:

[http://ws.awekas.at/weatherstation/updateweatherstation.php?ID=\[awekasid\]&PASSWORD=\[awekaspasword\]&](http://ws.awekas.at/weatherstation/updateweatherstation.php?ID=[awekasid]&PASSWORD=[awekaspasword]&)

Windy

Windy is - as the name suggests - very windy. The web interface is terrific - but also slightly overloaded. There are so many levels, animations, colors - you almost need a manual to find your way around.



The pages are multilingual and there is even an app. With Windy you are largely spared with values and numbers - everything is graphically prepared and animated.

Windy allows the integration of Windy data in your own websites - which makes the service very appealing to me.

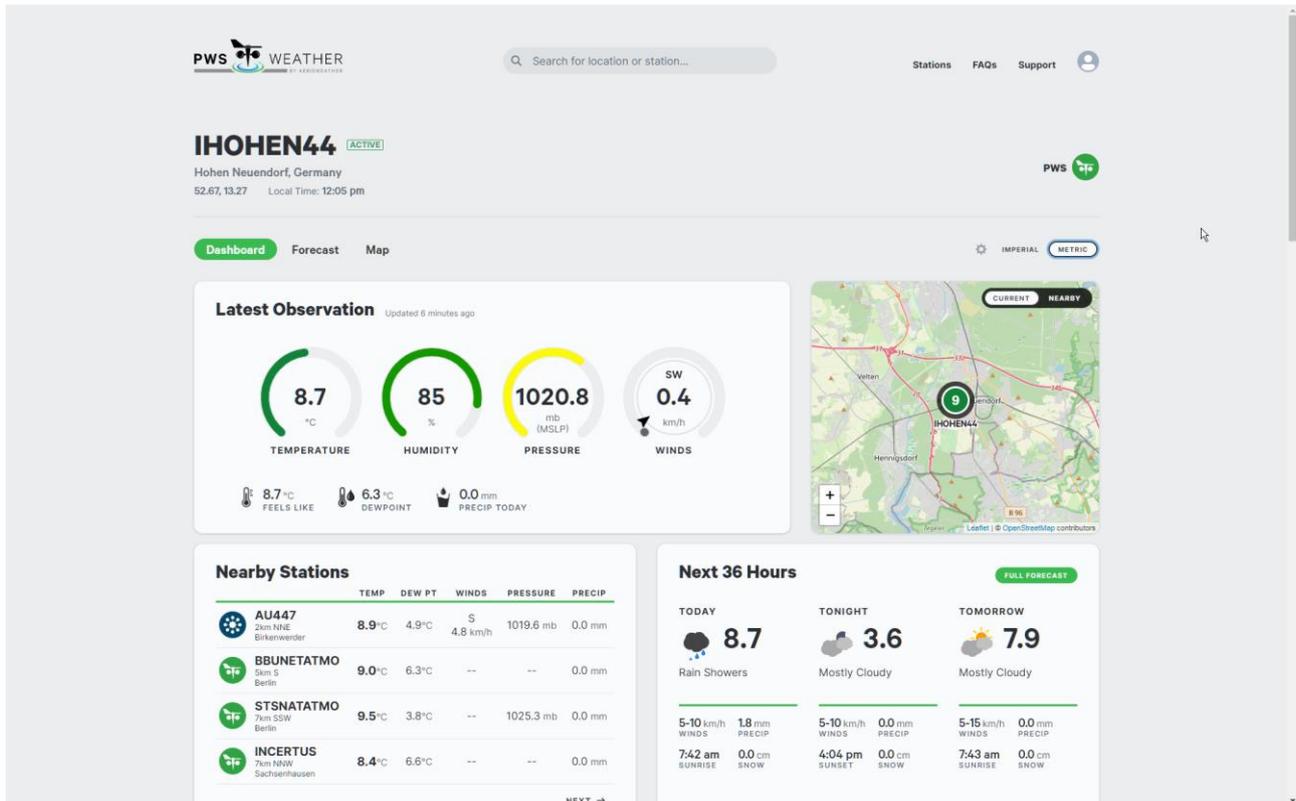
URL for Windy:

[https://stations.windy.com/pws/update/\[windyAPIkey\]?](https://stations.windy.com/pws/update/[windyAPIkey]?)

PWSWeather

PWSWeather comes from a completely different corner. Apparently a company Aeris works in the background, which earns its money with weather data. So there is great interest in the data from PWS and in return, users are offered a tidy interface and forecast data (also via API!) at no cost.

The websites are generally only available in English. An app is missing. However, you can access your data via API functions. Unfortunately, PWSWeather also uses the WU format, so that newer sensors cannot be displayed. However, there are indications of a new API v2 - but unfortunately no more specific information (yet).



Here, too, the use of Ecowitt or a proprietary format would be desirable. But that would also have to be supported by the manufacturers of the weather stations.

My suggestion: expand the WU format!

URL for PWSWeather:

[http://www.pwsweather.com/pwsupdate/pwsupdate.php?ID=\[PWS-ID\]&PASSWORD=\[PWS-Password\]&](http://www.pwsweather.com/pwsupdate/pwsupdate.php?ID=[PWS-ID]&PASSWORD=[PWS-Password]&)

and also

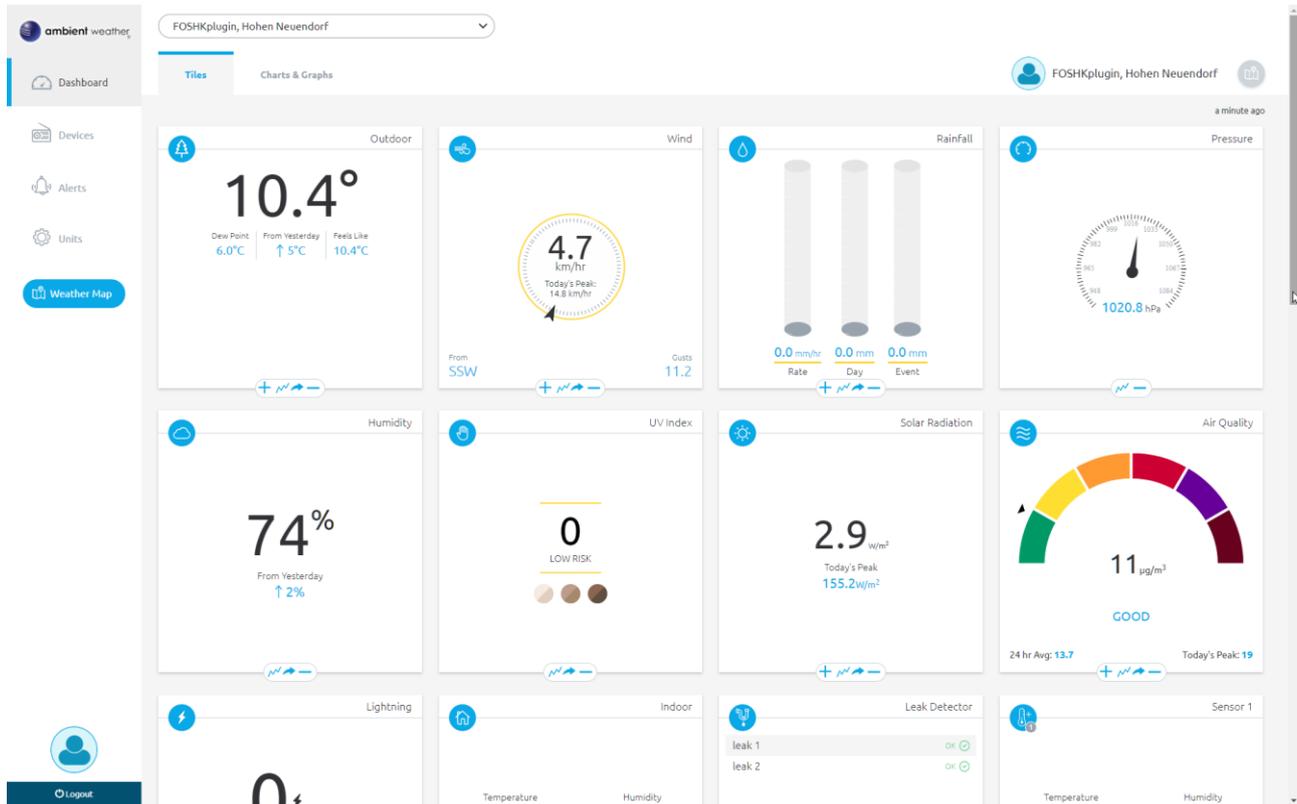
[http://pwsupdate.pwsweather.com/api/v1/submitwx?ID=\[PWS-ID\]&PASSWORD=\[PWS-Password\]&](http://pwsupdate.pwsweather.com/api/v1/submitwx?ID=[PWS-ID]&PASSWORD=[PWS-Password]&)

Ambient Weather

Ambient Weather has a special position in this list. The GW1x00/DP1500 does not support this service by default. However, it is also possible to upload data there via the custom server-function, FOSHKplugin and a [chargeable license](#) from Ambient Weather (VW-ANET: 100USD).

You will be rewarded with a very modern user interface and the display of almost all sensors that the GW1x00/DP1500 can process. In contrast to the Ecowitt models, the upload of PM2.5 values is limited to one indoor unit and one outdoor unit only.

The data format is the Ambient Weather-format based on Ecowitt-format.



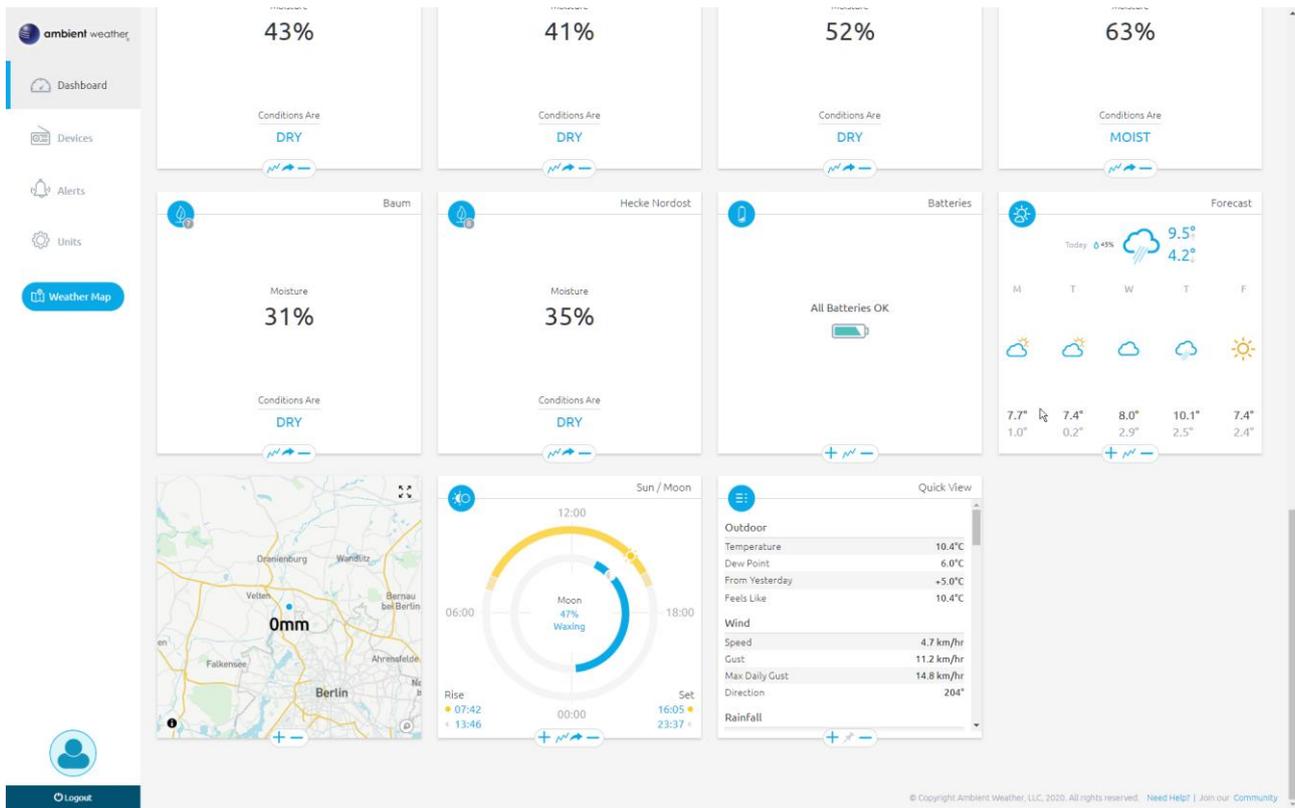
As with Ecowitt, the surface is divided into tiles, the order of which unfortunately cannot be modified. However, some tiles can be enlarged and moved forward. In addition to the usual tiles for individual sensors, there is also a tile for the weather forecast (5 days), a tile for sun/moon, a map tile and a "Quick View" tile with all current sensor values and a few min/max values. It is just a click of the mouse to get to the large diagrams. Unfortunately, like the tiles, the diagrams cannot yet be saved or sent by email.

Since Ambient Weather is aimed at the American market, multi-language support is currently not provided. But at least there is an Android app (albeit unfortunately without widgets) and the units displayed can also be set to the metric standard.

Images from a WeatherCAM can be integrated into the service. The upload can be done via FTP (push to AmbientWeather) or via http (poll from AmbientWeather).

Amazon Alexa, Google Home and IFTTT can also be connected via the Ambient Weather service. As with Ecowitt, alarms can be defined, which are transmitted by email or SMS if the threshold values to be set are exceeded or not reached.

There is no export function via the website. But Ambient Weather provides an API interface to get the data.



Service	App	Web	Inside	Private	Forecast	German	Data	Comment
Ambient Weather	Yes	Yes	Yes	?	Yes	No		almost all sensors (AMB), CSV exportable, chargeable

Weather365.net

Another - incomprehensibly still relatively unknown service - is [Weather365](#).

It is operated by the German Institute for Weather and Climate Impact Analysis (IWKF) - Meteo-Services and has a more agricultural focus.

In addition to an [imprint](#), there is also a [note](#) on what should be achieved with the uploaded data. These data are used, among other things, to improve the model calculations of the regional models of the service; After a certain period of reporting and verification, this data is also received as additional base reports for the local models.

They are definitely interested in other data suppliers - also from privately operated weather stations.

An astonishingly extensive [station page](#) is generated.

There you will find a local weather report, archive data, extensive diagrams, overviews, weather maps from the DWD (incl. Warning card) and some (more rare) evaluations such as GTS, Mars maturity calculation (!) or the HUGLIN index (viticulture).

stations.meteo-services.com/wetterstation/index.php?station_id=8217&uw=kmh&ut=C&lp=0

Wetterbericht
PWS Hohen Neuendorf

AKTUELL ARCHIV DIAGRAMME STATIONSKARTE

WX-Station Ver. 1.905 2021-03-05

06:39:03 17:56:43 (Morgendämmerung) 06:05 (Abenddämmerung) 18:30 TZ: Europe/Berlin

aktuellste Messwerte 07-03-2021 12:42:00 (CET)

Temperatur 2.8°C Empfundenes 0.5°C Taupunkt -1.4°C

Rel.F. 74% Wolkenuntergrenze N/A.

Wind 0 km/h Böen 7 km/h ENE

Luftdruck 1021 hPa Tendenz:

Globalstr. 42 W/m² UV-Index 0 Regenrate 0 mm/h

aktuell - Grünland-Temp.-Summe (GTS): 20°C / (200 = Vegetationsbeginn)

Bodenstation	Tiefe 5 cm	Tiefe 10-15 cm	Tiefe 20-30 cm	Tiefe 40-50 cm
Bodenfeuchte	41 cb	N/A.	N/A.	N/A.

Tageszusammenfassung

TMax 3.1°C (00:08) TMin 0.9°C (06:00) WindMax.: 11 km/h (00:39)

Niederschlag Σ: 0 mm

Globalstr. Tagessumme: 247 W/m² StrahlungMax: 63.7 W/m² (11:19)

experimentelle Textvorhersage - KI-gestützte Verknüpfung von Messwerten und lokaler Wetter-Computermodell-Prognose Version 1.04 (04/2020)

Vorhersage für Hohen Neuendorf, Sonntag den 7. März 2021: ausgegeben am Sonntag, 7. März 2021 - 11:00 Uhr

Den ganzen Tag stark bewölkt, mittags um 3 °C, am späten Nachmittag um die 5 °C. Gegen Abend hin zumeist stark bewölkt bei Werten um 2 °C. Nachts anfangs stark bewölkt, ab Mitternacht meist Nebel / Hochnebel. Die Tiefstwerte liegen bei -3 °C Leichter Frost, teilweise Reifbildung. Achtung verbreitet Glätte auf den Straßen durch Eis oder überfrierende Nässe. Besonders auf Brücken und in Waldstücken ist mit erhöhter Glättegefahr zu rechnen.

Starker Wind - Böen bis zu 41 km/h, vereinzelt auch darüber, im Mittel um 26 km/h.

Die weiteren Aussichten:

Am Montag gering bewölkt. Anfangs zumeist teils bewölkt, teils klar, örtlich Nebelschwaden oder Bodennebel möglich. Höchstwerte am Tag um 7 °C. In der Nacht zum Dienstag Tiefstwerte um -4 °C.

Dienstag meist teils wolkig, teils recht sonnig bei Höchstwerten um die 7 °C.

Vorhersage Hohen Neuendorf

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Registration and notification of the required station network ID takes just a few minutes. The support team was also ready to help quickly and competently by email.

Sending is supported by weewx, for which a [weewx extension](#) is required, but which is provided by Weather365. Anyone who is familiar with the variables available from [WSWin](#) should be able to create such a template (NRT file) in a few minutes.

The structure of the data to be sent is described quite well here. There are a few more fields in the sources for the weewx extension.

The dispatch takes place via http/POST. The operator provides a transmission interval of 300 seconds / 5 minutes.

[FOSHKplugin](#) supports sending to this service since v0.08; since spring 2021, this service can also be supplied directly with [WSWin](#).

You can register your own station via <https://stations.meteo-services.com/login/>

If you have then received an ID from the weather service, you can log in at <https://stations.meteo-services.com/login/login.php> with your email address and ID.

An overview map of all available stations can be found at <https://stations.meteo-services.com/fullscreen/> - there you can also simply switch to the station page of this station by clicking on the relevant station.

Apart from minor display problems, I really like the service. In addition to German, English is also supported.

stations.meteo-services.com/wetterstation/index.php?station_id=8217&uw=kmh&ut=C&p=0

Vorhersage Hohen Neuendorf

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	So	Mo	Di	Mi	Do	Fr
Wetter						
TMax/TMin [°C]	5 / -1	7 / -3	7 / -4	10 / 2	11 / 5	11 / 3
Niederschlag [mm]	0	0	0	0	7	0
Niederschlags-Wahrscheinlichkeit [%]	30	20	20	30	70	20
Bodenfeuchte [%nFk] Lössboden 30-60cm Tiefe	68	68	68	68	78	73
Bodentemp. 10cm Tiefe [°C]	5	8	6	8	9	9
Bodentemp. 40cm Tiefe [°C]	5	4	4	5	6	6
Pflanzenschutz Spritz-Grenzwert [18 km/h]	Extrem über Grenzwert 29 km/h	mittel 12 km/h	mittel 11 km/h	Über Grenzwert 23 km/h	Extrem über Grenzwert 39 km/h	Extrem über Grenzwert 37 km/h

Radar aktuell Radarfilm




So 07.03.21 12:35 Uhr So 07.03.21 11:55 Uhr

DWD

Interim conclusion

For my needs, there is currently no really perfect provider.

Either the forecast or a language localization is missing. Or not all sensors are supported.

I would like to have both: an app (with widgets!) and browser access. And I not only want to see my data nicely prepared and permanently on the Internet, but also need a weather forecast.

And if possible, in the language in which I think and also free of charge - I provide the data and you the infrastructure and the forecast.

But if I have to pay, then please only if I also receive forecast data and can also use it in other services. And of course only at a reasonable price.

[PWSWeather](#) is taking a very customer-friendly approach with the Aeris forecast data. Those who upload station data receive free forecast data in return.

I am curious whether this will remain a permanent solution or whether the usual route of the forecast providers (WU, Darksky) will follow ...

Therefore, you can also come up with the idea of tinkering and hosting your own solution right away. Thanks to custom servers and a large number of available software solutions, this is definitely feasible.

As examples are mentioned here:

[WeeWX](#)

[WeeWX/Belchertown](#)

[PWSDashboard](#)

[Meteotemplate](#)

I've only looked at these programs superficially. If you work more intensively with it, you can certainly get a lot more out of it.

WeeWX

[WeeWX](#) is a monster. There's probably pretty much nothing that WeeWX can't do. It is so extensive in terms of interfaces and configurability that you can spend a lot of evenings with it and still have to do without the display of the lightning bolts. At least that's what happened to me.

There is a clear user interface, but the graphics cannot be zoomed and I was not able to easily integrate weather reports / forecasts.



For WeeWX there are a few graphical extensions (skins) of which I installed at least the Belchertown skin on recommendation. A Windy display is then also integrated.

Belchertown has its own records page that lists the minima and maxima along with the time of occurrence.

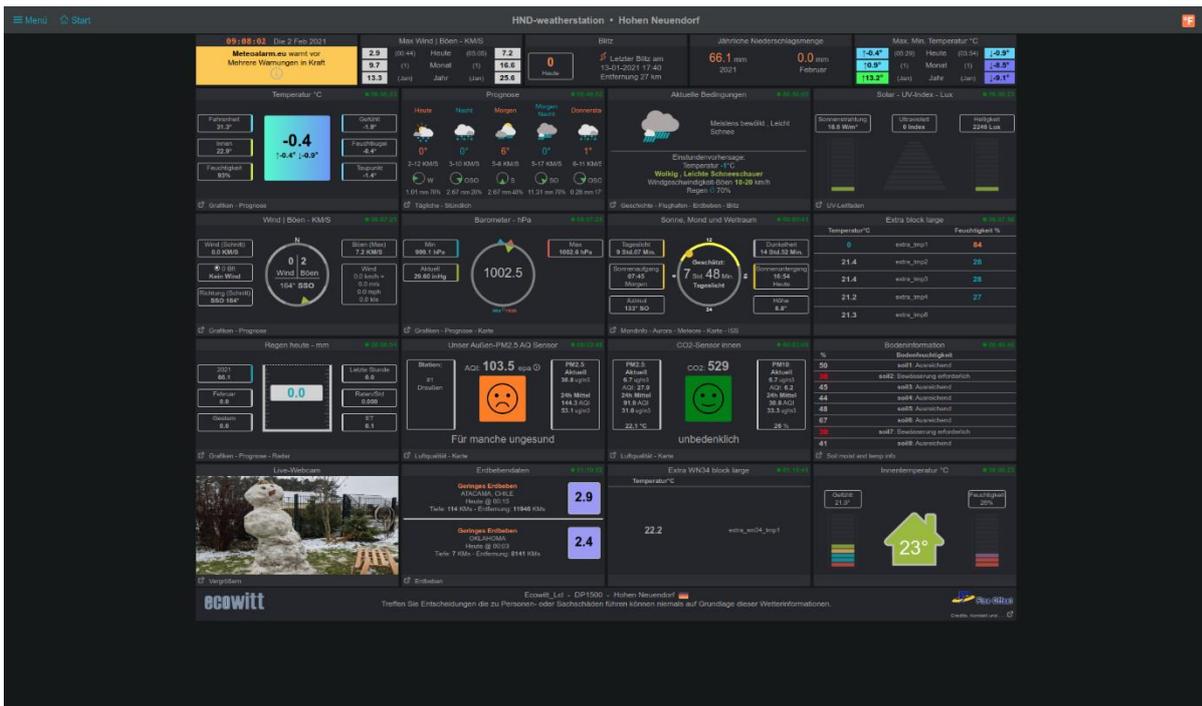
WeeWX can be fed by WU but also by Ecowitt. In this way, all sensors could be transmitted and visualized. There is even a driver to query the GW1000 via the API interface.



Unfortunately, there is currently still a problem with lightning and leakage sensors. At least I didn't succeed in visualizing this with the [Interceptor driver](#) right away. However, this could work better with the [API driver](#) (which does only work with devices that support the API-interface like GW1x00 or WH2650).

PWSDashboard

I had the fastest successes here with my local installation with [PWSDashboard](#). Not much had to be configured for this - a lot comes with the standard. The transmission is in Ecowitt format and even the lightning bolts are displayed.



It is well suited for quickly presenting a private weather website on the Internet. The layout is quite rigid and therefore has to be adapted for changes. The site is based on PHP, so changes are perfectly feasible. In fact, the author of PWSDashboard sees this as a basic framework for your own modifications - changes in the php files are sometimes also necessary for configuration purposes. To demonstrate the possibilities, I set up a PWS dashboard installation with current data at <https://wetter.phantasoft.de>.

The data of many other services (such as severe weather warnings, earthquakes, overview maps of the air quality, etc.) can be integrated. This requires free API keys from the respective providers, which have to be configured once.

You will be rewarded with a lot of additional graphics, textual information and helpful popups.

Your own webcam can also be integrated. History data are saved and these can be used to prepare diagrams.

The big advantage lies in the native support of the Ecowitt protocol - so the data of all sensors offered by Ecowitt can be visualized. For sensors that are not yet supported out-of-the-box by PWS Dashboard, separate blocks with a few lines of PHP can be built in. On the demo page, I practiced this for the CO2 sensor WH45 and the new WN34.

Multilingualism and weather forecast are given with PWS Dashboard.

An example for the output of diagrams can be found here:



In fact, the user does not have to bother with any database systems. The data storage and visualization takes place internally without any further configuration measures. All that is needed is a cron job, which most web hosters should actually offer. But even an external cron service can be used for this.

For some time now, Meteotemplate has also offered direct support for the Ecowitt protocol via [plug-in](#), which also enables the common Ecowitt sensors to be supported in Meteotemplate. The first point of contact should be the [Meteotemplate forum](#) - in addition to the download link, there is also an explanation about the installation / use of this plugin.

And with a little knowledge of PHP, you can easily add missing functions and sensors yourself. Forecast data can (still) be integrated via Darksky.

A really nice and comprehensive example of a meteotemplate page can be seen here: http://www.kwos.org/poggiocorese_ecowitt/indexDesktop.php

CumulusMX (CMX)

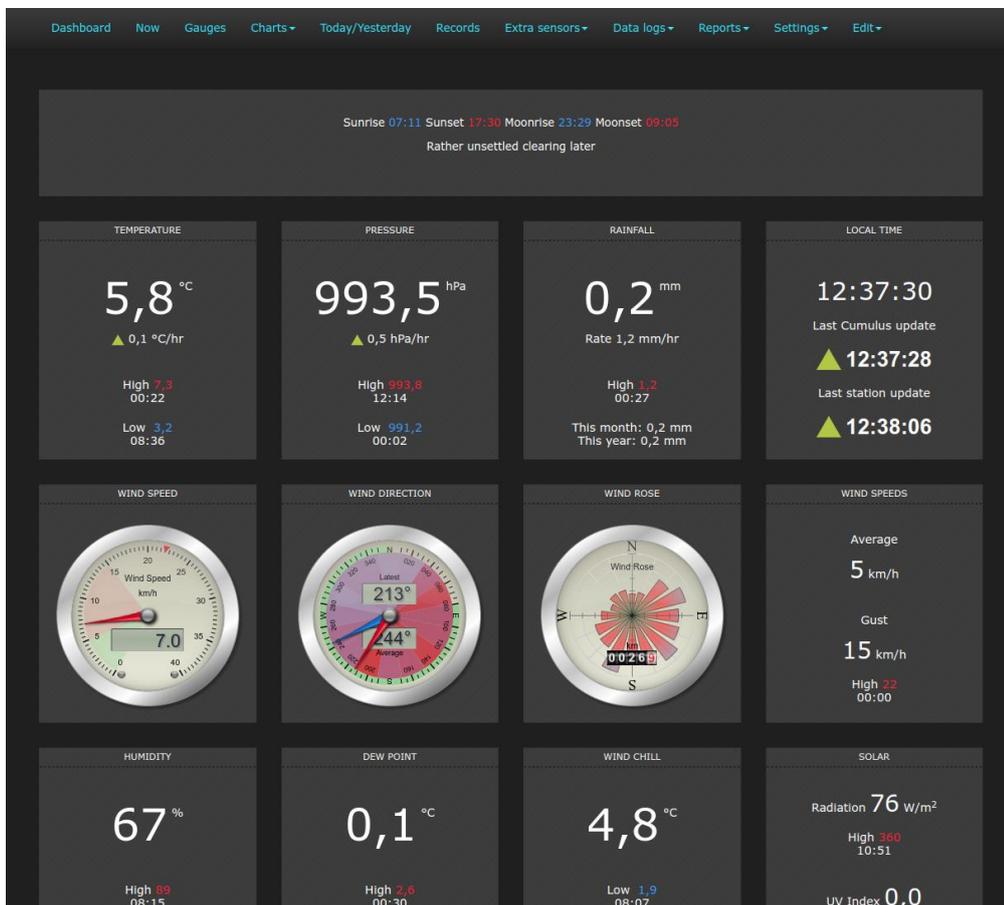
CMX is a free, very nice and comprehensive software for visualising and storing the data of a local weather station. It supports many forwarding options and interfaces to other programmes and presents the data - web-supported - clearly in a dashboard; offers visualised instruments and enables long-term archiving of the data. The integration of local weather data into own websites is also supported.

The user does not have to configure or adjust much himself - most of it works out of the box.

On a 24/7 running computer, this can be **THE** central weather station app.

More information and the link to download the CMX package can be found [here](#).

CMX doesn't need to be installed much for operation under Windows - it's enough to unpack the ZIP file in a folder and start the CumulusMX.exe there. The further configuration is then done via web browser using the link <http://ipaddress:8998> where ipaddress corresponds to the address of the computer on which CMX was started.



Diagrams are a speciality of CMX. Not only can any input variables determined by the user be displayed within a diagram. These diagrams are interactive and can also be exported and presented on websites:



However, there is also the option of displaying the data (yesterday/today) as well as displaying the recorded record values in tabular form. The names of the sensors displayed can be changed by the user.

For many, the extensive forwarding options offered by CMX should be interesting. Besides Weather Underground, Windy, PWSWeather, WOW, WC, APRS/CWOP, Awegas, OpenWeatherMap and Custom http as well as other services are supported.

In addition, the data can also be stored in a MySQL database on any target or sent to an MQTT broker via MQTT.

I am impressed by the multitude of possibilities and the technical implementation. Particularly noteworthy is that the basic functions work immediately without any manual entries in any INI files - the setup wizard guides you through the initial setup with just a few clicks. Even for more advanced "special" configurations, no separate editor is necessary - here, too, the setup is done via web form.

And all this is done locally - on a slim computer that only needs to be switched on around the clock. A Raspi 4 should have the necessary performance and be power-saving enough to let the device run permanently without a bad ecological conscience.

Conclusion

Apart from the lack of an app, the use of free software offers by far the best options in terms of supported sensors, layout and supported languages.

But:

The effort (financial as well as technical/administrative and time) should not be underestimated - especially when it comes to data security and archiving.

If you absolutely need an app for your smartphone, you should take a look at the [Personal Weather Tablet \(PWT\)](#). Although this was originally intended for tablets, it also runs on Android smartphones.

It is fed in Ecowitt format via a custom server, which is why all current sensors are supported. The author of the program is currently working on the additional integration of the GW1000 API.

If you need several custom servers on the GW1000, you should take a look at [FOSHKplugin](#). This Linux service receives messages in WU, Ecowitt or Ambient Weather format and distributes them in a wide variety of formats to any number of weather services and programs. With v0.08, in addition to MQTT, the database system InfluxDB is also supported, via which the weather data can be graphically processed very quickly, easily and [representative](#) using e.g. Grafana. The Awegas upload API is also supported by FOSHKplugin.

With v0.09 support for [APRS/CWOP](#) follows.

Oliver Engel

<https://foshkplugin.phantasoft.de>

21.02.2022

Changelog:

v1 - 11/22/2020

initial

v2 - 12/14/2020

Awekas: archiving time

Ecowitt: Tiles can be rearranged on the desktop side

V3 - 01/29/2021

Ecowitt: HP10, API, App, Tiles sorting

V4 - 02/02/2021

PWS Dashboard: new images, basic structure

V5 - 03/07/2021

Weather365 added

PWS Dashboard carried out a little further

V6 - 05/30/2021

PWSWeather: Notes on new API; additional upload address

Weathercloud can process additional sensors - but not for free

Awekas also supports its own API solution

Weather365 is now also directly supported by WSWin

Added example for Grafana

V7 - 11/09/2021

Ecowitt now has an app

HP10 is delayed

GW1000 has got a successor: GW1100

Extension of the Meteotemplate

first english version

V8 - 11/15/2021

WOW: more detailed explanation with example

Links to the forum pages and the demo page in the introduction

V9 - 02/21/2022

First CMX-Integration