

Meteobridge PRO2 - Datasheet



Meteobridge PRO2 is the successor of Meteobridge PRO that was introduced in 2015 and established a whole new product class, the *Personal Weather Server*. Meteobridge PRO2 comes in a tiny package (about the size of a cigarette box), a power footprint of 1-2 Watts, internal data storage of 16 GB, LAN and WiFi capabilities, a graphical OLED display, 2 external USB ports and integrated RF capability to receive data from Davis Instruments sensors directly.

Autonomous - Meteobridge PRO2 is operated by your browser, so you don't have to install anything on your PC and you can use it with any desktop, laptop, tablet. With the browser you configure the Meteobridge PRO2 initially. Once configured to your needs the Meteobridge PRO2 works totally independent from your PC, which takes the burden of having a PC up and running all the time to monitor weather data away from you. It is an autonomous, low power solution that takes care of your weather stations data.



Weather Stations - Meteobridge PRO2 supports these weather stations:

- Davis Instruments® Vantage Pro2™, Vue™ (can read RF sensor data directly, no console or envoy or data logger needed), Envoy, Envoy 8x, WeatherLink Live, AirLink
- Oregon Scientific® WMR-88, WMR-100, WMRS-200, WMR-300, RMS-200, WMR-928, WMR-968
- Meade/Irox/Mebus/Honeywell/Nexus TE-923, TE-827, TE-821, DV-928
- FineOffset/Ambientweather WH-1080, WH-2080, WH-3080, Observer-IP
- FineOffset WH-2310/2308, WH-4000
- Ecowitt GW1000, GW2001 Wittboy, WH2910C, WH2320, WH2350
- Ambien Weather Observer IP
- PeetBros Ultimeter 100, 800, 2100
- Rainwise MkIII (MkIIICC, CC-3000, IP-100 interfaces are supported)
- Lufft WS600/601/700/500/200, Ventus V200A
- LaCrosse/ELV WS2300, WS550, WS777, WS888, WDC7000
- Thies Clima Sensor, Gill GMX600, Weatherflow (Air, Sky, Tempest)
- Ventus W835, ELV RS500

Weather Networks - Being connected to one of the above weather stations Meteobridge PRO2 can upload your weather station's data to the following Internet weather networks, where you are part of a weather community and get your data visualized in various ways:

- | | | |
|------------------------------|----------------------------|---------------------------|
| • Weather Underground | • Weather Cloud | • Meteobridge Weather CAM |
| • Weather Underground Camera | • Windfinder | • Wattering |
| • AWEKAS | • Windguru | • Weathercloud |
| • CWOP / APRS | • Idokep | • Ambientweather Network |
| • WeatherForYou | • Weatherflow | • Agroclima |
| • UK MetOffice WOW / WOW NL | • Wetter.com | • Wetterwarte Süd |
| • Terre-Net | • Previmeteo | • Schleswig-Holstein-Netz |
| • Windy | • Anything Weather | • Meteomap.Cloud |
| • Home Weather Station | • Meteonews | • Weatherlink Cloud |
| • Open Weather Map | • Meteoplug Cloud Graphing | • Meteoclimatic |

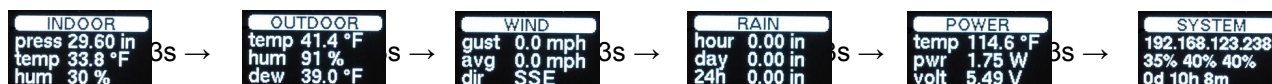
Uploads / Sending - Beside feeding weather networks Meteobridge PRO2 allows you to pull your weather data in short intervals to your own server in the Internet. This can be done by FTP, SFTP, HTTP, HTTPS or even by MySQL requests. You also can send weather data by email or can twitter your data. Which data to send or upload and at which intervals is completely under your control.

Web-Templates - Meteobridge PRO2 can feed the most popular webpage templates („Leuven“, „Saratoga“, „Home Weather Station“, „Meteotemplate“ and „WD-Live“) and makes it easy to set up your individual Internet weather web page easy.

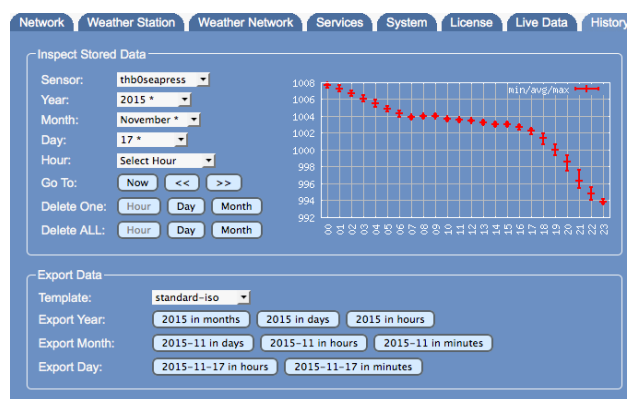
Conditions - Meteobridge PRO2 can even act on user-defined sensor data conditions and initiate any of the actions mentioned above (like email) when sensor data matches conditions defined by you. Having multiple ways to upload and send data, controlled by user-defined conditions gives you an extremely flexible tool to make things happen based on sensor data.

Remote Access - Meteobridge PRO2 offers the ability to be reached from the Internet by simply setting a mark on the web interface. Doing so you are provided with an Internet URL where you can reach your Meteobridge PRO2. No changes at your firewall and router are needed. It just works, unless you are in a company-grade LAN where packet filtering is applied or other special measures are taken. This feature is extremely helpful when you are on travel or the Meteobridge is located in a remote location and you want to check things or change settings. Your Meteobridge remains protected by the password you gave it.

Display - Meteobridge PRO2 has a 128x64 pixel black/white display at the front, which is used during boot to show boot progress and the IP address it has been given by the router. This display is user programmable and can also be used to show data of station sensors. You can define distinct pages to show up on the display. These pages can have text in various fonts and sizes and will typically show sensor data. You can arrange these pages into a flow so that information to be displayed will change at a frequency defined by you. Example below shows a typical cascade of pages that comes as predefined.



Storage - Meteobridge PRO2 comes with an internal database that can store up to 16 GB of weather station data, which allows to hold data of more than a decade. Data can be inspected, edited and deleted via the Meteobridge PRO web interface, which also gives a graphical overview about data of a specified sensor in a year's, month's or day's time range. Meteobridge PRO can directly make use of stored data when uploading information, so this can feed your web server with any kind of sensor data for any period in time. Therefore, you are not stuck to predefined templates but can design your internet weather presence as you like.



Sharing - Meteobridge PRO2 allows to export stored weather data in a CSV like notation. Which data to export and for what period in time is user-defined. This allows you to export data for various follow-on processes. Meteobridge PRO2 makes data exports accessible by providing a samba share (windows network folder) that every PC in your LAN can easily mount as a network folder.

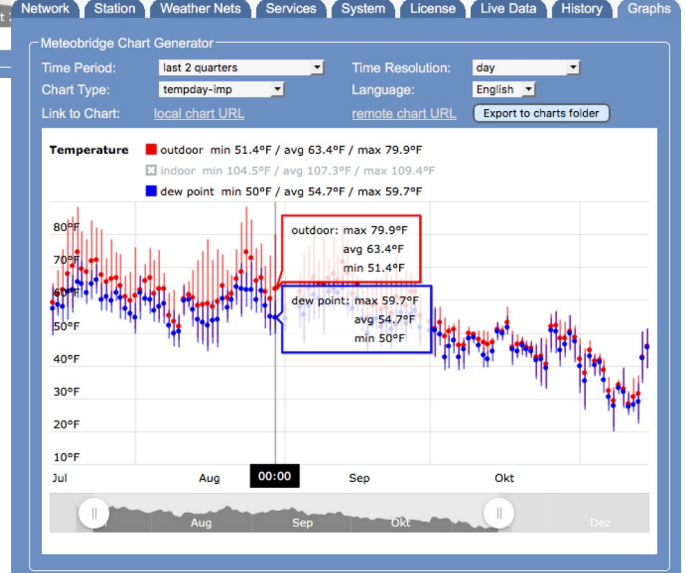
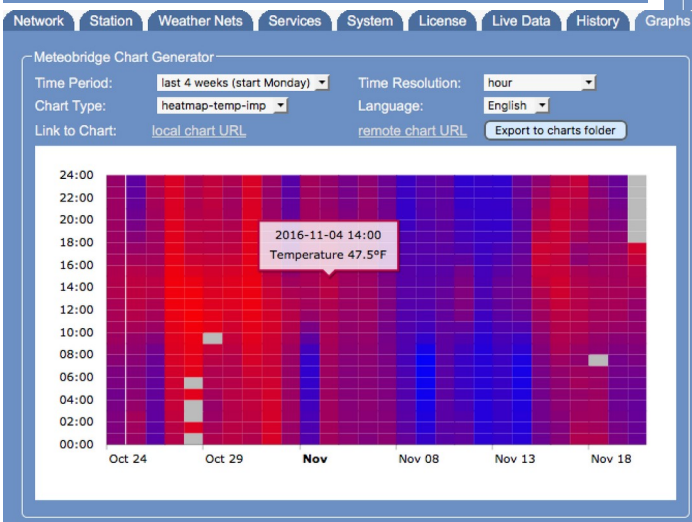
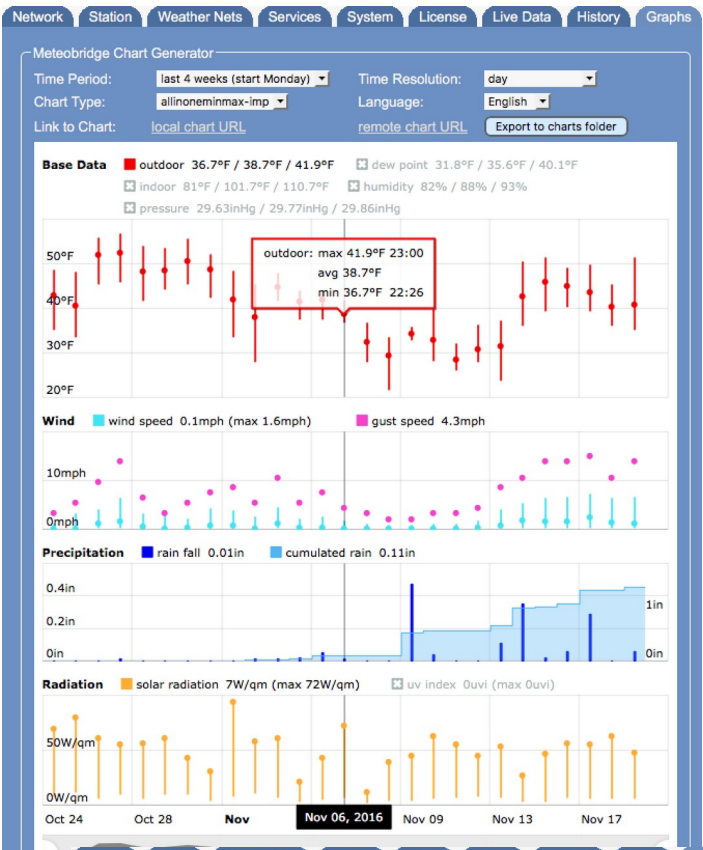
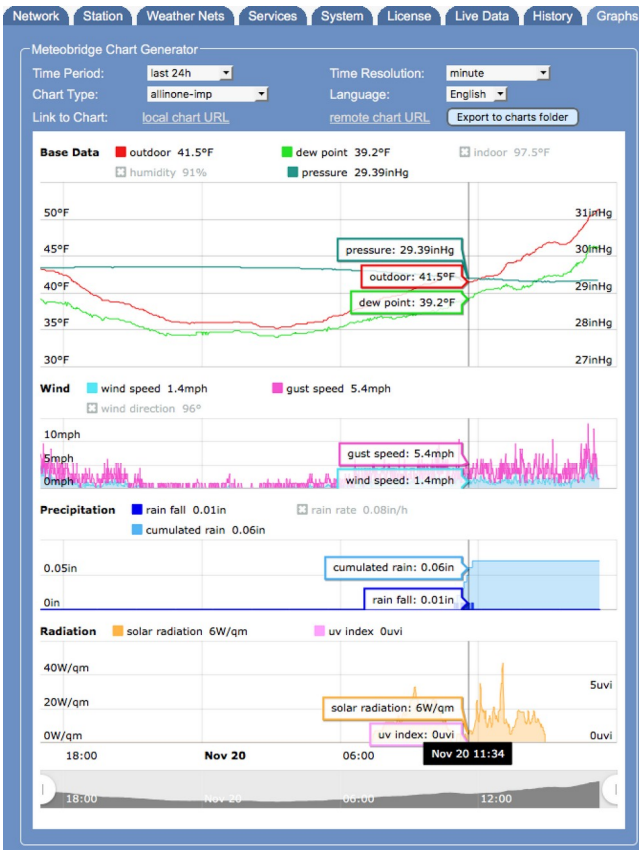
Monitoring - Meteobridge PRO2 has an internal power monitoring that measures support voltage and power usage of the Meteobridge PRO itself and all connected USB devices. This is extremely handy, when Meteobridge PRO2 is running in a battery powered environment, as it can monitor and even act on power conditions. It also allows you to check if your setup is doing "as green" as expected.

SMS / Twitter - Meteobridge PRO2 can send SMS via service provider „messagebird“. This can be done in regular intervals or triggered by user-defined events. Content of the SMS can include weather data. Meteobridge PRO2 is not limited to SMS but can also send weather information via twitter.

Dashboard - Meteobridge PRO2 has the popular Aurora Weather 34 template included to visualize the current weather situation in a nice way without the need to define a web page on your own.



Graphs - Meteobridge PRO2 can show line graphs of the recorded weather data. Different kind of information can be shown in vertically stacked panels that share the same time line. You can inspect the graphs from within the Meteobridge PRO2 web interface or you can upload the graphs via FTP to your web server. Integration into your home page is most easy as the graphs are self-contained, you don't have to install additional libs on your web server. Furthermore you can also reach out to the graphs on your Meteobridge PRO2 from the internet, when you have remote access enabled on your Meteobridge PRO2. Graphs are not password protected, so you don't have to compromise your password for Meteobridge PRO2 administration for allow access to the graphs. While Meteobridge PRO2 comes with a set of standard graph definitions (both, with ISO and imperial units) you can also define new graph definitions with the powerful "meta chart" feature, where charts can be easily composed via GUI. This way Meteobridge PRO2 gives more options to visualize weather data than most PC programs while having an unmatched small form factor and asking for an extremely small amount of energy.



Hardware Specification

- Size: 57mm x 27mm x 95mm (width x height x depth) without antennas
- weight: 130g (with antennas)
- operating temperatures: 0 - 40°C, non-condensing
- 100/10 Mbit Ethernet port
- WiFi 2.4 GHz, 802.11g/n (right SMA male connector on back panel)
- RF-Sensor reception in 868-915 MHz band (left SMA female connector on back panel)
- external power supply (incl. plugs for US, EU, UK) with micro USB connector
- full size USB female connector on front panel
- micro USB female connector on back panel
- black/white OLED with 128 x 64 pixels to display status

- information and user defined data
- reset pin hole
- 3 LEDs on front panel, indicating
 - RF sensor reception (red)
 - system status (yellow)
 - power (green)
- internal components
 - VoCore21 computing module (MTK7628AN, 16 MB Flash, 128 MB RAM)
 - 4 port USB hub
 - voltage / power monitoring IC (INA220)
 - barometer IC (BMP390)
 - temperature / humidity IC (SHT31)
 - 16 GB industrial SLC micro SD card

Compliance

Meteobridge PRO2

- is CE and is RoHS conform and is FCC compliant (contains FCC ID 2AC4R-VOCOREV2)
- fulfills Open Source obligations of included SW components (www.meteobridge.com gives details)