

Setup

1. Connect the ethernet, antenna and power supply



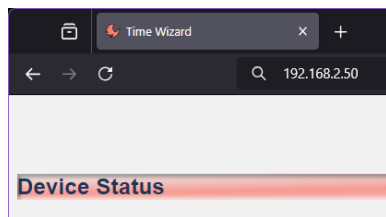
2. Make sure to place the antenna where you could get the best satellite signal. Please see FAQs for more information

3. By default, the device will be in DHCP mode. The IP address and net mask show on the display

192.168.2.50

255.255.255.0

4. Use a web browser to configure the device. Enter the IP address in your web browser and the web UI should come up



Display

The front display rotates between UTC Time, Satellite Strength, IP Address and Netmask.

UTC or Coordinated Universal Time is the global standard for regulating most internet connected devices that need

time. Please keep in

mind, devices that

request time convert UTC Time to the time zone specified by the user.

12.46.08 utc

Each two digit number is the Signal Noise Ratio of the

top 4 satellite in each constellation. From left to right, GPS, Galileo, BeiDou, Glonass and last, the type of lock, 2D or 3D.

42.39.36.25-3D

The IP Address and netmask are shown to help users locate the device on their network. While DHCP

is easier for at-home users, it's recommended to turn off DHCP in the settings to set a Static IP.

192.168.2.50

255.255.255.0

Web UI

The status section shows various information currently going on about the device.

Current UTC Time: 04/20/2025 19:11:20
NMEA Process Offset: 71817 µs
Up Time: 0d 00h 04m 31s
Lock: 3D
GPS Signal: [16] 42, 38, 38, 37
Galileo Signal: [10] 36, 35, 31, 30
Glonass Signal: [9] 35, 31, 30, 28
Beidou Signal: [7] 39, 33, 31, 30

-Current UTC Time is shown. This should be used for information only, not to be compared for accuracy.

-NMEA Process offset shows the time it takes to process Satellite information.

-Up Time is the total time the device is running without a restart.

-Lock is the type of lock. 3D, 2D or None.

-The Signals shown are the total satellite being used, followed by the signal to noise ratio of the top 4 satellite. Mid 30s and 40s are recommended for a good satellite lock.

Because DHCP can move devices to other IP address, it's recommended to set

disable DHCP and set a Static IP. If you're not comfortable doing this, DHCP can be enable to allow the DHCP server assign an IP address. The IP address and netmask will always show on the display.

☐ Enable DHCP
IP Address: 192.168.2.52
Net Mask: 255.255.255.0
Gateway: 192.168.2.1

Enable and disable the satellite constellations.

Note: This could result in a situation where the device can't get lock.

In some situations, you could add an offset to the time to get better accuracy. Only change this if you have a better time source to compare to.

☒ GPS Enabled
☒ Galileo Enabled
☒ Glonass Enabled
☒ Beidou Enabled
Time Offset (in microsecond): -400
Manually Set Time
☐ Manually Set Time
Set Year (4 Digits): 2025
Set Month (1-12): 4
Set Day (1-31): 20
Set Hours (0-23): 19
Set Minutes (0-59): 7
Set Seconds (0-59): 16

In situations where satellite signal is impossible, but you want devices on your network to have synchronized time. You can manually set time. Note: The device can drift as much as 45ms per hour.

FAQs

How do I get the best satellite signals?

For the best possible signal, it's recommended to use an L1 1575.42 Mhz antenna outdoors. In the northern hemisphere, a South facing window would give better signal compared to other directions. In a home setting, you can receive satellite signal in a single story home. Concrete buildings usually require an outdoor antenna.

What is the difference between 2D and 3D Lock?

When 2D lock is achieved, location of the device is known to get accurate time. 3D lock considers the elevation of the earth to get even more accurate time.

How do I preform a factory reset?

In the web UI, a factory reset button can be found at the bottom. If you can't access the device through the network. You can use the back button method. You'll need a tooth pick or paper clip to push it.

1. While powered on, push the reset button for 5 seconds
2. Release the button once the display says "reset"
3. A count down will start to restart the device
4. The device will boot up with the original settings

Thank you for your purchase!