




Prohiver

USER MANUAL FOR PROHIVER V3

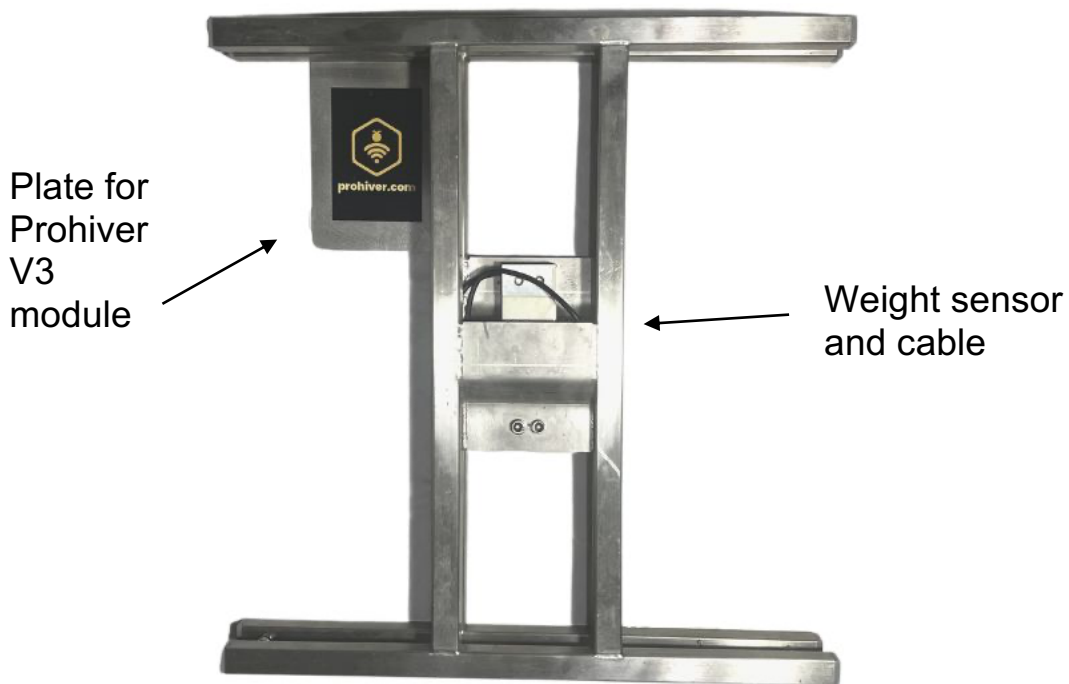
1. Technical characteristics of the Prohiver monitoring system:

- 1.1. Weighing ranges: 0.1 to 200 kg, safe maximum load 300 kg
- 1.2. Weighing accuracy: +/- 100g
- 1.3. Operating temperature: -25 to +50 C
- 1.4. Humidity measurement: from 11% to 99% relative humidity, $\pm 3\%$ (макс), 0-80%
- 1.5. Temperature measurement: -25 to +50 C, error +/- 1C
- 1.6. Power source: 18650 Li-Ion battery
- 1.7. Power consumption in standby mode: $\sim 1.5 \mu\text{A}$ (microamps)
- 1.8. Expected battery life with twice-daily data transmission: ~ 6 months

2. Weighing Platform (top view):

- 2.1. Made from stainless steel.
- 2.2. When placing the weighing platform underneath the hive, make sure the ARROW on the sensor is facing down. 

BACK

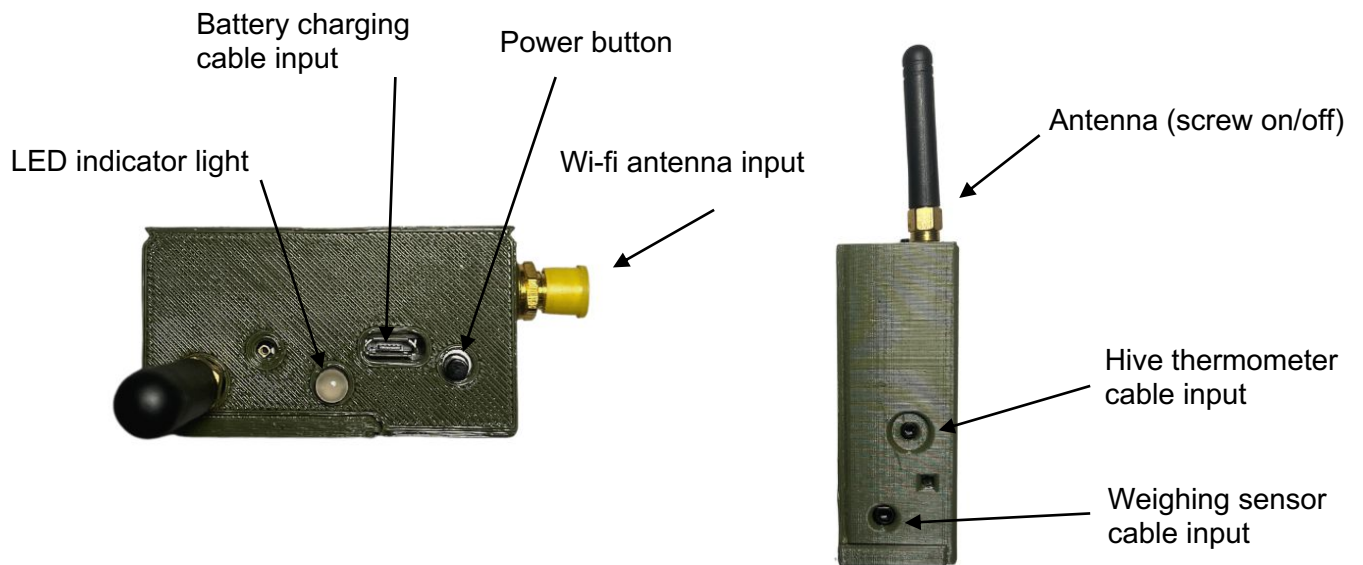
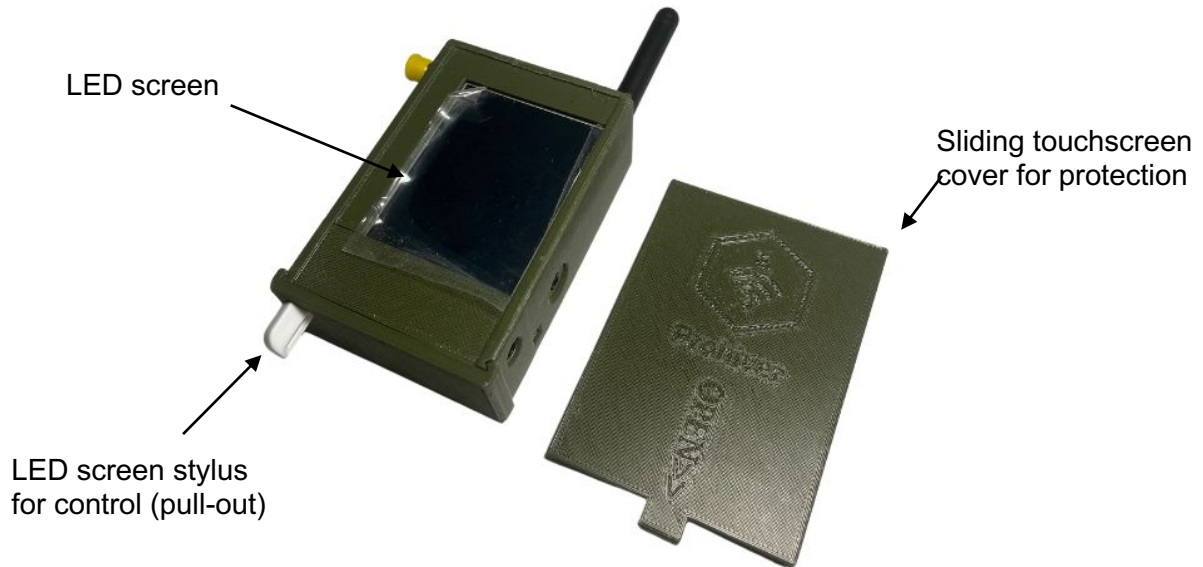


FRONT



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3. Prohiver V3 Module:



4. Starting your Prohiver V3 first time:

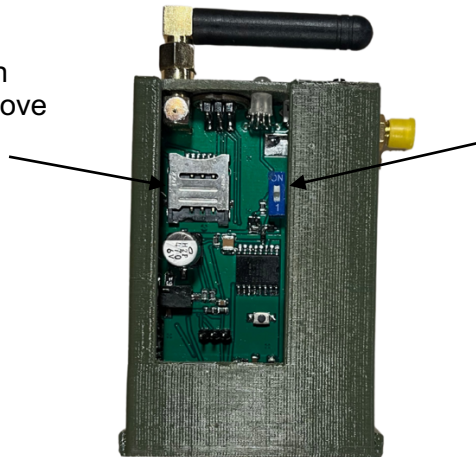
- 4.1. Prohiver V3 comes already calibrated and setup out of the box if you bought a full kit.
- 4.2. Fully charge before starting to use your Prohiver module. Please note, the battery has to be charged at least in room temperature above 10 degrees Celcius. When battery is fully charged, the indicator light will change from red to green.
- 4.3. To turn on the Prohiver V3, you have to slide the small lid on the back side of module and toggle main power supply button to "on".



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- 4.4. Once main power supply is on Prohiver V3 is already active and collecting data. The screen is in sleep mode until you long press the black side power button.

SIM card slot. Slide down and flip it to insert or remove a SIM card.



Main Power supply button Toggle “on” or “off” Please note, if “off” is set then the device will not send any data as it is completely off.

- 4.5. Connect module to the platform by plugging in the weight sensor cables.
- 4.6. Long press black power button on the outside of the module to see the parameters on the screen.
- 4.7. See user guide part “**Using you Prohiver v3 touchscreen**” on how to use all the LED touchscreen.
- 4.8. See user guide part “**Test data connection**” to see if you Prohiver is sending data to the cloud.
- 4.9. See user guide part “**Weight calibration**” to see how to calibrate your platform to the module.
- 4.10. See user guide part “**Update your Prohiver V3**” on how to run an update of your Prohiver’s operating system.
- 4.11. See user guide part “**Using Prohiver account on web platform**” on how to register, add and use your Prohiver V3 scales on Prohiver Web Dashboard.

5. Update your Prohiver V3

- 5.1. Fully charge your Prohiver V3
- 5.2. Download the latest version of Prohiver operating system into your mobile or computer device that you will use for updating.
- 5.3. Latest version can be found at this link: <https://prohiver.com/software-update/>
- 5.4. Connect Prohiver V3 to your mobile or computer via the WiFi network:
- 5.5. Long press the button on the side of the Prohiver to turn on the screen.
- 5.6. Go to Wi-fi tab (3rd settings tab on Prohiver V3 and keep the screen open)
- 5.7. Go to your mobile’s or computer’s WiFi settings. Look for your Prohiver’s ID in the network list and select to connect (network name example: Scales[ID] E.g. ScalesGD014).

Note: The WiFi network is not password protected.



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- 5.8. Once connected, go to your phone's or computer's internet browser and in the address field, enter the address: <http://192.168.4.1/update>
- 5.9. In the window that opens, press 'browse', find and select the latest version file that you have downloaded previously, and click "Ok".
- 5.10. Press "Update".
- 5.11. Wait for the message: "Update successful! Reloading...". At this moment your Prohiver should have went into sleep mode.
- 5.12. Turn on the Prohiver's screen again, by long pressing the button on the side of the Prohiver.
- 5.13. Check that you have a latest version by looking at the top left corner of your initial screen.

6. Weight calibration

- 6.1. Weight calibration is needed if you have adjusted the platform or you have swapped Prohiver V3 modules with different platforms than they were initially calibrated to.
- 6.2. It is recommended to perform weight calibration procedure at least every year to ensure correct weight readings.

6.3. To test that your module is calibrated to the platform:

- 6.3.1. Take known weight item of at least +10 kg and place the 'known weight item on top of the platform and check whether the weight indeed increases / decreases with the known weight of the object +/- 0.1 kg.
- 6.3.2. If the above test shows weight deviations that are more than the indicated 100 grams from the known weight, you can use the weight calibration procedure described below.

6.4. To calibrate calibration weight:

- 6.4.1. Plug module to the platform.
- 6.4.2. Put the platform on an even and stable surface.
- 6.4.3. On your V3 1st tab screen, next to "Scales Zero" press on button "Set" and wait till it changes to "OK".
- 6.4.4. Now put a known weight item which weights at least +10 kg on the platform.
- 6.4.5. Next to "Calibration weight(kg)" press on the field and using the keypad set the precise weight that you have put on top of the platform. Press on the tick.
- 6.4.6. Next to the field it should say "OK". Please check the weight indicator to see if it now shows the known weight of the item.

7. Test data connection

- 7.1. Before testing data connection, please make sure:
 - 7.1.1. Working antenna is connected to the module.
 - 7.1.2. Module is in an open area with good internet connection.
 - 7.1.3. Module is well charged.



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- 7.1.4. Working SIM card is inserted.
- 7.2. Turn on your Prohiver V3 module and go to 4th tab of the screen.
- 7.3. If you have our SIM card check that the field next to “APN if need” is “TM”.
- 7.4. Next to “Check the GSM” press on the button “Run”.
- 7.5. Wait till it does the check.
- 7.6. Check the Modem should show OK.
- 7.7. Check the SIM should show OK.
- 7.8. Check the connection should follow with “Op: network providers name / signals strength” (signal strength can show weak/good/excellent).
- 7.9. Check the Internet should show OK+Synchronized: Prohiver SIM
- 7.10. In case it shows “Fail” next to any of the fields, please contact Prohiver customer support.
- 7.11. If you are testing with your own SIM card, then leave the APN field empty.
- 7.12. If you are testing with your own SIM card for SMS sending, on the last part of the test there will be a button to send a test SMS. Please make sure that on the web platform’s Scales Configuration, you have ticked the box next to SMS sending.

8. Using you Prohiver V3 touchscreen

- 8.1. Make sure the battery is well charged.
- 8.2. Check that the main power supply is set to “on” on the back of the module.
- 8.3. Long press the black power button on the side to turn on the screen.
- 8.4. Home screen with key parameters turns on for 5 seconds. Here you can see:
 - 8.4.1. Prohiver module’s ID and version.
 - 8.4.2. Current date.
 - 8.4.3. Weight, temperature (outside temperature in white/inside temperature in red), humidity (h%), atmosphere pressure (hPa) and volts of the battery.
 - 8.4.4. Press on the last red button if you want to continue to other screens.
 - 8.4.5. After 5 seconds of inactivity it will go back to sleep mode.
- 8.5. Once you are on the 1st tab of the screen you can see key parameters for 2 minutes. After that it will go back to sleep unless you press on the screen.
- 8.6. **1st settings tab:**
 - 8.6.1. Weight in kilograms, the inside/outside temperature, humidity and volts of the battery.
 - 8.6.2. Date and time is set automatically after data connection test. (see user guide part “**Test data connection**”).
 - 8.6.3. Calibration weight field is there to calibrate weight of the scales (see user guide part “**Weight calibration**”).
 - 8.6.4. Scales Zero is there to set platform weight to zero. This is for calibration (see user guide part “**Weight calibration**”).
 - 8.6.5. Last field is to set the language of the module. Press on the side arrows to scroll between languages: English / Lithuanian / Russian.
- 8.7. **2nd settings tab:**



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- 8.7.1. This shows what main settings are set for your Prohiver V3 module. All the settings can be changed via our web platform dashboard: <https://app.prohiver.com/>
- 8.7.2. SMS sending: shows sending hours and if it is enabled. Please note if you are using Prohiver's SIM then SMS function will be automatically disabled.
- 8.7.3. Data hour: shows at which hours the data is sent to the cloud for SMS.
- 8.7.4. Sending Data: shows if Wi-Fi and/or GPRS sending of data is enabled (GPRS should be enabled to be able to see the data on web platform).
- 8.7.5. Time: shows at which hours the data is sent to the cloud for web platform.
- 8.8. 3rd settings tab:**
 - 8.8.1. This tab is to connect V3 module to your mobile, computer or any other Wi-Fi station.
 - 8.8.2. If you want to update Prohiver V3 operating system, you have to connect your module to phone or computer via this tab. (see **Update your Prohiver V3**)
 - 8.8.3. To connect to your Wi-Fi station, make sure you have connected Wi-Fi antenna to the module. Search for your network and connect.
 - 8.8.4. If you want to delete Wi-Fi history, try to connect to any Wi-Fi station, but don't type in the password.
- 8.9. 4th settings tab:**
 - 8.9.1. This is for running Data connection test (see user guide **Test data connection**).
- 8.10. 5th settings tab:**
 - 8.10.1. Shows the countdown of the 2 minutes time till the module will go to sleep mode.
 - 8.10.2. Once finished with the operations, you can press the big red button on this screen to bring the module to sleep mode or you can leave the module and after 2 minutes it will automatically go to sleep mode.
- 9. Troubleshooting:**
 - 9.1. No connection during the data connection test – go outside to where the internet signal would be excellent and try to run the test once again.
 - 9.2. Data is not coming – check the battery, run the data connection test, make sure the signal is Excellent, make sure you have credit on the Prohiver data subscription.
- 10. Customer Support:**
 - 10.1. For customer support please contact Prohiver team via:
 - 10.2. E-mail: info@prohiver.com.
 - 10.3. Phone/WhatsApp: +37061331592.
 - 10.4. Please call only during the working hours.
 - 10.5. Or leave us a message on: <https://prohiver.com/contact/>