

U-Spot DUO installation

fastprk⁺



Getting started...

- Activation Tool installed on Android Smartphone (contact support@urbiotica.com to get the latest version)
- Activation Tool username and password available
- Check that the network is configured in the Fastprk web platform
- Ensure that the LoRa coverage is ensured in the sensors' installation area

Tools

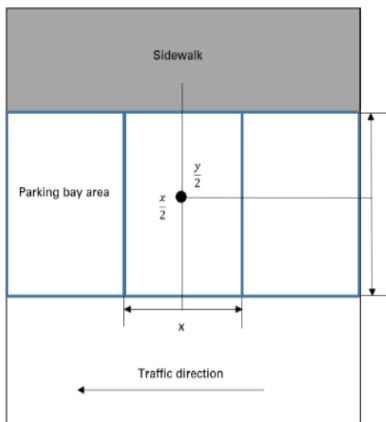
- ☐ DD 200 pro diamond core rig, vacuum base (P/N on Hilti website: Item #3423950).
- ☐ Ø130mm crown
- ☐ 10-litre portable water supply tank (P/N on Hilti website: Item #365595) + Extra portable Water Tank
- ☐ Vacuum Cleaner
- ☐ App Activation Tool on Android mobile phone
- ☐ RFID device (DOTR-900 from KCTNS) and selfie stick



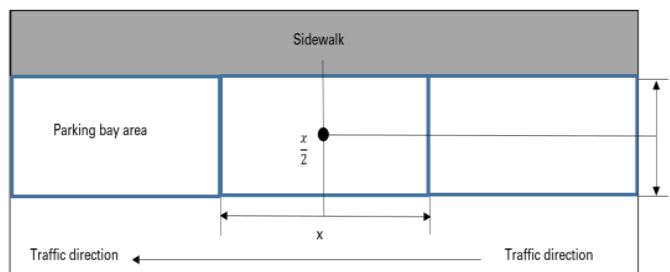
Materials

- ☐ Mortar Mapegrout SV

Sensor installation position



- Sensor edge must be in line with the pavement
- Sensor should be completely flush within the pavement



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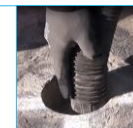


Installation step by step

1. Make a hole 75 mm deep with a crown of 130 mm Ø.



2. Clean and dry the hole from dust, debris and water.



3. Prepare the Mapegrout SV fast mortar.

4. For each of the sensors, fill the hole with enough mortar to ensure that the mortar takes up all the space between the hole and the sensor (approximately 250ml per sensor). For optimal installation, a surplus of mortar must spill over the hole when the sensor is inserted



5. Clean the mortar that overflowed from the edge of the hole.

6. Place a weight over the sensor and wait until dries. We recommend letting the mortar dry for 15 minutes.

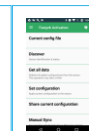


7. Take pictures of the installed sensors, about 70% - 80% of the sensors.

8. Take a picture (if possible panoramic) to ensure there are no cars nearby.



9. Activate the sensor with the Activation tool following the procedure describe in the next pages.



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U-Spot DUO sensor activation

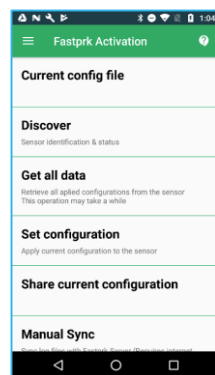
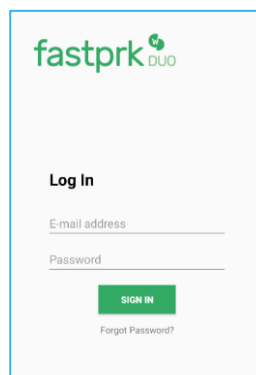
Once the sensor is physically installed, you can proceed with the activation using the RFID Tool and the Activation Tool App.

1. Prepare the environment

- ☐ Make sure that the phone and RFID devices are fully charged.
- ☐ On the mobile phone, setup the correct date/hour and time zone.
- ☐ On the mobile phone, activate location and network services (GPS, WiFi or GSM).
- ☐ On the mobile phone, activate Bluetooth.
- ☐ On the mobile phone, disable the screen standby time.

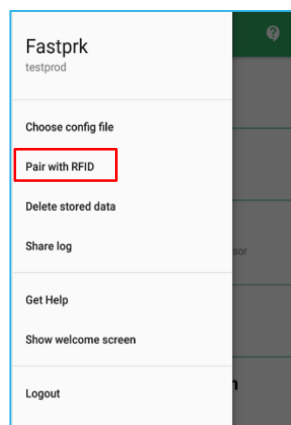
2. Basic step-by-step flow

a) Login in the Activation Tool App



b) Connect with the RFID device

- ☐ Power ON the RFID device.
- ☐ From the mobile phone open the Activation app, go to the sidebar menu from the left side, and choose the option 'Pair with RFID' to connect the RFID device, and check that the connection is successful.
- ☐ RFID password: 1234



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c) Set up the App

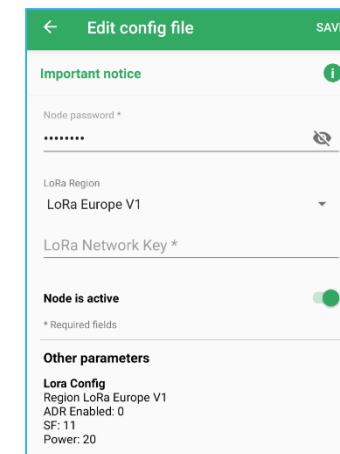
There are two ways of configuring the Activation app: one is manually (detailed steps below), or by importing a specific config file provided by Urbiotica.

☐ Option 1: Manual configuration

On the 'Current config file' from the main menu you can check and edit multiple options as the LoRa region, the default node password and node activation parameters.

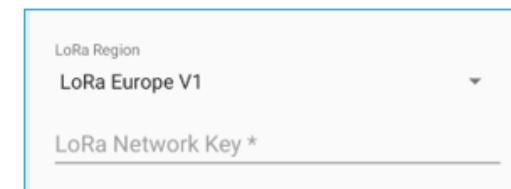
Check that 'Node is active' is enabled.

NOTE: Nodes passwords are NOT stored by Urbiotica. If changed, you are responsible for managing this information on your own way.



☐ Radio settings

From the menu go to 'Current config file' > 'LoRa Region', check that the correct LoRa Region is set depending of the radio frequency that is going to be used.



➤ Radio Setting for LoRa Europe and FCC LoRa (U-Box LoRa gateways)

Select the LoRa frequency type that is going to be used to communicate (**for your region**), and **do NOT modified the network key in the "Lora Network Key" field.**

To use LoRa frequencies a U-Box LoRa gateway must be installed.

➤ Radio Setting for LoRaWAN Europe and FCC (LoRaWAN network)

Select the LoRaWAN frequency type that is going to be used to communicate (**for your region**) and write down the LoRaWAN network key in the **"Lora Network Key"** field.

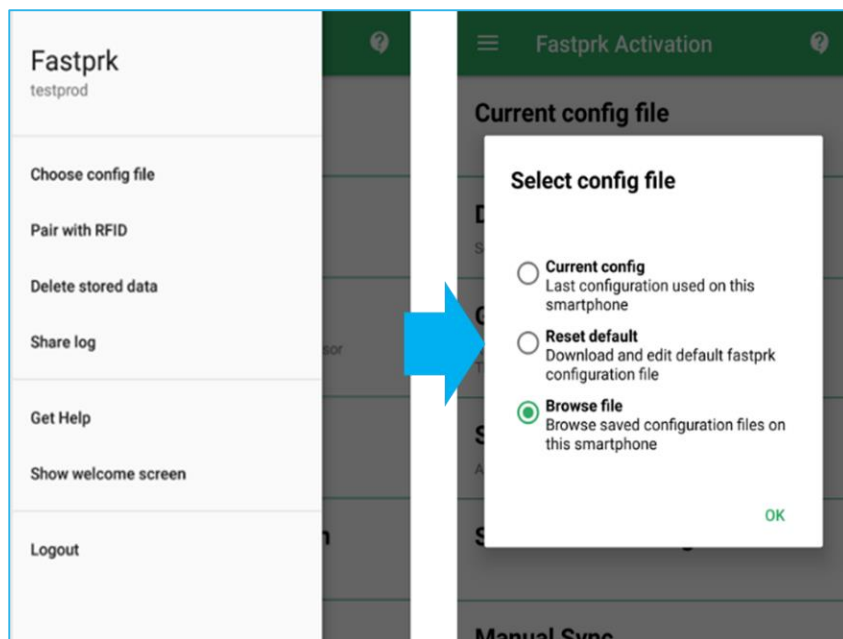
NOTE: Keep in mind that the Network key must be obtained from the LoRaWAN network provider.

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☐ Option 2: Import a configuration file

From the sidebar menu go to 'Choose config file' > 'Browse file', to load a specific configuration file, if required.



If you are experiencing issues on the Activation process, please use the 'Share log' option to send the configuration log to Urbiotica technical support team for further assistance.

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d) **Activate the sensor**

On each sensor, with the next order of actions, doing it from the top front of the sensor.

This will power on and send the configuration previously selected to the sensor and synchronize it with the Fastprk platform.

- ☐ Discover: show Sensor ID and Status
- ☐ Get all data: retrieve the configuration from the sensor
- ☐ Set configuration: apply current configuration to the node
- ☐ Manual Sync: synchronize sensor information log files with the Fastprk backend platform



⚠ NOTE: It is very important that there are no parked cars or metallic elements (tools, barriers, etc...) near the sensor during the activation as its first magnetic calibration value will be defined at that moment.