

TECHNICAL OVERVIEW



- 1..... **HARDWARE**
- 2..... **NETWORK**
- 3..... **WEBAPP**



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Welcome to spiio

In everything we do, we believe in the next green revolution. Our service allows horticulture professionals all over the world to make data-driven irrigation decisions and retain full digital control of millions of plants with the use of real-time data analytics. Spiio Inc. is based in Palo Alto, CA and Copenhagen, Denmark.

HARDWARE



Battery

Product Model: LS17500 CN
Original Manufacturer: Saft
Size: A
Technology: Lithium Thionyl Chloride (LiSOCI₂)
Voltage: 3.6V
Weight: 86g
Primary Uses: Radio-comms, emergency, security, tollgates, meters, tracking.

Configuration

Electric Imp's BlinkUp is a unique way to securely commission, provision and deploy devices. It uses light binary patterns to allow service technicians and/or customers to securely connect the device with the Spiio server using standard smartphones or tablets. Only authorized personnel can activate the sensor via the Spiio configuration app.

Interaction

The sensor has no physical buttons or other input methods. The only way to turn on or off the device is by using Spiio's dedicated configuration tool. Scanning the QR code on the device will take you to spio.com.



Configuration tool

Measurement

The device logs temperature, moisture and light measurements every hour.



Light



Battery



Temperature



Moisture



NETWORK

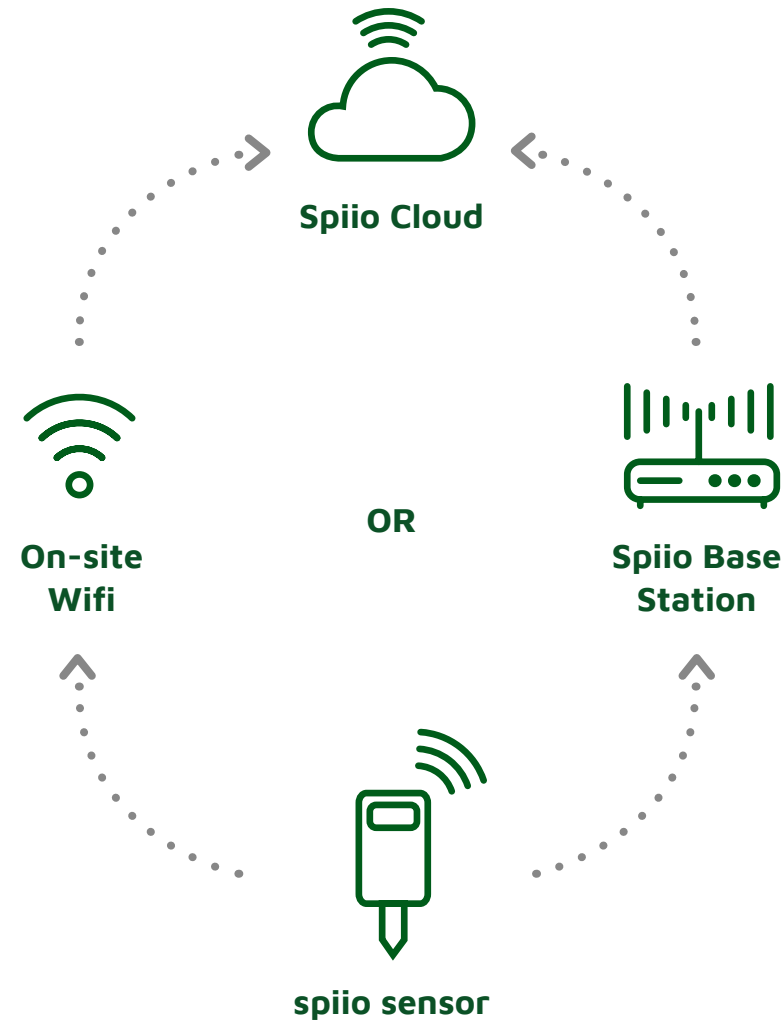


Connection

Spiio sensors connect **outwards** to the server in all cases. Spiio sensors will attempt connections on port 31314, 993 and 443 (in that order). Spiio sensors can connect via customer WIFI LAN or an isolated dedicated Spiio router. If customer LAN is used there is no need for customers to open any inbound ports.

Connection security

Connections are standard TLS1.2, using ECDHE-RSA2048-AES128-SHA256 (ie, forward secrecy is enabled). Embedded CAs verify the keys provided by each end, and a challenge-response is used to challenge the unique per-device key to prevent device impersonation even if TLS keys are leaked.



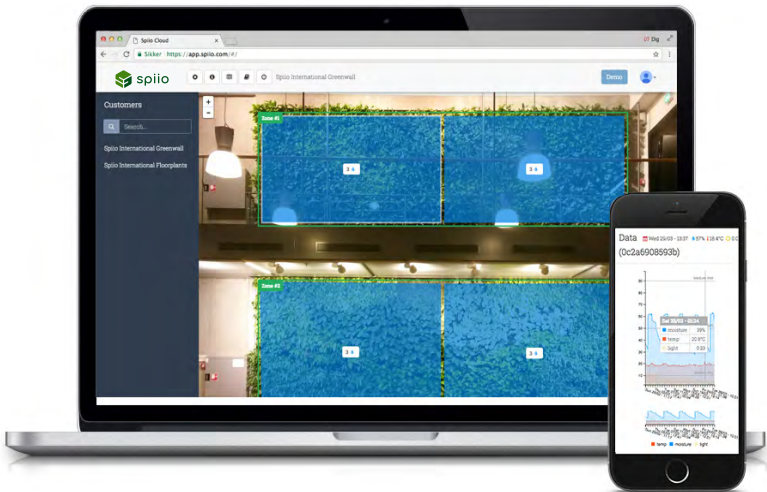
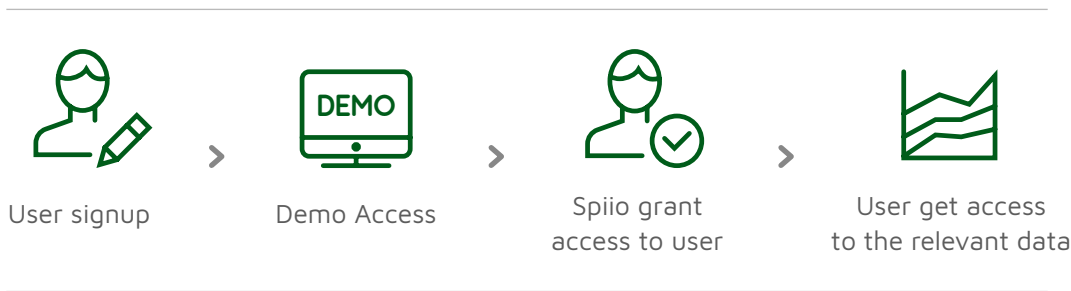


User signup

With a verified user account, Spiio’s web-based app can be accessed on both smartphone and desktop devices.

All users will be selected and invited by our Clients for a user signup at app.spiio.com. Once a user signs up for the first time, you will see a temporary Demo Wall. Upon confirmation from Client, Spiio will then grant access to individual users based on which green walls they should have access to in the future.

SIGN UP FLOW



This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.