



helioCORE™ System Setup Overview

Equipment list

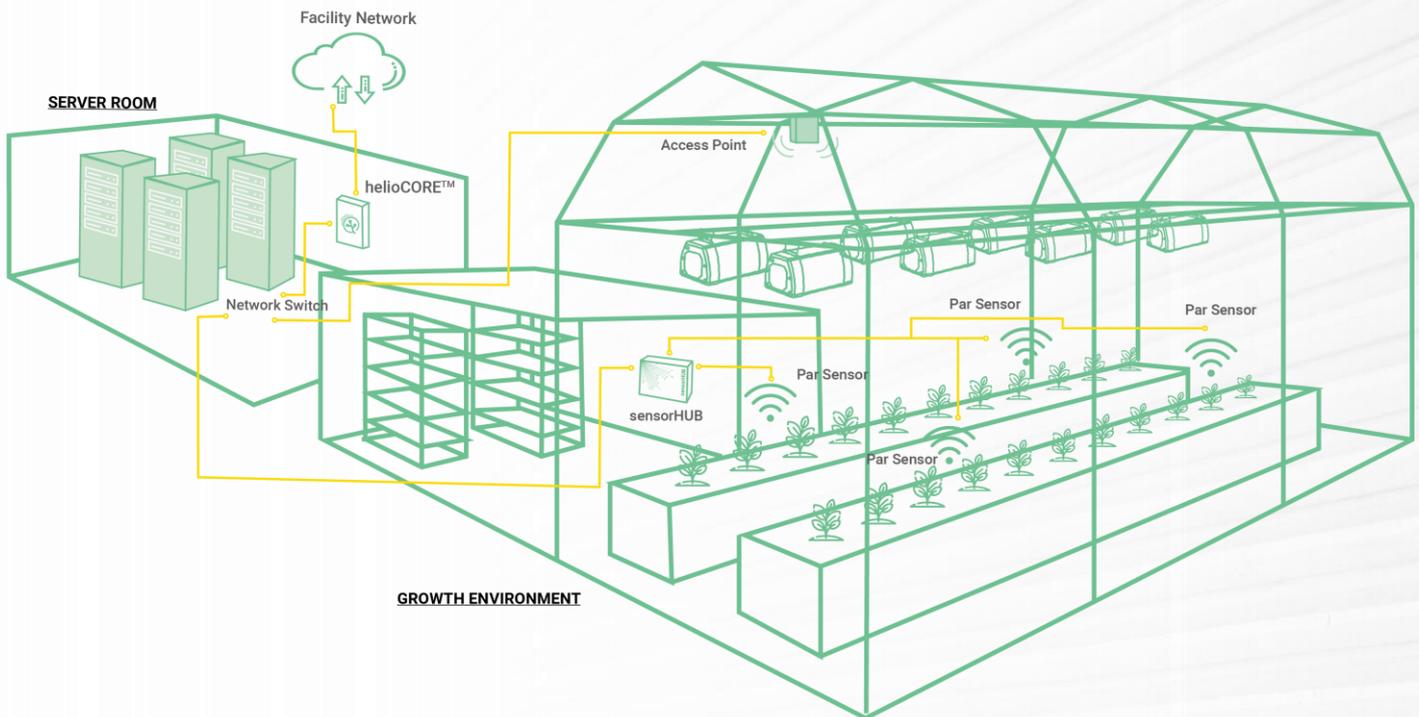
Item	Included	Placement
helioCORE™	Yes	Server room or similar
sensorHUB(s)	Yes (optional)	Grow area
PAR sensors(s)	Yes (optional)	Grow area
Sensor cable extensions	Yes (optional)	Grow area
Network switch	No	Server room or similar
Network access points	No	Grow area
Ethernet cables	No	

Equipment requirements

- The **network switch** must
 - be dedicated to the helioCORE™ LAN.
 - support POE+ to be able to connect sensorHUB(s) and in some cases also the network access points.
 - have a total POE budget sufficient to support all sensorHUB(s) and access points connected.

Equipment placement

- **helioCORE™** should be placed in a server room or similar space close to the grow area(s).
- **sensorHUB(s)** should be placed in the grow area(s) close to where the PAR sensor(s) are placed.
- **PAR sensor(s)** should be placed in the grow area(s) where the light is to be measured.
 - The 'PAR Sensor Placement' whitepaper [\[link\]](#) is a guide showing where to mount the PAR sensors to properly measure the light that the crop receives.
- The **network switch** may be placed in a server room or similar space close to the grow area(s).
- **Network access points** are to be placed within the grow area(s) in such way that they ensure a stable network connection for all lamps.



Equipment connection

1. Connect the **helioCORE™** WAN-port to the facility network with an ethernet cable.
2. Connect the **helioCORE™** LAN-port to the **network switch** with an ethernet cable.
3. Connect the **network access points** to the network switch using ethernet cables. Note that some network access points are POE-powered and thus must be connected to POE-ports of the network switch.
4. Connect the **sensorHUB(s)** to POE-ports of the network switch using ethernet cables.
5. Connect the **PAR sensor(s)** to the sensorHUB(s).
 - **Apogee PAR sensor(s)** are delivered with a 5-meter cable. **Sensor cable extensions** are available in lengths of 5, 10 or 20 meters. Several sensor cable extensions may be connected in series for longer distances.

More

- Each sensorHUB can support 8 sensors.
- helioCORE™ can support multiple sensorHUBs
- If there are multiple grow areas that are separated from each other, one sensorHUBs can be deployed per grow area.
- If there are multiple grow areas that are separated from each other, network access points may be needed in several/all areas.
- Several access points may be needed in each grow area.

For more detail, please see:

- helioCORE™ Setup Manual [\[link\]](#)
- sensorHUB Setup Manual [\[link\]](#)

