



Autonomous Flying Fox Roost Monitoring and Low-force Sprinkler Cooling System

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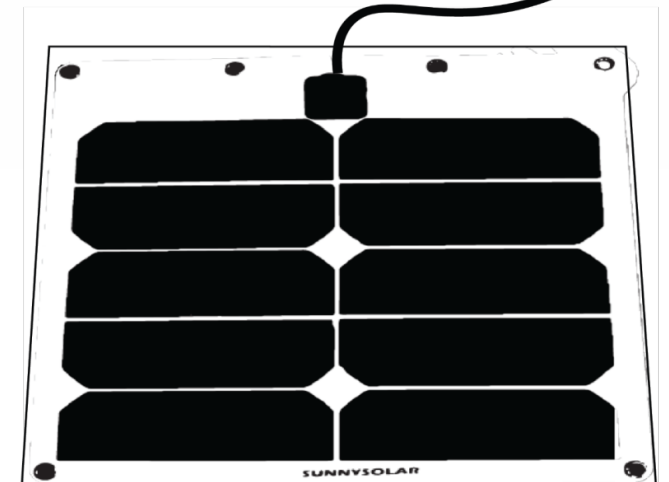
Components

- **Logger:**
 - Data Collection and Transmission
- **Pan Tilt Zoom Camera**
 - IP camera for remote observation
- **Cloud:**
 - Centralized data storage and control panel
- **Sprinkler Controller:**
 - Manages the functioning of water sprinkling system



Logger Specifications

- **Temperature:**
 - Typical accuracy $\pm 0.3^{\circ}\text{C}$
 - Range $-40 - 125^{\circ}\text{C}$
 - Long term drift $<0.02^{\circ}\text{C}/\text{year}$
- **Humidity:**
 - Typical accuracy $\pm 3.0\% \text{RH}$
 - Operating range 0 to 100
 - Long term drift $<0.25\% \text{RH}/\text{year}$
- Low **power** (0.15 mA avg on wakeup)
- Flexible **solar panels**
- IP55 dust and water **protection**



Pan Tilt Zoom IP Camera

- 5MP and 25x Zoom
- 360 degree Pan
- 90 degree Tilt
- Motion Detection
- IP66 water and dust proof
- Day and Night vision





Centralized Data Storage and Control Panel



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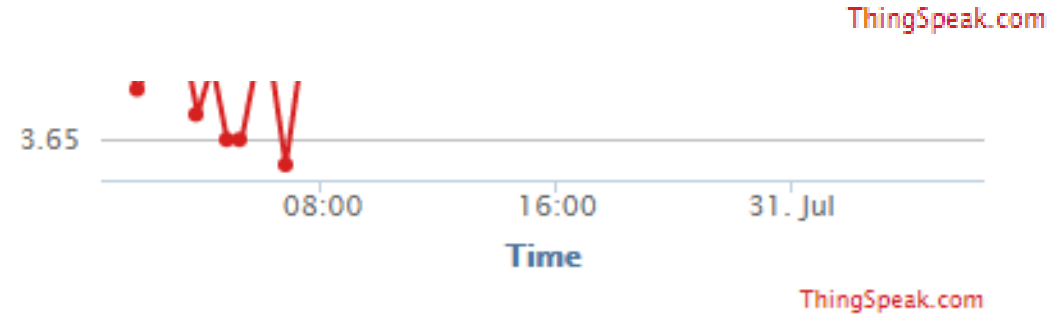
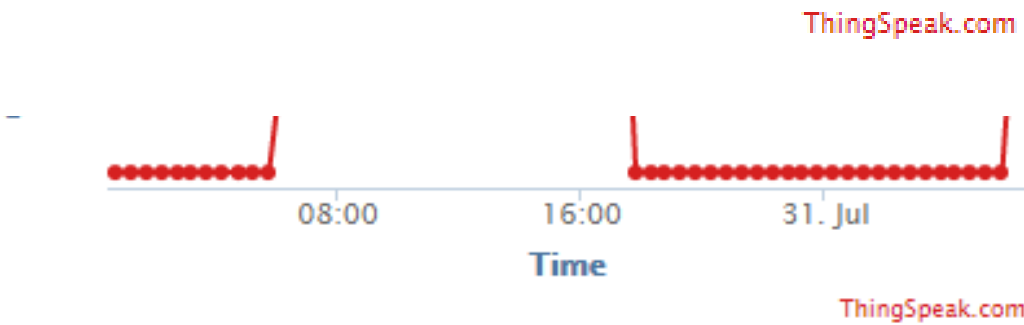
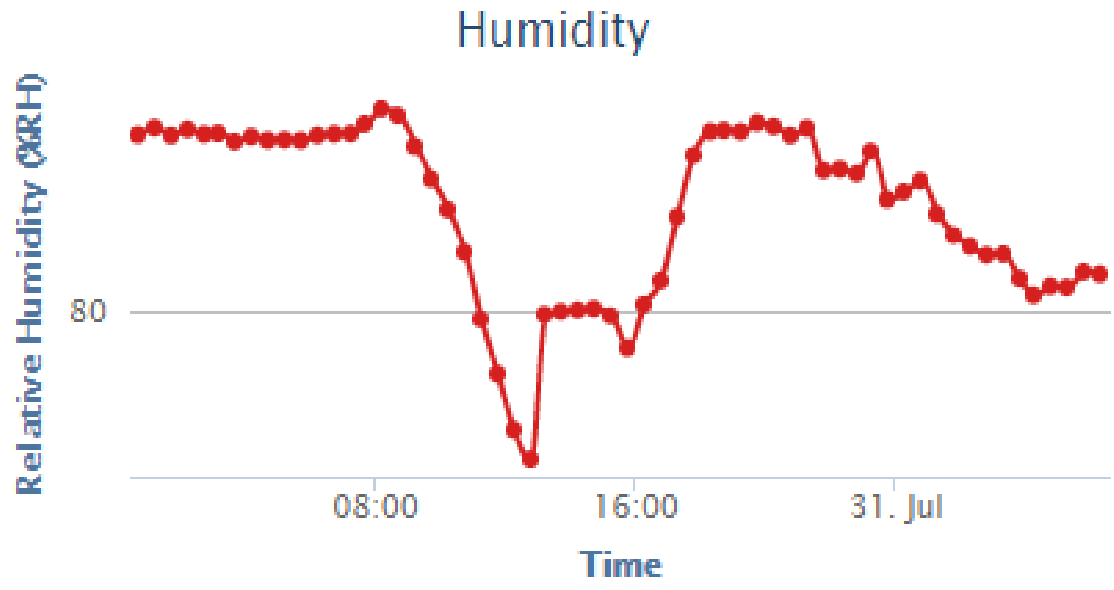
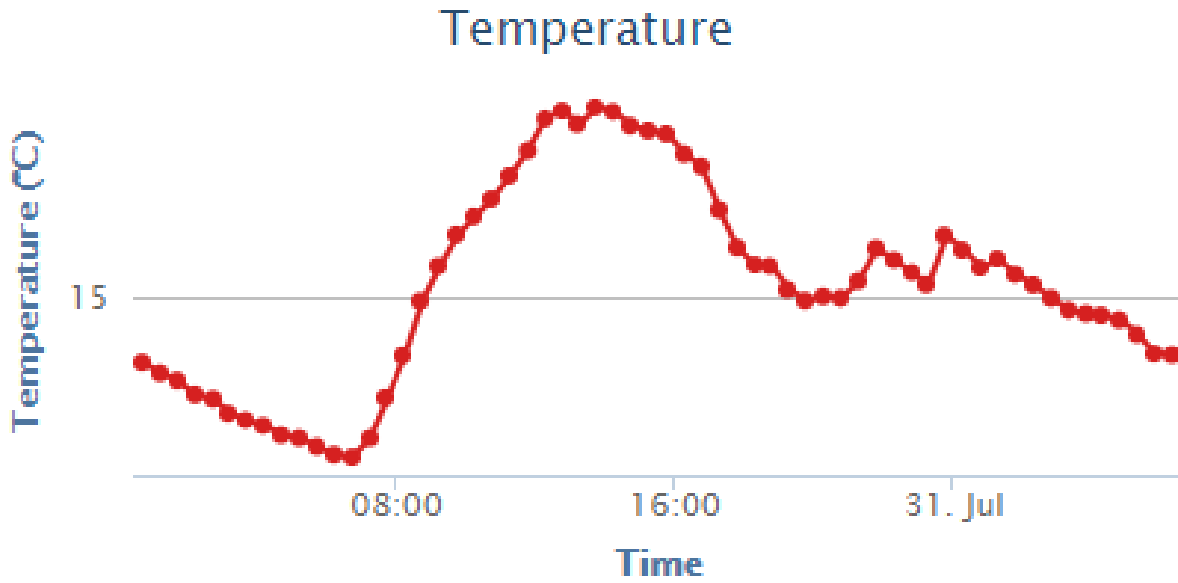
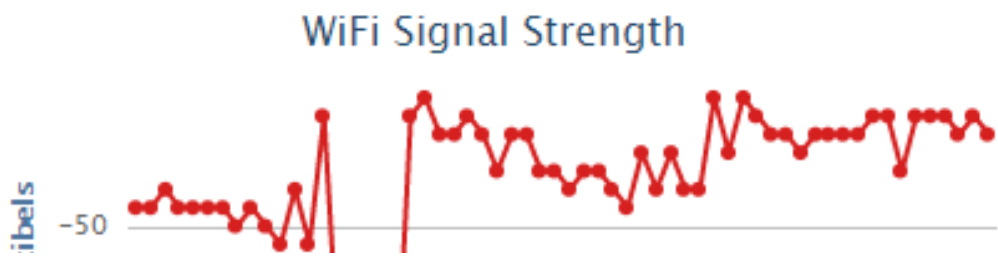
Event warnings and alerts



Trigger settings



Data Visualization

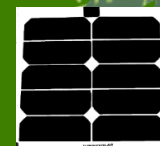
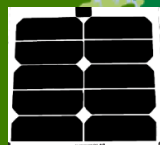
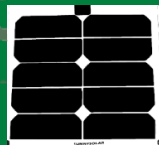
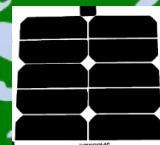
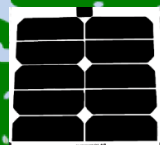


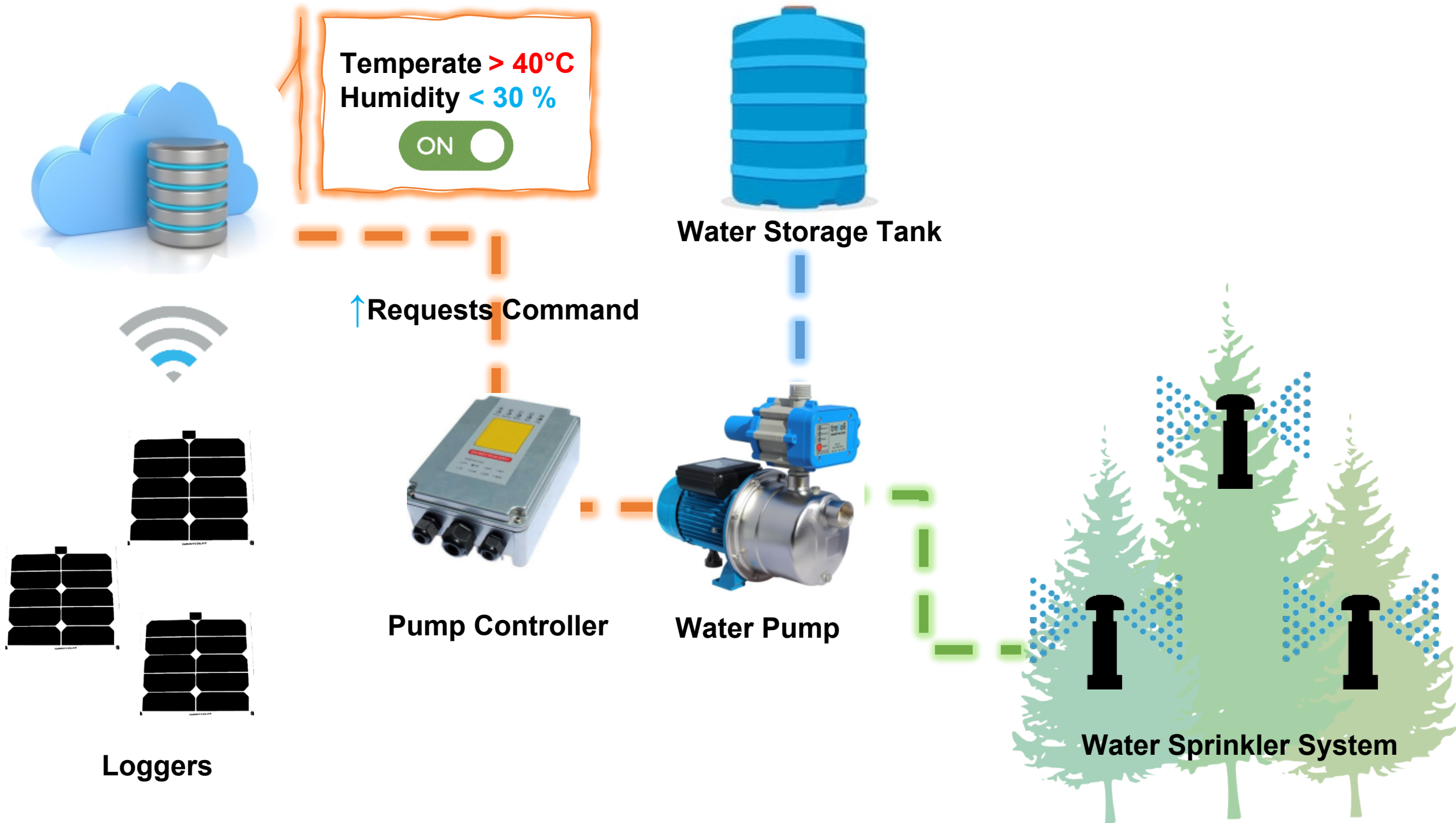


How does it work?



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Extensibility

- Connectivity




- Wind speed and direction
- Water reservoir temperature and level
- Water flow rate monitoring
- Hot water bleed control
- AI and ML for analytics and trends

Challenges

- Not enough sunlight
- Power for sprinkler system
- Connectivity





Let's talk about your project,
or just come and say hello!

**Any Questions...
Just Ask!**



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