Spectrum® Technologies, Inc.

SpecConnect

Your Crops…Your Data…Better Decisions

Integrated Wireless Agronomic Solution

SpecConnect Solution

Environmental monitoring across wireless sensor networks

- Capture Real-Time, Site-Specific (Microclimate) Crop Data

  WatchDog Retriever & Pups wireless communication network provides affordable access to moisture, disease information, and more

- Virtually See Your Crop

  Data is sent wirelessly to SpecConnect's web portal for easy access & analysis anywhere – anytime 24/7

- Make Better Decisions

  Improve conditions, conserve resources, and increase profits

SpecConnect
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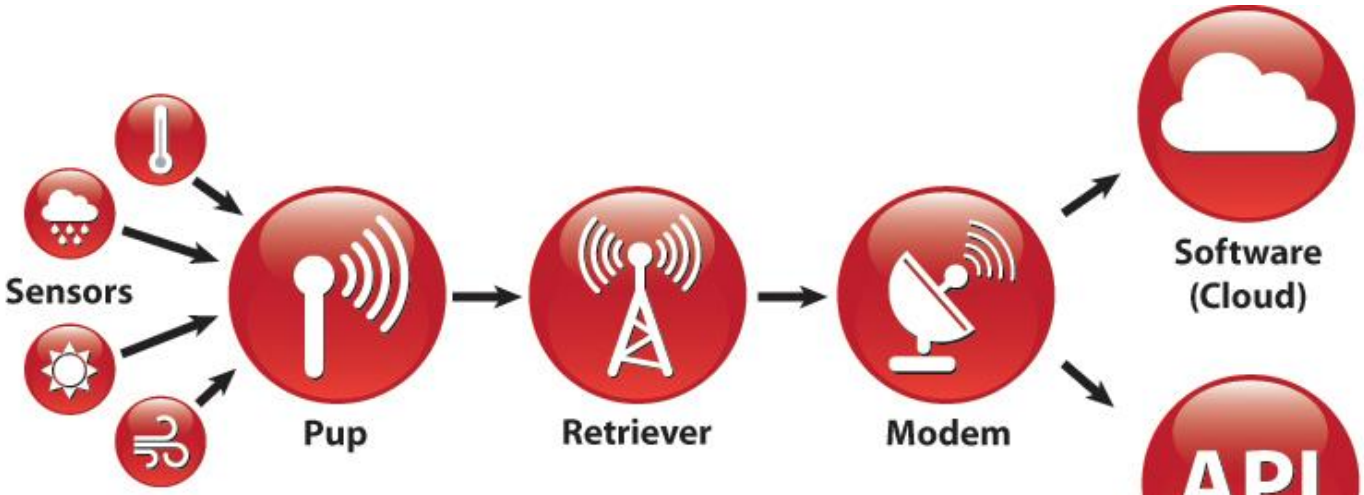
(800) 248-8873
www.specmeters.com/SpecConnect

SpecConnect

How It Works



- Capture real-time, site-specific data with customized nodes
- Each Pup can be configured with up to 4 different types of sensors
- All data is sent wirelessly to the Retriever
- Advanced “self-healing” mesh network

- Retrieves data from Pup network
- Can support up to 16 Pups per network

- Communicates data to the web
- Cellular or Wi-Fi
- Solar powered

- Real-time data viewable on your electronic device
- Easy & simple to navigate
- 100% customizable dashboard
- Send custom threshold alerts via text message or email
- Configure your network from your computer, smart phone, or tablet

- Download your data & make actionable decisions

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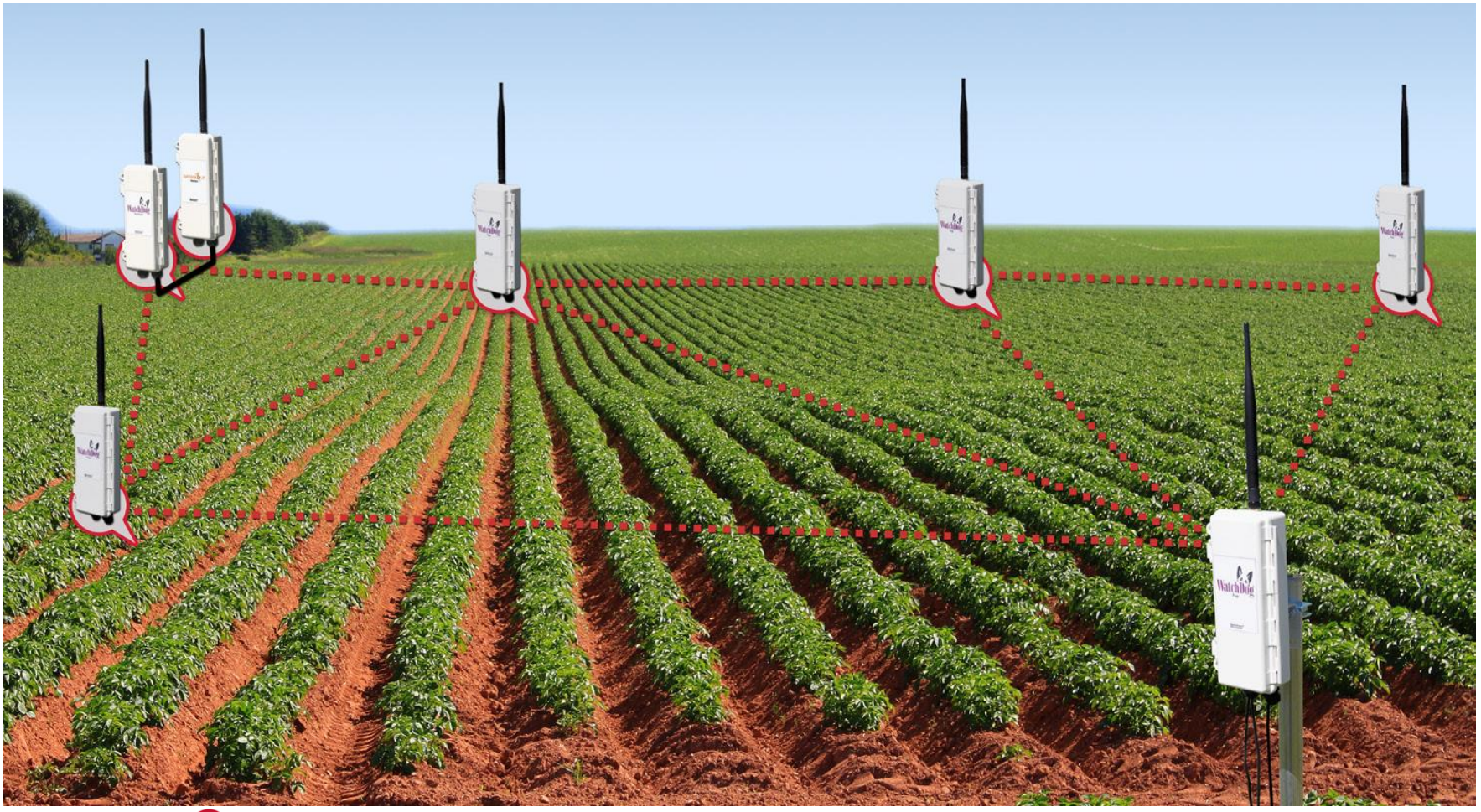

SpecConnect

Integrated Wireless Agronomic Solution

Network Components
WatchDog Retriever & Pups

SpecConnect works with the WatchDog Retriever & Pup wireless sensor network to:

- Monitor microclimates
  - Weather data
  - Soil moisture
  - Light intensity and duration
  - Rain
  - Insects
- Transmit data in environments that have many obstacles / complex topography
- Advanced self healing mesh network
- Rechargeable through solar power

Network Components

WatchDog Pup

- **Wireless data loggers that transmit sensor inputs to one central location (the Retriever)**

Transmitted data can be sent direct to the Retriever or hopping via other Pups

- All Pups are time synchronized
- Time-stamped measurements
- Signal strength & battery info relayed with measurements
- Powered by 6 AA batteries

Types

- Non-rechargeable (included)

  or

- Externally rechargeable

>9 month expected life

- Dependent on logging / transmission intervals

Network Components
Types of Pups

1.) Sensor Pups

- 4 external sensor ports
  - Allows up to 12 parameters (when using multi-sensors)
  - 16 data channels allows many data value types per sensor
    - Average
    - High
    - Low
    - Current

2.) Station Pups

- Allows users to plug in 2000 Series Weather Station and transmit all sensor data

3.) Repeater Pups

- No sensor inputs
- Serve as hopping nodes to help provide a path for the transmission signal around obstacles

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Sensors

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Anemometer

Pressure Transducer

Tipping Bucket Rain Collector

Irrigation On/Off Sensor

LightScout UV / Solar Radiation / PAR Light Sensors

CO_2 Sensor

LightScout Quantum Sensor Bar

Barometric Pressure Sensor

WatchDog Sensor Pup can be customized with up to 4 different sensors

WaterScout SM 100 Soil Moisture Sensor

Watermark Soil Moisture Sensor

External (Soil) Temperature Sensor

WaterScout SMEC 300 Soil Moisture, EC, and Temperature Sensor

Leaf Wetness Sensor

Temperature / Humidity Sensor

Temperature (Micro) Sensor

Network Components

WatchDog Retriever

- Receives all data from Pup network
- Multiple options for powering unit
  - 6 non-rechargeable AA batteries
  - 6 externally rechargeable AA batteries
  - Rechargeable battery pack
    - Must be charged with solar panel or AC-DC adapter
- Plug-in ports
  - DC port for AC power adapter or solar panel power adapter
  - USB drive
  - Stereo plug for connection to PC
  - AUX port for modem connection

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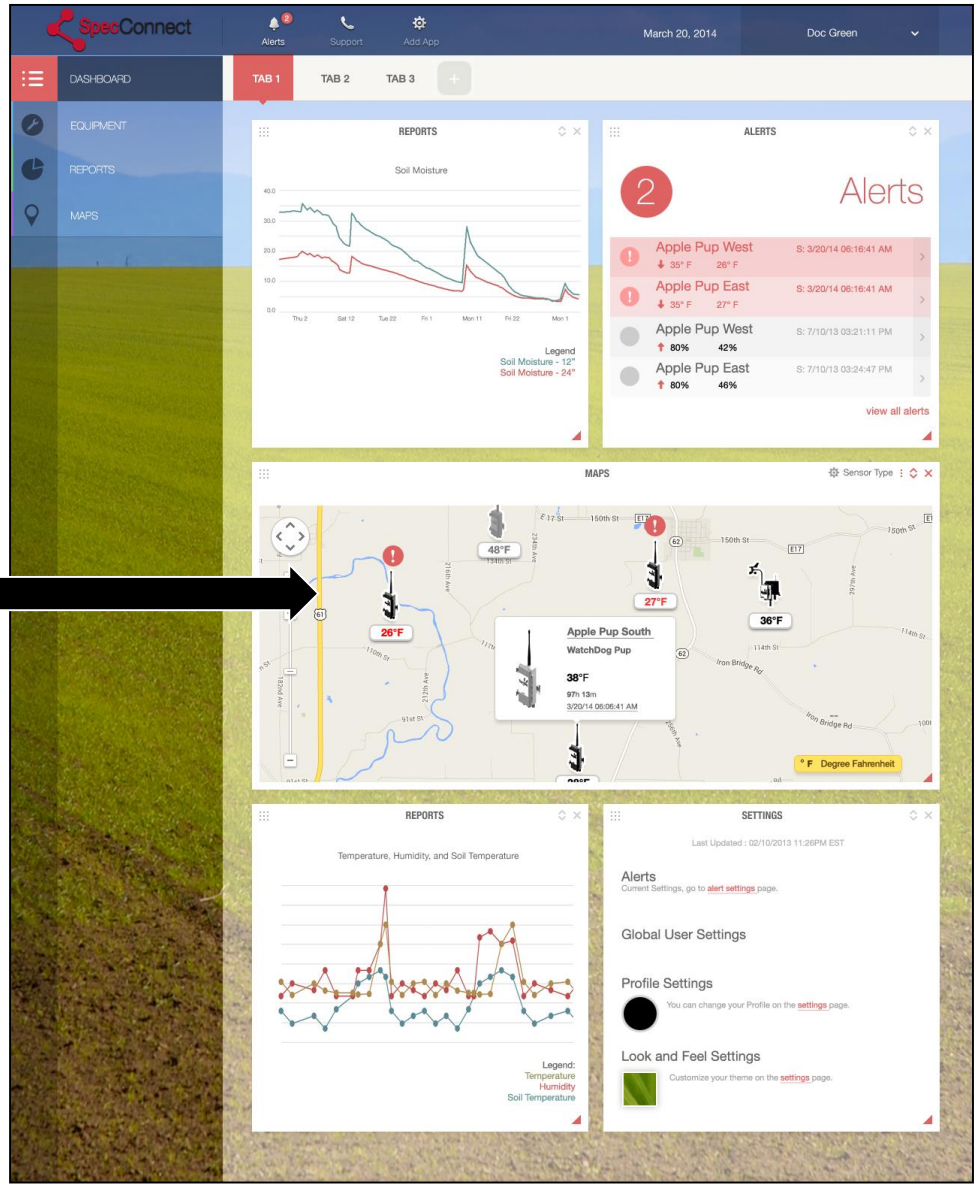
User Interface (UI)

Dashboard →



← Alerts

Map View →

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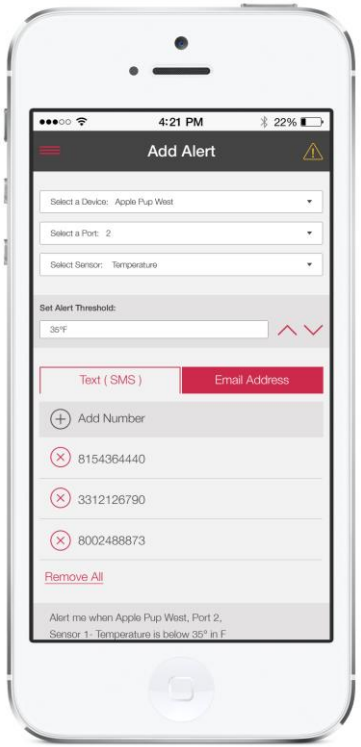
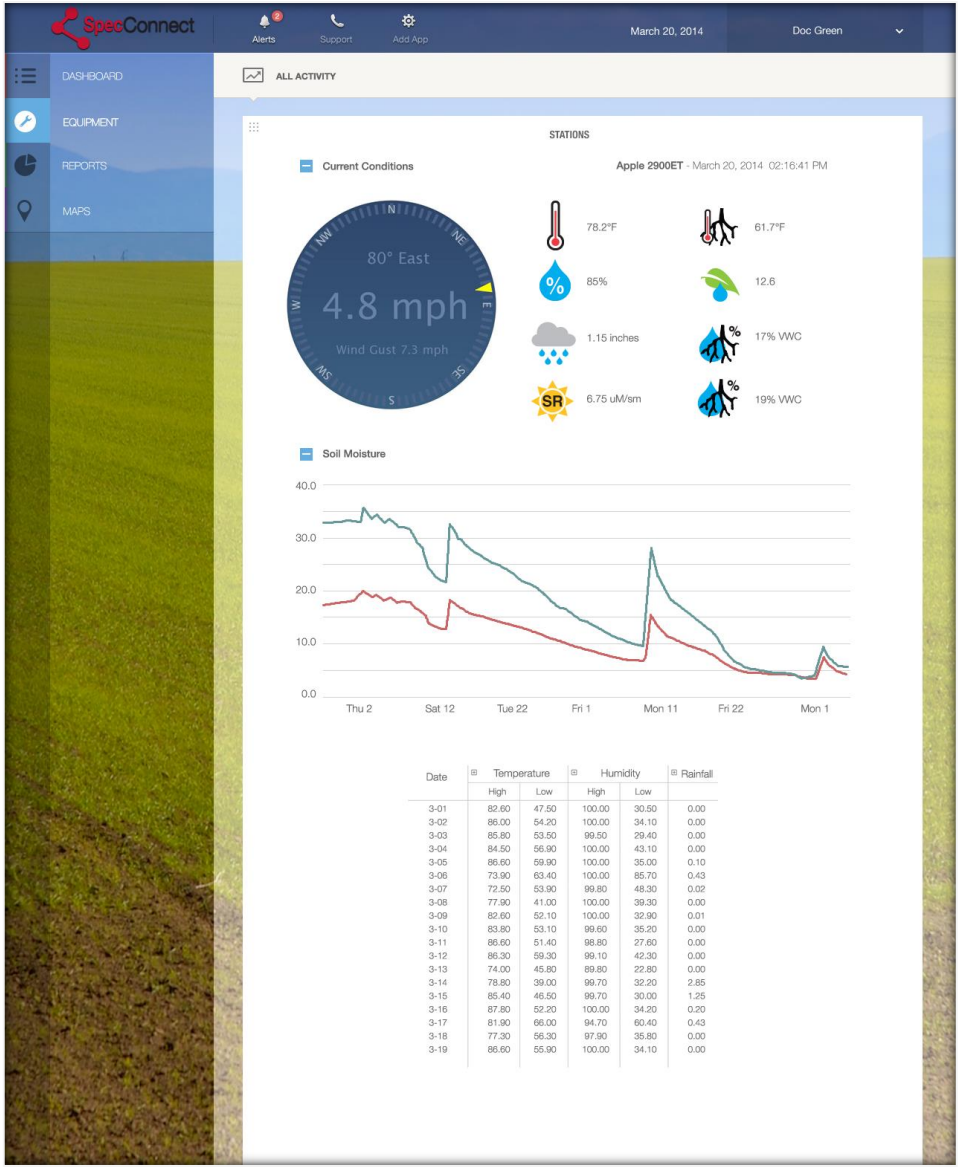
Equipment View

Mobile App