AquaMon

AquaMon® Single-Node System

AquaMon Introduction:

AquaMon is a tool for modern farming. It automatically collects data from local and remote sensors and uploads the sensor data to the web server. Once the data is resident on the web server, RSVP (Remote Sensor Viewing Platform) displays it in the format chosen by the grower. The system also works in reverse; the grower's web server inputs controlling field operations.

AquaMon offers the grower the flexibility to monitor parameters important to his crop and remotely control operations critical to his farm. Available sensors allow monitoring soil conditions, climate, and equipment status. The AquaMon RSVP web server issues alarms when sensors reach a preset limit or can avert harm by activating preset controls within the sensor network.

AquaMon Advantages:

- 24/7 access from any Internet enabled smart phone, tablet, or laptop
- Grower controls access to his data
- Grower selects the format of the data display
- Grower controls remote functions, alarm conditions and event notifications
- Grower retains ownership of the data at all times
- Accepts multiple sensor types including 2.5 volt analog, SDI-12, and 4-20 milliamp current loop
- Improve yields with precision irrigation, reduce power costs with smart pump control, and prevent crop damage with automated alarms.

AquaMon Single-Node System

AquaMon is available in several network configurations. The simplest configuration is as a standalone, single-node system. In this configuration local sensors connect directly to the communications controller where the data can be stored in the on-board memory and packaged for transmission to the secure web server. The data is passed to the web server via an embedded GSM modem at prescribed intervals.

As with other AquaMon sensor nodes, the single-node system accepts several sensor interfaces. The single-node system can connect to 2.5 Volt analog sensors, SDI-12 sensors, and 4-20 milliamp current loop sensors. With one sensor board the single-node system can accommodate up to six sensor inputs. A second sensor board can be added to permit connection of another six sensors.

Like other AquaMon sensor nodes, the single-node system also provides digital outputs to control systems in the field. Connected equipment such as pumps, valves and lights can be activated or deactivated with RSVP from the secure web server. The remote control of these functions can be performed with a user input to RSVP or the grower can configure the secure web server to automatically activate or deactivate control lines when programmed limits are reached.

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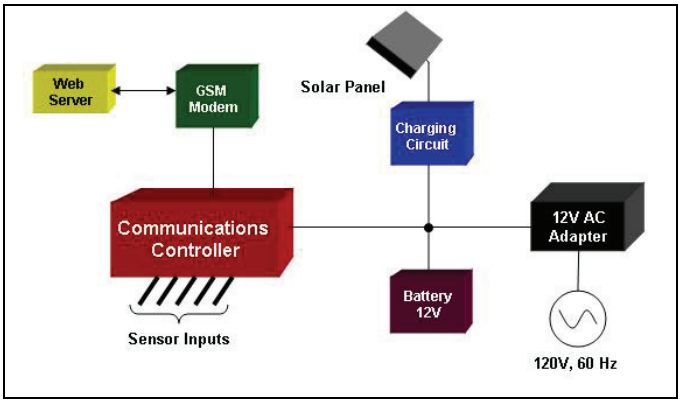
Block Diagram: AquaMon Single Node System



Single-Node System Options:

Cermetek offers single-node systems in several varieties. The differences in models reflect variations in how the systems are powered and the number of sensor boards. For installations with AC power available, the single-node system can be configured to operate with a 12 volt adapter plugged into a standard 120 Volt AC outlet. AC powered systems can be equipped with an optional battery backup to allow single-node system operation to continue during a power outage. In locations where AC Power is not readily available, the AquaMon single-node system can chosen with battery power as the primary power source. In this configuration a solar panel is available as an option to maintain the battery charge and extend the life of the battery.

Single-node systems can be ordered with one or two sensor boards. Each sensor board can accept up to 6 analog sensors. The number of control lines available to control external systems also increases when the additional sensor board is added.

AquaMon Single-Node Systems Models

CHA50001AXXG	Single-Node System, GSM modem, AC Powered, 1 Sensor Board
CHA50001ABXG	Single-Node System, GSM modem, AC Powered, Battery Backup, 1 Sensor Board
CHA50001XBXG	Single-Node System, GSM modem, Battery Powered, 1 Sensor Board
CHA50001XBSG	Single-Node System, GSM modem, Battery Powered, Solar Charger, 1 Sensor Board
CHA50002AXXG	Single-Node System, GSM modem, AC Powered, 2 Sensor Boards
CHA50002ABXG	Single-Node System, GSM modem, AC Powered, Battery Backup, 2 Sensor Boards
CHA50002XBXG	Single-Node System, GSM modem, Battery Powered, 2 Sensor Boards
CHA50002XBSG	Single-Node System, GSM modem, Battery Powered, Solar Charger, 2 Sensor Boards

AquaMon Single-Node System Specs:

Enclosure:

- Description: Sealed NEMA enclosure
- Dimensions: 11” x 7.75” x 5.5”

GSM Modem:

- Quad band
- 1.8/3.3V SIM
- Transmit Power 2 Watts maximum

Sensors

- 0 to 2.5 Volt Analog
- SDI-12
- 4-20 Milliamp Current Loop
- 10-bit Analog to Digital Conversion

Power

- AC: 120V, 60Hz
- Battery: 12 Volt, 9 Amp-hour, Lead Acid
- Solar Panel: Maximum Output 12 Watts
- Battery Life: 2500 transmissions without recharge

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