



VISIBLE WEATHER PACKAGE

1) Description of System (Package)

- a) Pavement Temperature at one inch below the surface.
- b) Pavement Temperature at pavement surface.
- c) Air Temperature.
- d) Humidity.
- e) Dew point, calculated in the software provided.
- f) All open protocol and/or NTCIP communications.
- g) Color camera, complete with housing, mounts, etc. for full operation.
 - i) Full streaming video ability if you have the network to support it.
 - ii) JPEG download ability at very short intervals based on local communication ability. Probably about 1 minute or less is doable, but probably a bit unrealistic in terms of needs or communications support equipment ability.
- h) Built in Land Line Modem. External cellular modem ability.

2) Power requirements.

- a) 110 Volts AC is standard input. All power supplies are provided.

3) Cables

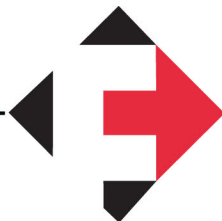
- a) Sensor comes with 60 feet of cable that is connected to the modem.
- b) The modem then has 4 feet of cable on it that is connected to the power supply.
- c) The power supply then has 4 feet of cable on it. Overall length is about 70 feet.
- d) Camera cable length is 60 feet.

4) Communications

- a) Accomplished by Land Line by use of built-in Modem.
- b) Cell or other type external modems can also be used.
 - i) They are not included in the package. Work with Zydax at the time of ordering if this optional communications abilities are to be used.
 - ii) Advising Zydax up front on what is intended to be used for communications is best.

5) Flexibility and Expandability.

- a) The Visual Weather System is very expandable. This system can become a full fledged RWIS by adding any other additional equipment desired.
- b) Details of exact software and/or hardware requirements and costs are based on specific needs at the time of the additions. However, this system designed with expandability in mind, is an unbeatable value, with unmatched quality and customer support.



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6) Open protocol.

- a) Published open protocol from the sensor out.
- b) Never held hostage by proprietary protocol.

7) Software.

- a) Comes with the Enhanced Zydax Data Collection Program (ZDCP) software.
 - i) User configurable system.
 - ii) Built-in Help Screens.
 - iii) Alarming ability based on user configurable criteria.
 - (1) Alarms are in the form of phone calls and email notifications.
 - iv) Visibility Indicators.
 - v) All data is time and date stamped.

8) Visibility Indicator

- a) The software provided allows the user to select any picture to be used as a baseline photo. This photo represents high quality visibility conditions. Once set, this photo is presented with the current photo for a side by side comparison of current weather and visibility conditions.

9) Alarms

- i) Alarms are time and date stamped.
- ii) Alarms are set by the user, utilizing real data from the system.
- iii) Alarm abilities expand with the addition of other devices and other data is available to work with.
- iv) Alarms are set and tested with a few mouse clicks.
- v) Alarms are communicated by phone calls and email.
 - (1) Up to 6 people can be notified by phone when alarm conditions are met.
 - (2) Unlimited distribution by email when alarm conditions are met, by setting up a mailing list.
- vi) Alarms can be set using data from multiple sensors.
- vii) Note alarms are from the monitoring computer, not the sensor.
 - (1) This computer must have the ability to send emails and/or make phone calls to support the alarm features.
- viii) Whether monitored by the agency or Zydax for the customer, with the Zydax Weather Station Monitoring Service, alarm ability is 100% available.
 - (1) Contact Zydax for details on Weather Station(s) Monitoring Services.

10) Camera.

- a) Temperature rated down to -40 degrees.
- b) Complete with housing, mounting bracket, sun shield, power supply, frame grabber, lens, and 60 feet of cable.
- c) This system is ready to mount and work as shipped.
 - (1) Focusing for clarity of pictures will be required. To do this a portable computer is required. The computer along with hardware and software provided makes it fast and easy to accomplish.
- d) Color camera
 - i) Full streaming video ability.
 - (1) This ability is dependant upon the ability of the communications network provided to support it.
 - ii) JPEG download ability at user set intervals if full streaming video is not used.

- (1) Upgrade intervals for pictures is adjustable, and download times of as little as one minute or less are possible, depending on the communications ability of the local provider.

11) Testing of system upon arrival

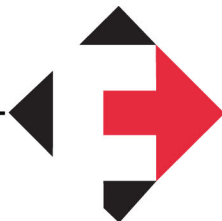
- a) System is shipped in “plug and play” condition to facilitate connecting and testing the system before it is installed. This assures proper operation and allows the user to get familiar with the system before it is installed. The steps required are:
 - i) Place the provided test software on the computer desktop.
 - ii) Connect camera to sensor cable with provided connector.
 - iii) Place camera in some secure location to provide pictures from a distance.
 - iv) Plug into the computer with connector provided.
 - v) Plug in sensor power supply.
 - vi) Plug in camera power supply.
 - vii) Double click on ZDCP Icon and start reading data and seeing pictures.

12) Field install

- a) The field install is basically the same as described above except for the installation of the sensor into the pavement and the permanent mounting of the camera and associated cables.
- b) A good location for the “Visible Weather Package” is an intersection. Especially one with a traffic controller available, as it typically makes picking up power and communications easy, and provides a cabinet to work it. However, note that no cabinet is required to install the “Visible Weather Package” as all components other than the temperature rated camera are rated for direct burial providing an easy, invisible, low cost and secure installation.
- c) NOTE:
 - i) The “Visible Weather System” does not include a tower or any other device to mount camera on . This may be added if needed by contacting Zydax. Utilizing existing mounting opportunities if they exist typically provides for an easier and lower cost installation.
 - ii) After mounting, focusing of the camera will be required. This is easily accomplished in the field with the use of a portable computer (not furnished). Connecting the computer directly to the camera to view the photos and focus it by utilizing the provided software and connectors.

13) System monitoring.

- a) This can be done by the customer with provided software.
- b) Zydax can also monitor the system(s) with the Zydax Weather Station Monitoring Service. Contact Zydax for complete information on monitoring new or existing weather systems.



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