

Basic Motion Detection System

The UltraSensor Laptop Security System is the basic system for small areas and for customers desiring to test the Sensors in special applications. It is a complete stand-alone motion security system. It can be connected to CCTV cameras, alarms and other security systems through a standard network.

The unique heart of the system is the CMD motion Sensor that can be used in a wide variety of applications. The primary purpose of the Sensor is to detect motion and provide additional information about the moving target.

The Sensor is designed to take advantage of one of the primary features of its technology, which is its ability to see through earth, concrete and other standard building materials. Other motion sensors need a window onto the world, the CMD does not. It can be completely buried so it is protected from tampering and from the environment. UltraVision is the first company to bring this technology to the security market.

The radial range of the Sensor is 22 to 25 feet and it covers an elliptical pattern on the ground (or approximates a hemisphere in 3D). It is able to detect motion from any direction. Multiple Sensors can form a ring or fence around a facility. When a Sensor detects motion an alarm signal is generated and recorded. As an option, a designated CCTV camera can point in the direction of that Sensor and record the target and its activity. The alarm distance is user defined. The alarm signal operates a dry switch output.

UltraSensor Concealed Motion Detector is made in two versions:

- CMD-1 is for indoor use and when the Sensor is mounted on materials less than one inch thick.
- CMD-2 is for outdoor use and when the Sensor is buried under six inches of dense material such as earth or concrete.

Both units are interchangeable in the same security network. All connections are made with standard CAT-5 cable. A typical side view of an installation complete with detection field is shown below.

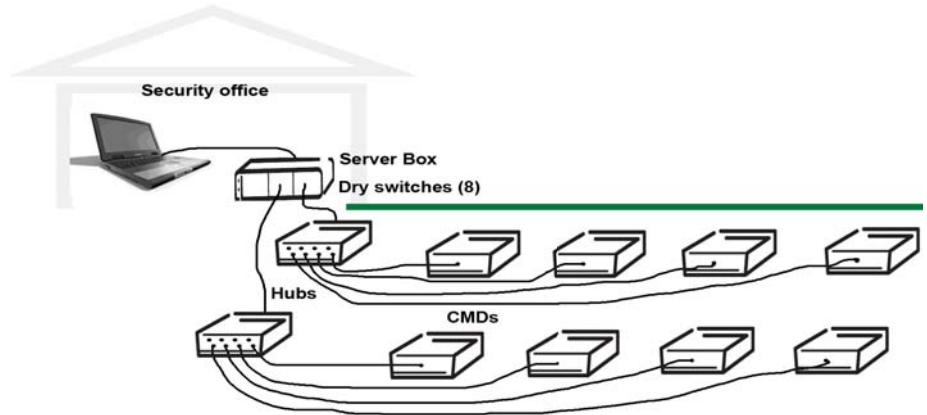


The detection hemisphere has a diameter of ~ 50 feet.

See the movie of this system in operation on our website at www.UltraVisionSecurity.com.

The **Laptop Server** box provides the power and Ethernet connections to the CMD Sensors. Up to 8 Sensors can be connected to the basic Laptop Server. Other servers are available with additional Sensor capacity and dry switches. Dry contact connections are provided for each Sensor so that alarms can be turned on and/or CCTV camera presets can be utilized. The server also provides the gateway to the security network - and the Internet. The server logs all alarms and monitors each Sensor's 'heartbeat' to insure it is working. The internet connection allows users with the proper password to access the information from any location.

The diagram shows a typical installation and how the devices are connected. All hubs and CMDs are buried. All devices shown are supplied by UltraVision.



The units shown are:

- CMD motion Sensors (8)
- Concentrator Hubs (2)
- Laptop Server (1)

A Concentrator Hub can have up to six Sensors connected. A basic Laptop Server can have up to two hubs connected and a maximum of 8 Sensors. Other CMD servers can deploy 24 Sensors or more depending upon customer requirements.

The dry switch outputs from the server can be connected to CCTV cameras in order to drive them to their preset locations. The dry switch outputs can also be used to sound alarms, turn on lighting and perform any other operation required in a security system.

The software on the server provides for setup and monitoring of the UltraSensors. The software is divided into two main sections; one for the security administrator and one for the system operator or guard.

The first screen is for administrator setup. The second screen shown below is used by the guard force to monitor motion alarms and their location. Drawings of any facility may be scanned and then entered into the program display section. Note that Sensor locations are shown in red. All alarms are logged in chronological order and must be acknowledged by a guard.

