

# Uniden®

# Guardian

Pan/Tilt/Zoom Camera  
G710PTZ



## Quick Start Guide



Mobile Alerts



Outdoor Camera



Stream Video



Night Vision



Motion Detection



Customizable Settings



No Monthly Fees

# Welcome to a new level of home security.

The Guardian G710PTZC is compatible with Guardian Video Security Systems.



**WARNING!** To prevent possible injuries or product damages, please read all warnings indicated by this icon prior to using the product.



**IMPORTANT!** To offer additional guidance and explanations about how to make the most out of your system, please read all notices indicated by this icon.

To prevent damage to your Guardian G710PTZC camera or injury to yourself or to others, please read and understand the following safety precautions in their entirety before installing or using this equipment.



**WARNING! ELECTRIC SHOCK RISK!** To prevent electric shock, do not remove screws or cover.

**Do not attempt to disassemble camera.** There are no usable serviceable parts inside. Service should only be performed by a qualified technician.

**Handle camera with care.** Do not hit, shake, or drop the camera, as this would cause damage and prevent proper operation.

**Avoid strong light.** Do not expose camera at sun or expose strong light into the lens directly, as it will degrade image quality and may cause damage. Camera should ideally be placed out of direct sunlight for improved performance.

**Protect from elements.** The camera is weatherproof but direct exposure to excessive rain, sun or marine environmental conditions will degrade its performance and shorten the life of the product.

**Avoid excessive moisture in camera or adapters.** Do not use strong or abrasive detergents when cleaning camera. Clean gently with dry cloth or with mild detergent.

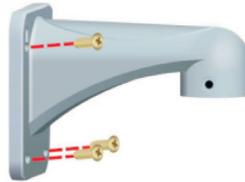
Please be sure that you use this product with a proper power source that applies specified voltage and current (110-240V AC, 12V DC). Higher voltage rates may damage the unit or cause abnormal performance.

**Disclaimer:** The information in this document is subject to change without notice. The manufacturer makes no representations or warranties, either express or implied, of any kind with respect to completeness of its contents. Manufacturer shall not be liable for any damages whatsoever from misuse of this product.

**PACKAGE INCLUDES:** (1) PTZ Camera, (1) Wall Bracket, (1) Ceiling Bracket, (1) Power Supply 12V/1A, (1) 100' Cable, (1) Mounting Kit and (1) User Manual



PTZ Camera



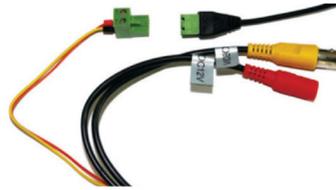
Wall Bracket



Ceiling Bracket



Power Supply



Cables and Mounting Kit





## 1080P Camera

Camera Wide Angle Lens

Night Vision LEDs

BNC Connector

Ceiling and Wall Brackets

# Features and Specifications

## Product Features

- High quality video using 1/2.7" CMOS sensor
- Weatherproof IP66 Rating
- Approximately 65 ft. night vision range
- Automatic focus and light levels
- Theft-proof design
- Optical-quality transparent dome
- RS485 control
- 128 preset points (81-128, special functions)
- 3-10mm zoom lens with F2.2 2.0MP auto focus
- 360° continuous horizontal rotation with 90° vertical movement
- Low-noise camera rotation motor
- Memory function retains settings in case of power loss

## PTZ Module Features

- Horizontal scanning: 360° rotation
- Rotation/tilt speed: 13°/second
- 128 preset positions - 80 preset positions support auto-cruise function
- Cruise route can save 16 preset positions with each position pausing for 5-60 seconds
- Preset positions speed: 50°/second
- PTZ scanning precision  $\pm 0.5^\circ$
- 3x optical zoom
- Fully functional built-in decoder with all data saved inside of the module to retain settings in case of power loss
- Decoder's all-in-one integrated design ensures high reliability
- Camera can be controlled with an optional keyboard or remote control

## PTZ Dome Camera Specifications

- 1 Camera
- 1/2.7 CMOS sensor
- 1080p resolution
- 1920 x 1088 effective pixels
- 3-10mm zoom lens
- Zoom 3X
- Communication protocol: PELCO-D & P
- Viewing angle 20° to 40°
- Pan/Tilt speed: 13
- Pan horizontal 0° to 360°
- Tilt vertical 0° to 90°
- Up to 100' night vision
- 4 Super LEDs and 8 Chip-mounted LEDs
- 0.1 Lux Min illumination
- IP66 weather rating
- 4°F - 122°F operating temperature

## SETTING BAUD RATE AND ADDRESS



**IMPORTANT:** You can set your PTZ camera's address in the admin menu of your DVR. Go to Main Menu > Setup > PTZ. You will see two tabs: Serial Port and Advanced. Under Serial Port, enable PTZ on address "1". If you need to change the physical address of the camera, complete the following directions. Under Advanced, you can create motion schedules.



**NOTE:** User does not need to do this manual configuration if the kit has an address that is already preset to 1.

Unlike conventional security cameras, PTZ cameras require an address and a connection speed to be set in order for them to properly operate. The default settings for this camera are an address of "1", baud rate of 2400, and the Pelco-D protocol. However, if your camera came as part of a bundle, its address may have been set to something other than "1". If you are connecting the camera in accordance to the instructions included with the bundle, you should not have to change any of its settings. In either case, if you are only using a single PTZ camera you generally do not have to make any changes and you may proceed to the next section. Please consult your PTZ contractor manual for required settings.

If you need to change your camera's settings, these should be made using a DIP (dual in-line package) switch panel located within the camera itself. In general, it is easier to do this before connecting the camera, but in some cases, you may need to change settings while the camera is connected to the PTZ controller. In this case, please make a temporary connection by following the procedures laid out in the next section, "Connecting the Camera". Please be advised that adjusting these settings after the camera is mounted can be difficult due to the panel potentially being inaccessible because of location, position, etc.

To access the panel, one must remove the clear dome by first twisting the metal collar around the dome counterclockwise and then removing the six screws securing the plastic dome to the camera - see Image A. Be careful not to scratch the clear dome while removing it. To locate the circuit board where the DIP switches are mounted, please refer to Image B.

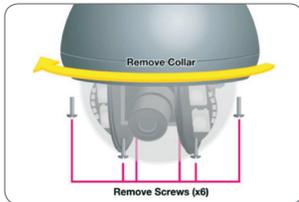


Image A

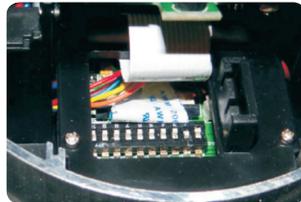


Image B

DIP switches are binary. They are either On ("1") or Off ("0"). Different combinations of ones and zeroes on the board produce different settings. On the Guardian G710PTZ, there are a total of 10 DIP switches but only the first nine have any effect. The first six are for setting the address of the camera while positions 7 and 8 control the baud rate. The baud rate is the speeds in bits per second at which the controller communicates with the camera for control. Position 9 is used to set the communication protocol for the camera to use either Pelco-D or another protocol.

Your camera is set to a baud rate of 2400. This will allow you to effectively control the camera up to 3,000 feet away.

Areas with electronic interference may require heavier or shielded cabling. Also, the higher the setting, the shorter the distance control which may be required for some PTZ controllers.

### SETTING CAMERA ADDRESS

| Address switch<br>Address (8 digits) |   |   |   |   |   |   |
|--------------------------------------|---|---|---|---|---|---|
| CODE                                 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1                                    | 1 | 0 | 0 | 0 | 0 | 0 |
| 2                                    | 0 | 1 | 0 | 0 | 0 | 0 |
| 3                                    | 1 | 1 | 0 | 0 | 0 | 0 |
| 4                                    | 0 | 0 | 1 | 0 | 0 | 0 |
| 5                                    | 1 | 0 | 1 | 0 | 0 | 0 |
| 6                                    | 0 | 1 | 1 | 0 | 0 | 0 |
| 7                                    | 1 | 1 | 1 | 0 | 0 | 0 |
| 8                                    | 0 | 1 | 0 | 0 | 1 | 0 |
| 9                                    | 1 | 0 | 0 | 1 | 0 | 0 |
| 10                                   | 0 | 1 | 0 | 1 | 0 | 0 |
| 11                                   | 1 | 1 | 0 | 1 | 0 | 0 |
| 12                                   | 0 | 0 | 1 | 1 | 0 | 0 |
| 13                                   | 1 | 0 | 1 | 1 | 0 | 0 |
| 14                                   | 0 | 1 | 1 | 1 | 0 | 0 |
| 15                                   | 1 | 1 | 1 | 1 | 0 | 0 |
| 16                                   | 0 | 0 | 0 | 0 | 1 | 0 |

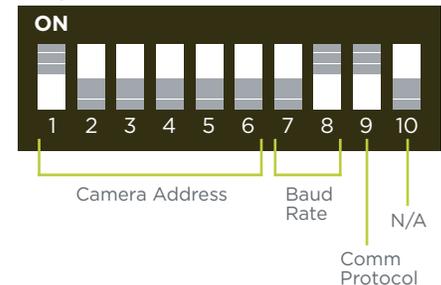
### SETTING BAUD RATE

| Baud Rate | Switch Number (BIT) |   |
|-----------|---------------------|---|
|           | 7                   | 8 |
| 1200bps   | 1                   | 1 |
| 2400bps   | 0                   | 1 |
| 4800bps   | 1                   | 0 |
| 9600bps   | 0                   | 0 |

### SETTING PROTOCOL

| Protocol | Switch Number 9 |
|----------|-----------------|
| Pelco-D  | 1               |
| Pelco-P  | 0               |

Image A



### EXAMPLE

Image A displays the following camera settings:  
 Address = Channel 1  
 Baud Rate = 2400  
 Pelco-D Communication Protocol



**NOTE!** Some PTZ controllers may require specific connection speeds. Check your system's manual for the proper settings.

## CONNECTING THE CAMERA

Before you can operate the camera, you must connect it to a system, which can support Guardian G710PTZC operations. There are three sets of connectors including power, video and the bare control wires. This latter connection is covered on the next page.



**NOTE:** We recommend connecting the camera (at least temporarily) to some PTZ controller to test your settings and connections before mounting it in its final location.

## POWER AND VIDEO CONNECTION

**STEP 1.** Connect the BNC and power leads from the camera to the camera to the matching connectors on a video/power cable



**NOTE:** these may need to be purchased separately if your camera was not included as part of a bundle package.



**IMPORTANT!** When connecting the power and video cable between the camera and the DVR, the “male” power end (red plug) connects to the matching power lead on the camera.

**STEP 2.** Connect the power lead on the other end of the video/power cable to a power adapter or power distribution panel. Make certain that the power supply is rated for DC 12 volts and 800mA to 2A.

**STEP 3.** Connect the BNC connector on that same end of the cable to a Video In port on the back of the DVR.

You can now plug the camera’s power adapter into a surge protector and turn it on. To protect your investment, we **STRONGLY** recommended using a surge protector that is dedicated power supply, for a clamping voltage of 330 or lower, a Joule rating of at least 400 and a response time of 10 nanoseconds or less.

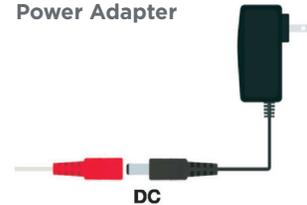
Camera

1.



Power Adapter

2.



3.



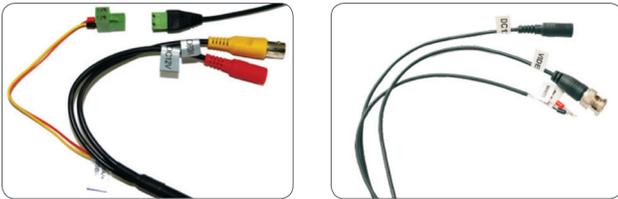
## PTZ CONTROL CONNECTION

In addition to connecting the power and video leads to the camera, you must also connect the two bare wire leads to the RS485 ports in the PTZ controller on the back of the DVR.

As seen in the referenced image, the wire leads from the camera are two different colors and are labeled. They are also pre-installed into a block which plugs into a matching receptacle on the extension cable. The control wire leads at the other end of the extension cable must be inserted into the ports on the back of the DVR. In the case of the RS485 ports being marked as positive (+) and negative (-), the wire designated RS485 A (red tip) is the positive lead while the wire marked RS485 B (black tip) is to go into the negative port. Your camera comes with a connector that the bare wires plug into above each port. The connector will either have small screws to tighten the wires into the port or a release clamp to keep the wires firmly secured in the connector.

If the wire can easily be removed from the port, then it isn't secure and you can experience control difficulties until it is properly attached. Space permitting, multiple PTZ cameras may be connected to the same ports. They will each require a different address, which is set up using the DIP switches as covered in the previous section.

Cables



## INSTALLING THE CAMERA

When installing your camera, it is important to select a proper site not only for field of view, but for other considerations as well:

**Distance from viewing/recording device.** The further the camera is from the DVR or monitor, the higher the chances of signal degradation. Typical 75 Video Cable provides acceptable signal at distances up to 200' (30m). At greater distances, UL-Listed shielded RG59 should be used. The camera's power supply should be located as near to the camera as possible when the distance exceeds 200' as the power level will drop over extended distances resulting in a decrease in video quality.

**Do not place near high voltage wires or other sources of electrical interference.** Electrical interference will degrade the quality of the signal.

**Place camera out of reach to avoid damage.**

**Avoid direct exposure to weather.** Do not place the camera where rain or snow will hit the lens directly nor should the camera be placed so that the sun or bright light shines directly into the lens. Your camera is weatherproof but it will not work when submerged in water. Ensure that all power and video connections are not directly exposed to water and are protected from the elements.

**Do not place camera behind a window.** If there is a light source behind the camera, it can cause a reflection in the window that will obscure events on the other side of the glass. Likewise, the camera's infrared LEDs will reflect off the glass and shine into the lens, thus degrading the image.

**Light levels should be approximately the same between camera and target area.** A camera in a brightly lit area looking into a shaded area, or vice versa, may produce inadequate results.

The above guidelines and the optimal camera location will depend on your unique circumstances. As a general rule, the locations highlighted in green indicate the best locations to mount your camera. Both locations are sheltered from rain or snow and offer good sight lines to allow your camera to monitor a wide area. Note, your camera is weatherproof and requires less protection than weather-resistant cameras which can be placed in more exposed locations, if needed. Keep in mind that this camera is designed to operate between 14° F to 122° F (-10° C to 50°) with a relative humidity of up to 95% and consider wind chill and other environmental factors when selecting your location. Your camera comes with both a ceiling and wall mount. The location of the camera will determine which mount you will need to use. The mounting surface must be sturdy and able to hold at least five times the camera's total weight.



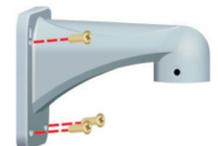
## MOUNTING THE CAMERA

**STEP 1.** Mount the bracket on the desired surface. If you are running the cable into the wall, it is best to drill a large enough hole to prevent the cable from catching on anything and allowing the cable extending from the camera to be easily pushed through.

### Mounting Hardware



Ceiling Mount



Wall Mount

**STEP 2.** Run the cable up from the camera and through the bracket.

**STEP 3.** Secure the camera to the bracket with the included bolts.



**WARNING!** Do not allow the camera cable to be subject to pinching, tight bends or other severe constriction as part of its final installation position as this can damage the cable over time leading to signal loss or potential fire hazard.

Take precautions to ensure a clear work area below the camera mounting point during installation as a falling camera can cause injury or damage.

### WHICH CABLE TO USE?

Your cabling needs will depend on the distance between your camera and DVR. There are several cables to fit specific needs and may be purchased from the your vendor/retailer.

#### To maintain video quality:

Using better cables always enhances video quality. Always check state and local laws before installing cameras.

To prevent video signal loss, run one continuous cable between the camera and DVR for best results. If more length is required, use the minimum number of inter-connection points possible.

#### Other notes:

If a cable run exceeds 800ft, we recommend using RG-6 coaxial cable which is available at most retail building supply companies.

If your home or business is pre-wired with CAT-5 cable, then you can run up to 1000ft.

### OPERATION

You can control your PTZ camera via the Uniden Guardian app or web application. Simply type your IP address to access the login screen.



## DVR GUIDELINES

### General Cruise Setup Procedure

Each DVR system has different scan setup procedures, but there are some general similarities. Most involve the process of pivoting the camera to the desired starting point and saving that point. Then, by selecting one or more points for the camera to move to in sequence, a scan path is built which is then saved. Often, multiple paths can be saved within the DVR, which can be selected for later use.

These points can be set by using the PTZ controls on the DVR itself. Please refer to the on-screen interface examples. In both examples, directional control is achieved by using the DVR's mouse to click on one of the directional arrows. As long as the arrow button is held, the camera will move in that direction. There are no horizontal stops and the camera can rotate continuously, if desired. The camera's elevation is limited to 90°. On both control panels, there are controls for zoom, focus and iris (light level). The product has 3x optical zoom lens, which will adjust between 3 and 10mm. The camera has an auto-focus feature and is not user adjustable. Objects closer than 20" (50cm) will be blurry due to the limits of the automatic focus. Likewise, the camera automatically adjusts the iris internally and that setting is not manually changeable by the user.

Of the 128 presets available on the camera, presets 1-80 may be used for defining camera positions. The remaining 48 have special functions. Preset 95 is the most useful as it will erase previously configured presets.



Image 1: PTZ Setup



Image 2: PTZ Setup



Image 3: PTZ Setup

### EXAMPLE 1: SETTING A CRUISE

This example is based on using a DVR without an attached PTZ keyboard. Your DVR's specific commands may differ slightly. Please consult your system's manual.

## Cruise Setup

**STEP 1:** In PTZ control screen (refer to Image 1), click **SETUP** button

**STEP 2:** Enter as shown in Image 3, click **SCAN** button and input the proper value in the scan value field.

**STEP 3:** Click **START** button and enter as shown in Image 1 to set the zoom, focus, direction, etc. Click **SETUP** button to return to screen as shown in Image 3:

**STEP 4:** Click **END** button to complete the setup. Then, click the right button on the mouse to exit.

## Cruise Calls

**STEP 1:** As in Image 1, click **PAGE SHIFT** button and then enter PTZ control menu as shown in Image 2.

**STEP 2:** Enter the number of scans in the value field then click **SCAN** button. PTZ will begin to work on the scan line. Click **STOP** button to stop.

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## TROUBLESHOOTING

### No camera movement or image at power-up.

- Possible cause: power connection issue.
- Solutions: Check the connections between the power supply and the camera. Connections should be clean and dry.
- Ensure that the power outlet is live.
- Confirm that the power supply is connected and working properly.

### Camera displays image, but does not respond to commands.

- Causes/Solutions: DIP switch settings are incorrect – please see pages 6 and 7.
- RS485 connection is loose or not connected properly – please see page 9.
- The RS485 wires are broken. Check the wires for damage.
- Electrical interference. Use thicker or shielded wire.

### Blurred image.

- Possible cause: Transparent dome is dirty.
- Solution: Use a damp, soft cloth to clean the dome. Do not use abrasive cleaners or solvents. Avoid harsh chemicals including acetone as they may permanently fog the plastic.

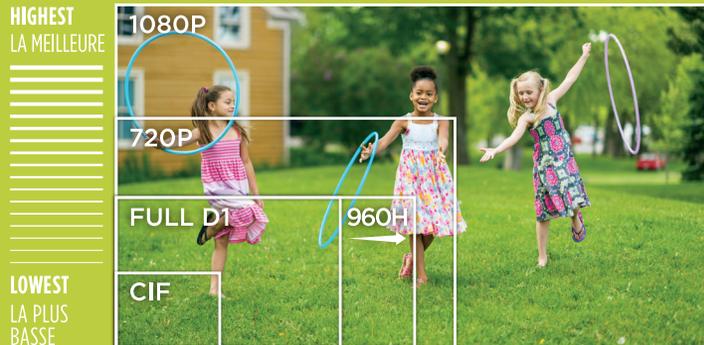


Control remotely from your smartphone or tablet.



FREE Uniden Guardian App - Mobile Remote Access to live video from camera to iPhone®, iPad® and Android™ devices  
SYSTEM REQUIREMENTS: Network Router with available port.

1080p resolution lets you see so much more!



## Need Help? Contact us



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