



DN2916 Gatekeeper W21IP Stop Arm Camera Installation Guide

Note:

This document describes the installation and aim of the cameras associated with Gatekeepers W21IP Stop Arm Camera.

A firmware configuration guide is available that describes how to configure a 504HD2 / 508HD4 DVR for use with the W21IP Gatekeeper Stop Arm Camera.

Copies of this document is available by calling Gatekeeper Service Support at 604.864.6187 or going to www.gatekeeper-systems.com.

Gatekeeper W21IP Stop Arm Camera Installation Guide

One of the most important issues when installing a W21IP camera is the placement of the camera for proper alignment.

General Information

- The camera should be mounted between the two black rub rails found on most school busses. See Figure 1. If the bus does not have the black rub rail mount the cameras high enough so they are not in the spray of the front tires. Do not mount the cameras too high (usually above 4.5 feet from the ground (approximately)). While we want the cameras high enough to avoid road spray from the tires and passing vehicles we also want to minimize the vertical angle from the camera to the license plate of passing vehicles.
- Positioning of the camera should allow for the cables to be routed through interior channels that can be accessed by removing the covers.
- Damaged / dirty license plate can be problematic. If a plate is damaged or dirty a poor licence plate image or no image at all could result
- Note: Other documentation is provided to configure the Gatekeeper Systems 504HD2/508HD4 DVR and is not included here.
- A D21IP camera can be installed to capture the driver's profile. See Figure 3 for mounting location.

Mounting and Aiming of the W21IP

- In order to aim the W21IP camera properly, the buses stop arm must be deployed.
- Place the camera facing forward between the two black rub rails. The camera should be mounted about 54" behind the stop arm so that the corner of the stop arm is visible in the upper right corner of the image. See figure 2.
- Before drilling any holes in the bus it is strongly recommended that the camera and wedge be held against the side of the bus and aimed. Use an ICD or dongle with tablet to view the image while assuring the position is correct Once the position is determined then attach the camera to the bus using the tek screws provided.
- Use the supplied grommet so that the metal around the hole in the bus does not cut into the camera cable when it is routed through from the exterior of the bus.
- Run the camera cable inside the bus and attach to a 30 ft Cat 5 cable (GSWHCAT5-30MLD)
- If you are connecting to a 304SD1 or 504HD2 connect the Cat 5 cable to the IP appropriate DVR channel using a CAB000377.
- If you are connecting to a 508HD4 connect Cat 5 cable directly to the GSI 4 Port Switch

Wedge

- The wedge gives the camera an additional 10° angle outwards from the bus. The camera has a natural 20° angle off the side of the bus. The use of the wedge allows the camera to collect video from two lanes over. See Figure 3 at bottom of document.



Figure 1. Camera mounted 54 inches behind stop arm base and between rub rails



Figure 2. Camera mounted so deployed stop arm is visible in top right corner of image

Licence Plate Views



Single lane view of licence plate with wedge



Second lane view of licence plate with wedge

W21IP LPR Image Rotation

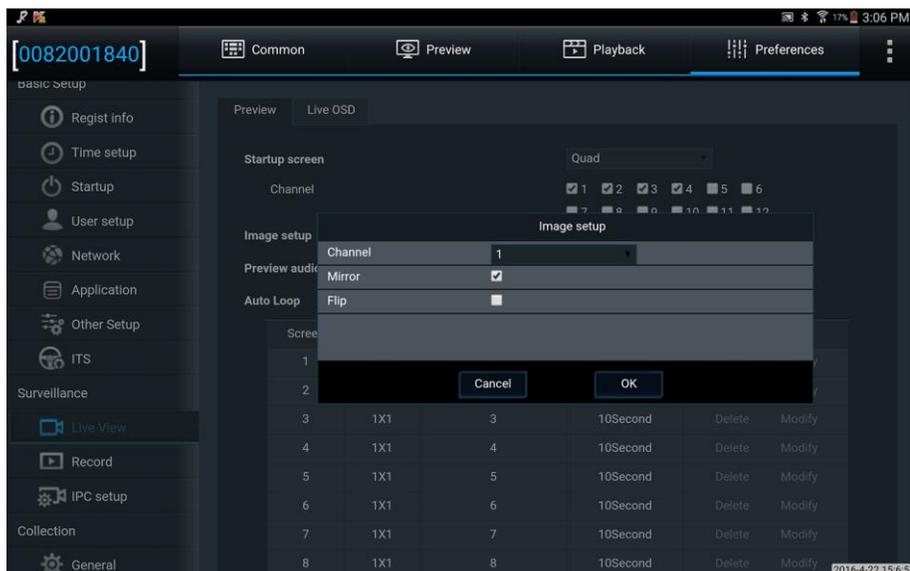
W21IP cameras will ship with the correct orientation. However, if the orientation needs to be changed because the image is upside down or reversed, use the following procedure.

Log onto the recorder using either the ICD (or monitor with mouse) or the GK Dongle with a tablet. If using the ICD / monitor + mouse, navigate to Surveillance / Live view / Preview / Image Setup



Select the camera by clicking on the arrow next to the Channel button. Use the two view orientation buttons (in the blue oval) to change the image to the required orientation and click SAVE and then EXIT. Normally it is necessary to do both a vertical and horizontal flip to get the image to be in the proper orientation. Ensure desired image is what is on the screen.

If using G4 Connect, connect the dongle to the DVR and log onto the recorder using a tablet. Navigate to Preferences / Live View and click on Setup box beside Image Setup. Select the required camera by selecting the camera number beside Channel. Then select the Mirror and / or Flip buttons and select OK. You will have to navigate back to Preview page to see if the desired change has been achieved.



Overall Layout including D21IP Driver cam

Installation of W21IP camera as a Stop Arm Violation Camera

- Forward Facing W21IP Camera should be mounted 54" behind the Stop Arm. Be careful to get the bottom corner of the Stop Arm in the video when it is deployed.
- Mount rear facing camera close to outward facing cam, however if there is a rear Stop Arm, then 54" from the rear Stop Arm. Be careful to get the bottom corner of the Stop arm in the video when it's deployed (if bus is so equipped)
- Mount the cameras between the ribs on the side of the bus about waist height.
- Most installs will require a 30 ft long cat 5 camera cable.
- Use the 20° wedge to achieve 2 lane plate capture

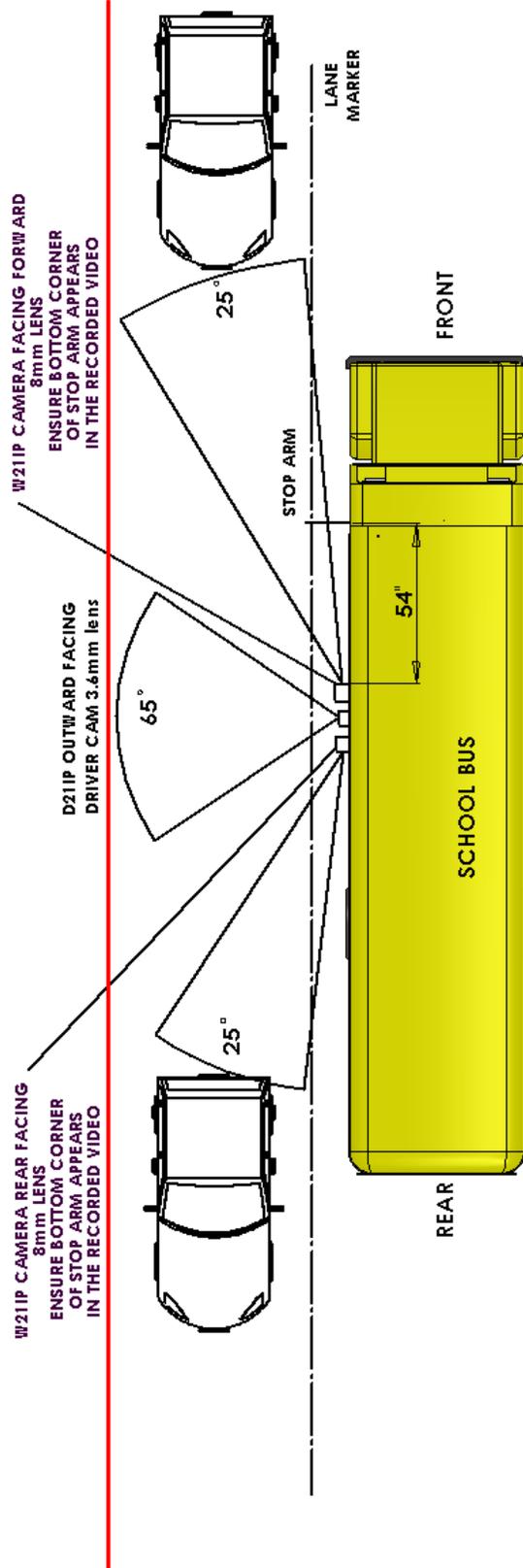


FIGURE 3