

Plate Surveillance System Installation Guide

Software Version 3.0.1

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SYSTEM OVERVIEW

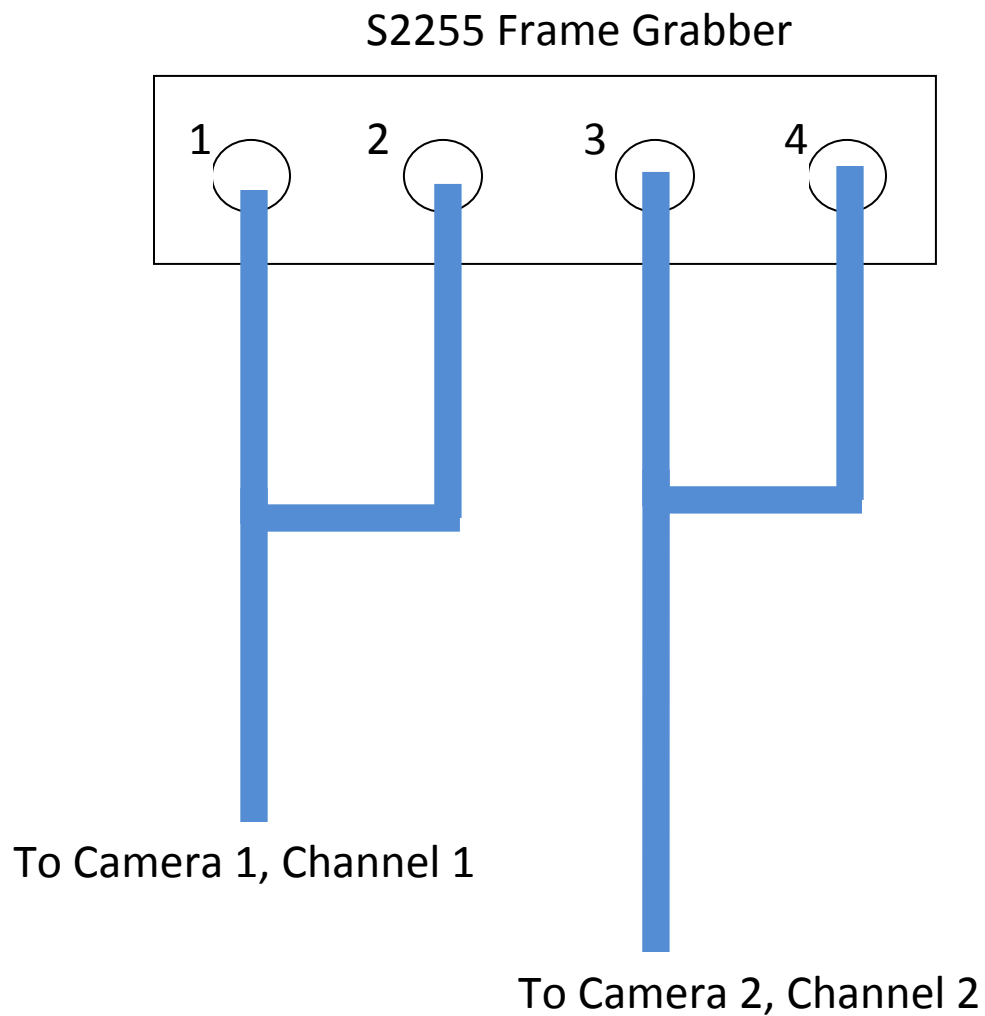
The Plate Surveillance System 3.0 consists of the following applications:

- FE Plate Analysts Workstation
 - Search tool allowing the search of stored images and video playback, and image export
 - Batch processing video files and jpeg images
 - Edit mode processing of jpeg images allowing the editing of results and pushing those results to the database
 - Importing stored image data from a field drive to a central repository
- FE LPR GoNoGo Monitor
 - Provides instant status on the LPR service
- FE Service Control
 - Provides for installation and configuration of the service
- FE LPR Monitor
 - Provides additional diagnostic data on a LPR service, either on the same machine or over a network connection
- FE LPR Service
 - The LPR process which
 - Does real time LPR processing from live camera streams
 - Full digital video recording of all images (on motion detection or plate detection)
 - GPS tagging of all LPR results (either from live GPS receiver or from statically set GPS location)
 - Watch list processing and email alert generation from the real time LPR processing.

INSTALLATION INSTRUCTIONS

CAMERA CONFIGURATION

The system uses a single S2255 Frame Grabber. The device has four ports, but the ports are used in pairs. One port in the pair is used for LPR processing and the other is used for DVR compression. Using BNC splitters, daisy chain the connections as shown:



IF A PREVIOUS VERSION HAS BEEN INSTALLED

1. Remove all previous versions

- a. Run the FE Service Control application. On the LPR Service Tab, click “uninstall”.

NOTE: if running Windows XP, when prompted with the security prompt, ensure that the “Protect my computer and data from unauthorized program activity” is UN-CHECKED. You do not want protection as that will prevent the application from un-installing the program.

- b. Close the FE Service Control application
- c. Run Control Panel/Add-Remove-Programs (or Control Panel/Programs and Features) and remove all FE applications
 - i. FE Analysts Workstation
 - ii. FE GoNoGo Monitor
 - iii. FE LPR Monitor
 - iv. FE Service
 - v. FE Service Control

INSTALLING NEW SOFTWARE

2. Install New Software

- a. From the distribution folder (unzipped) run the following setup.exe programs
 - i. FE Analysts Workstation
 - ii. FE GoNoGo Monitor
 - iii. FE LPR Monitor
 - iv. FE Service
 - v. FE Service Control

3. Install the new S2255 Frame Grabber Drivers

- a. If previous versions of S2255 drivers have been installed (from First Evidence PSS version 2.0), change the drivers to the new driver. If no previous versions have been installed, install the new driver.

NOTES:

1. When the S2255 is plugged in for the first time, the OS will prompt for driver installation. Follow the instructions for a custom/manual driver selection. The drivers are located in the following directory: C:\Program Files\First Evidence\FE LPR Service\S2255Drivers (choose XP, Vista, or Vista 64 as appropriate).
2. To change the driver from a previous version (PSS version 2.0):
 - a. Go to control panel/system/device manager/Sound Video and Game controllers, and select the 2255. The name listed should be "Sensoray 22255 Video". If its "Sensoray 2255 A/V", then that is the old one and needs to be updated. Right click and select update driver. Manually browse to the new driver location and install it.
 - b. After updating the driver, plug the 2255 into each and every USB port and check that the correct driver is installed by viewing the name of the device in the control panel. If the device name has an "A/V" after it, it needs to be updated.
 - c. Re-boot the computer after installing the 2255 drivers.

NOTES: A critical bug exists in the 2255 device driver.

3. If the 2255 Frame Grabber is plugged in, and the LPR system is operational, and then the 2255 devices is removed, and re-plugged, the system will crash.
4. To work around this problem, ensure that te 2255 device is plugged in before the computer boots (after the drivers and LPR service have been installed).
5. Its ok to plug in the 2255 after the computer boots, but if you remove it, you must reboot the computer before re-inserting it.

4. Configure the LPR Service

a. Run the LPR Service Control Application

- i. Click on the Watch Lists tab and configure the watch lists (used to generate email alerts). Select a watch list file, set the match threshold, select an email alert list, and save changes.

NOTES:

6. Watch lists can be any length. Lists of 40,000 have been tested.
7. Once the list file has been selected, overwriting this file with a new file of the same name will automatically update the list. This allows automatic pushing of watch list updates.
8. Refer to the attached sample watch list and email list files.

- ii. Click on the Email tab and configure the email server settings. These settings are values which are provided by your email service provider.

b. Click on the GPS Tab to configure the GPS coordinates

- i. If you will be using a GPS receiver, follow driver installation instructions in the GPS receiver package first.
- ii. If you will be using a GPS receiver, you do not need to configure anything on this tab, this tab is only for static GPS location.
- iii. If you will be not be using a GPS receive, you can enter the fixed site coordinates on this page. You may enter the coordinates in either Degrees/Minutes/Seconds or in fractional format.

c. Click on the Source Channels Tab

- i. Assign names to the channels. If no name is assigned, the channel will not be enabled. Names can be as simple as "0", "1", etc.

d. Click on the Passwords Tab

- i. Passwords are currently disabled per NCIS requests.

- e. Clicks on Video Setup
 - i. Select either NTSC or PAL
- f. Click on the LPR Service Tab
 - i. Click Install Service. After a few seconds the status should indicate “running”.

NOTE: if running Windows XP, when prompted with the security prompt, ensure that the “Protect my computer and data from unauthorized program activity” is UN-CHECKED. You do not want protection as that will prevent the application from installing the service.

- g. Close the FE Service Control Application
- h. Shut down the computer, plug in the USB devices, and then start the computer. The LPR service should be fully functional.

START OPERATION

- 5. Run the FE GoNoGo Monitor
 - a. Note that you should get green indications.
 - b. Note the Plate Process Queue Level at the bottom of the left side status column. It indicates how many image are pending processing by the LPR processing algorithm. As this queue fills, the progress bar indicates the level. The color of the bar will change from green to yellow when the buffer is about 80% full. It will turn red when its 95% to 100% full. A Red indicator signals that frames are either being dropped or critically close to being dropped. If the system hits red on a regular basis, the average motion per second is too high for the processor. Either re-adjust the camera to reduce spurious motion, or use a more powerfull processor.
 - c. Note, standard LPR cameras that produce a dark/monochrome image will produce less spurious motion (requiring less processing to identify plates) than color or HD cameras.

