

Wall Security Camera System - Claim

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The purpose of the 'Wall Security Camera System' invention is intended to provide the secured camera system with camera viewers hanging on the wall to view, record and monitor motion target anytime without having to open the curtains, doors or open and check mobile devices. This Wall Security Camera System is also intended to resolve the existing security camera system issues when the users have the security camera online accounts to view their motion events, but the video files could have been deleted by hackers, and lagging issue of delaying video notifications. This new security camera system provides secured connections to the new Camera Hostspot which was introduced in this invention to host all the local cameras within its own local network before connecting and sending video files to the WiFi Router for Internet Access. This security camera system also provides the users with solid video recording files and quick delivery of alert event notifications. This claim shows the overview figure of this invention which was submitted on 2024/01/31 with U.S. PCT/US24/13663 and International PCT/IB2024/000096 Patent Numbers, which can be used as the representing invention drawing to print on the patent frame and the following functions and features of this invention.

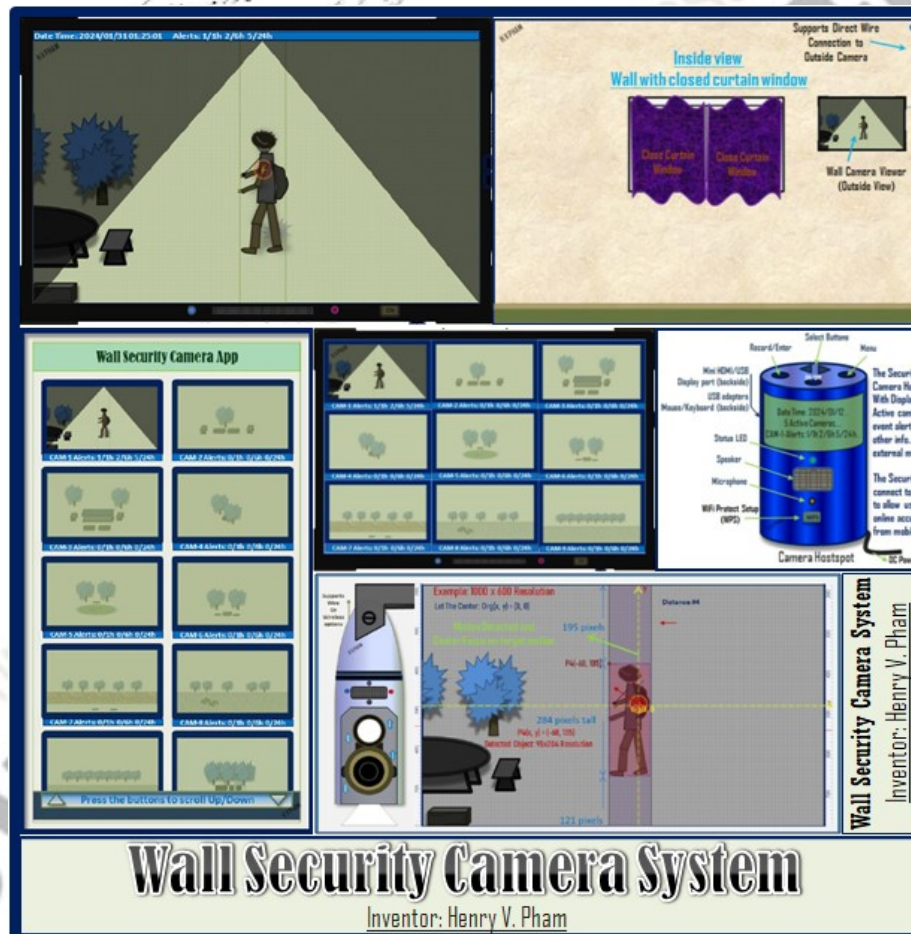


Figure-A: Wall Security Camera System -- Overview

1. The main apparatus for the Wall Security Camera System, comprising:

The Wall Security Camera System would come with Wall Camera Viewers to view direct connected cameras and Camera Hostspot which stores recording videos and hosts all the local connected cameras;

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the Camera Hostspot would send video files to WiFi Router for Internet Access . Wherein, the Wall Camera Viewers would be used to connect one or more cameras and can be supported as a standalone mode without Camera Hostspot or WiFi Router; the Camera Hostspot with keyboard and mouse support for camera configuration, would be used to store recording videos before sending to the WiFi Router and provide overall views to the connected camera viewer for all the local connected cameras.

2. The main operational functions apparatus for the Wall Security Camera System, comprising:

The Wall Security Camera System would provide constant cameras viewing and recording motion target anytime without missing any moment even without motions with streaming collecting every 10 seconds snapshots to support reviewing the surround area at any given time. One video file of the 10 seconds snapshots photo streaming video which captured up to 13.3 hours is equivalent to the 5 minutes video file in memory size for regular video recording with 16 frames per second. Wherein, the Wall Camera Viewers would provide the constant views and record video to its local memory and or send to the Camera Hostspot, and Mobile Apps would provide checking and viewing recording videos remotely at anytime with Internet Access; the Wall Camera Viewers would support scanning for motion and send alert videos; the Wall Camera Viewers would work with any existing cameras even work well with the cameras with auto following motion functions which was described in the "Auto Following Motion Security Camera" invention which was submitted on 2024/01/31 with U.S. PCT/US24/13660 and International PCT/IB2024/000177 Patent Numbers.

3. The Hardware layout and requirements apparatus for the Wall Security Camera System, comprising:

The Wall Security Camera System would come with Wall Camera Viewers mounting on the wall and Camera Hostspot with dual networks to host all local connected cameras. Wherein, the Wall Camera Viewers would come with camera input for direct connection, mouse & keyboard inputs for cameras configuration, built-in or memory slot to store videos, and LEDs and speaker for status and motion notifications plus power adapter with secured mounting corners brackets; The Camera Hostspot would come with Display Port, mouse & keyboard inputs, supported menu buttons, display panel with LEDs, microphone & speaker and WPS button for cameras setup and configure from cameras to WiFi Router.

4. The Motion Scanning Software & Algorithm apparatus for the Wall Security Camera System, comprising:

The Camera Viewer would be built with Firmware/Software to scan the images to detect motion target with the Motion Scanning Algorithm that was described in the original invention document which is similar to the scanning for motion in the 'Auto Following Motion Security Camera' invention. Wherein, Camera Viewer would capture images and save in resolution, in monochrome BMP image mode every 1/4 of a second for at least 15 seconds with circular buffering techniques; the capture images would be layout in rectangle with center origin of x and y coordinates to scan and identify the motion object shape correctly before recording and sending alert; This scanning method for Camera Viewer would work for all cameras with or without the following motion target functions with either auto or manual control, and this feature can be used to control the cameras that support external turning camera mechanical.

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5. The Cameras and Camera Viewers connections apparatus of claim 1, 2 & 3, further comprising:

The Cameras and Camera Viewers connections could come with wire or wireless. Wherein, the wire connection mode would provide direct connect for perfect standalone mode which can be used independently with constant viewing; the wireless connection mode would suggest with WPS function for secured and convenient setup with the 2-Press Connection Confirmation for persistent connection; the 1st WPS Press would provide temporary wireless connection and the 2nd WPS Press to have owner wireless access with Press-and-Scan to have access which was mentioned in the 'WiFi[+]Secured' invention; the cameras and camera hosts could come with WPS button to support this feature beside the WiFi Setup App.

6. The Camera Hostspot requirements apparatus of claim 1, 2, 3 & 4, further comprising:

The Camera Hostspot with keyboard mouse and monitor supported would come with local network to host the local cameras and wan network to connect to WiFi Router for Internet Access. Wherein, the local area network would provide the camera with dynamic Local IP Address or Machine MAC/ID separately to provide secured connection locally and privately with invisible Authentication Device Names or IDs; the Camera Hostspot would securely record videos from all the connected cameras to its memory with cycling-buffer recording techniques to avoid memory full and send video files to the WiFi Router for Internet Access where the mobile devices can be access remotely; the Camera Hostspot would support mobile device connection directly when the owner devices are nearby to camera viewing when Internet Outage happens.

7. The Camera Hostspot, Wall Camera Viewers Software and Mobile Devices applications for video viewing apparatus of claim 1, 2 & 4, comprising:

The Wall Camera Viewers and Mobile Device would come with camera and video files viewing functions. Wherein, the Camera Hostspot provides display connection to have an overview of all connected cameras; the Wall Camera Viewers would be used to connect, record and display videos of the connected cameras; the mobile device application which can be standardized camera support viewer, would provide the user with mobile access and view the camera videos files remotely.

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