

## 1.0 Manufacturer

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## 2.0 Warranty

Manufacturer shall warrant the camera to be free from defects in material and workmanship for three years from the purchase date.

## 3.0 General Specifications

The network camera shall be LILIN P5R6552E2 camera.

### Video Performance

- A. The camera shall have a minimum light requirement of 0.04 Lux at F2.0 in color mode, 0.006 Lux at F2.0 in B/W mode or 0 Lux if IR on.

### Power

- A. Power requirement for the network camera shall be DC12V, 6.7W or PoE, 8.7W.
- B. The camera shall provide power consumption DC12V at 8.7W.

### Sensor

- A. The camera shall use a progressive scan 1/2.7" CMOS image sensor.
- B. The camera shall produce a maximum resolution of 2608 (H) × 1960 (V) = 5,499,760 (pixels).

### Certifications

- A. The camera shall be compliant with CE EMI CLASS A certifications.
- B. The camera shall be compliant with FCC EMI CLASS A certifications.
- C. The camera shall be rated to IP67 standard against water and dust ingress.
- D. The camera shall be rated to IK10 vandal resistant rating.

### PC Requirements

- A. The PC CPU requirement shall be Intel® Core™ i7 or higher grade for the camera.
- B. The camera shall support Windows 7 64 bit, Windows 8 64 bit, Windows 10 64 bit.
- C. The PC memory RAM shall be at least 8GB or above, dedicated graphics card for the camera.

### Mechanical

- A. The camera shall not exceed a dimension of Ø115 × 91 mm approximately.
- B. The camera shall not exceed a weight of 420g approximately.

### Video Streaming

- A. Video streaming format in order to provide better quality and compression rate shall support H.265 / HEVC main profile, H.264 main profile, Motion JPEG.
- B. The camera shall provide RTSP/TCP, RTSP/UDP.
- C. The camera shall provide 3 streaming with combine compression and resolution at same time for various Internet or Intranet applications.
- D. The camera shall support VBR, CBR, GOP adjustable, fixed bitrate range encoding mode.
- E. The camera shall provide 3 resolution in browser for user easy to change resolution.
- F. The camera shall support RTSP unicast streams and multicast streams.

### Network Security

- A. The camera shall support up to 7 users for accessing the streaming.
- B. The camera shall support multiple user access levels with password protection.
- C. The camera shall support the system log to store the IP address.
- D. The camera shall support the config log for all related operation setting.
- E. The camera shall support the user log in order track each user accessing date and time.
- F. The camera shall support the network log for all network issue information.
- G. The camera shall display the number of currently connected devices to video, to know the device connection status.

- H. The camera web interface shall display the last time the camera boot up, to know the device connection status.

**Authentication**

- A. The camera shall support base64 HTTP encryption, digest HTTP authentication, RTSP authentication, DDNS via HTTPS.
- B. The camera shall support HTTPS encryption of data. It shall support self-import of digital signatures, and change HTTPS port.
- C. The camera shall support login account digest access authentication for avoiding passwords being extracted improving the network security.
- D. The camera shall require a username and password for video transmission over RTSP streaming.

**Integration**

- A. The camera shall be able to be accessed by the iOS mobile device and Android mobile device
- B. The camera shall conform to the ONVIF profile S standard and provide official documentation.
- C. The camera shall support LILIN Navigator Enterprise 2.0.
- D. The camera shall support 3rd party VMS through LILIN HTTP API.

**Web Browser**

- A. The camera shall support IE 9, IE 10, IE 11, Chrome, Firefox, Opera, Safari for Mac OS.

**Alarm Events**

- A. The camera alarm event shall support motion detection, network lost detection, global counter, virtual input, metadata.
- B. The camera shall provide at least 25 sets of customizable HTTP POST commands after multiple event triggering for system integration.

**Alarm Notification**

- A. The camera shall provide alarm notification with SMTP, FTP, HTTP post, Push service notification.
- B. The camera shall support FTP setting a timer to automatically upload photo for time-lapse photography purpose.

**Environmental**

- A. The camera shall be operated in following temperature range: -30°C – +50°C / -22°F – 122°F.

**Lens**

- A. The camera shall support fixed lens at 2.8mm.
- B. The camera shall support fixed IRIS at F2.0.
- C. The camera shall support horizontal angle of view at 100.4°
- D. The camera shall support vertical angle of view at 73.6°
- E. The camera shall support diameter angle of view at 127.5°

**Infrared LED**

- A. The camera shall support IR distance at 30M.
- B. The camera shall support peak wavelength at 850nm.
- C. The camera shall support beam spread at 60°, 90°.

**Video Resolutions**

- A. The camera shall be able to produce images in 2592x1944 (5MP), 2304x1728 (4MP), 2304x1280 (3MP), 1920x1080 (2MP), 1280x960 (1.3MP), 1280x720 (1MP), 720x480 (D1), 720x576 (D1), 640x480 (VGA), and 352x240 (CIF)

**Maximum Frame Rate**

- A. The maximum frame rate is up to 20FPS @ 2592 x 1944 in normal mode.

**IR-cut Filter**

- A. The IR cut filter shall be able to support color (day), monochrome (night), auto, schedule.

**Scanning System**

- A. The camera shall use a progressive scan image sensor.

**Picture Setting**

- A. The camera shall provide brightness, contrast, hue, saturation and sharpness.

**Picture Effects**

- A. The camera shall provide mirror, flip, rotation features.

**White Balance**

- A. The camera shall provide the white balance settings including: Auto and Manual(adjustable).

**Video Quality**

- A. The camera is able to specify its shutter speed for min and max range 1/30(1/25)s – 1/20000s for various environments.
- B. The camera shall support back light compensation area selection, partially brighter areas can be masked, compensating for the dark areas.
- C. The camera shall support 2D WDR, to reduce the brightness of the overexposed image.
- D. The camera shall support HDR at 70dB.
- E. The camera shall support 3D noise reduction.
- F. The camera shall support privacy mask up to 4 zones and mask configurable.
- G. The camera shall provide the sense up settings including: off, x2, x4.
- H. The camera shall support Sense up+.
- I. The camera shall support auto gain control up to 36dB.
- J. The camera shall support adjustable exposure value.
- K. The S/N ratio shall be more than 48dB (AGC off).
- L. The camera shall support day and night switch selectable including day mode, night mode, auto mode, time schedule.
- M. The camera shall support video output aspect ratio changed from 16:9 to 9:16 when the image flipped 90 degrees after rotate is selected.
- N. The camera OSD shall support foreground and background color change, and transparency adjustment.
- O. The camera OSD shall support being drag-and-drop to the specified location in web interface through a mouse.
- P. The camera shall support adjustable position in OSD display for date, time, camera name.
- Q. The camera OSD color shall be changeable and transparency adjustable, for avoiding OSD to block the image. This function is mandatory.

**Network**

- A. The camera shall support 10Base-T, 100Base-TX.
- B. The camera shall support LILIN API (CGI).
- C. The camera shall support to manually change the RTSP URL and Port for system compatibility.
- D. The camera shall support to manually change the RTCP for system compatibility.

**CPU**

- A. The camera shall support up to SoC ARM Cortex-A7 Single Core 800MHz.
- B. The camera shall support up to Embedded 128MB DDR3, 128MB flash memory.

**Video Display**

- A. The camera shall support LILIN Universal Active X.

**OS**

- A. The OS of the camera should be embedded Linux 3.10.

**Protocols**

- A. The camera shall support the following network protocols: IPv4, TCP, UDP, HTTP, HTTPS, SMTP, NTP, DDNS, FTP, ARP, DHCP, DNS, RTSP, RTCP, Telnet, ICMP, IGMP, ONVIF Profile S and SSL/TLS.

**Languages**

- A. The camera shall support the following languages: English, Traditional Chinese, Simplified Chinese, Spanish, Italian, Turkish, Russian, Korean, French, Arabic, Hungarian, Japanese.

**4.0 Installation**

- A. All equipment shall be tested and configured based on the manufacturer guide line prior to installation.
- B. All the products shall be updated for the latest firmware.
- C. All the products shall be changed for the default username and password prior to installation.

## 5.0 Environmental Green Policy

- A. The specified camera shall be manufactured in accordance with ISO 14001.
- B. The specified camera shall be compliant with the EU directives RoHS and WEEE.
- C. The specified camera shall be compliant with the EU regulation REACH.

END OF SECTION