

## 1.0 Manufacturer

Merit LILIN ENT. Co. Ltd  
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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 ZMR8122X2-P camera.

### Video Performance

- A. The camera shall have a minimum light requirement of 0.03 Lux at F1.8 in color mode, 0.007 Lux at F1.8 in BW mode, or 0 lux if IR on.
- B. The camera shall have a minimum light requirement of 0 Lux with IR led on.

### Power

- A. Power requirement for the network camera shall be DC12V, 13W or PoE+, 14W.
- B. The camera shall provide power consumption DC12V at 14W.

### Sensor

- A. The camera shall use a progressive scan 1/2.8" CMOS image sensor.
- B. The camera shall produce a maximum resolution of 1945 (H) x 1097 (V) = 2,133,665 pixels.

### Certifications

- A. The camera shall be compliant with CE certifications.
- B. The camera shall be compliant with FCC Class B certifications.
- C. The camera shall be rated to IP68 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 I3 or above 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 4GB or above for the camera.

### Mechanical

- A. The camera shall not exceed a dimension of 102.5mm (W) x 102.5mm (H) x 258mm (D) approximately.
- B. The camera shall not exceed a weight of 1050g approx. approximately.
- C. The camera window shall be at least Ø75mm heat resistant glass level & rain repellent glass.

### Video Streaming

- A. Video streaming format shall meet the standard H.264, and in order to provide better quality and compression rate, shall support H.264 main profile, H.264 high profile and also shall support Motion JPEG.
- B. The camera shall provide RTP/HTTP, RTP/TCP, RTP/UDP and multicast features.
- C. The camera shall provide 4 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, smart H.264 encoding mode.
- E. The camera shall provide smart H.264.
- F. The camera shall provide 3 of resolution in browser for user easy to change resolution.

### Network Security

- A. The camera shall support up to 10 users for accessing the streaming.
- B. The camera shall support multiple user access levels with password protection.

**Authentication**

- A. The camera shall support base64 HTTP encryption, digest HTTP authentication, 802.1x, IP address filtering, RTSP authentication, HTTPS DDNS via HTTP.

**Integration**

- A. The camera shall be able to be accessed by the mobile device (IOS and Android).
- 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.

**SD Card Recording**

- A. The camera shall support micro SD, SDHC SD and SDXC SD.
- B. The camera shall support circular recording.

**Web Browser**

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

**Alarm Events**

- A. The camera shall support motion detection, tamper detection, audio detection, network lost detection.

**Alarm Notification**

- A. The camera shall provide alarm notification with FTP, STMP, HTTP post, SD card, SAMBA and alarm output.

**IVS Basic 1.0**

The camera shall support IVS basic 1.0: motion detection, tampering detection, advanced motion detection, traffic light detection, tripwire detection and object counting.

**Environmental**

- A. The camera shall be operated in following temperature range: -40°C – +50°C/-40°F – 122°F.

**Lens**

- A. The camera shall support zoom Lens at 7.0 – 22 mm.
- B. The camera shall support horizontal angle of view at 41° – 14°.
- C. The camera shall support vertical angle of view at 22° – 8°.
- D. The camera shall support diameter angle of view at 48° – 18°.

**Infrared LED**

- A. The camera shall support IR distance at 40M.
- B. The camera shall support peak wavelength at 850nm.
- C. The camera shall support beam spread at 60°, 90°.
- D. The camera shall provide rain repellent glass.

**Video Resolutions**

- A. The network camera shall be able to produce images in 1920x1080 (1080P), 1280x960, 1280x720 (720P), 720x480 (D1), 720x576 (D1), 640x480, and 352x240 (CIF).

**Maximum Frame Rate**

- A. The camera shall produce 30 fps @ 1920 x 1080 resolution with H.264 video compression.
- B. The camera shall produce 30 fps @ 1920 x 1080 resolution with MJPEG video compression.

**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.

**White Balance**

- A. The camera shall provide the white balance settings including: auto, tungsten, indoor, fluorescents 1, fluorescents 2, outdoor 1, custom.

**Video Quality**

- A. The camera is able to specify its shutter speed for min and max range 1/30(1/25) s to 1/30000s for various environments.
- B. The camera shall support 2D WDR.
- C. The camera shall support HDR at 100dB.
- D. The camera shall support 3D noise reduction.
- E. The camera shall support privacy mask up to 4 zones.
- F. The camera shall provide the sense up settings including: off, 1 frame, 2 frames.
- G. The camera shall support Sense up+.
- H. The camera shall support auto gain control up to 66dB.
- I. The camera shall support lens distortion correction.
- J. The camera shall support S/N Ratio.

**Network**

- A. The camera shall support 10Base-T, 100Base-TX.
- B. The camera shall support LILIN API (CGI).
- C. The camera shall support display OSD date, time, camera name.

**CPU**

- A. The camera shall support up to embedded SoC ARM Cortex-A9, 600MHz.
- B. The camera shall support up to 256MB DDR3, 256MB flash memory.

**Video Display**

- A. The camera shall provide the video display settings including: LILIN Universal Active X, HTML 5.

**OS**

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

**Protocols**

- A. The camera shall support the following network protocols: IPv4, IPv6, TCP, UDP, HTTP, HTTPS, SMTP, SIP, MQTT, QoS, SNMP Trap, NTP, DDNS, UPnP, FTP, ARP, DHCP, PPPoE, DNS, RTSP, RTCP, Telnet, ICMP, IGMP, ONVIF Profile S, SDDP, Bonjour, 802.1x 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.

**Others**

- A. The camera shall support multi IP addresses.

**4.0 Installation**

- A. All equipments 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