1.0 Manufacturer

Merit LILIN ENT. Co. Ltd
No. 20, Wu-Kong 6 Rd.,
Wu-Ku Industrial Zone Wu-Ku District,
New Taipei City, Taiwan R.O.C.

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 P3R6322E2 camera.

Video Performance

A. The camera shall have a minimum light requirement of 0.02 Lux at F2.0 in color mode, 0.003 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, 5W or PoE, 5.8W.

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) × 1097 (V) = 2,133,665 (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 Ø110 × 89(H) mm approximately.
B. The camera shall not exceed a weight of 520g approximately.

Alarm Input / Output

A. The camera shall support 1 digital input (TTL, +3 – 5VDC) terminal block.
B. The camera shall support MOS relay contact N.O., load.max. 40VDC, 450mW/300mA,450mW, terminal block.

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, H.264 high profile, 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 provide ePTZ & digital zoom.
E. The camera shall support VBR, CBR, GOP adjustable, fixed bitrate range encoding mode.
F. The camera shall provide encoding mode smart H.264.
G. The camera shall provide encoding mode smart H.265.
H. The camera shall provide 4 resolution in browser for user easy to change resolution.
I. The camera shall support RTSP unicast streams and multicast streams.

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.

C. The camera shall support ONVIF search disable setting for preventing unauthorized system search and keeping device secure.
D. The camera shall support Metadata.
E. The camera shall support RTCP Check.
F. The camera shall support UPnP and Bonjour service disable setting for preventing unauthorized system search and keeping device secure.
G. The camera shall support IP address filtering for security purposes.
H. The camera shall display the number of currently connected devices to video, to know the device connection status.

Authentication

A. The camera shall support base64 HTTP encryption, digest HTTP authentication, IEEE 802.1x, IP address filter, MAC address filter, RTSP authentication, DDNS via HTTPS, HTTPS encryption
B. The camera shall support login account digest access authentication for avoiding passwords being extracted improving the network security.
C. The camera shall support HTTPS encryption of data. It shall support self-import of digital signatures, and change HTTPS port.
D. The camera shall comply with IEEE 802.1x authentication protocol transport.
E. The camera shall be compatible with IEEE 802.1x, and it shall support EAP-PEAP and EAP-TLS methods selection.
F. The camera shall require a username and password for video transmission over RTSP streaming.
G. The camera shall support ONVIF search enable/disable to avoid using public tools to search for the device and to reduce network security risks.

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 conform to the ONVIF profile T standard and provide official documentation.
D. The camera shall support LILIN Navigator Enterprise 2.0.
E. The camera shall support 3rd party VMS through LILIN HTTP API.

SD Card Recording

A. The camera shall support micro SD, SDHC SD, SDXC SD.
B. The camera shall support circular recording.
C. The camera shall support SD card size up to 128 GB.

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, tamper detection, alarm detection, network lost detection
B. The camera disconnected network detection shall support automatic related alarm triggering and recording to SD card when there is no streaming output, no matter how many network devices are connected in a series.
C. The camera shall support multiple event triggering alarms to avoid false alarm and system integration.
D. The camera shall support trigger an alarm only when motion detection and digital input occur at the same time.
E. The camera shall support multiple schedule setting and set consecutive national holiday as holiday schedule.
F. The camera shall support smart event which includes five sets of events, each set of events can set five sets of conditions, when the conditions are met can do specific alarm trigger.
G. 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, SAMBA, SD card, SNMP Trap, Push notification.
B. The camera shall support FTP setting a timer to automatically upload photo for time-lapse photography purpose.
C. The camera shall support Event log, operation log, IVS event log.
D. The camera shall support holiday list schedule.

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 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 103.7°.
D. The camera shall support vertical angle of view at 57.8°.
E. The camera shall support diameter angle of view at 120.2°.

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°.

Video Resolutions
A. The camera shall be able to produce images in 1920x1080 (2MP), 1280x960 (1.3MP),, 1280x720 (1MP), 720x480 (D1), 720x576 (D1), 640x480 (VGA), 352x256 (CIF)

Maximum Frame Rate
A. The maximum frame rate under 60Hz is up to 30FPS @ 1920 x 1080 in normal mode.
B. The maximum frame rate under 50Hz is up to 25FPS @ 1920 x 1080 in normal mode.
C. The maximum frame rate under 60Hz is up to 30FPS @ 1920 x 1080 in HDR mode.
D. The maximum frame rate under 50Hz is up to 25FPS @ 1920 x 1080 in HDR 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: ATW-NARROW, ATW-WIDE, and AWC (MANUAL).
B. The camera shall support One Push AWC to ensure optimum white balance for the scene requirement.

Video Quality
A. The camera is able to specify its shutter speed for min and max range 1/30(1/25)s – 1/30000s 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 highlight protection to prevent overexposure caused by too much light.
D. The camera shall support 2D WDR, to reduce the brightness of the overexposed image.
E. The camera shall support HDR at 100dB.
F. The camera shall support 3D noise reduction.
G. The camera shall support privacy mask up to 4 zones and mask configurable.
H. The camera shall provide the sense up settings including: off, x2, x4, x8, x16 and x 32.
I. The camera shall support Sense up+.
J. The camera shall support auto gain control up to 60dB.
K. The camera shall support lens distortion correction.
L. The S/N ratio shall be more than 50dB (AGC off).
M. The camera shall support day and night switch selectable including day mode, night mode, auto mode, time schedule.
N. 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.

O. The camera OSD shall support foreground and background color change, and transparency adjustment.
P. The camera OSD shall support being drag-and-drop to the specified location in web interface through a mouse.
Q. The camera shall support adjustable position in OSD display for date, time, camera name, watermark and event status.
R. 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 three IP addresses simultaneously for different network connections.
D. The camera shall support to manually change the RTSP URL and Port for system compatibility.
E. The camera shall support to manually change the RTCP for system compatibility.

CPU

A. The camera shall support up to embedded SoC ARM Cortex-A9, 816MHz.
B. The camera shall support up to 512MB DDR3L, 256MB flash memory.

Video Display

A. The camera shall support LILIN Universal Active X, LILIN Java Applet.

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, MQTT, QoS, SNMP V1, SNMP V2, SNMP V3, SNMP Trap, Heart Beat, NTP, DDNS, UPnP, FTP, ARP, DHCP, PPPoE, DNS, RTSP, RTCP, Telnet, ICMP, IGMP, ONVIF Profile S, ONVIF Profile T, 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.
B. The camera shall support IP filtering and MAC address filtering to prevent denied devices access to the network ensuring security.

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