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 P2G1052 camera.

Video Performance

A. The camera shall have a minimum light requirement of 0.01 Lux at F1.4 in color mode, 0.007 Lux at F1.4 in B/W mode.

Power

A. Power requirement for the network camera shall be DC12V, 5W or PoE, 6W.
B. The camera shall provide power consumption DC12V at 6W.

Sensor

A. The camera shall use a progressive scan 1/2.8" CMOS image sensor.
B. The camera shall produce a maximum resolution of 2616 (H) × 1964 (V) = 5,137,824 (pixels).

Certifications

A. The camera shall be compliant with CE certifications.
B. The camera shall be compliant with FCC Class B certifications.

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 70(W) × 50(H) × 110(D) mm approximately.
B. The camera shall not exceed a weight of 380g approximately.

Video Output

A. The camera shall provide CVBS 1.0Vp-p, 75 ohm, RCA jack.

Audio Encoding

A. The camera shall support G.711 u-law, PCM, AAC, SIP.

Audio Capability

A. The camera shall support two-way audio.
B. The camera shall provide built-in microphone.

Alarm Input / Output

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

Video Streaming

A. The camera shall support H.265 / HEVC main profile.
B. 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.
C. The camera shall provide RTP/HTTP, RTP/TCP, RTP/UDP and multicast features.
D. The camera shall provide 4 streaming with combine compression and resolution at same time for various Internet or Intranet applications.

E. The camera shall provide ePTZ & digital zoom is supported.
F. The camera shall support VBR, CBR, GOP adjustable, fixed bitrate range encoding mode.
G. The camera shall provide encoding mode smart H.264 / H.265.
H. The camera shall provide 4 of 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 UPnP and Bonjour service disable setting for preventing unauthorized system search and keeping device secure.
E. The camera shall support IP and MAC address filtering for security purposes.
F. The camera shall support the system Log to store the IP address, account and related setting record of connected user for security purposes.
G. The camera web interface 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, IEEE 802.1x, IP and MAC address filter, RTSP authentication, DDNS via HTTPS, HTTPS encryption, SSL and TLS.
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 mobile device (IOS and Android).
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 hardware dewarping technology for third party video interoperability.

SD Card Recording

A. The camera shall support micro SD, SDHC SD and 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 10, IE 11, Chrome, Firefox, Opera and Safari for Mac OS.

Alarm Events

A. The camera shall support motion, tamper, audio, alarm, network lost detection, SmartEvent and push service for smartphone.
B. The camera alarm event shall support IVS detection, motion detection, digital input detection (if available), sound detection (if available), and disconnected network detection.
C. 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.
D. The camera shall support multiple event triggering alarms to avoid false alarm and system integration, including:
D.1. The camera shall support trigger an alarm only when motion detection and digital input occur at the same time.
D.2. The camera shall support multiple schedule setting, and set consecutive national holiday as holiday schedule.
D.3. The camera shall support at least five sets of events, each set of events can be set to at least five sets of

conditions, when the conditions are met, and the alarm is triggered.

D.4. 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 and SNMP Trap.
B. The camera shall support FTP setting a timer to automatically upload photo for time-lapse photography.
C. The camera shall support Event & operation log & IVS event log.
D. The camera shall support holiday schedule.

Standard IVS

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

Environmental

A. The camera shall be operated in following temperature range: -20°C – +50°C / -4°F – 122°F.

Video Resolutions

A. The network camera shall be able to produce images in 2592x1944 (5MP), 2560x1440 (3.6MP), 2048x1536 (3.1MP), 2304x1296 (3MP), 1920x1080 (2MP), 1280x960 (1.3MP), 1280x720 (1MP), 720x480 (D1), 720x576 (D1), 640x480 (VGA), and 352x240 (CIF).

Maximum Frame Rate

A. The camera shall produce 25 FPS @ 2592 x 1944 resolution with normal mode video compression.
B. The camera shall produce 15 FPS @ 2592 x 1944 resolution with HDR mode 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, 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.
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 auto, time schedule, day mode, night mode and external control. For ensuring the accuracy of day and night switching.

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 BMP file upload for display on the live screen as a watermark.
Q. The camera OSD shall support being drag-and-drop to the specified location in web interface through a mouse.
R. The camera shall support display OSD date, time, camera name, position configurable, watermark and event status.
S. 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 network storage for NAS (SAMBA/CIFS).
D. The camera shall support three IP addresses simultaneously for different network connections.
E. The camera shall support multicast TTL setting to prevent network congestion and affecting other network devices.
F. The camera shall support to manually change the RTSP URL and Port for system compatibility.
G. 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 provide the video display settings including: 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, SIP, 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 and IEEE 802.1x.

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 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