

1.0 Manufacturer

Merit LILIN Ent. Co., Ltd.
No. 20, Wugong 6th Road,
Wugu District, New Taipei City 248

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

2.0 Camera Network Description

The Day & Night 1080P HD Dome IR IP Camera described shall be a LILIN model number LR2122 or equivalent. The camera described shall be a high sensitivity megapixel camera using multiple-profile video streaming of H.264 and Motion JPEG technologies, built-in IR cut filter mechanism, auto color & mono switching, back light compensation, day & night applications for 24-hr surveillance, effective low light performance, and is PoE (IEEE 802.3af compatible) and/or can be directly powered using DC12V $\pm 10\%$.

3.0 General Specifications

- 3.1 The Day & Night 1080P HD Dome IR IP Camera shall incorporate a 1/2.5" Progressive scan CMOS sensor with 1920 (H) x 1080 (V) effective pixels. The network camera shall be able to produce images in 1080P, 720P, D1 or CIF resolution. The camera shall have a minimum light requirement of 0.4 lux at F1.6 / 0.5 lux at F1.8 in color mode (Low Light Mode) or 0 lux if IR LED on.
- 3.2 The camera shall produce 15 frames per second at 1080P resolution with H.264 video compression or produce 15 frames per second at 1080P resolution with Motion JPEG video compression.
- 3.3 The camera shall provide three streaming at same time for various Internet or Intranet applications.
- 3.4 The camera shall provide Infrared LED for ultra low lux night vision.
- 3.5 The camera's projection beam of infrared LED shall reach 16M with IR wavelength at 850nm.
- 3.6 The camera shall have at least 256MB of RAM.
- 3.7 The camera shall provide a TCP/IP protocol video output via a RJ-45 Ethernet connection.
- 3.8 User and Administrator password protection levels are provided.
- 3.9 The camera shall provide two sets of sensors or video quality for day and night that the setting can be programmed based on individual schedule(s).
- 3.10 The camera is able to specify its shutter speed for min and max range for various environments. (1/30s ~ 1/8000s)
- 3.11 The camera shall provide 3D noise reduction feature.
- 3.12 The camera shall provide WDR and BLC features.
- 3.13 The camera shall provide privacy mask features.
- 3.14 The camera shall provide PoE (IEEE 802.3af compatible) input.
- 3.15 The camera shall provide video mirror and flip features.
- 3.16 A recessed mechanical rest button shall be provided to return the camera to factory default settings.

4.0 Camera Networking Requirements

- 4.1 The camera shall incorporate a built-in web server.
- 4.2 The camera shall provide integrated support for IP, TCP, UDP, HTTP, SMTP, NTP, DDNS, UPnP, FTP, ARP, DHCP, PPPoE, DNS, RTCP, RTSP, Telnet, ICMP, IGMP, and ONVIF protocols.
- 4.3 The camera shall provide FTP services for sending JPEG snapshots based on scheduling and/or continuously sent with various time pattern, prefix, and postfix for JPEG file names that it can achieve better FTP system integration.
- 4.4 The camera shall provide email service for sending JPEG snapshots for at least 5 different recipients.
- 4.5 No unique or proprietary client software shall be required for viewing or controlling the camera.
- 4.6 The camera shall be user configurable and the administrator may functionally or aesthetically modify the camera’s web pages.
- 4.7 The camera shall provide 3G mobile remote live monitoring capability – Alarm PushVideo on smartphone devices (LILINViewer).
- 4.8 Multiple cameras installed shall be connected and managed by Center Management Software (CMX Software). Cameras can be grouped in the CMX Software. Camera groupings in CMX Software can be assigned for certain user(s) for user management purpose.
- 4.9 The camera shall provide IP filter to isolate a particular IP address for safety and related possible conditions.
- 4.10 The camera shall provide NTP (Network Time Protocol) feature so that the camera is able to connect to NTP network.
- 4.11 The camera shall provide OSD (on-screen display) feature which includes time display and device name display.
- 4.12 The Web server of the camera shall provide system log information for administrator(s) to view videos and operation details.
- 4.13 The camera shall provide alarm event notification via external alarm outputs on detections on audio, motion, and network lost.
- 4.14 The camera shall provide various alarm event outputs: i.e. GPIO (general purpose input/output), FTP (file transfer protocol) and email notification services to notify the users.

The camera shall not exceed a dimension of body: Φ 120 x 102mm and weigh no more than 450g. Power requirement for the network camera shall be DC12V \pm 10% / PoE (IEEE 802.3af compliant). The operating temperature for video camera shall be -25°C ~ +50°C (-13°F ~ 122°F). The camera manufacturer shall be ISO 9001 certified and Camera shall comply with CE.

5.0 Minimum Performance Specifications

IP CAMERA SERIES			
Day & Night 1080P HD Dome IR IP Camera			
Model		LR2122E4	LR2122E6
Lens	Focal Length	4mm	6mm

Architect & Engineering Specifications

	Iris	F1.6	F1.8	
	Angles of View	H	62.2°	43.6°
		V	37.4°	25.4°
		D	69.2°	49.4°
Pick Up Element	1/2.5" CMOS image sensor			
Effective Pixels	1920 (H) x 1080 (V) = 2,073,600 (pixel)			
Chip Size	5.7mmn (H) x 4.28mm (V)			
Scanning System	Progressive Scan			
Infrared Cut Filter	Auto / Schedule / Day (Color) / Night (Mono)			
Min. illumination	0.4 Lux at F1.6 (Low Light Mode) / 0 Lux with IR LED ON		0.5 Lux at F1/8 (Low Light Mode) / 0 Lux with IR LED ON	
White Balance	Auto / Tungsten / Indoor / Fluorescents 1 / Fluorescents 2 / Outdoor 1 / Outdoor 2			
Back Light Compensation	Off / On			
Electronic Shutter	1/30(25)s~1/8000s			
Sense Up	Off / 1 Frame / 2 Frames / 3 Frames / 7 Frames			
Sense Up+	Yes			
Auto Gain Control	36 dB Variable Gain			
3D Noise Reduction	Off / 1 ~32 Selectable			
2D WDR	Off / x2 / x3 / x4			
Privacy Masking	Off / On (4 zones)			
Image Effects	Brightness, Contrast, Hue, Saturation, Sharpness, Mirror, Flip			
Multiple profile	Peak Wavelength	850nm		
	Beam Spread	30°		
	Radiant Distance	16M		
Operating Temperature	-25°C ~ +50°C (-13°F ~ 122°F)			
Dimension	Ø120mm x 102mm			
Weight	450g			
Power Supply	DC12V±10% / PoE (IEEE 802.3af compliant)			
Power Consumption	DC12V, 7.5W / PoE, 8.5W			
NETWORK				
Video Compression	H.264, Motion JPEG			
Resolution	1080P (1920 x 1080), 720 (1280 x 720), D1 (720 x 480), CIF (352 x 240)			

Architect & Engineering Specifications

Maximum Frame Rate	H.264 : up to 15 fps @ 1920 x 1080 , 30fps @ 1280 x 720 , 30fps @ 720 x 480	
	Motion JPEG : up to 15 fps @ 1920 x 1080 , 30 fps @ 720 x 480 , 30 fps @ 352 x 240	
Video Streaming	RTP/HTTP, RTP/TCP, RTP/UDP, Multicast	
Video Bitrate	128 Kbps ~ 5Mbps	
	Frame rate and bit rate controllable on-the-fly	
	VBR / CBR / GOP supported	
Security	Base 64 HTTP encryption	
	Multiple user access levels with password protection	
	10 user accounts available	
Users	8 simultaneous users	
ePTZ & Digital Zoom	Yes, ROI is supported	
OSD	Text overlay for date, time, and camera name	
Alarm Function	image upload over FTP and email by face / tampering / audio / motion detection	
CPU, Memory	Embedded SoC ARM11, 528MHz, 256MB DDR2, 256MB flash memory	
Maintenance	Firmware update via HTTP	
	Firmware available at website	
Network Interface	10Mbps / 100Mbps Base-T, M12 connector	10Mbps / 100Mbps Base-T, RJ-45 connector
PC Requirement	OS: Windows 2000, Windows XP, Windows Vista, Windows 7	
	Browser: Windows Internet Explore 6, 7, 8	
	CPU: Intel Pentium 4 1.8GHz or above	
	RAM: 1GB or above, Independent Display Card	
Network Protocols	IP, TCP, UDP, HTTP, SMTP, NTP, DDNS, UPnP, FTP, ARP, DHCP, PPPoE, DNS, RTSP, RTCP, Telnet, ICMP, IGMP, ONVIF	
Mobile phone	iPhone, iPad, and Android support	
System Integration	ONVIF & LILIN HTTP API	
CMX	CMX HD 3.6 support	
Video Display	LILIN Universal ActiveX & LILIN Java Applet	
OSD	Embedded Linux 2.6.32	

*Please submit ISO 9001, CE certificates.

*This specification is intended for use by the design/construction professional and any user of LILIN products to assist in developing project specifications for security and video surveillance systems.