



### RLC-BF 2450

- Excellent picture quality in Approx. 3.2 Megapixel,
- 3 Megapixel (2048x1536) maximum resolution,
- DynaBoost:Cutting edge WDR (120dB) to enhance visibility under Extremely bright or dark enviroments,
- Dual codecs (H.264, MJPEG) with dual streaming Capability,
- ICR Day/Night function,
- Maple Series.

FULL HD  
1080





#### ■ CMOS Sensor

CMOS sensors give highest picture quality as well as the best sensitivity at both bright and dark locations. They perform on-chip analog to digital signal conversion and two-step noise reduction in parallel on each column of the sensor. This can help to reduce the amount of "seen" pixels when you zoom in on a photo.

#### ■ ONVIF

The Open Network Video Interface Forum (ONVIF) is a global and open industry forum which its goal is to facilitate the development and use of a global open standard for the interface of physical IP-based security products. RedLeaf is a member of ONVIF.

#### ■ Power over Ethernet (PoE)

With PoE a single cable to provide both data connection and electrical power to electronic devices.

PoE allows for great reductions in installation costs as there is no need to install separate power cables for the camera.

#### ■ The Best Possible Image

It is always important to produce the best possible image considering the environmental conditions.

Our expertise is to process the input light by means of a high quality lens, a sensitive image sensor and a powerful DSP processor to produce a crystal clear output image which is superior to any other solution currently available in the market.

#### ■ Vivid Pictures in Darkness

A high percentage of unwanted events happen at night or in low-light conditions. This puts the priority of having a high performance security solution in low light conditions to a very high level. RedLeaf cameras have an unprecedented image quality independent of the lighting conditions, and provide a lucid image at very low lux levels.

FULL HD  
1080

 ONVIF

## ■ Higher Resolution Doesn't Mean Higher Quality

A high pixel count doesn't necessarily mean that the captured image has a high quality. So there may be a high resolution image advertised as HD, full HD, etc. but the quality of the picture won't be that much remarkable to your eyes.

The low quality of the output image of a camera despite the high resolution settings has two main causes.

First is the high compression levels applied to the camera for bandwidth saving and second is the low quality image sensors utilized inside the camera as well as basic image processing techniques.

For having "real" high quality image it is necessary to use more advanced technologies instead of basic WDR and noise reduction techniques.

RedLeaf uses new technologies named

SDNR and WDR+ to provide a high resolution image with a high quality.

## ■ SDNR (Smart Dynamic Noise Reduction)

One of the vital features of an IP camera is its ability to reduce the noise in the image under low light conditions. RedLeaf uses a complex method that performs signal processing on the fixed and moving parts of each frame separately. This smart technology combines the results of 2D and 3D NR signal processing which results in a crisp and high quality image output.

## ■ WDR+

The wide dynamic range (WDR) function of RedLeaf cameras provides clear images even under strong back light conditions, namely when there exist very bright and very dark areas simultaneously in the field of view of the camera. WDR enables the capture

and display of both bright and dark areas in the same frame, in a way that no important detail is lost in the shadows or highlights.

Full-fledged technology of WDR broadens the dynamic range of the RedLeaf cameras by using two distinct methods:

### - Multi-frame imaging:

the camera captures more than one frame of the scene with different exposure parameters and then combines them to produce a vivid and full detail output picture.

### - Non-linear sensors:

the sensitivity of the sensor is different at different illumination levels so the details of dark and bright areas of the scene are fully captured.

## ■ SMART IR

Our eyes are designed to detect visible light waves, although this is only a small portion of the electromagnetic spectrum.

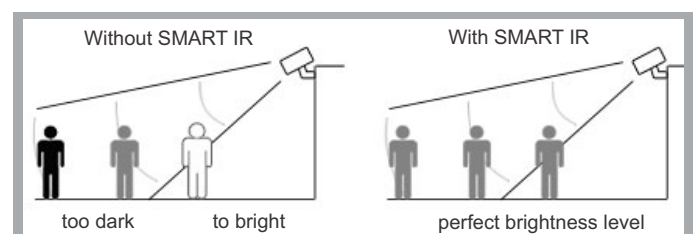
Infrared (IR) light is electromagnetic radiation with longer wavelengths than those of visible light, extending from the nominal red edge of the visible spectrum at 700 nanometers (nm) to 1 mm. Infrared radiation of an object is a measure of the heat which it emits in the space.

Almost every object emits some level of energy in form of IR radiation, even if it is small. In low light conditions a combination of hardware and software procedures allow RedLeaf cameras to capture the IR radiation projected by an object.

This technology is called Smart IR and one of its unique characteristics is that it can vary the intensity of the IR illuminators depending on the distance of the object to the camera. This results in a clear image even in total darkness.

The IR LEDs used in RedLeaf cameras provide a life time of roughly ten times more than that of the regular LEDs.

Also, the low amount of heat which radiates from this kind of LEDs minimizes the damage resulting from the IR radiation to the inner camera parts. The LEDs of RedLeaf cameras can be replaced easily if any accidental damage happens, without the need to replace the whole kit.



## Technical Specifications

### RLC-BF 2450

#### Camera

Image device	1/3- type CMOS
Number of effective pixels	Approx 3.2 Megapixel
Minimum illumination	Color: 0.05 lx , 0 lx IR ON
Electronic shutter speed	1/1 to 1/10,000 s
Gain control	Auto/Manual
Focal length	3.3 ~ 12mm
Exposure control	Full auto, Shutter priority, Iris priority, Manual
White balance mode	Auto, ATW, Indoor, Outdoor, One-push, manual, Sodium vapour lamp
F-number	F1.6 to F3.5

#### Camera features

Day/Night	Yes (IR-cut Filter)
DynaBoost	Yes (120dB)
Noise reduction	Yes (SDNR)

#### Image

Codec image size(HxV)	3M (2048x1536) / Full HD(1920x1080) /1.3M (1280x1024) 1.2M (1280x960) / HD (1280x720) / D1 (704x576) / CIF (352x288)
Video compression format	H.264,MJPEG
Codec streaming capability	Dual streaming
Maximum frame rate	30 fps (H.264 & MJPEG @ 1080P) / 20 fps (H.264 and MJPEG @ 3M)

#### Audio

Audio compression	G.711 / G.726
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#### Network

Protocols	IPv4,IPv6,TGP,UDP,ARP,ICMP,IGMP,HTTP,HTTPS,FTP (client/server), SMTP, DHCP, DNS,NTP, RTP/RTCP,RTSP,SNMP (MIB-2)
ONVIF software	Yes (Ver. 2.0)
Number of clinets	20
Authentication	IEEE802.1x

#### Interface

Local recording	SD memory card x1(compatible with the SD/SDHC standards max 32GB)
Ethernet	10BASE - T/ 100BASE-TX (RJ-45)
Sensor input	2
Alarm output	1
External microphone input	mini-jack (mono)
Audio line output	mini-jack (mono), max output level:1Vrms
Analog video output	Yes 1*BNC (75Ω)

#### General

Weight	1.2 KG
Dimension(ØxHmm)	105 x 307 mm
Power requirements	PoE, DC12V, AC24V
Outdoor	Yes (IP66,IK10)
Operating temperature	-15°C~60°C
Safety regulation	UI2044, FCC 158 Class A, IC Class A,IEC60950-1, EN55022(A)+EN55024+EN50130-4, VCCI Class A, C-Tick class A

#### System Requirements

Operating system	Windows XP™ - Professional Edition Windows Vista™ (32/64bit) - Ultimate, Business Edition Windows 7 (32/64bit) - Ultimate, Professional Edition Windows 8 (32/64bit) – Pro Edition
Processor	Intel Core2 Duo 2.33 GHz Or higher
Memory	2GB or more
Web browser	Microsoft Internet Explorer® Ver. 6.0 and higher Google Chrome® Ver.4.0 and higher (Plug-in free viewer only) Firefox® Ver.3.5 and higher (Plug-in free viewer only) Safari® Ver.4.0 and higher (Plug-in free viewer only)

## Dimensions

