# NetCam-2 Series Digital Network Cameras

- I/4-inch Format CCD color camera
- Up to 720x486 resolution
- Wavelet compression
- TCP/IP protocol
- I0BaseT Ethernet port
- Integrated server for one additional camera
- Internal HTML pages for viewing and administration
- Improved GUI for Real time viewing in single or dual display
- Video motion detection and alarm contacts
- Dial in and dial out via external modem



The NetCam-2 series of self-contained network cameras comprises a high-resolution color camera, wavelet video compression, video motion detection and a network server for up to 100 simultaneous network clients. The NetCam-2 has inputs for one additional standard analog color camera. Acting as a server for this additional camera, the NetCam-2 will transmit the images of the 2 channels individually or in dual mode.

The network interface is compliant with 10BaseT Ethernet and supports the TCP/IP set of communication protocols allowing communication on private networks, Intranets and the Internet. By connecting an external modem, the unit can also communicate over public telephone lines.

Alarms can be triggered by the software video motion detector, or a contact closure input. Once an alarm is generated, the camera will send alarm pictures to a predefined e-mail address or upload the pictures to a file on a network server using FTP. The connection is either over the LAN or an external modem dial-up connection.

The cameras have outputs for a video iris lens and serial outputs for control of Pan and Tilt units, Zoom lenses and AutoDomes $^{TM}$ .

Security options include password access protection, IP address filtering and image encryption.

A PC with standard Internet Explorer or Netscape browser is used for viewing of the network camera images.

The user control functions enable the selection of individual images or a dual screen. The picture update rate, image resolution and image size are adjustable from the viewing location.

In order to enhance the picture update rate, a quality box can be defined for the area of interest. This part of the picture is transmitted at the selected picture quality, while the remainder of the picture is transmitted at reduced quality.





## **SPECIFICATIONS**

### **ELECTRICAL**

Model **Nominal** Color No. voltage/power system NetCam-2 12 VDC/24 VAC/5 W NTSC LTC 0202/11 12 VDC/24 VAC/5 W PAL

Internal camera and video specification:

Imager: Interline transfer CCD I/4-inch image format.

**Active Picture Elements:** NTSC Models: 768 H x 492 V. PAL B Models: 752 H x 582 V.

Sensitivity: 3 lux (0.3 fc) 1) for f/1.2 lens, 89% scene reflectance

Horizontal Resolution: 480 TVL.

Signal-to-Noise:

46 dB.(Unified weighting filter per CCIR Recommendation

567).

**AGC:** 18 dB.

Shutter speeds: Automatic; up to 1/100,000 sec. White Balance: Auto tracking; 2500 K to 8,000 K. Contouring: Horizontal and vertical symmetric,

**Gamma: 0.45** 

Video output: Output I on a BNC; I Vpp into 75 Ohms.

**Video inputs:** 

Input I, selected by switch (V-in/V-out) on a BNC I Vpp, selectable 75 Ohms or high impedance

Lens:

C/CS-mount.

Video-iris: 12 VDC 40 mA max.

Video level: 1.0 Vpp

Network

32bit RISC Processor Flash memory: 8 MB

RAM: 16 MB

**Operating System:** Embedded Linux

**Video Channel (Input / Output):** 

Selection internal/external camera and terminating/nonterminating inputs

DHCP, FTP, SMTP, PPP, PPPoE

Network Line: 10Base-T Ethernet LAN

**Compatible Browsers:** 

MS internet Explorer Ver 5.0 or later

Netscape Ver 4.7 or later

Java applet for Windows based computers

Operating system: Windows 98/ME/NT4/2000/XP

Network protocols: TPC/IP, HTTP, ARP, RARP, ICMP,

Image Resolution: 720X486, 720X243, 360X243,

180X121, 90X60

**Image Compression:** 

Compression: Wavelet, Progressive mode Compression Ratio: 10:1 ~200:1 (typical 30:1)

Frame Rate: Max 30 frame/sec

**Performance:** 

Transfer Rate: Max 120 fps, Decoding Rate: 2~15 fps,

Management and Software Update:

Remote system-configuration

Flash memory allows new version software updates

through local LAN network

**Security:** 

Password protection IP Address Filtering

Alarms and I/O:

Motion detection (Activity detection) Automatic e-mail and file transfer

I opto-coupler alarm input, 5 to 12 VDC, 10 to 20 mA.

Miscellaneous functions:

High quality image area setting

Image quality control (10 levels of compression)

Periodical image transfers through e-mail and uploads to a server using FTP using LAN or automatic dial-up

connection

Grey/Progressive/Single-shot Mode

**Serial Ports:** 

I  $\times$  RS-232 and I  $\times$  RS-485 on terminal block connector. RS-232 is used for PTZ control driver or PSTN modem.

RS-485 is used for PTZ control driver

External power supply: 12 VDC/1.5 A; 100 – 240 VAC;

Power supply unit included

#### **MECHANICAL**

#### Connectors:

- Ix BNC, video.
- RJ-45 Ethernet.
- General Interface.10-pole terminal block RS232 RS485

Alarm sensor input.

- 4-pin video iris connector
- 3-pole terminal block for 24 VAC power input
   3-pole direct zoom/focus connector, +/-6 V with

common pound

- Power 5 mm circular, center positive (12 Vdc)

Camera mounting: Top and Bottom; I/4-inch 20 UNC

Lens mounting: C and CS

**Dimensions:** 75 x 65 x 150 mm (HxWxD\*)

\*including connectors

Weight: 0.8 kg

# **ENVIRONMENTAL**

Camera:

Temperature range:

Operating: -5 to 45°C (23 to 113°F) Storage: -40 to 70°C (-40 to 158°F)

Operating Humidity: 5% to 93% non-condensing

General Standard according to EN50130-5 Class I

**Electro Magnetic Compatibility:** 

**Emission:** 

PAL model: EN 55022, Class B; NTSC model: FCC part 15, Class B

Immunity: EN 55024 for ITE equipment

Certification: CE, UL1950 & FCC

Power Supply Unit: Temperature range:

Operating: -5 to 45°C (23 to 113°F) Storage: -40 to 70°C (-40 to 158°F)

**Operating Humidity:** 5% to 95% non-condensing General Standard according to EN50130-5 Class 2

**Electro Magnetic Compatibility: Immunity:** Meets FCC part 15, Class B

CE: Compliant, class B

**Delivered accessories** 

Set-up software

Cross-over network cable



NetCam-2 Home page



**NetCam-2 Full Viewer** 

