The world's smallest and fastest, 360 degree camera system

NM33

The revolutionary of the security camera world

"With 360-degree viewing angle and high-performance in a compact body, this camera has no blind spot."

- Building all solutions in a small cubic body of thirty-three millimeter on a side, the camera system with the high quality image and multi-task functions surely secure your daily life.
- Equipped with a newly developed small-sized fisheye lens（φ20mm）, it takes pictures in hemispheric field of vision.
- The images on a 3 million pixel CMOS sensor assure clarity in enlarged images.
- High reliability and high image quality thanks to glass lenses.
- Equipped not only with a NTSC/PAL composite output terminal, which can be directly connected to VCR, but also with a digital signal output for JPEG image.
- Thanks to the built-in, newly developed, high-speed processor, you can convert a hemispherical image to a flat image and can zoom or scroll any portion of the images.
- Thanks to the auto-panning function, you can enjoy auto-panning at your ease without turning your camera or extra image processing. The elimination of the swinging mechanism has reduced its cost and risk of malfunction.

- You can control the camera view with your command through the the specified circuit. You need not any troublesome setting up.
- In addition, by linking the NM 33 to networks, you can utilize the NM 33 as an in-store monitoring system and a real-time communication system with various mobile or cellular telephones.
- The image digitally captured in a facility by this 360 degree wide-angle camera can be transferred to a remote place without gradation for monitoring in real time through a digital to digital image processing server.
- This camera can be built in your current system on the spot, and assures you promising performance.
- Thanks to its attractive size and high performance, NM 33 offers a variety of applications never experienced before.

Designed by:

OPT Corporation
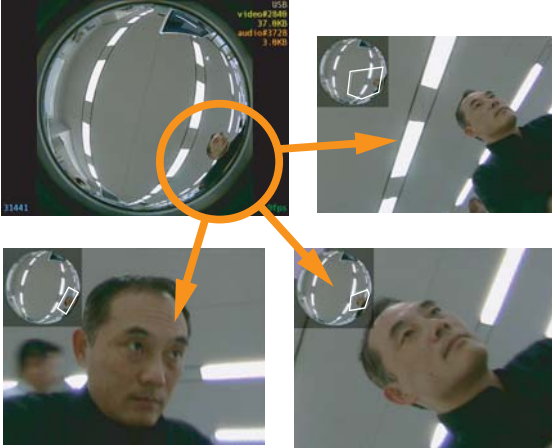5423-2 Miyagawa, Chino-shi, Nagano-ken 391-0013 Japan
Phone: +81-266-82-0020, Fax: +81-266-82-0022

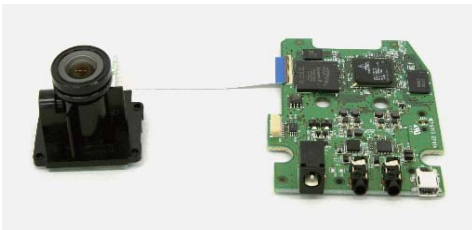# *The revolutionary of the security camera world*
NM33 family

Specification (NM33-N)

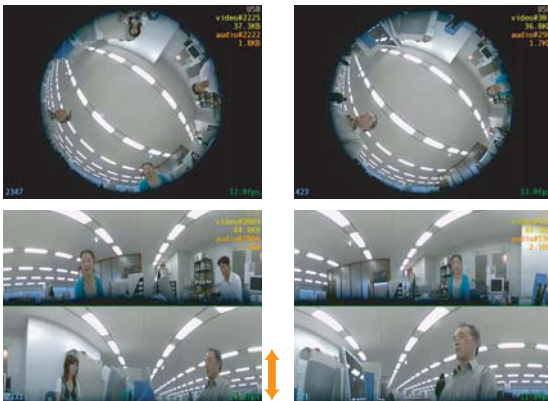| item	value
Power	
Supply Voltage	5.0 V ± 5 %
Consumption Current	500 mA max.
Lens	
Object Distance	10 mm～ infinity (from the lens surface)
Viewing Angle	180°(V) + 360°(H)
Image Sensor	Single-panel 1/2" Color CMOS
Effective Pixels (h x v)	2048 x 1536, approx. 3.15M pixels
Usable Pixels	approx. 1.70M pixels
Minimum Light Required	5 lux
Analog Video Output (VBS mode)	NTSC/PAL switchable
Video Signal System	1 Vp-p Composite Video, Negative Sync.
Output Drive Capability	75 Ω
Digital Video Output	USB1.1 (full speed)
Frame Rate	15fps max.
Image Compression Type	JPEG
Image dimension	640 x 480 pixels (VGA size)
	320 x 240 pixels (QVGA size)
Dimension	
size	W:39.0 x H:30.0 x D:28.0 mm
weight	60 ± 5 g
Operation Environment	Temperature: 0 ～ 40 ℃
	Humidity: 20 ～ 80 %(Rh) No-condensation
Storage Environment	Temperature: －20 ～ 60 ℃
	Humidity: 20 ～ 90 %(Rh)

How good a 3 Mega pixel is

Zoom up image is still good as these !

Board Camera type (NM30B)

Fringe Priority (FRIP) lens :
image of surround area looks more realistic in ratio

Standard type lens vs **FRIP lens**

Dome Type Camera (NM33D-F)
FRIP lens is built-in.
Good for the setting in vertical angle either on a table or under a ceiling. A whole room area can be monitored by one camera.

φ5 inch

USB - digital output.
BNC - NTSC/PAL composite output

DTC Reduction system :
Sending Digital Image will dramatically improve the visual communication for Video Conference and Store Control. It supports your company in reducing Distance, Time, and Cost.

Degital-in digital-out

Remote Monitoring system DTCR - N/F

Connecting in LAN network, the camera works as a WEB Camera, but with very high resolution and high frame rate.

OPT Corporation supplies you Omnidirectional world