

360° Mega pixel camera Module

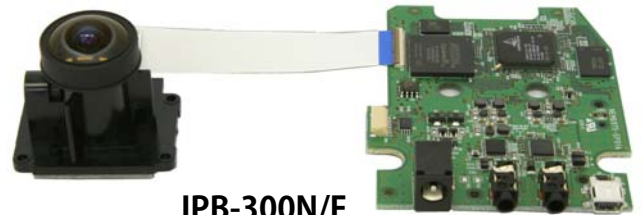
This camera has no blind spot

3 Mega pixel

Image de-warping software is installed

Key features

- ◆ **3 Mega Pixel** color CMOS Sensor
- ◆ Small size Fish-eye lens
 - Get Omnidirection image ~ No blind spot!
 - Focus adjustment is not required.
- ◆ Ultra Wide angle : 2 models of 180° & **214°** possible to reduce the number of cameras
- ◆ **Image de-warping software** is in the camera ~ output the image after de-warped
- ◆ Digital auto-panning feature
- ◆ Digital PTZ
 - No moving parts = quick response, high durability
- ◆ Dual out put of Analog/Digital signals
- ◆ Because of **small size Module**,
 - Easy to install into various shape of housing
 - Good for fitting in a narrow space

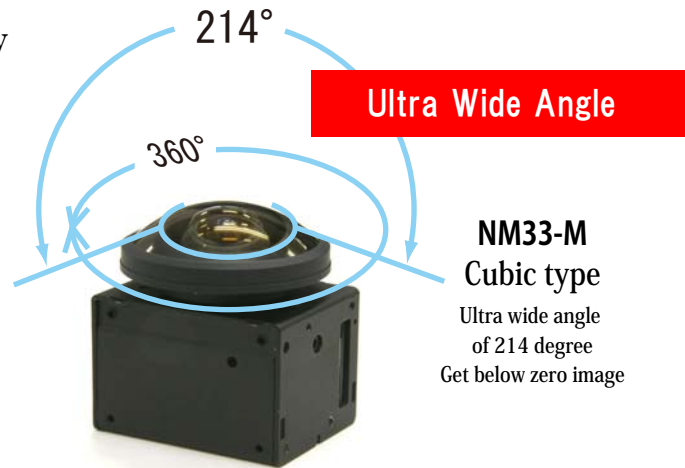


IPB-300N/F
Board camera type



NM33-N/F
Cubic type

Small body of
30 x 39 x 27mm
Easy for handling

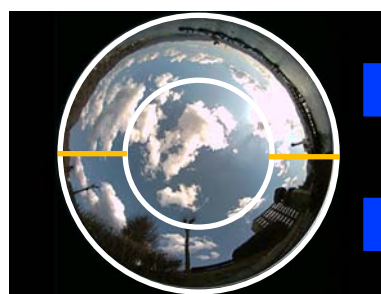


NM33-M
Cubic type
Ultra wide angle
of 214 degree
Get below zero image

Example: to de-warp and enlarge a designated area



Sub-image can be ON/OFF



Extract the fish-eye round image ... into 180 degree each Panoramic images



Specification

Items	Specification
Power	
Power Voltage	5.0 V \pm 0.5 V
Consumption Current	500 mA
Max Rated Voltage	-0.3 ~ 6.0 V
Lens	
Focus Length	ϕ 25 mm (N,F) ϕ 38 mm (M)
View Angle	10 mm $\sim \infty$ (from Lens surface)
View Angle	180° (N, F)、214° (M)、
Image Sensor	
Effective Pixels	H: 2048 x V: 1536、 approx. 3.15 M pixels
Usable Pixels	approx. 1.7 M pixels
Minimum Light Required	5 lux (skin color base)
AV Output (Analog)	
(VBS mode)	NTSC/PAL switchable (when ex-factory)
Video Signal system	Composite VIDEO 1Vp-p, Negative Sync.
Output Drive Capacity	75 Ω
AV Output (Digital)	
(USB FS mode)	Video Frame Rate 15 fps (max.)
Signal type	USB1.1
Imager Compression	JPEG
Image Dimension	
	640 x 480 VGA size
	320 x 240 QVGA size
	1536 x 1536 LARGE mode (Cubic type)
Control Input	USB1.1
Dimensions	
Size	39(W) x 30(D) x 27(H) mm (Cubis type)
Weight	approx. 60 ~ 80 g
Operation Environment	
Temperature	: 0 ~ 40°C (no condensing)
Humidity	: 20 ~ 80 %Rh
Storage Environment	
Temperature	: -20 ~ 60°C
Humidity	: 20 ~ 90 %Rh

※ Specificatio varies in each model.

※ Specification is the subject of change without notice.

Examples: Housing

Because of small size, possible to fit in various shape of housing.



◀ Flat type
applied for China Shanghai Sub-way car camera more than 9,500 units.

▶ Dome type
can fit in ϕ 6cm



◀ Ceiling fit type
built-in the down-light housing.

▶ Plate type
low-cost design



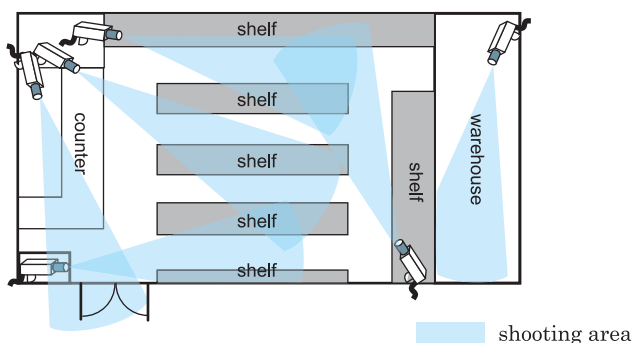
【 Feature of 360 degree camera 】

Good for reducing the number of cameras, monitors, and installation labor. Elimination of the swinging mechanism reduces its cost and the risk of malfunction.

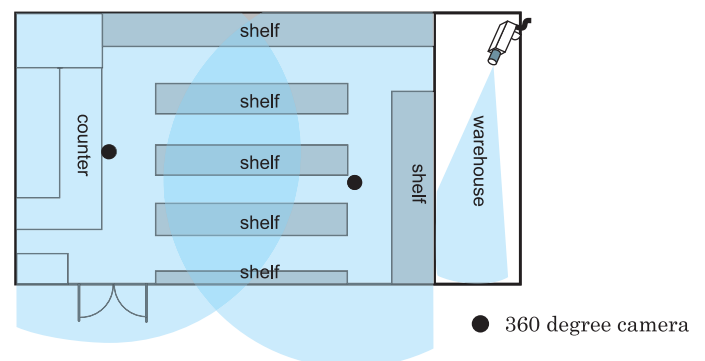
Image of application of 360 degree cameras

(Example: supposing a small size (15 x 8 m) store)

【 in case of Conventional cameras 】



【 in case of 360 degree cameras 】



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