High Resolution 360° Network Camera

Excellent clear view in 360° wide long range

Best & first in the World

12 Mega Pixel

NUD360-F
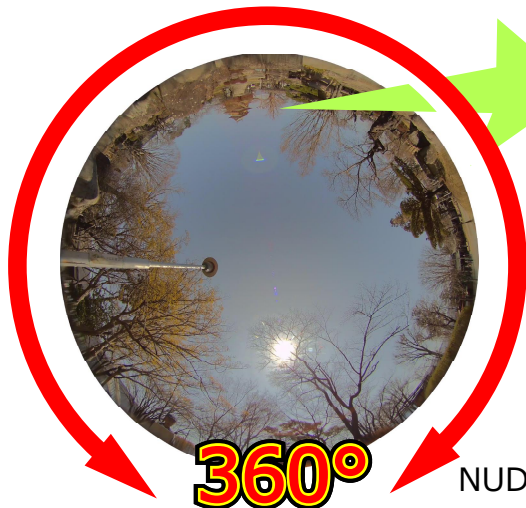
This camera has no blind spot

| H.264 Video Codec | 12.4 Mega High Resolution | ONVIF Network Connection |

Partial enlargement (80m ahead)
Monitoring with high resolution all the way around far

180° x2 panorama view

360°

NUD360-F realized a true 360° camera
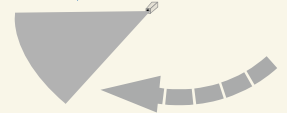
NUD360-F solves faults of the conventional surveillance camera.

Swing type 360° camera

The direction where the camera does not face becomes a blind spot. A life of mechanical movement is short. (5,000H)

High magnification directional camera

needs to use multiple number of cameras to watch all around, this spends extra costs for equipment, system, construction and monitoring labor.

◆ Built-in 12.4 Mega pixel color CMOS Sensor (SONY)

◆ Newly designed ultra high resolution fish-eye lens performs high image quality in the fringe area
  - a long range surveillance in 360-degree all around view
  - Reduce number of cameras, system cost

◆ No focusing is required   speedy work and high durability (75,000H)

◆ Network connectable   Central remote controlling

◆ IP66 IK10 Dust & Water proof dome housing

The best camera for urban surveillance system connectable to NTT DATA's New IoT platform "ANYSENSE®"
E-mail : anysense_sales@kits.nttdata.co.jp

Ver. 17

A leading company for 360° camera

OPT Corporation

ooparts technology

Specification   Model : NUD360-F

Camera	
Image Sensor	1/1.7" Progressive Scan CMOS
Effective Pixels	4072 × 3046(V)　(12.4 M)　pixels
Minimum Illumination	Color: 0.1 lux (30 IRE、2400°K), B/W: 0 lux (IR LED ON)
Day/Night	Yes, Mechanical IR cut filter
Color to B/W switch	On/Off/Auto
IR LED	850 nm X 18 Working distance: 20 m (0 lux, 30 IRE, gain 255, auto shutter mode)
Electronic Shutter	1/5~1/10,000 sec (auto), 1/5~1/2,000 sec (manual)
S/N Ratio	56 dB
LENS	
Lens Type	Fish-eye Lens (stereographic projection type)
Focal Length/Aperture	f=1.44 mm/F1.8
Viewing Angle	Horizontal: 180, Vertical: 180°
Iris / Focus	fixed
Video	
Compression	H.264、M-JPEG
View Mode	Fisheye view, Dewarped view; 180°/360°Panorama, ePTZ
Max. Frame rate vs. Resolution	18 fps/4000x3000, 10 fps/4096x2160, 10 fps/3840x2160 30 fps/2048x2048, 30 fps/1600x1200, 30 fps/1920x1080 30 fps/1024x1024, 30 fps/1280x960, 30 fps/1280x720 30 fps/800x600, 30 fps/640x480
Multi-Streaming	Simultaneous 3 streams (based on Video configuration)
Bit Rate	Constant, Variable (128 Kbps~12 Mbps/Stream)
Privacy Mask	Enable/Disable, Max. 8 configurable regions
Image Enhancement	WDR (130 dB),　White balance (auto, manual) Brightness, Contrast, Sharpness (auto), AGC Digital noise reduction, Flickerless, Defogging
Text Overlay (OSD)	Yes
Image Orientation	Flip, Mirror
Built-in Analytics	Line Cross, Enter Area, Missing Object, Unattended Object etc.

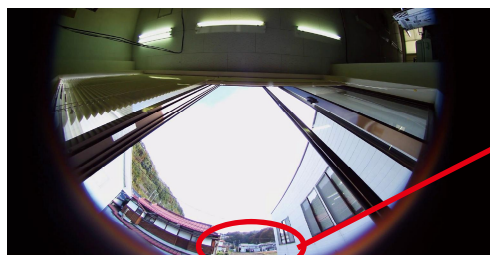| Audio	
Compression	8 KHz, Mono, PCM, 16 bit encoding; G.711
Audio In/Out	Connect to Terminal Block
Network	
Protocol & Service	TCP, UDP, HTTP, HTTPS, DHCP, PPPoE, RTP, RTSP, IPv4, IPv6, DNS, DDNS, NTP, ICMP, ARP, IGMP, SMTP, FTP, UPｎP, SNMP, Bonjour, Sony VISCA, Pelco D, Pelco P
Ethernet Port	Ethernet (10/100BASE-T), RJ-45 connector
Security	IP address filtering, HTTPS encryption, Password protected user levels IEEE802.1X network access control, Anonymous Login
Alarm	
Alarm Trigger	Video motion detection (10 regions), External device through digital input
Interface	
Profile	ONVIF
Digital Input	2, Terminal block
Digital Output	2, Terminal block
Local Storage	MicroSDHC/MicroSDXC memory card slot (card not included)
General	
Power Source	PoE（class 3, IEEE802.3af) / 8.2 W
Weight	approx. 1.98 Kg
Dimensions	φ152 x 110 (H) mm (excluding Screwing part)
Mount Type	Wall, Ceiling, Ground, Corner etc…
Operating Temperature	-20～+50℃ 10～85%　(no condense)
Storage Temperature	-40～+60℃ 10～95%　(no condense)
Environmental Casing	Dust/Water-proof IP66, IK10
Firmware Access Browser	Microsoft® Internet Explorer® 8.0/9.0/10.0/11.0
Applicable OS	Microsoft® Windows® 7, 8, 8.1, 10
Approvals	CE(EN 55022 Class B, EN 55024), FCC(Part15 Subpart B Class B) IP66, IK10

※　Specifications are subject of change without any notice.　Rev.16

◎ Effective even if installing in an airport building, factory or high ceiling building.Although other companies fisheye cameras can see a moving line of persons, NUD360-F can watch hands of workers.

◎ Since NUD360-F can watch 360° all around in the distance with sufficient resolution, you can reduce the number of cameras and load of the system. In case of other cameras need to be placed every 30m, NUD360-F is with 100m intervals.

◎ Because resolution is high, partial expansion is possible in a considerable amplification.

◎ Because NUD360-F can distinguish the No. plate of the car of 10m ahead, it is effective for the traffic control at intersections.

◎ NUD360-F is full of various intelligent functions.

Example of usage

◎ Large store, factory, warehouse, airport, wide area
◎ Border security
◎ Urban security system

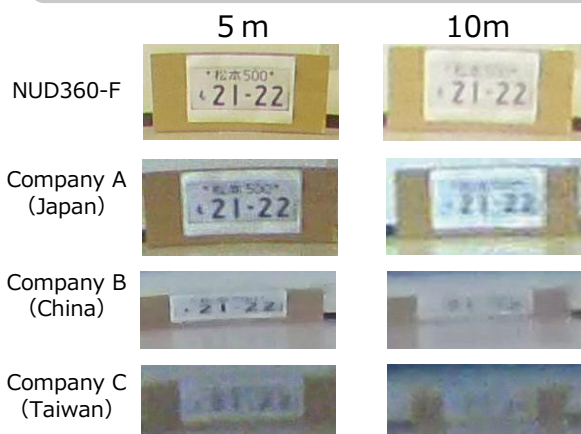### Compare in the fringe area

Clear view in 360°at 100m ahead

NUD360-F

others 12M fisheye cameras
complexed and poor quality

Compare with other 12M fisheye cameras

	5 m	10m
NUD360-F		
Company A (Japan)		
Company B (China)		
Company C (Taiwan)		

others 10m

Performance of NUD360-F
10m	30m	50m

The **resolution of fringe area** is the most important to take 360° image.

Our lens generates a high resolution image at the fringe area.

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