



i-TRU
MEGA Super Dynamic

WV-NP502

WV-NW502S

Megapixel Super Dynamic Network Cameras

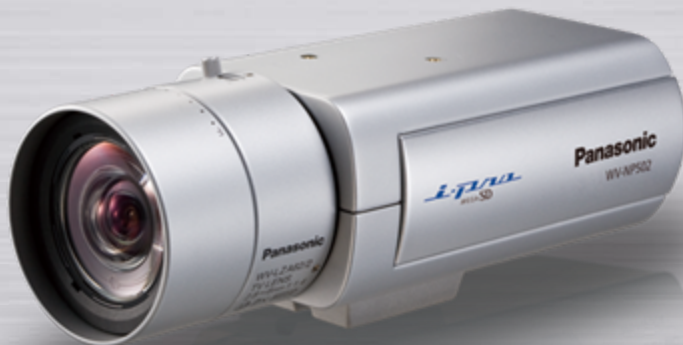
Security & Sound Systems Business Unit

Overview

i-TRU
MEGA Super Dynamic

WV-NP502

Megapixel Super Dynamic Network Camera



WV-NW502S

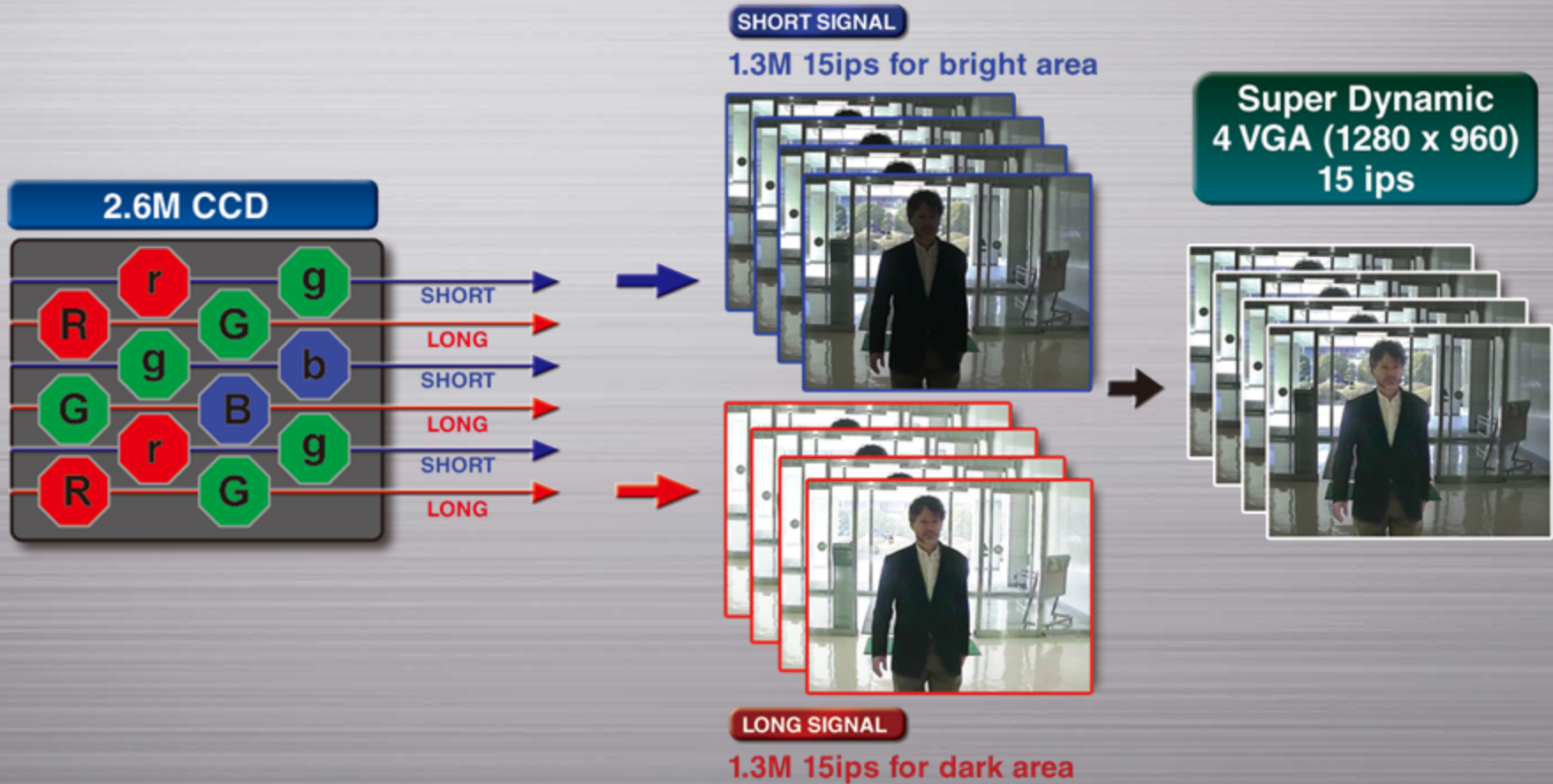
Megapixel Super Dynamic Vandal Resistant Fixed Dome Network Camera

Megapixel image with superior dynamic range by fusion of 2.6 million pixels CCD and Super Dynamic DSP.
2.6 million pixels CCD with Panasonic's image processing expertise delivers outstanding image quality
H.264 High Profile with UniPhier LSI enables 1280x960 image at 30ips
High sensitivity: 1.0 lux allows color images even when the lighting is dim.
ABF automatically corrects back focus by adjusting the CCD position,
Adaptive DNR: 2D-DNR for motion area and 3D-DNR for static area are effectively combined.
Face detection: Up to 8 faces can be detected and transferred as XML data.

Megapixel Super Dynamic

i-PM
MEGA Super Dynamic

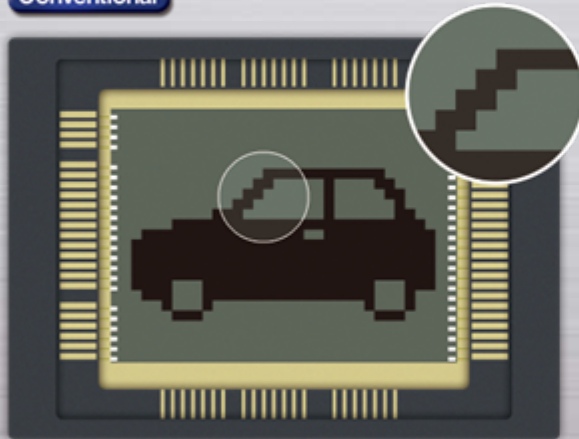
Megapixel Super Dynamic delivers 1280 x 960 image with superior dynamic range by fusion of 2.6 million pixels CCD and Super Dynamic DSP.



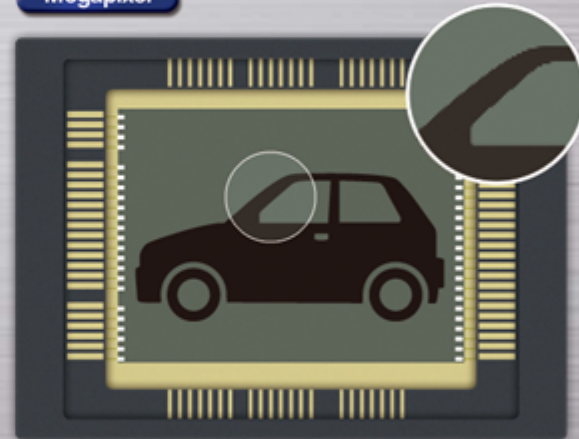
2.6 million pixels CCD and Uniphier platform delivers 2048 x 1538 outstanding image quality, allowing precise identification.

It can provides 10 times more precise image than the conventional VGA CCDs

Conventional



Megapixel



2048 x 1538 is available in JPEG mode.

2.6 million pixels CCD and Uniphier Platform delivers outstanding image quality, allowing precise Identification.

It can provides 10 times more precise image than the conventional VGA CCDs

Conventional



Details are unclear.

Megapixel



The person can easily be identified with clear detail.

2048 x 1538 is available in JPEG mode.

Megapixel

i-TWA
MEGA Super Dynamic

2.6 million pixels CCD and Uniphier platform delivers 2048 x 1538 outstanding image quality, allowing precise identification.

Megapixel



2048 x 1538 is available in JPEG mode.

Panasonic ideas for life

2.6 million pixels CCD and Uniphier platform delivers 2048 x 1538 outstanding image quality, allowing precise identification.

Alternatively it can capture an area 10 times larger while maintaining the same image quality of conventional VGA cameras.



VGA



1280 x 960

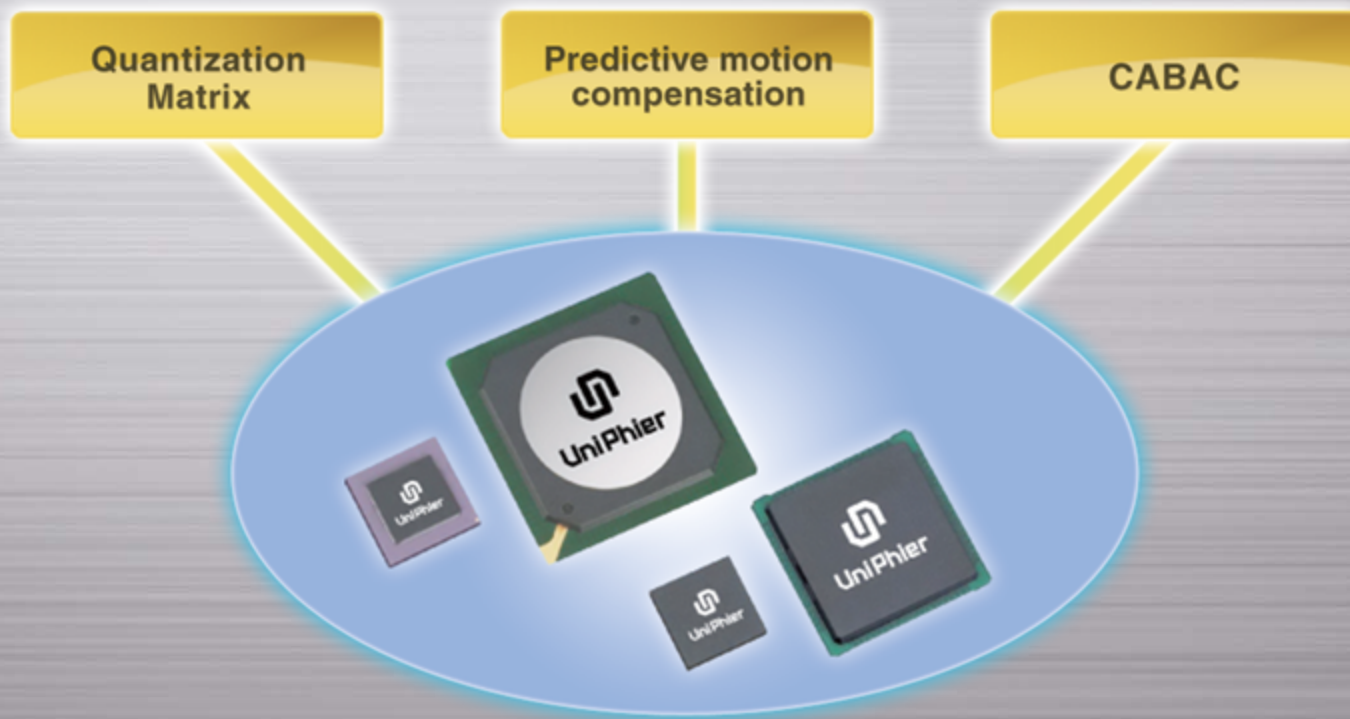


2048 x 1538

2048 x 1538 is available in JPEG mode.

**H.264 High Profile encoding with Panasonic Uniphier LSI enables
1280 x 960 high quality real time video with smaller data size.**

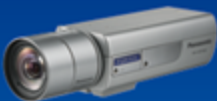





UniPhier H.264 High Profile



H.264 High Profile

**H.264 High Profile encoding with Panasonic Uniphier LSI enables
1280 x 960 high quality real time video with smaller data size.**

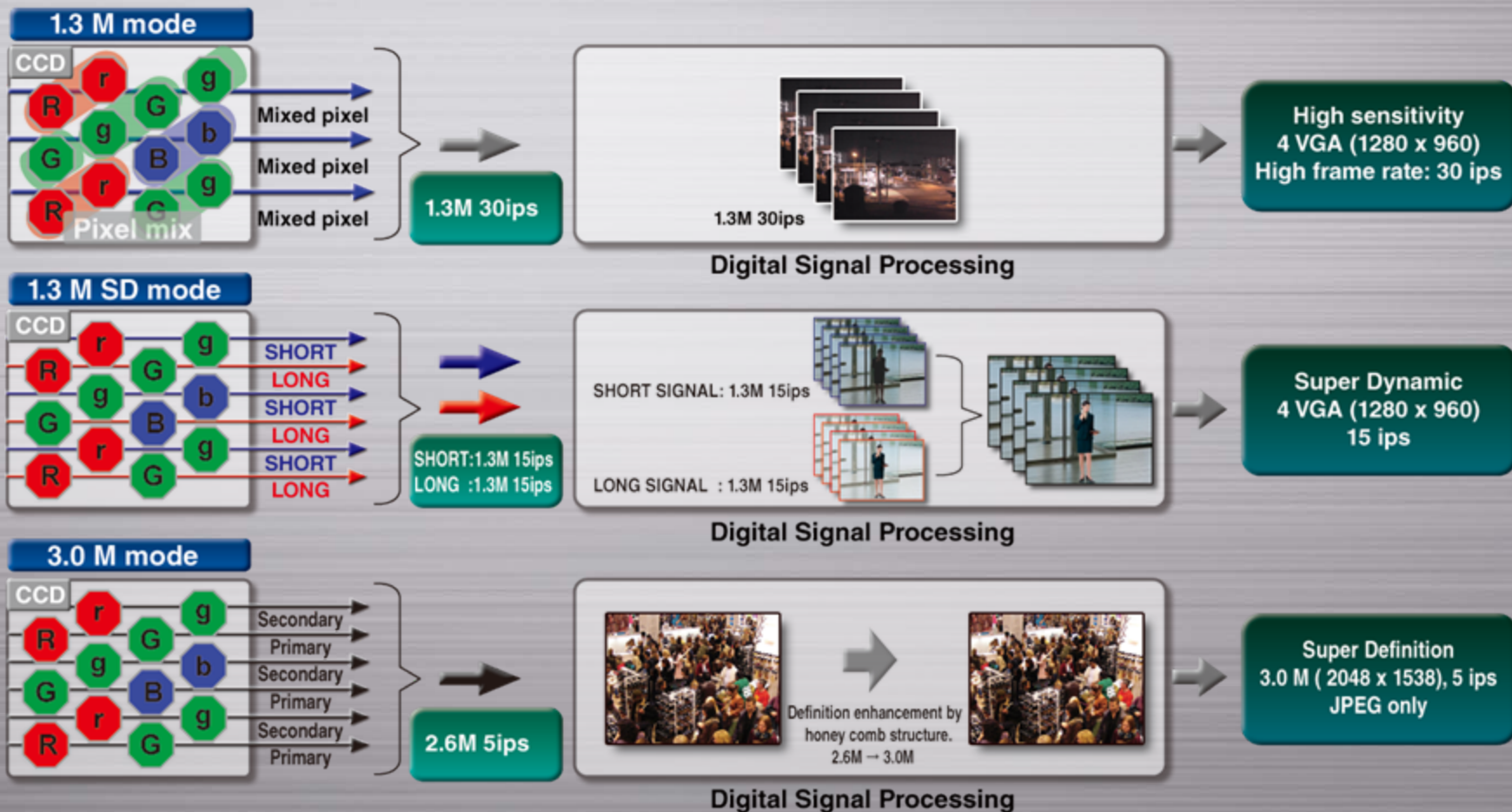
UniPhier

	1280x960 comparison	VGA comparison
NP304 	<p>JPEG 11.5Mbps</p>  <p>1280 x 960 11 ips JPEG</p> <p>JPEG quality mode = 5</p>	<p>MPEG-4 2 Mbps</p>  <p>VGA 30 ips</p>
NP502 	<p>H.264 4 Mbps</p>  <p>1280 x 960 30 ips H.264</p>	<p>H.264 1 Mbps</p>  <p>VGA 30 ips</p>

Superior image and high frame rate with smaller data size

Versatile CCD modes

Versatile CCD drive modes options allows High resolution, High sensitivity, High frame rate and Super Dynamic depending on the application requirement.



Versatile image modes

Versatile image mode options such as 3M/1.3M, JPEG, MPEG-4 and H.264 are available depending on the application requirement.

3M mode delivers outstanding 2048 x 1538 image quality while 1.3M mode allows 30 ips real time video output.

	1.3 M mode	3 M mode
JPEG	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; background-color: #008080; color: white; text-align: center;">1280 x 960 30 ips</div> <div style="border: 1px solid black; padding: 5px; background-color: #008080; color: white; text-align: center;">VGA 30 ips</div> <div style="border: 1px solid black; padding: 5px; background-color: #008080; color: white; text-align: center;">QVGA 30 ips</div> </div>	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; background-color: #008080; color: white; text-align: center; width: 200px; height: 100px;">2048 x 1538 5 ips</div> <div style="border: 1px solid black; padding: 5px; background-color: #008080; color: white; text-align: center;">1280 x 960 15 ips</div> <div style="border: 1px solid black; padding: 5px; background-color: #008080; color: white; text-align: center;">VGA 15 ips</div> </div>
H.264	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; background-color: #008080; color: white; text-align: center;">1280 x 960 30 ips</div> <div style="border: 1px solid black; padding: 5px; background-color: #008080; color: white; text-align: center;">VGA 30 ips</div> <div style="border: 1px solid black; padding: 5px; background-color: #008080; color: white; text-align: center;">QVGA 30 ips</div> </div>	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; background-color: #008080; color: white; text-align: center;">1280 x 960 15 ips</div> <div style="border: 1px solid black; padding: 5px; background-color: #008080; color: white; text-align: center;">VGA 15 ips</div> <div style="border: 1px solid black; padding: 5px; background-color: #008080; color: white; text-align: center;">QVGA 15 ips</div> </div>
MPEG-4	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; background-color: #008080; color: white; text-align: center;">VGA 30 ips</div> <div style="border: 1px solid black; padding: 5px; background-color: #008080; color: white; text-align: center;">QVGA 30 ips</div> </div>	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; background-color: #008080; color: white; text-align: center;">VGA 15 ips</div> <div style="border: 1px solid black; padding: 5px; background-color: #008080; color: white; text-align: center;">QVGA 15 ips</div> </div>
SD ON	15ips at each image size	N/A

This shows availability. Actual frame rate depends on the conditions.

Progressive Video Output

i-TV
MEGA Super Dynamic

Progressive Video Output ensures clear images with less motion blur and no tearing even when the subject is moving.

Interlace scan



Image appears with tearing when the subject is moving due to temporal difference between odd/even field.

Progressive scan



There is no tearing even when the subject is moving.

High sensitivity

High sensitivity 1.0 lux allows color images even when the lighting is dim.

When the situation is too dark, Electronic Sensitivity Enhancement and Day/Night feature further enhances the low light capability, ideal for 24-hour surveillance.

Conventional



Image is dark and unclear.

MegaSD Camera

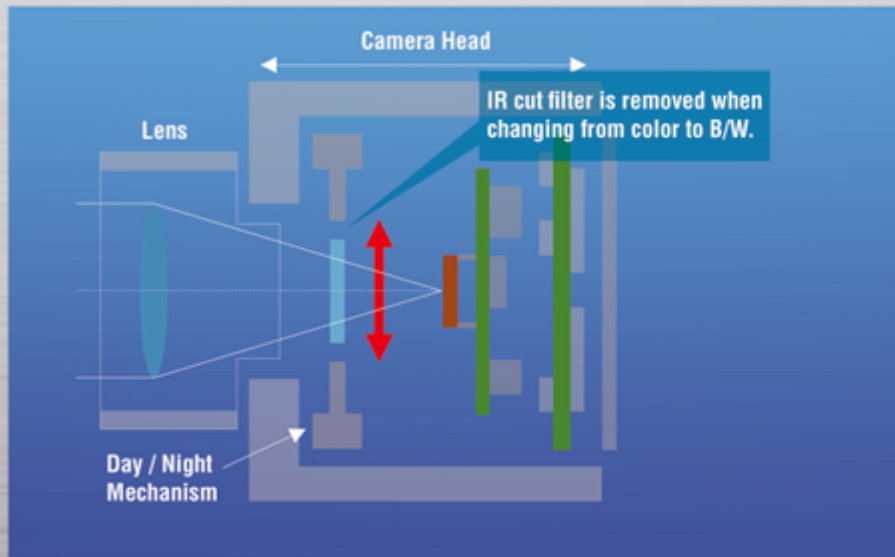


Clearer iamge thanks to the high sensitivity.

Day-Night

Day/Night feature automatically switches the camera from color to B/W and vice versa depending on the illumination, an ideal solution for 24-hour surveillance.

With moving IR cut filter and ABF, both high sensitivity and accurate focus are ensured.

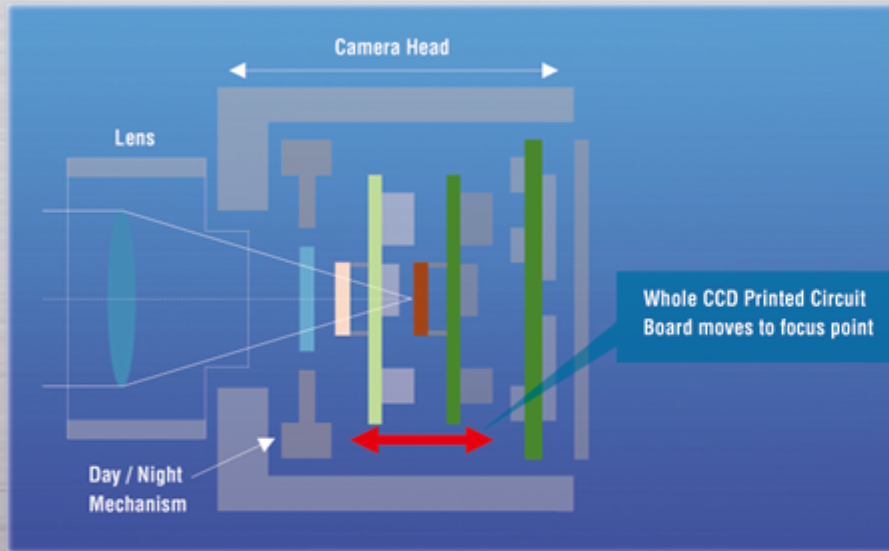


Changing from
color to B/W



ABF (Auto Back Focus)

ABF automatically adjusts back focus by adjusting the CCD position, allowing easy installation and accurate focus in both color and B/W mode.



Defocus by
IR filter removal



Accurate focus
by ABF

Adaptive DNR

2D-DNR for motion area and 3D-DNR for static area are effectively combined, realizing a clear low noise image with less motion blur and resolution deterioration.



AGC OFF: Image is too dark



AGC ON: Image is too noisy.



Conventional DNR:
Motion blur on moving subject.



Motion adaptive DNR:
Clear image without motion blur.

Auto Image Stabilizer

i-TWA
MEGA Super Dynamic

Auto image stabilizer digitally cancels the vibration on images by the advanced digital signal processing.

It enables the camera to be installed where vibration or wind is a concern.

Stabilizer: OFF



Stabilizer: ON



Panasonic Megapixel supported lens ensures high resolution on the entire image including fringe field.

Conventional lens



Defocus around the periferal area.

High definition lens



Entire image is sharp and clear.

H.264 latest encoding technology with Panasonic Uniphier platform enables superior image of 1280 x 960 with smaller data size.

This allows more cameras within the limited network/disk capacity, allowing flexible system design.

Conventional



H.264



More cameras



H.264 Latest Encoding

H.264 latest encoding technology with Panasonic Uniphier platform enables superior image of 1280 x 960 with smaller data size.

This allows better image quality within the limited network/disk capacity.

Conventional

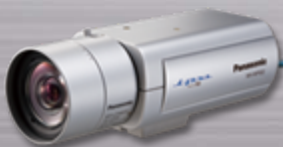


Larger data

VGA



H.264



Smaller data

MEGA



Better image quality

H.264 Latest Encoding

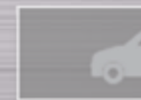
H.264 latest encoding technology with Panasonic Uniphier platform enables superior image of 1280 x 960 with smaller data size.

This allows faster frame rate within the limited network/disk capacity.

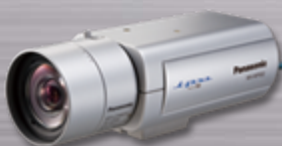
Conventional



Larger data

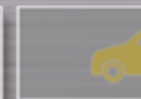


H.264



Smaller data

Faster frame rate



H.264 Latest Encoding

H.264 latest encoding technology with Panasonic Uniphier platform enables superior image of 1280 x 960 with smaller data size.

This allows longer recording time within the limited disk capacity.

Conventional



H.264



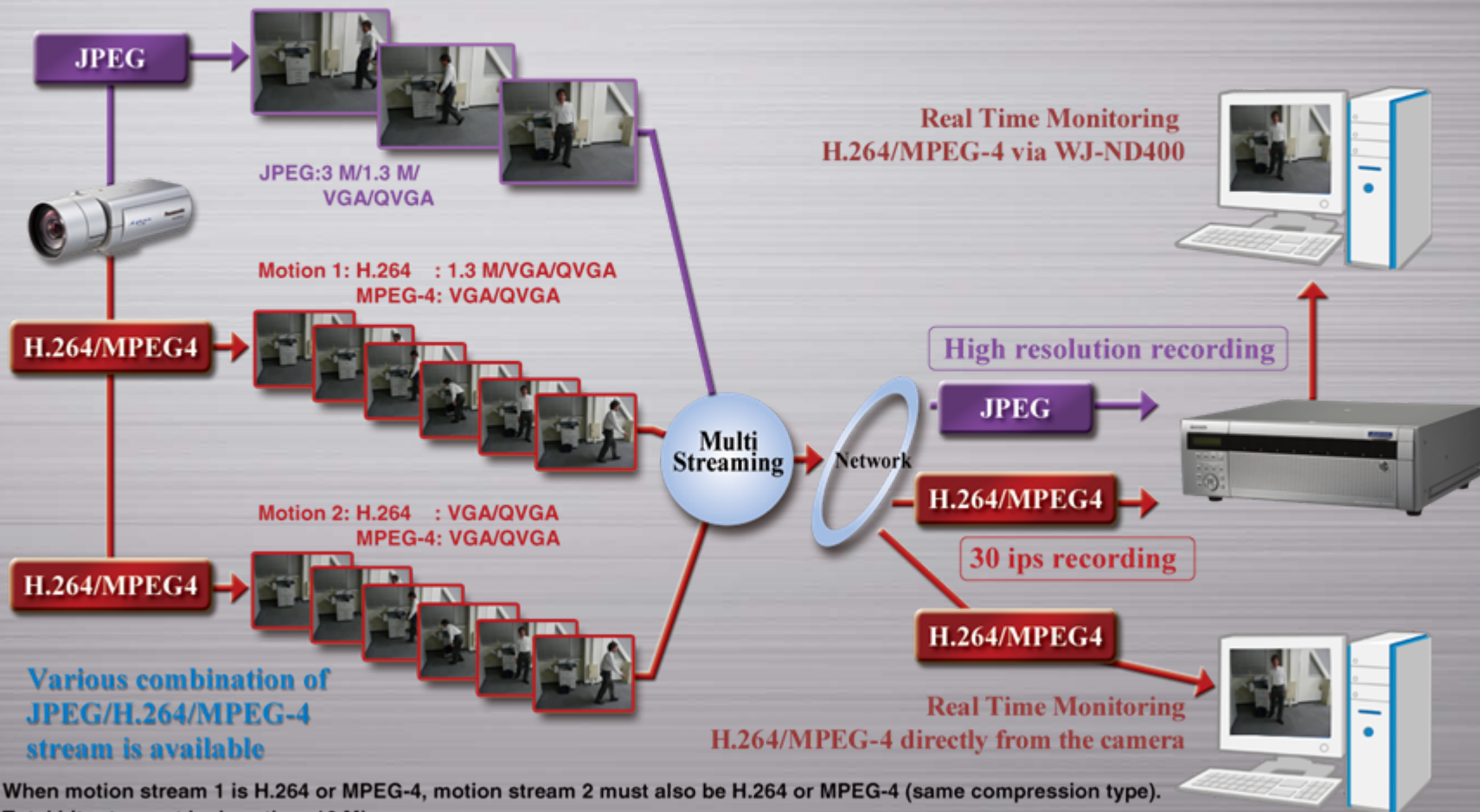
Smaller data

Longer recording time



Multi-streaming

Three types of streaming modes including JPEG and H.264(2ch) or MPEG-4(2ch) can be transmitted simultaneously, enabling real time monitoring and high quality recording.



When motion stream 1 is H.264 or MPEG-4, motion stream 2 must also be H.264 or MPEG-4 (same compression type).
Total bit rate must be less than 16 Mbps.

Real Time Monitoring

i-TVA
MEGA Super Dynamic

30 images/second real time video at up to 1280x960 image size captures the decisive moment in JPEG/H.264 mode.

Real time MPEG-4 VGA mode is also available.

10 frames/sec.



30 ips Real time



SD Memory Backup

i-PRO
MEGA SuperDynamic

When the network experiences a problem, images can automatically be backed up in the SD memory card. SDHC supported.

This prevents image loss and makes it possible to playback and check images captured while the network is down.

1. Network trouble



2. Stored in the SD Memory Card



WJ-ND400

OR



FTP Server

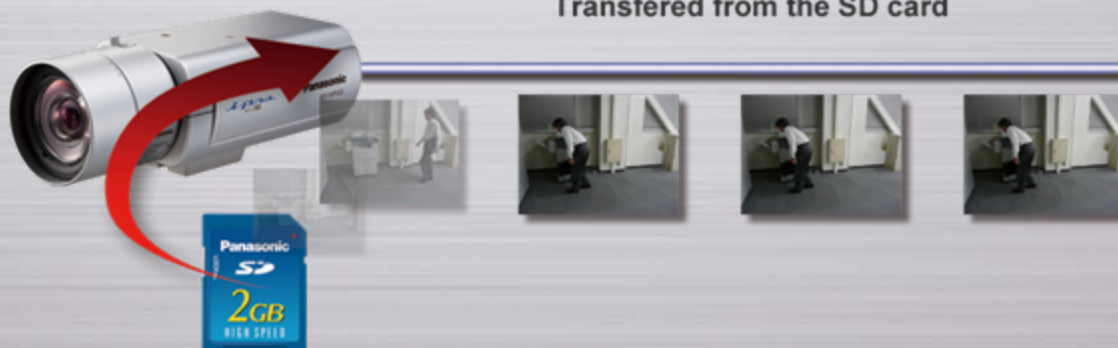
It works when used with a FTP server or an i-Pro network recorder.
SD memory recording is available only in JPEG mode.

Images recorded in the SD memory card in i-Pro network cameras during a network failure can be transferred to the recorder automatically.

Images can be transferred even when the recorder is in recording status.

③ Network recovery

Transferred from the SD card



WJ-ND400

OR



FTP Server

Note: It is impossible to retrieve backup images to the FTP server automatically.

PoE (Power over Ethernet)

Both power and image data can be transmitted through a single Ethernet cable.

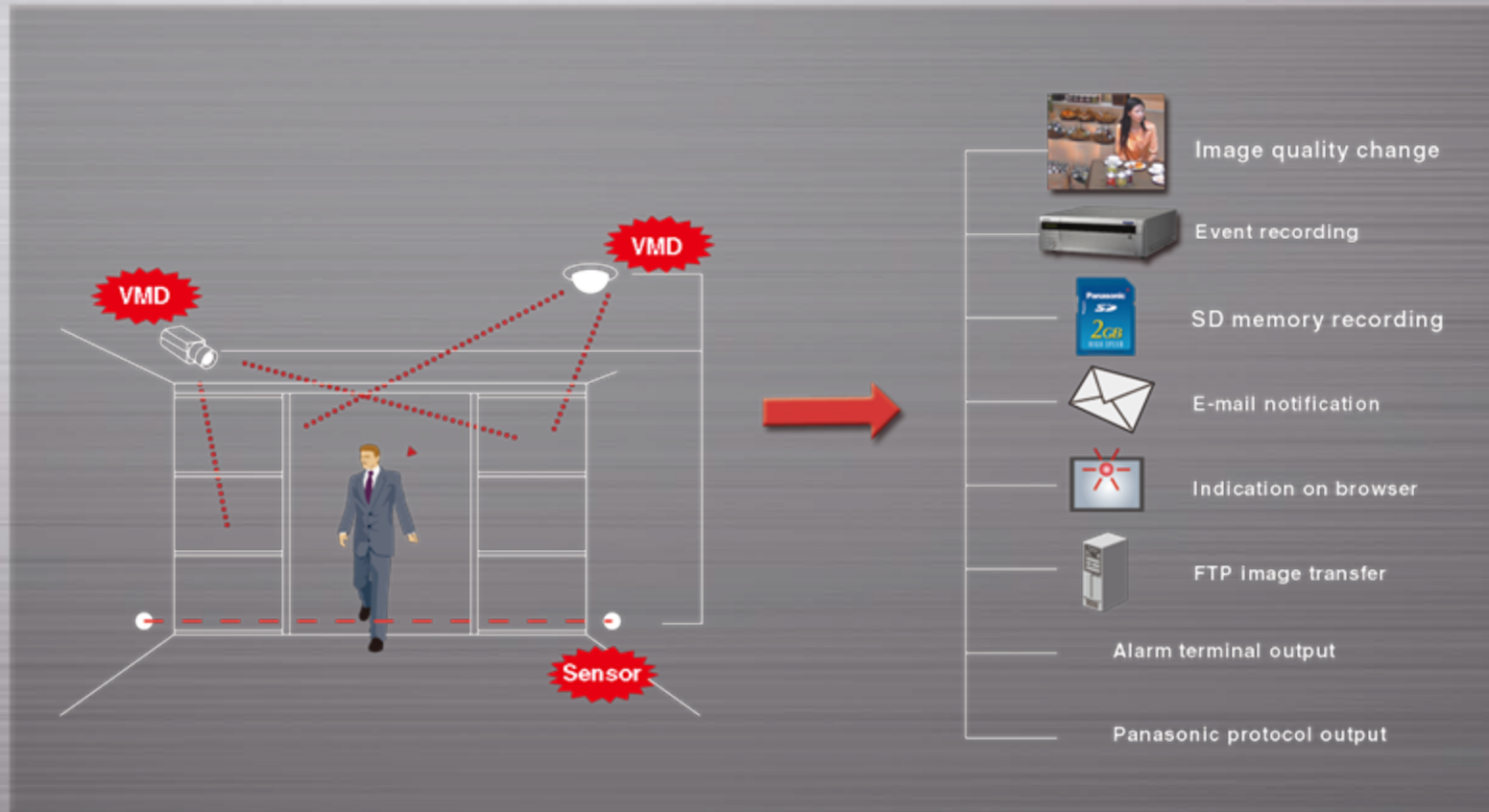
By eliminating the need for power cables and supplies when installing cameras or changing layouts, installation and maintenance costs are reduced.



Flexible Alarm Handling

Versatile alarm actions include Image quality change, Event recording, SD memory recording, FTP image transfer, E-mail notification and Indication on browser.

Alarm sources: VMD, Terminal input and Panasonic alarm command.



Note: When using Alarm SD memory REC, FTP image transfer is disabled.

User friendly GUI

User friendly GUI including display mode control, camera control and status monitoring allows intuitive operations, reducing the burden on operators.



Multiscreen mode

Up to 16 cameras can be displayed on 4x Quad screens or 16 split screen.

Pan/Tilt control is available in the Quad screens.



Multiscreen mode

Up to 16 cameras can be displayed on 4x Quad screens or 16 split screen.



Note: Pan/Tilt control is not available in the 16 split screen.

2x, 4x Digital zoom enables precise monitoring.

Pan/Tilt control is also available for zoomed area.

Original image



2x
digital zoom

Pan/Tilt control is available



4x
digital zoom

Face detection

Up to 8 faces can be detected and transferred as XML data, making possible to develop custom application.

The screenshot displays the web interface for a Network Camera WV-NP502. The interface is divided into a left sidebar and a main content area. The sidebar contains a 'Setup menu' with buttons for 'Basic', 'Image/Audio', 'Multi-screen', 'Alarm', 'Video analytics' (highlighted in green), 'User mng.', 'Server', 'Network', 'Schedule', 'Maintenance', and 'Help'. The main content area has tabs for 'XML notification' and 'Face detection'. The 'Face detection' tab is active, showing a live video feed of a woman in a white shirt and black skirt standing in a hallway. A blue rectangular box is drawn around her face, indicating detection. Below the video feed, there are settings for 'Face detection' with radio buttons for 'On' (selected) and 'Off'. Below that, there is a field for 'XML notification of detection information' with a dropdown menu showing 'To XML notification >>'. A 'Set' button is located at the bottom of the settings panel.

Face detection is not handled as an alarm source.

Video Motion Detection

The motions in the specified areas can be detected, triggering an alarm.

Up to 4 areas can be registered. Finer tuning is possible with area and sensitivity adjustment.

Up to 4 areas can be set.

Detection size; When smaller, sensitivity becomes higher.

Sensitivity: Low to High

Alarm VMD area Notification

Area 1(White) 2(Blue) 3(Green) 4(Red)

Status On Off On Off On Off On Off

Detection area [Slider 1-10] [Slider 1-10] [Slider 1-10] [Slider 1-10]

Detection sensitivity Low High Low High Low High Low High

Delete [Delete] [Delete] [Delete] [Delete]

Light detection control On Off

Set

VMD information addition

Information addition On Off

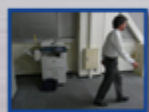
Set

Playback VMD Search

i-Pro cameras can send motion meta data when used with WJ-ND400 so that motions in the specified area in the recorded images can quickly be searched.



Image data



Motion data

+

01001101



Set the time range,
camera CH and detection area.



Motion in a specified area is searched.

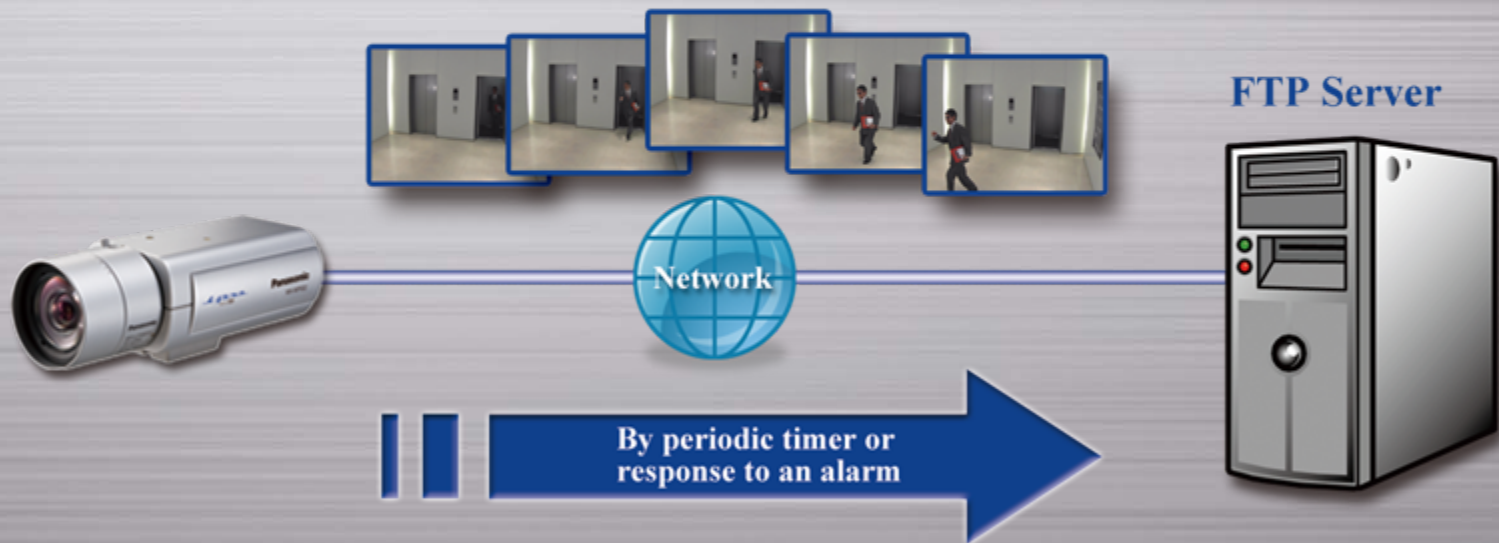
Search Result



Sensitivity depends on the VMD setup of the camera. a

**FTP client function enables periodic live image transfer to an FTP server.
Image transfer in response to an alarm is also available.**

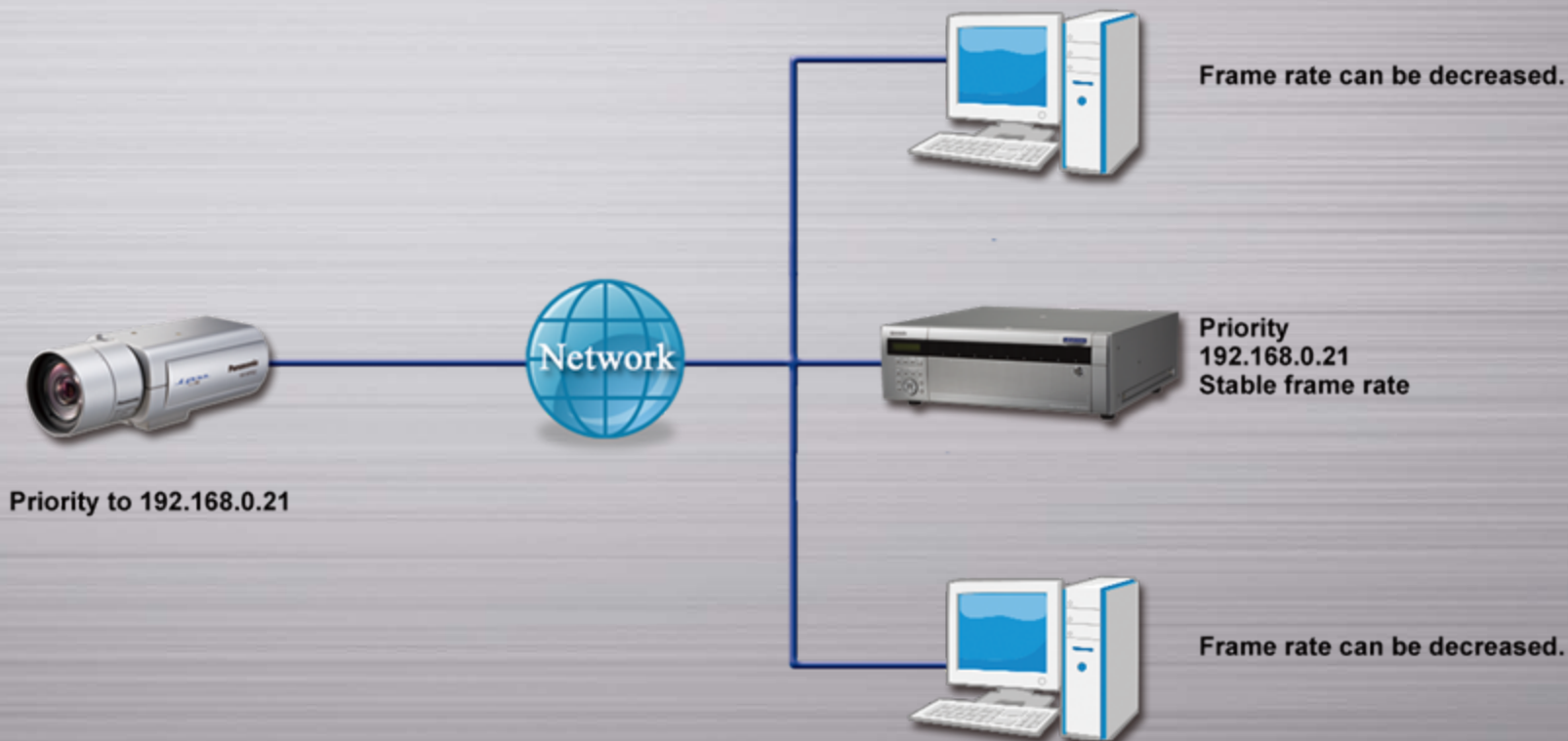
Live image or recorded image. JPEG only.



Note: Only one of the alarm FTP or periodic FTP can be selected in the setup menu..

Priority Stream Mode

One or two streams can get higher priority when multiple devices are accessing, allowing to secure the frame rate for the recording.



Frame Rate Priority Mode

Frame Rate Priority Mode dynamically controls bit rate depending on the subject to maintain the frame rate.

Subject



When a large motion exists in the image...

Constant bit rate mode

Frame rate:

Bit rate:



Frame rate:

Bit rate:

Bit rate is constant but frame rate may drop.

Frame Rate Priority mode

Frame rate:

Bit rate:



Frame rate:

Bit rate:

Bit rate can increase up to 150% to keep the frame rate.

Note: This mode does not always guranty the frame rate.

Bi-directional Audio

Full duplex bi-directional audio allows interactive communication between camera site and monitoring site.



G.726 (ADPCM) 32 kbps mode only

Privacy zone masking provides the ability to mask sensitive areas of the image from view.

Gray mask and monotone mosaic are available and mask position/size changes corresponding to the PTZ operation.

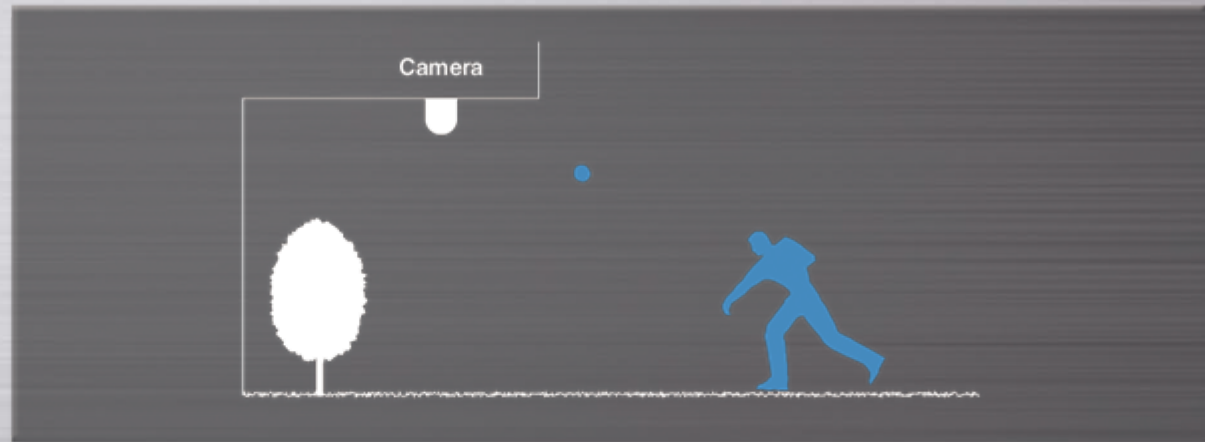


Vandal & Weather resistant

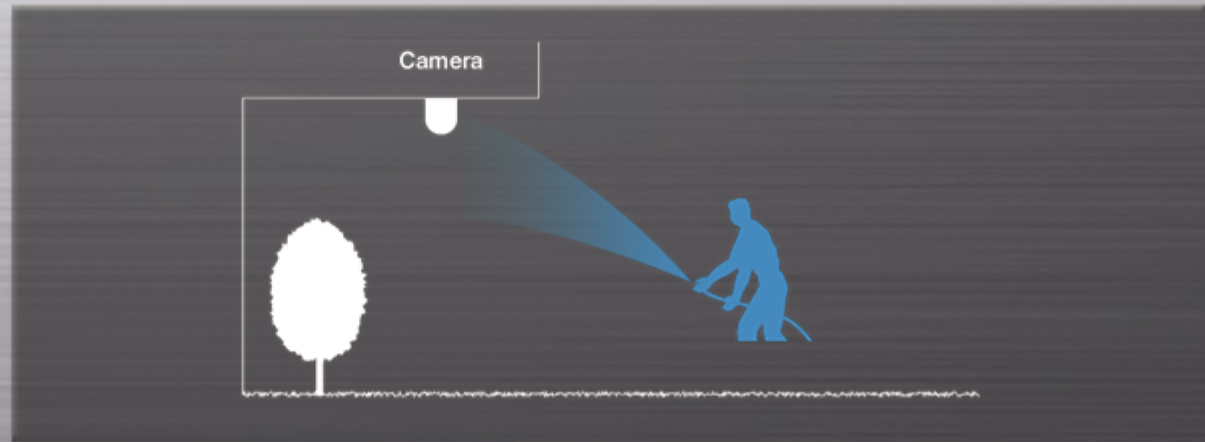
i-TWA
MEGA Super Dynamic

Vandal and Weather resistant feature made possible by use of the special materials allows installation in harsh environment.

Vandal resistant



IP 66 Water and Dust resistant

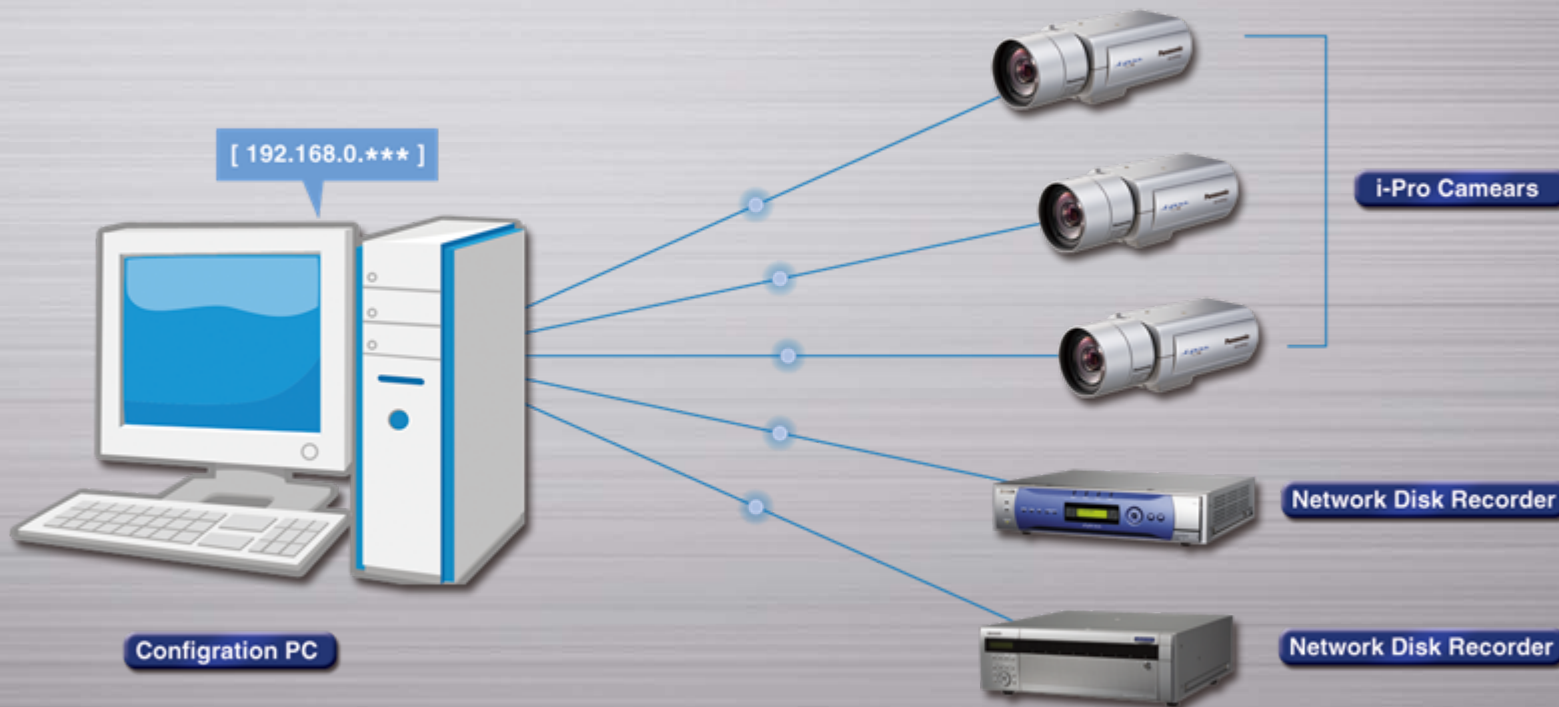


Note: WV-NW502 only

Easy IP Set-up

IP address of the cameras, encoders, recorders and decoders can easily be setup by the system configuration software.

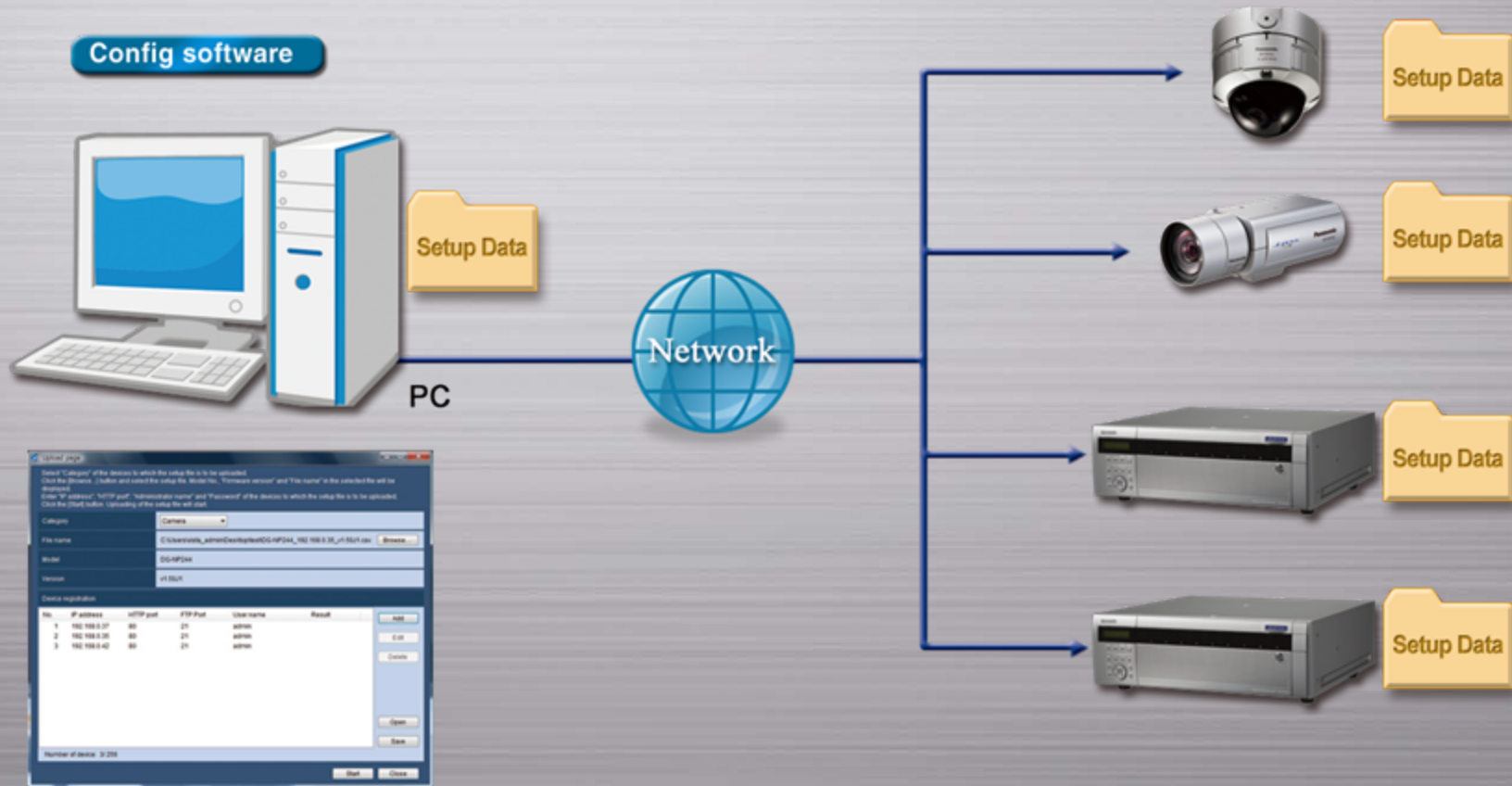
IP address of the cameras can also be setup by the IP set up tool provided with the cameras.



Easy IP setup is available within the same subnet.

Configuration software

Setup data of the cameras can be down/loaded with the Configuration software, reducing setup time especially when using the same setup data to the multiple units.



Multi site System

Multi-recorder-Multi-site system can be made with optional WV-ASM100 i-Pro Management Software.

WV-ASM100 enables large scale multi-site surveillance system with management efficiency and user-friendly operation.

