

DWC-PZV2M72T

MEGApix PANO 48MP 180° Dome IP Camera



Before installing or operating the camera, please read and follow this manual carefully.



PRECAUTIONS

- Do not open or modify.
- Do not open the case except during maintenance and installation, for it may be dangerous and can cause damages.
- Do not put objects into the unit.
- Keep metal objects and flammable substances from entering the camera. It can cause fire, short-circuits, or other damages.
- Be careful when handling the unit.
- To prevent damages, do not drop the camera or subject it to shock or vibration.
- Do not install near electric or magnetic fields.
- Protect the camera from humidity and dust.
- Protect the camera from high temperature.
- Be careful when installing near the ceiling of a kitchen or a boiler room, as the temperature may rise to high levels.
- Cleaning: To remove dirt from the case, moisten a soft cloth with a soft detergent solution and wipe.
- Mounting Surface: The material of the mounting surface must be strong enough to support the camera. Q

FCC COMPLIANCE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference, when the equipment is operated in a residential environment. This equipment generates, uses, and radiates radio frequency energy, and if it is not installed and used in accordance with the instruction manual, it may cause harmful interference to radio communications.

WARNING: Changes or modifications are not expressly approved by the manufacturer.

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FEATURES*

- 48MP 180° Panoramic Camera
- 4x 12MP CMOS Sensors
- Single Network Connection/One Recording License
- Fast Frame Rates: 15fps at 48MP / Real-time 30fps at 32MP
- 4x7.2mm Auto Focus Fixed Lens
- Zero Distortion Anti-reflective Glass
- CleanView® Hydrophobic Self Cleaning Glass Coating
- Easy Image Alignment and Stitching
- Smart DNR® 3D Digital Noise Reduction
- True Day/Night with Mechanical IR Cut Filter
- Advanced 1.0Ghz Dual Core Video Processors
- Web Server Built-in
- Dual Codecs with Simultaneous Dual-Stream
- Auto Gain Control (AGC)
- Backlight Compensation (BLC)
- Auto White Balance (AWB)
- Motion Detection
- ONVIF Conformant, Profile S
- PoE Plus and DC12V
- IP66 Rated Weather Resistant

PARTS & DESCRIPTIONS*





DIMENSIONS (MM)*





INCLUDED IN THE BOX*





NETWORK CONNECTION*

There are two way to power a MEGApix® PANO™ camera.

Use a PoE+ switch or a PoE+ injector to connect data and power through a single cable and begin viewing and recording images instantly. A non-PoE switch will require an adaptor for power transmission.

1. Using a PoE+ Switch / PoE+ Injector

The MEGApix® PANO[™] Camera is PoE-Compliant, allowing transmission of power and data via a single Ethernet cable. PoE eliminates the need for the different cables used to power, record, or control the camera. Follow the illustration below to connect the camera to a PoE-enabled switch using an Ethernet cable. Please note that the camera requires PoE+ Switch /



2. Using 12VDC

If a PoE+ injector is not available, use a power adaptor for power transmission and a non-PoE switch for data transmission. Follow the illustrations below to connect the camera without a PoE Injector.



INSTALLATION*

Easy Camera Installation

- 1. Using the torx wrench included, remove the dome cover from the camera module by loosening the screws on the dome.
- 2. Using the mounting template sheet or the camera itself, mark and drill the necessary holes in the wall or ceiling.
- 3. Pass wires through and make connections.
- 4. Secure the camera module to the mounting surface using four screws.
- 5. The cameras offer a motorized lens adjustment per sensor from the camera's web viewer. See page 17.
- 6. Assemble the dome cover over the camera body.
- 7. Remove the protective film from the camera's dome.

Using Cable Weather Protector

To use the LAN water protector case, refer to the diagram below:

- 1. Insert the network cable into (a), the camera's network port.
- 2. Connect (b) to the camera's network port by rotating it clock-wise until tight.
- To complete the water-proof installation, connect part (c) to the case's body, securing tightly by rotating it clock-wise.







INSTALLATION*

Installing the SD Card

- Detach the camera's cover dome from the camera's module by unscrewing the cover dome screws.
- 2. Using the camera or mounting template, mark and drill the necessary holes in the mounting surface.
- 3. Secure the two long mounting screws to the camera's base.
- 4. Pull wires through and make connections.
- 5. Mount the camera to the mounting surface using the 2 mounting nuts.
- 6. Secure the camera's cover dome onto the camera base to complete the installation.
- 7. See page 9 for water-proof cabling installation.



4 SD Card Slots

The memory card is an external data storage device that has been developed to offer an entirely new way to record and share video, audio, and text data using digital devices.



Recommended SD Card Specification (Not Included)

- Type: Micro SD (SDHC/SDXC)
- Manufacturer: Transcend, Kingston,
- Toshiba, Sanddisk
- Capacity: 4~128GB
 Class: over Class 10

Adjusting the Camera's Angle

The camera's stitching and lens adjustment is done automatically from the camera's web viewer.

Installing DW IP Finder™ Software

DW IP Finder[™] searches for all available Digital Watchdog devices currently connected to your network.

- Install *DW IP Finder* to find the MEGApix® PANO[™] camera on your local network. The software can be found on the included User Manual CD. Run *DW IP Finder* and install onto your PC.
- 2. When setup is complete, launch *DW IP Finder*.
- 3. The software will automatically search your network for all Digital Watchdog® supported devices. Your camera will appear as "DWC-PZ2M72T."
- 4. Double-click on the camera name and select 'View Camera Website' to launch the camera' web viewer.

Find Devices	14 1								http:/	/digital-w	atchdog.com
All Thumbnail	Name	IP Address	Model	MAC Address	Netmask	Gateway	Port	DHCP	Version	IP Conf.	Uptime
	DWC-PB2M4TIR	192.168.1.80	DWC-PB2M4TIR	00:0D:F1:20:3D:5C	255.255.255.0	192.168.1.1	80	Disabled	1.02.01_20141111	Click	
-	DWC-MF10M28T	192.168.1.10	DWC-MF10M28T	64:76:57:CE:02:70	255.255.255.0	192.168.1.1	80	Enabled	2.8.0127	Click	8 mins
	DWC-MF21M4TIR	192.168.1.19	DWC-MF21M4TIR	00:0D:F1:10:AF:9C	255.255.255.0	192.168.1.1	80	Disabled	1.01.00_20150120	Click	
FW Upgrade											

*Install the *DW IP Finder* to a computer located on the same Subnet Mask as the MEGApix® PANO[™] camera.



Using DW IP Finder[™] Software

Use DW IP Finder[™] to change the basic settings of your MEGApix[®] camera or to connect to your MEGApix[®] camera.



Using DW IP Finder[™] Software

Use IP Finder to set the connection type and the IP address information for your MEGApix® PANO[™] camera.

- 1. **DHCP**: Select DHCP to access the camera within the same internal network. For further explanation on DHCP, please see page 14.
- 2. Static IP: Select Static to connect to the camera from an external network. For further explanation on Static, please see page 14.

Camera's Name		Camera's MAC Address
Network Type Camera' <u>s Network</u> Settings	Camera Name DWCA-VF25WIR4 MAC Address 00:0 IP Configuration Mode Ports DHCP Veb Port Web Port Static IP IP Address 192.168.1 .19 Video Port Netmask 255.255.255.0 Audiio Transmit Gateway 192.168.1 .1 Audio Receive	P Image: Second system 20:F1:10:AF:9C 80 0 0 0 0 0 0
Camera's Username and Password Open the Camera's	Username admin Password ••••• View Camera Website Reboot Ap	ply Cancel
web viewer Reboot the Camera		Save / Cancel Changes

*If you change the camera's IP, write down the camera's MAC Address for identification in the future.



DHCP

The Dynamic Host Configuration Protocol (DHCP) is a network configuration protocol that allows a device to configure automatically according to the network it is connected to.

If your network supports DHCP and your MEGApix® PANO[™] camera is set to DHCP, IP Finder will automatically find and set your MEGApix® PANO[™] camera to correspond with your network requirements.

Static

Static IP addresses are recommended when using a network that does not support DHCP or when setting your device to be accessed externally via the internet. If Static is selected, you must manually enter the correct network settings for your MEGApix® PANO[™] camera. The settings will correspond with your network. To set your camera to a static IP address, we recommend that you (1) setup the camera to DHCP, (2) allow it to configure itself according to your network, and (3) change the settings to a static IP address.

- 1. To set your MEGApix® PANO[™] camera to Static, highlight the desired device from the search results list, and click on **Configuration**. In the "Network Configuration" window, make sure **Static** is selected.
- 2. Enter the following information: IP Address, Netmask, Gateway, and Preferred DNS.
- 3. Click **Apply** and **Reboot** to save all changes.

CAMERA REBOOT*

Resetting the Camera

Pressing the reset button on the camera's back for five (5) seconds will initialize all environmental variables to factory default. Previous setup for IP default, time, etc. will be deleted. If a system's IP address is lost, reset the camera back to factory default.

The following are the default network settings.

IP Mode	DHCP
Subnet Mask	255.255.255.0
Gateway	192.168.1.1
HTTP Port	80



* Frequent use may cause system error.



Remote Video Monitoring Via Web Browser

Monitor and configure the MEGApix® PANO[™] camera through a built-in web viewer.

Type the camera's IP address in a web 1. browser. Enter Username and Password Default:

Username: admin | Password: admin

- 2. The web browser may ask to install **FbVLC** to view video from the camera. Once it has been installed. Internet Explorer will display video images from the camera.
- 3. The Web Client is also available in Google Chrome, Safari and Firefox web viewers. Please note that features may be limited.
- Once the web viewer is up, press 'Settings' 4. to go to the camera's menu. There, select live view at the top of the options on the left. The camera's view will appear in a new window.

Digital Watchdog IPCAM Settings - Go W Digital Watchdog IPCAM : × ← → C ☆ ☆ [] 100.32.247 III Apps ≦ Tinybeans - My Verize	ogle Chrome 141/priv/cam.html on @ ADP 🜔 PNC 🂽 Aetna	🖒 🔀 🐱	
W. DIGITAL WATCHDOG Iverything's Digital			
GENERAL GENERAL NETWORK SECURITY DATE & TIME IMAGE QUALITY	Camera Actions Reboot Restore Update Firmware Cc	Camera Date Mon Feb 1 13:41:39 P Uptime Jode Version 5 MAC Address 64:76:57:E1 IP Address 100.32. mmera Name Fe mmera Model XPM-FL7	- Status
VIDEO STREAMS	General Settings IR Switching : Auto Status LED : Enabled	At night use : Black and W J Apply Cancel	/hite •



GUI Description

Monitor and configure the MEGApix® camera through a built-in web viewer.

- 1. Live video display- This is the region for live video stream from the camera.
- 2. Setup Menu- Setup the camera's Video, Network, Events, System etc.
- 3. Display information- Above the stream buttons, the camera's resolution and stream name will be displayed
- 4. Play/Stop- Pause video or return to live as needed.
- 5. Stream selection- Select a stream to display it in the viewing area. See page 26 for stream setup.
- 6. Sensor Adjustment- From the live view, you can adjust each of the camera's sensors separately:
 - a. Rotate the lens left or right to adjust the image stitching if needed.
 - b. Adjust the camera's auto focus manually or press the 'auto focus' button.





Setup > General

View the MEGApix® PANO[™] camera's basic information.

The Factory Rest page allows you to reboot the camera or reset its settings to factory default.

- 1. <u>Reboot</u> press the 'Reboot' button to reboot and power cycle the camera.
- <u>Restore</u> Select to reset the camera's settings back to factory default. If this option is selected, all settings except for the camera's network settings with be deleted and reset to their factory default. Press OK in the confirmation window to complete the reset.
- <u>Reset Factory</u> Select to reset the camera's settings back to factory default. If this option is selected, all settings, including the camera's network settings, with be deleted and reset to their factory default. Press OK in the confirmation window to complete the reset.

NETWORK SECURITY DATE & TIME	Restore Code Set Factory MAC /	ra Date Wed Feb 3 Uptime Version	10:31:01 PST 2016 23:23	
SECURITY ROUTE & TIME	set Factory MAC	Version		
DATE & TIME		Address	5.0.1204 54:76:57:EC:00:3F	
	ate Firmware IP / Camer	Address a Name	100.32.247.141 PANZILA	
IMAGE QUALITY	Camer	a Model	XPM-FL72-48MP	
VIDEO STREAMS	l Settings			
VIRTUAL CAMERAS IR S	vitching : Auto	✓ At night use :	Black and White	~
		Apply Can		
	_			

Setup > General

View the MEGApix® PANO[™] camera's basic information.

Use this general settings page to upgrade the camera's firmware. The information at the top of the page shows the camera's name, current firmware version and date. To check for the latest firmware, click on the link to Digital Watchdog's website, or go to <u>www.digital-watchdog.com</u>.

To start the upgrade process:

- 1. Download the latest firmware from the Digital Watchdog website.
- 2. Click the 'Browse' button and select the firmware file.
- 3. Press the 'Upload' button.
- 4. The system will automatically start the upgrade process.
- 5. You can track the upgrade process in the update status page.
- 6. Once the upgrade is complete, the camera will reboot to complete the update.

Complete Surveillance Solutions LIVE VIEW	Camera Actions Status
GENERAL	Reboot Camera Date Wed Feb 3 10:31:01 PST 2016
NETWORK	Restore Code Version E 0 1304
SECURITY	Reset Factory MAC Address 64:76:57:EC:00:3F
DATE & TIME	Update Firmware IP Address 100.32.247.141
	Camera Name PANZILA Camera Model XPM-FL72-48MP
IMAGE QUALITY	
VIDEO STREAMS	General Settings
VIRTUAL CAMERAS	IR Switching : Auto 🗸 At night use : Black and White 🗸
	Apply Cancel



Setup > General

Adjust the MEGApix® PANO[™] camera's Day & Night settings.

- 1. IR Switching- select the camera's IR filter mode.
 - a. <u>Auto</u> The camera will switch between color and B/W automatically based on the levels of light in the camera's Field of View (FoV).
 - b. <u>Force Day</u> Manually use the camera's True Day/Night IR cut filter the camera's view to day mode regardless of the light levels in the camera's FoV.
 - c. <u>Force Night</u> Manually removes the True Day/Night IR cut filter from the camera's lens and turns the camera's view to night mode regardless of the light levels in the camera's FoV.
- At night use– Select whether the camera will switch to B/W or remain in color when low light is detected.
- 3. Status LED– select to enable or disable status LEDs at the camera.

Reboot Camera Date Wed Feb 3 10:31:01 PST 2016
Restore Uptime 23:23 Code Version 5.0.1204
Reset Factory MAC Address 64:76:57:EC:00:3F Update Firmware IP Address 100.32:247.141
Camera Name PANZILA Camera Model XPM-FL72-48MP
ieneral Settings
IR Switching : Auto V At night use : Black and White V Status LED : Enabled V
Apply Cancel

Setup > Network

View the MEGApix[®] PANO[™] camera's network information.

- <u>DHCP</u> Check the box next to DHCP if you are using a DHCP Server. The camera will obtain all its network information automatically from the server. If you do not have a DHCP server, or wish to manually enter the camera's network information, leave the box unchecked to give the camera a static IP Address. Contact your Internet Service Provider (ISP) or Network Administrator for more information.
- 2. IP Address Enter an IP address for the camera
- 3. Netmask default is 255.255.255.0
- <u>Gateway</u> This is your router's external IP address. This address is used when accessing the camera remotely from outside the network. The router will channel the data request to the appropriate port associated with the camera.
- <u>NameServer</u> Enter a Domain Name Server (DNS) address. This translates a web addresses to an IP addresses.
- 6. <u>Host Name</u> If needed, rename the camera for proper identification.
- 7. <u>UPnP</u> Enable or disable the camera's UPnP function according to your network requirements.
- <u>Web Port</u> By default, the camera's web port is set to 80. These are the ports necessary in order to communicate with the camera when accessing from a different network. Some ISP may block port 80. Please contact your Network Administrator for additional information.





Setup > Security

Use the User Setting page to set a new password for the camera's admin user. To change the admin's password, type and retype the new password in the corresponding fields and click 'Apply'. The camera's default username and password are: root | admin

Setup > Date & Time

This page displays the camera's current time and date & time setting options:

- 1. <u>Camera Time</u>– This section displays the camera's current date, time, and time zone.
- 2. <u>Time Zone</u>– Select the appropriate time zone from the drop-down menu.
- 3. <u>NTP Server</u>– Set the camera to sync its time with an NTP server by pressing the 'SYNC' button.
- 4. <u>Computer Time</u>– You can also set the camera to sync its time with your computer's settings by pressing the 'SYNC' button.

Setup > Image Quality

Adjust the MEGApix® PANO[™] camera's Image settings. Changes will apply to all four (4) sensors.

- 1. BASIC SETTINGS
 - a. <u>Active Noise Filter (Smart 3D DNR™ Digital Noise Reduction)</u> Control the level of noise in the image. Select from Off, Low, Medium and High. The higher the level, the more the camera will manipulate the image to reduce digital noise, but it will also increase lagging when motion occurs. By default, the 3D DNR settings are set to Low.
 - b. Local Exposure Set the camera's exposure time from Auto or manually from 1X ~ 4X.
 - c. <u>BLC (Backlight Compensation)</u> This setup option allows you to adjust the camera's capture of light when there is strong backlight in the camera's Field of View [FoV]. By default, BLC is set to OFF.
 - d. <u>Exposure Control</u> In case the camera's image is flickering, adjust the value on this setting. By Default, Exposure Control is set to 60GHz.
- 2. Press 'Preview' to review changes before saving.
- 3. Press 'Apply' to save changes.
- 4. Press 'Cancel' to exit without saving.
- 5. Press 'Reset Factory' to return all settings to their default values.

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CENTRAL CENTRAL CENERA	Basic Settings Active Noise Filter: Medium ▼ Local Exposure : Auto ▼ Back-light Compensation : Off ▼ Exposure Control : Anti-flicker 60Hz ▼ Exposure Settings ● Advanced Exposure Settings ● Metering Area : Center ▼ Custom Metering Area : Center ▼ Exposure Target Factor (25% ~ 400%) : 100 Shutter Time Limit (sec): Min Image Properties Sensor Max Gain : Seturation: 64 Brightness: 0 Hue: 0 Auto WDR: 0 Auto Contrast: 0 White Balance Control : Auto White Balance Control : Auto Preview Apply Cancel Reset Factory	



Setup > Image Quality

Adjust the MEGApix® PANO[™] camera's Image settings. Changes will apply to all four (4) sensors.

1. EXPOSURE SETTING

- a. <u>Metering Mode</u> This is the region of interest for the exposure settings. The camera's exposure will be determined by the selected Metering Mode, affecting the camera's bright levels. Select an option from the available drop-down options.
- b. <u>Custom Metering Area</u> If 'Custom' is selected in the Metering Mode, adjust the Metering Mode position in the camera's FoV. Select an option from the available drop-down options.
- c. <u>Exposure Target Factor</u> Higher values mean the image will settle to something brighter. Lower values mean the image will appear darker.
- d. <u>Shutter Time Limit</u> Set the shutter's minimum and maximum speeds from the available options. Select 1/7.5 to set more exposure time to light. This setting is used to make movements look natural/ unfrozen. Select 1/8000 to set less exposure time to light. This settings is used to catch fast moving objects.
- e. <u>Sensor Max Gain</u> Maximum light gain settings in low light conditions. Select from 26dB (least light), 30dB, 36dB to 42dB (most light). Default value is 36dB
- f. <u>Fastest Exposure</u> Set the shutter speed from the available options between 1/25 and 1/32000. Select 1/25 to set more exposure time to light. This setting is used to make movements look natural/ unfrozen. Select 1/32000 to set less exposure time to light. This settings is used to catch fast moving objects.

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Image: starting of the start	Basic Settings Active Noise Filter: Medium ✓ Local Exposure : Auto ✓ Back-light Compensation : Off ✓ Exposure Control : Anti-flicker 60Hz ✓ Exposure Settings : Advanced Exposure Settings Metering Mode : Center ✓ Custom Metering Area : Center ✓ Exposure Target Factor (25% ~ 400%) : 100 Shutter Time Limit (sec): Min 1/8000 ✓ Max 1/15 ✓ Sensor Max Gain : 36db ✓	
	Image Properties Saturation: Brightness: 0 Hue: Manual Contrast: 64 Sharpness: 65 Auto WDR: 0 Auto Contrast: 0 White Balance Control: Normal Preview Apply Cancel Reset Factory	Ţ

Setup > Image Quality

Adjust the MEGApix® PANO[™] camera's Image settings. Changes will apply to all four (4) sensors.

- <u>Saturation</u> Set the camera's saturation levels from 0 ~ 255. The higher the number, the more vibrant will the colors appear on the camera's image. The lower the number, the more black and white the image will appear. Default value is 64.
- 2. <u>Brightness</u> Set the brightness of the camera's image from -255~255. The higher the number, the brighter the camera's image will appear. Default value is 0.
- 3. <u>Hue</u> from -15 ~ 15. The higher the number, the camera's image will use warmer tones. The lower the number, the camera's image will use cooler color tones. Default value is 0.
- Manual and Auto Contrast Set the camera's contrast between 0 ~ 128. The higher the number, the contrast between the dark and bright areas in the camera's FoV will be more distinct. Default value is 64. if auto is selected, it will use the manual contrast value as a baseline or target.
- <u>Sharpness</u> Sets the image sharpness between 0 ~ 255. The higher the number, the sharper the image. Default value 128.
- Auto WDR (Wide Dynamic Range) The Wide Dynamic Range is used when there are extremely bright and extremely dark areas in the VoF of the camera. Set the level between 0 and 128.
- <u>White Balance Control</u> This gives the camera a reference to "true white." White Balance is used to make colors appear the same in the Field of View (FoV) no matter what is the light temperature of the light source. Select form the available drop-down menu options.
- 8. <u>White Balance Method</u> Select a relevant setting from the drop-down options.

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	^
LIVE VIEW	Basic Settings
GENERAL	
NETWORK	Active Noise Filter: Medium ✓ Local Exposure : Auto ✓
SECURITY	Back-light Compensation : Off 🗸
DATE & TIME	Exposure Control : Anti-flicker 60Hz 🗸
IMAGE QUALITY	Exposure Settings :
VIDEO STREAMS	Advanced Exposure Settings
VIRTUAL CAMERAS	Custom Metering Area : Center
	Exposure Target Factor (25% ~ 400%) : 100
	Shutter Time Limit (sec): Min 1/8000 V Max 1/15 V
	Image Properties
	Saturation: 64
	Brightness:
	Hue:
	Manual Contrast: 64
	Sharoness: 6
	Auto WDR:
	Auto Contrast:
	White Balance Control : Auto White Balance Method : Normal Normal
	Preview Apply Cancel Reset Factory



Setup > Video Streaming

The MEGApix® PANO[™] camera allows you to setup 2 different streams to optimize storage and bandwidth usage.

- 1. <u>Video Mode</u>- Select the camera's resolution from the following options: 48MP at 15fps or 32MP at 30fps. Selecting the resolution will affect the streams settings below.
- 2. Encode FPS- Select from 0fps to 30fps.
- 3. Advanced Stream Settings:
 - a. GOP Size This sets the number of I-frames and P-frames per second. If GOP is set to 30, the camera will record 1 I-frame and 29 P-frames. To improve the recording quality, lower the GOP number. However, the lower the number, the larger streaming file size will be.
 - Bitrate Control Select the appropriate bitrate control option from the drop-down menu options.
 - c. Average Bitrate Set the average values for the camera's bitrate performance.
 - Min/ Max Bitrate If VBR Bitrate mode is selected, adjust the minimum and maximum bitrate levels.
- 4. Select 'Apply' to save changes.

DIGITAL WATCHDOG	·
LIVE VIEW	
GENERAL	Note: Stream resolutions should be in the descending order.
NETWORK	Vides Mode : 32MP at 30/ps •
SECURITY	a Three L
DATE & TIME	Excela PDS : [30 +]
IMACE QUALITY	
VIDEO STREAMS	
VERTURE CAMERIAN	GOP Size (1-255) : 5 Bitrate control : (258 Average Bitrate : 9000000 Min bitrate (bps) : 5000000 Min bitrate (bps) : 5000000
	Citeran 2
	Encode FPS = [5 •] Stream settings (
	Apply Cancel Reset Factory

SPECIFICATIONS*

IMAGE	
Image Sensor	Four (4) 1/23" 12MP CMOS Sensors
Effective Pixels	4000 (H) x 3000 (V) (Per Sensor)
Minimum Scene Illumination	F2.4 (30IRE): 0.5 Lux [Color] F2.4 (30IRE): 0.1 Lux [B/W]
Maximum Resolution	48MP (4x12MP)
Focal Length	Four 7.2mm Fixed Lenses, 180° Panoramic View
Horizontal Field of View (HFOV)	48MP Mode: 48° HFOV per image, 185° total HFOV 32MP Mode: 46° HFOV per image, 180° total HFOV
NETWORK	
LAN	802.3 Compliance 10/100/1000 LAN
Video Compression Type	H.264, MJPEG
Resolution / Frame Rate	48MP: 15fps per sensor 32MP: 30fps per sensor
Protocols	TCP/IP, DHCP, UDP, RTSP,NTP, RTP,Zeroconf, UpnP, Telnet
Stream Capability	1 main high resolution, 1 low resolution
Maximum User Access	2 Users
Web Viewer	OS: Windows 7 or higher Browser: Internet Explorer, Google Chrome, Firefox
ENVIRONMENTAL	
Operating Temperature / Humidity	-10°C ~ 50°C (14°F ~ 122°F), Less than 80% (Non-Condensing)
IP Rating	IP66 Certified (Weather Resistant)
ELECTRICAL	
Power Requirement	12V DC, PoE+ [IEEE802.3at, PoE+ Switch/ PoE+ Injector]
Power Consumption	12VDC: 22.5W PoE+: 25.5W
MECHANICAL	
Dimensions	7.5 x 4.25 inch (190 x 102mm)
Weight	4.4 lbs (2kg)



Before sending your camera for repair, check the following or contact your technical specialist.

I can't find my MEGApix® PANO™ camera on the IP Finder software.

- Is the PoE cable connected properly?
 Make sure cable is tightly connected at both ends. It should make a "click" sound when connected properly.
 Make sure cable is intact and there are no cuts or exposed wires.
- If Yes, are the camera's LED light turned on and blinking?
 The camera's LED lights indicate that the camera is powered on. Blinking LED light indicate that the camera has finished booting up and is transmitting data.
- If Yes, is the internet working properly?
 Make sure you can connect to the internet with other devices on the network (ex. Your Computer). Your internet could be temporarily down.
- If Yes, if using a power adaptor, does it meet camera's power requirements?
 Power Requirements: DC12V (22.5W 12VDC), PoE Plus (25.5W POE+). Please note that if you plug the camera into PoE+ but then plug that switch into a PoE it will not work properly/
- If Yes, if using PoE Switch, is it connected to a proper internet outlet and operating properly? Make sure the PoE Switch is connected to a router/modem and the ports that have devices connected to them have a green LED on.
- If Yes, is the computer on the same network as the MEGApix® PANO[™] camera? Camera and computer should be connected to the same router. Contact your network administrator if you have more than one network available.
- If Yes, try connecting the camera to a different port in the PoE Switch.
 That specific Switch Port may be damaged or currently not working properly.
- If Yes, try resetting the camera to default settings.
 Press the 2 buttons in the back together and hold for 5 seconds. The camera will return to factory default with default IP address set to DHCP. The camera will be found using the DW IP Finder software with an IP address that matches your network's requirements.

Before sending your camera for repair, check the following or contact your technical specialist.

I can't connect to my MEGApix® PANO™ camera through the Web Browser

- Are the camera's LEDs on and blinking? The camera's LED indicates the camera is On. If the LED blinks, the camera has finished booting up and is transmitting data.
- If Yes, is the internet working properly?
 Make sure you connect to the internet with other devices on the network (ex. Your Computer). Your internet could be temporarily down.
- If Yes, is the computer on the same network as the IP camera?
 Camera and computer should be connected on the same router. Contact your network administrator if you have more than one network available.
- If Yes, try pinging the MEGApix® PANO[™] camera's IP address as it appears on the DW IP finder.
 From your desktop, go to Start > Programs > Accessories > Command Prompt. Type "ping" followed by the camera's IP address; then, press Enter. If you get the message "Request timed out," camera is not connected. If you get data back, that means the camera is connected.
- If Yes, try connecting the camera, to a different port in the PoE Switch.
 That specific Switch Port may be damaged or currently not operating properly.
- If Yes, check your security settings on your internet browser.
 Try adding the camera's IP address to the trusted sites list in your Internet Options. *Setup may vary depending on the browser you use.



Before sending your camera for repair, check the following or contact your technical specialist.

I can't see the live video of my MEGApix® PANO™ camera.

- Are you trying to view the camera's video from an Internet Explorer browser?
 Make sure you have the minimum PC requirements to view the camera. *See below for more information.
- If Yes, did you install all required FbVLC files? These are VLC media files that allows the camera to stream its video to the web client.
 When you connect to your MEGApix® PANO[™] camera for the first time, your browser will ask you to install FbVLC. Make sure your Web Browser's security settings do not block pop-up windows and allows FbVLC files
 - to be installed and used. *Setup may vary depending on the browser you use.
- If Yes, make sure nothing is blocking the camera's lens.

Server Minimum Requirements	
Any server capable of recording 24 or mo	pre 1080P cameras will be sufficient for full 4 x 12mp
recording	
Processor	Intel® Core ™ i3-3220 CPU @3.30GHz or similar
RAM	8GB Required (16GB Recommended)
Hard Drive	Sata 6 Gb/s, 64 MB cashe, 1 TB, 7200 RPM
Graphics Card	NVIDA Quadro K6000, 1GB DDR3 or similar

Client Minimum Requirements For single 4K resolution video monitor				
Processor	Intel [®] Core™ i5-2500 CPU @3.3 GHz or similar			
RAM	8GB Required (16GB Recommended)			
Graphics Card	NVIDA Quadro K6000, 1GB DDR3 or similar			

Before sending your camera for repair, check the following or contact your technical specialist.

Setting the IP Address for your PC

Dynamic Host Configuration Protocol (DHCP) is the default setting for the camera.

If the MEGApix® PANO[™] camera is connected to a DHCP network and the camera's IP Configuration Mode is set to DHCP, the server will automatically assign an IP address to the camera. If the camera is using DHCP, the default IP address will be 192.168.1.80, and the default subnet mask will be 255.255.255.0.

The MEGApix® PANO[™] camera can also connect to the web viewer using a static IP address. This will allow you to set your own IP address manually.

Setup the Network Protocol on your PC.

- 1. Go to Network icon on your PC.
- 2. Right-click and select Properties.
- 3. Double-click Local Area Connection.
- 4. Click Properties.
- 5. Double-click Internet Protocol Version 4 (TCP/IPv4).
- 6. Select Obtain an IP address automatically to set the computer to a dynamic IP address, or select Use the following IP address to set the computer to a static IP address.
- 7. If the option Use the following IP address has been selected, setup the IP address as 192.168.1.XXX. The last three digits should be a number between 1 and 254.

			Internet Protocol Version 4 (TCP/IPv4) Properties	2
Control Panel	▶ Network and Internet ▶ Network and Sharing Center	- 4 Search Control Panel		
Control Panel Home Change adapter settings Change advanced sharing	View your basic network information and se	et up connections See full map Internet	General You can get IP settings assigned automatically if your networ this capability. Otherwise, you need to ask your network adm for the appropriate IP settings	k supports ninistrator
settings	General	Connect or disconnect	 Obtain an IP address automatically Uge the following IP address: 	
	IPv4 Connectivity: Internet IPv6 Connectivity: No network access	nnect ns: 🔋 Local Area Connection	IP address: 192.168.1.1	00
	Media State: Enabled		Subnet mask: 255 . 255 . 255	0
	Speed: 100.0 Mbps		Defections in 102 102 1	
	Details	N connection; or set up a router or access point.	 Obtain DNS server address automatically 	
	Activity	r VPN network connection.	O Use the following DNS server addresses:	
	Sent — 💐 — Received		Preferred DNS server:	
	Bytes: 18,931,920 928,109,020	omputers, or change sharing settings.	Alternate DNS server:	
See also HomeGroup	(Properties Clisable Diagnose	leshooting information.	Validate settings upon exit	l <u>v</u> anced
Windows Firewall	Close		ОК	Cance



Current TCP/IP Settings

If your IP settings are obtained automatically, you could use the MS-DOS prompt (or Command Prompt) to determine your IP address.

To check your PC's TCP/ IP Settings (Windows Vista or Windows 7):



Under the 'General' tab of the TCP/IP Properties you will see your IP address information.

WARRANTY INFORMATION*

Digital Watchdog (referred to as "the Warrantor") warrants the Camera against defects in materials or workmanships as follows:

Labor: For the initial five (5) years from the date of original purchase if the camera is determined to be defective, the Warrantor will repair or replace the unit with new or refurbished product at its option, at no charge.

Parts: In addition, the Warrantor will supply replacement parts for the initial five (5) years.

To obtain warranty or out of warranty service, please contact a technical support representative at 1-866-446-3595 Monday through Friday from 9:00AM to 8:00PM EST.

A purchase receipt or other proof of the date of the original purchase is required before warranty service is rendered. This warranty only covers failures due to defects in materials and workmanship which arise during normal use. This warranty does not cover damages which occurs in shipment or failures which are caused by products not supplied by the Warrantor or failures which result from accident, misuse, abuse, neglect, mishandling, misapplication, alteration, modification, faulty installation, set-up adjustments, improper antenna, inadequate signal pickup, maladjustments of consumer controls, improper operation, power line surge, improper voltage supply, lightning damage, rental use of the product or service by anyone other than an authorized repair facility or damage that is attributable to acts of God.



LIMITS & EXCLUSIONS*

There are no express warranties except as listed above. The Warrantor will not be liable for incidental or consequential damages (including, without limitation, damage to recording media) resulting from the use of these products, or arising out of any breach of the warranty. All express and implied warranties, including the warranties of merchantability and fitness for particular purpose, are limited to the applicable warranty period set forth above.

Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above exclusions or limitations may not apply to you. This warranty gives you specific legal rights, and you may also have other rights from vary from state to state.

If the problem is not handled to your satisfaction, then write to the following address:

Digital Watchdog, Inc. ATTN: RMA Department 5436 W Crenshaw St Tampa, FL 33634

Service calls which do not involve defective materials or workmanship as determined by the Warrantor, in its sole discretion, are not covered. Cost of such service calls are the responsibility of the purchaser.



Complete Surveillance Solutions

Headquarters Office: 5436 W Crenshaw St, Tampa, FL 33634 Sales Office: 16220 Bloomfield Ave., Cerritos, California, USA 90703 PH: 866-446-3595 | FAX: 813-888-9262 www.Digital-Watchdog.com technicalsupport@dwcc.tv Technical Support PH: USA & Canada 1+ (866) 446-3595 International 1+ (813) 888-9555 French Canadian 1+ (514) 360-1309 Technical Support Hours: Monday-Friday 9:00am to 8:00pm Eastern Standard Time