

## Digital Watchdog IP Megapixel Camera MV421TIR

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### A&E Specifications

#### Security System

#### *Masterformat®* Numbers and Titles

28 00 00 ELECTRONIC SAFETY AND SECURITY

28 20 00 ELECTRONIC SURVEILLANCE

28 23 00 VIDEO SURVEILLANCE

28 23 29 VIDEO SURVEILLANCE REMOTE DEVICES AND SENSORS

### PART 1: GENERAL

#### 1.01 GENERAL

- A. All equipment and materials used shall be standard components that are regularly manufactured and used in the manufacturer's system.
- B. All systems and components shall have been thoroughly tested and proven in actual use.
- C. All systems and components shall be provided with the availability of a toll-free technical support phone number from the manufacturer. The phone number shall allow for technical assistance for either the dealer/installer or the end user at no charge for as long as the product is installed.
- D. All systems and components shall be provided with an explicit manufacturer warranty.

#### 1.02 SUMMARY

- A. The MV421TIR MEGAPIX camera is a triple CODEC network camera that provides 1080P megapixel resolution at 30 frames per second. The camera is designed for Outdoor installation with IP68. The camera has built in IR LED's that provide a clear image in minimum to no illumination. The camera's advanced technologies like, Electronic Day and Night, 3D-DNR, and Double Shutter WDR will deliver the best images in any type of environment. Power over Ethernet combined with our Snapit Housing, branded for it's quick

and easy installation procedure, allows you to view and control your MEGAPIX camera from anywhere in the world in just a few minutes.

### **1.03 SUBMITTALS**

- A. Manual
- B. Specification Sheet
- C. Brochure

### **1.04 REFERENCES**

- A. National Television System Committee (NTSC)
- B. Conformity for Europe (CE)
- C. Federal Communications Commission (FCC)
- D. Restriction of Hazardous Substances (RoHS)

### **1.05 QUALITY ASSURANCE**

- A. With engineering and manufacturing facilities in Seoul, Korea, and distribution and product support in the United States, DW offers a level of specialty in the manufacturing and deployment of analog and IP video security technology that your business can rely on. In addition to our proven product offerings, we have taken service and technology to the next level with a substantial investment in additional skilled industry professionals, online service capabilities, and application support. We offer technical assistance from Monday to Friday 8:30 AM to 8:00 PM EST via a toll-free telephone number at no extra charge.

### **1.06 DELIVERY, STORAGE, HANDLING**

- A. General: Delivery, storage, and handling of the Digital Watchdog Camera shall be in accordance with the manufacturer's recommendations.
- B. Ordering: The manufacturer's ordering instructions and lead-time requirements shall be followed in order to avoid installation delays.
- C. Delivery: The Digital Watchdog Camera shall be delivered in the manufacturer's original, unopened, undamaged container with identification labels intact.

- D. Storage and Protection: The Digital Watchdog Camera shall be stored and protected from exposure to harmful weather conditions and at the environmental conditions recommended by the manufacturer.

## **1.07 WARRANTY**

- A. LABOR: For a period of two (2) years and one (1) year on LED from the date of original purchase, if the Digital Watchdog 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.
- B. PARTS: In addition, the Warrantor will supply replacement parts for a period of five (5) years and one (1) year on LED. To obtain warranty or out of warranty service, please call a technical support representative at 1-866-446-3595 Monday through Friday from 8:30 AM to 8:00 PM EST.

A purchase receipt or other proof of the date of the original purchase is required before warranty service is rendered. The warranty only covers failures due to defects in materials and workmanship which arise during normal use. This warranty does not cover damage 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, maladjustment 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.

- C. LIMITS AND EXCLUSIONS: There are no expressed warranties except as listed above. The Warrantor will not be liable for incidental or consequential damages, including without limitation or damage to recording media, resulting from the use of these products or arising out of any breach of the warranty. All expressed 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 that vary from state-to-state.

## PART 2: SPECIFICATIONS

### 2.01 FEATURES

- A. The MV421TIR IP shall be equipped with a 1/2.8" Sony CMOS sensor.
- B. The MV421TIR shall be designed for outdoor installation with IP68 certification.
- C. The MV421TIR shall have a 3 axis gimbal bracket for precise camera positioning.
- D. The MV421TIR shall include 24 IR LED's capable of 70ft illumination.
- E. The MV421TIR shall have a mechanical IR cut filter.
- F. The MV421TIR IP shall include a 3.5~16mm varifocal lens with Auto focus feature.
- G. The MV421TIR IP shall support internal storage for emergency recording.
- H. The MD421 shall have 1 audio in and 1 audio out connector for 2 way audio.
- I. The MD421 shall support 1 sensor in and 1 relay out.
- J. The MV421TIR shall employ M-JPEG, MPEG-4 and H.264 compression. Users can choose one of these three compression types.
- K. The MV421TIR shall be designed with a built-in web server, such that standard web browsers like, Internet Explorer or Firefox, can be used to view the camera view without installing special viewer software. The operating system required for viewing system should be Microsoft Windows 2000/XP/Vista/7. The minimum system requirement is Intel 2.0 GHz Pentium IV CPU, with 512MB RAM, decent display chip with 32MB display memory.
- L. The MV421TIR shall have a network interface that is 10/100 Mbps Ethernet with RJ-45 connector.
- M. The MV421TIR shall support dual voltage with POE(Class2) and DC12V
- N. The camera shall have 3 user level settings, which are a) Super, b) Operator, and c) Viewer.
- O. The MV421TIR shall have a maximum frame rate that can handle 30fps at 1920X1080 resolution in M-JPEG, MPEG-4 and H.264 mode.
- P. The MV421TIR shall employ dual CODEC that are capable of streaming out M-JPEG, MPEG-4 and H.264 simultaneously.
- Q. The MV421TIR shall have user image sizes which are user selectable among 1920X1080,1280X720, 960X544, 800X448, 704X400, 640X352, 480X272, 320X176, 1440X1080, 960X720, 800X608, 704X528, 640X480, 480X368, 320X240
- R. The MV421TIR shall have a manual shutter speed that can be adjustable among 1/30, 1/60, 1/120.
- S. The MV421TIR shall have a digital slow shutter speed that can be selectable among 2X, 3X, 4X.
- T. The MV421TIR shall have the ability for back light compensation
- U. The MV421TIR shall support the following network protocols: IPv4, IPv6, TCP/IP, UDP, HTTP, UPnP, RTSP/RTP, IGMP, SMTP, FTP, DHCP, NTP, DNS, DDNS, PPPoE and Onvif.
- V. The MV421TIR shall utilize an event notification capable of using SMTP.
- W. The MV421TIR shall have user configurable port settings.

- X. The MV421TIR shall be capable of limiting the bandwidth of Video output from 1800Kbps to 8Mbps.
- Y. The MV421TIR shall be capable of overlaying time stamp and text caption over video image.
- Z. The MV421TIR shall be capable of auto FTP upgrade.
- AA. The MV421TIR shall be capable of IP address filtering to the inward access to the camera.
- BB. The MV421TIR shall be capable of 5 clients simultaneous camera view.

## 2.02 CAMERA SPECIFICATIONS

A.	Minimum Scene Illumination:	0.0 Lux(B/W), 0.5 Lux(Color) in F1.6
B.	Lens Type:	Varifocal with auto Focus
C.	Focal Length:	3.5~16mm
D.	IR Distance	70ft
E.	Lens Operation:	
	Iris	Automatic
	Focus	Automatic / manual
	Zoom	Control by SW
F.	Brightness	0~20
G.	Electronic Shutter Range:	1/30
		1/60
		1/120 and Auto
	Digital Slow Shutter	OFF, 2X, 3X, 4X
H.	BLC:	OFF / ON
I.	WDR:	0~10
J.	Auto Gain Control	0~20
K.	Day & Night:	Mechanical IR cut filter, AUTO, Day(Color) and Night(B/W)
L.	Lenz mode	Indoor, Outdoor
M.	Mirror:	OFF / ON
N.	Flip	OFF / ON
O.	Sharpness:	0~10
P.	Chroma:	0~20
Q.	3DNR:	OFF / LOW / MIDDLE / HIGH
R.	Privacy:	OFF / ON (30 Programmable Zones)
S.	Motion Detection:	OFF / ON (12 Programmable Zones)

## 2.03 VIDEO SPECIFICATIONS

- A. Imaging Device: Sony CMOS
- B. Image Size: 1/2.8"-inch
- C. Signal System: NTSC
- D. Total Pixels: 2016 X 1108

**2.04 External device**

- A. Audio: 1 in / 1 out
- B. Sensor: 1 in / 1 out

**2.05 NETWORK SPECIFICATIONS**

- A. LAN: 802.3 Compliance 10/100M
- B. Supported Codec: H.264, MPEG4, MJPEG
- C. Resolution: 1920X1080 ~ 320X240
- D. Frame Rate: up to 30 fps
- E. IP version: IPv4, IPv6
- F. Protocol: IPv4, IPv6, TCP/IP,UDP, HTTP, UPnP, RTSP/RTP, IGMP, SMTP, FTP, DHCP, NTP, DNS, DDNS, PPPoE.
- G. Onvif: ver. 1.02
- H. Web Viewer: IE, Chrome, Firefox, Safari
- I. CMS: NxMS, Pivot

**2.06 ELECTRICAL SPECIFICATIONS**

- A. Power Requirement: Dual Voltage: DC 12V / PoE(Class3)
- B. Power Consumption: 7.2W, 600mA / 8.64W, 720mA (LED On)

**2.07 ENVIRONMENTAL SPECIFICATIONS**

- A. Environment: Indoor / Outdoor
- B. Operational Temperature: -10°C ~ +55°C (-14 ° F ~ 131°F)
- C. Storage Temperature: -20°C ~ +70°C (-4 °F ~ 158°F)
- D. Operational Humidity: Less than 90%

## **2.08 MECHANICAL SPECIFICATIONS**

- A. Material: Aluminum - AL / ADC12-1
- B. Dimension: 139 (diameter) X 118.8 (height) millimeters
- C. Unit Weight: 2.05 lbs.

## **2.09 CERTIFICATIONS**

- A. CE
- B. FCC
- C. RoHS

## **2.10 WARRANTY**

- A. 2 Years.

## **2.11 MODEL NUMBERS**

- A. DWC-MV421TIR

(Written OCT 15, 2012)

\*Digital Watchdog is constantly developing product improvements. We reserve the right to modify product design and specifications without notice and without incurring any obligation.