



## IP Camera AM-FD2020-MA6-W H.265 2MP 20X Zoom 0.0008lux IP Bullet Camera



**DARK WARRIOR**  
STAR LIGHT

### Dark Warrior Starlight Series IP Camera

Designed to work under Ultra Low Light illumination to Give Color Picture Quality

**Superior Engineering Design & Sensational Image Quality**

## AM-FD2020-MA6-W H.265 2MP 20X Zoom 0.0008lux IP Bullet Camera



**SUPER  
WDR**



**H.265 VIDEO  
COMPRESSION**



**VIDEO  
ANALYTICS**



**TRIPLE  
STREAMING**



**AUDIO  
IN/OUT**



**ALARM  
IN/OUT**



**VOLTAGE  
PROTECTION**



**ANR**



**SD  
CARD**

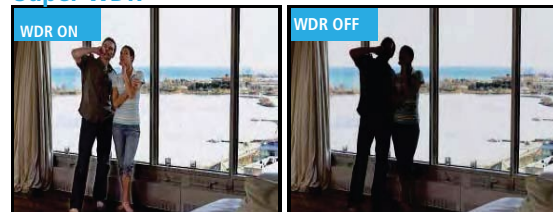


**INFRARED AND  
WHITE LED**

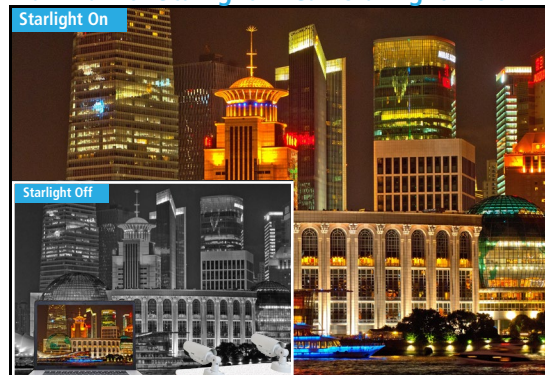
### Features :

- Full HD 2MP Resolution 1920 x 1080P at 30fps, 60fps at 720P
- 1/2.8" Ultra low lux progressive scan CMOS sensor
- Ultra low lux color image at 0.0008Lux
- Total 20X Zooming Capacity by Optically 20X & Digitally 16X
- Latest H.265+ HEVC hardware compression along with H.264/MJPEG
- High Intensity ExIR LED/White LED, Night Vision up to 120M, Dual LED(White + Infrared), Auto adjust IR Power according to Zoom
- Smart more than 10 IVA functions, Supports 140dB WDR and 3DNR to night vision image enhancement
- Triple streaming, Triple compression, Variable/Constant bitrate and frame rate
- Support Intelligent Alarm function Motion/Video Blind, Port Alarm, Network Disable, IP/MAC Conflict Detection
- Supports offline storage by microSD card 128gb(card optional) and Network storage(FTP)
- ANR(automatic network replenishment) to support offline network storage data(SD Card/USB) videos automatically download to NVR hard drive when network re-established
- ROI(region of interest) technology can save more than 25% of bit rate so it increases the storage period
- Smart IR function works when object/person is close to camera. It controls IR to get clear picture
- 1Ch audio input,output, Third party alarm Integration by 3Ch Input /2Ch Output
- Software compatibility with icrys series 256Ch CMS software and any third party Onvif VMS/CMS Software
- Supports P2P APP alert management & functions
- P2P secure cloud monitoring on iOS/Android handsets(through NVR live/playback/audio and control)
- Wide range network protocol TCP/UDP/FTP/SMTP/upnp/RTSP/RTMP/HTTP & many more
- Various functions such as Day&Night, BLC/HLC, AGC, White balance, Shutter speed, In/Outdoor mode, etc.
- OSD in multiple color, naming & position, Privacy, Motion detection, Smart De-Fog control
- Latest ONVIF S profile compliance, Email notification, Manual & Schedule snapshot
- Easy, fast response & friendly graphical user interface, Advanced encryption secure access
- Built in uni/multicast streaming to support multiple user logging at same time
- Built-in TVS 6000V and Lightning/Surge 4000V protection, Supports wall/pendant/corner mounts IP66 waterproof standard, works under high and low environment -40°C ~ 70°C temp. condition

### Super WDR



### Darkwarrior Starlight IP Camera Night Vision



## Intelligent Video Analytic Functions :

### Double Trip Wire



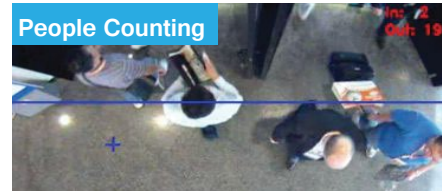
The application detects moving objects that cross a two trip line, making it possible to automatically trigger an event. Ideal for illegal turn or traffic flow (vehicles or people) and specify the minimum to maximum time intervals or when the person or an object enters in unauthorized zone and crosses, the both virtual lines trigger an event.

### Facial Detection



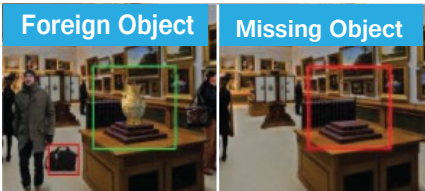
The application is able to identify and capture human faces from live video & it can save the images to the specified Recording Path either in NVR or CMS or Local Computer with Date & Time Stamp. Ideal for ATM windows, Service and Ticket Counters, Retail POS counters, Doorways and Passageways, Lobby and Reception areas.

### People Counting

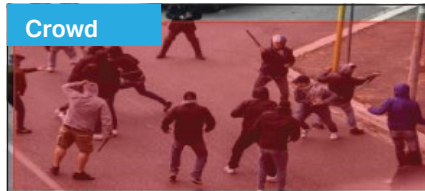


The application sense people from an overhead position in the desired areas, how many persons Enter & Exit passing through. Functional to maintain Visitor Data, supervise stock point, evaluate traffic in key areas & manage the traffic flows. Ideal for Customer Service Centers, Airports, Changing Rooms, Point-of-Sale (POS) transactions Desk.

### Foreign Object

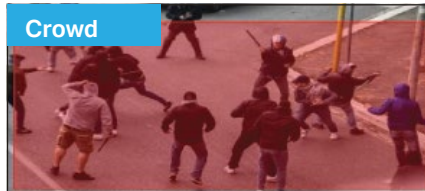


### Missing Object



**Foreign:** The application Detects object abandoned/left behind/ Suspicious Objects Left in Pre-defined Area. It triggers an event. Ideal for Public Transports, Museums, Art Galleries & Public Places  
**Missing:** The application detects when a particular object was moved or removed from the desired drawn Virtual area, it trigger an event. Ideal for Museums, Warehouse, Art Gallery, Jewelry showroom.

### Crowd



The application estimates the density of people in pre-defined area, once the density crosses a certain limits or suddenly group of a people enter into in the pre-defined area, it triggers an event. Ideal for Retailers, Shopping Malls, Waiting Areas, Hospitals, Parking Zones, Silent Zones.

### Loitering



If somebody enters the marked area and stays there for a certain period of time, the alarm is automatically triggered. Ideal for Public areas, Border Fences, Buildings, Government Restricted Zone, Banks, Parking Areas.

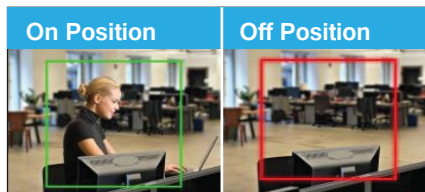
### Parking



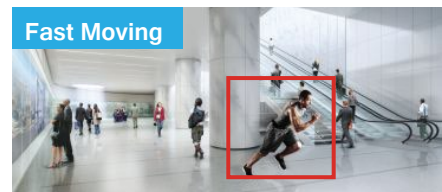
The application detects illegal parking with pre-defined restricted zones, speed limit settings.

Ideal for VIP parking Zone, No Parking Zone, Special Allocated Parking Zone, Parliament House.

### On Position



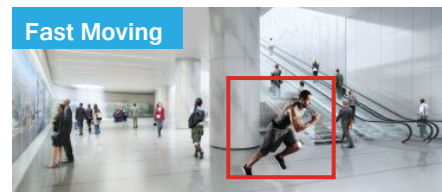
### Off Position



The application triggers an alarm when the Duty Officers are absence from their pre-defined sitting positions.

Ideal for Reception, Customer Service Desk, POS Desk, Entry/Exits Security Guards Cabin.

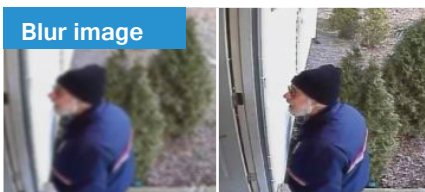
### Fast Moving



The application triggers an alarm when the person runs in a not allowing Running pre-defined Zone.

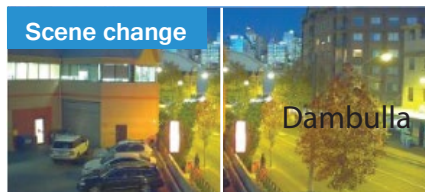
Ideal for Temple, Hallways lobbies, Platforms Walking Zone, Airports Runways.

### Blur image



The application trigger an alarm if someone deliberately or accidentally disturbed the lens focus or change the image Sharpness.

### Scene change



The application trigger an alarm if the camera Rotated/Manipulation/Direction Shifted from the user-selected Viewing direction or camera lens is covered by some bag or cloths, Spray Painting, Video Tamper.

More than  
**18 IVA Functions**  
are available



## Technical Specifications

Model No	AM-FD2020-MA6-W
<b>Camera Specification</b>	
Sensor type	1/2.8" Ultra low lux CMOS sensor
Lux Level(illumination)	Color 0.0008Lux, B/W 0.0001Lux @(F1.2, AGC ON), 0Lux @ IR On
Shutter speed control	Auto/Manual, 1/2s ~ 1/100,000s
AGC	Yes, Adjustable
Lens	F = 4.7mm ~ 94mm
Zoom ratio	20X Optical, 16X Digital
Angle Of View	Horizontal : 55.8°(Wide) ~ 3.2°(Tele)
Aperture Range	F1.5 ~ F3.0
Zooming Speed	Approx. 2.6s(Optical Wide-Tele)
Focus	Auto/ Semi-automatic/ Manual
IRIS	Auto
SN Ratio	≥ 55dB
Signal System	PAL/NTSC
ICR	Dual filter ICR
IR LEDs	4 ExIR LED, 2 White LED
IR Functions	IR LED 120mtrs., White LED 30mtrs., Smart IR control, IR auto adjust
<b>Camera Functions</b>	
WDR	140dB, Auto/Manual adjustable
Day/Night	Auto(Outside/Inside), Color, B/W
Digital noise reduction	3DNR (Close/Ordinary/Expert)
Light compensation	BLC Off/On, HLC Off/On
White balance	Auto/Manual/Lock/Nature/Sunshine/Day Light/Warm Light
Other functions	Smart Defog control, EIS(Image Stabilizer), Flip control, Privacy masking
Motion detection	Yes, Zones :396(22x18), Sensitivity level 1~ 100
Image control	Brightness, Contrast, Sharpness, Saturation
OSD display	Yes, Character size, Display arrangement, Color
<b>Compression/Video/Audio</b>	
Video compression	H.265, H.264, MJPEG, H.264 Main/High/Baseline profile
Video resolution	2MP(1920x1080P)/1.3MP/1MP/D1/2CIF/CIF/VGA
Main stream	1080P(1920x1080)/960P(1280x960)/720P(1280x720)/D1(704x576)
Second stream	D1(704*576)/2CIF(704x288)/CIF(352x288)/QCIF(172x144)
Third stream	CIF(352x288)/QCIF(172x144)
Record & Live frame rate	25/30(N)fps at 2MP/1.3MP/1MP, 50/60(N)fps at 720P, 704x576, and second stream @25fps
Bit Rate	32Kbps ~ 16Mbps, VBR/CBR, I-Frame interval
Audio compression & bitrate	G.711/G.726/ADPCM & 8K~48Kbps
<b>Video Analysis</b>	
Intelligent video analysis	Crowd detection/Tripwire/Double tripwire/Perimeter/Missing and Foreign object/Fast Moving/ Loitering/Parking/Blur image/Scene change/Audio & Video abnormal detection
Intelligent alarm	Motion detection/Video loss/Video blind/Port alarm/IP & MAC conflict detection
Alarm & IVA trigger	On-screen alerts/PTZ trigger/Link out/E-MAIL/FTP upload/Pre-Post record
Corridor control	Yes(supported format 16:9, 9:16)
Region of Interest(ROI)	4 Area

## Technical Specifications

Model No.	AM-FD2020-MA6-W
<b>Network, Storage, Interface</b>	
Protocol	TCP,UDP,HTTP,802.1x,FTP,SMTP,UPnP,Multicast,DNS,DDNS,NTP,RTSP,DHCP,PPPoE,SNMP
Pre & Post recording	Pre : 5 to 15sec, Post : 10 to 60 sec
Storage function	ANR(auto download in NVR), Manual & Alarm recording
Network storage	FTP(pre & post upload)
LAN port	1x Port RJ-45, 10M/100M ethernet
Storage	Micro SD/SDHC/SDXC slot(128Gb)
Audio	1Ch in, 1Ch out
Alarm	3Ch in, 2Ch out
Composite video out	1Vp-p Composite Output, 75Ω, BNC Connector
Communication	RS-485
Other ports	USB2.0
<b>Software Support</b>	
Onvif	Yes, Profile S
CMS software	iCRYST Series, up to 256CH(IP+NVR+Matrix)
3rd Party VMS/NVR /CMS	Onvif/SDK/CGI
Mobile	Android /iOS through NVR, P2P cloud support
User login	8 User / 4 level of rights, Simultaneous login <7 User client
Snap shots	Schedule, Link with FTP or Email
Encryption	Off/AES
Browser Support	IE 8+, Chrome 18 ~ 30 +, Firefox 5.0 +
Others Functions	FTP Upload, EMAIL Alert
Authority Security	User(ID and PW)/Host(MAC Address)/IP Address Filtering
<b>Pan/Tilt/Alarm</b>	
Preset	500 Preset
Special Function	Power Off Memory
Protocol	PTZ_PELCO_D/P, DOME_PELCO_D/P,
<b>General</b>	
Power supply	AC24V
Power consumption	<22W @ IR Off, <29W @ IR On
Voltage protection	TVS 6000V, Lightning/Surge 2000V(power) 1000V(RJ45)
Language	English,Spanish,Korean,Italian,Turkish,Thai,Russian, Polish,French
IP & Vandal protection	IP66
Reset switch	Yes
Operating temp. & humidity	-40°C ~ 70°C & 0% ~ 95% RH
Enclosure	Metal housing, 3 axis bracket(External)
Weight (g) & Dimension	<3.5Kg camera, 435mm(L) X 165mm(W) X 110mm(H)

### Dimension :

