The VIVOTEK MS8391-EV is designed with multiple sensors providing higher resolution, maximizing the field of view and reducing the total number of cameras required, thereby saving on the installation costs. Featuring 4 x 3MP CMOS sensors, the multiple sensor network camera can monitor full horizontal views and deliver high-quality comprehensive coverage, making it an ideal outdoor surveillance solution with sharper images for more details. Covering a wide angle of 180 degrees, the MS8391-EV provides complete video security with no dead angles.

By having Multiple Sensors with 12-Megapixel resolution, users can ePTZ across the entire panoramic image for detailed views. Employing VIVOTEK’s Smart Stream II technology, the MS8391-EV can reduce both bandwidth and storage consumption by up to 50%* while maintaining high standards of image quality.

Additionally, as a professional day/night camera, it adopts a Smart IR technology which prevents overexposure and provides noise reduction to adjust the IR lighting intensity instantaneously based on the changes of light in the ambient environment. Finally, the MS8391-EV is armed with a robust IP66 and IK10-rated housing to enable the multi-sensor camera to withstand rain and dust as well as to protect against vandalism or tampering.

* Depending on scene
**Technical Specifications**

**System Information**
- **Model**: MS8391-EV
- **CPU**: Multimedia SoC (System-on-Chip)
- **Flash**: 128MB
- **RAM**: 1GB

**Camera Features**
- **Image Sensor**: 1/2.8" Progressive CMOS
- **Maximum Resolution**: 7552x1416
- **Lens Type**: Fixed focal
- **Focal Length**: f = 6 mm
- **Aperture**: F1.6
- **Field of View**: 180° (Horizontal), 34° (Vertical)
- **Shutter Time**: 1/5 sec. to 1/32000 sec.
- **WDR Technology**: WDR Enhanced
- **Day/Night**: Removable IR-cut filter for day & night function
- **Minimum Illumination**: 0.23 Lux @ F1.6 (Color), 0.01 Lux @ F1.6 (B/W)
- **Preset Locations**: 20 preset locations
- **Pan/Tilt/Zoom Functionalities**: ePTZ: 48x digital zoom (4x on IE plug-in, 12x built in)
- **IR Illuminators**: Built-in IR illuminators, effective up to 30 meters with Smart IR IR LED4
- **On-board Storage**: Slot type: MicroSD/SDHC/SDXC card slot

**Video**
- **Compression**: H.264 & MJPEG
- **Maximum Frame Rate**: 7 fps @ 7552x1416
- **Maximum Streams**: 4 simultaneous streams
- **S/N Ratio**: 63 dB
- **Dynamic Range**: 60 dB
- **Video Streaming**: Adjustable resolution, quality and bitrate Configurable video cropping for bandwidth saving Smart Stream II
- **Image Settings**: Time stamp, text overlay, flip & mirror, scheduled profile settings, configurable brightness/contrast/ saturation/sharpness, white balance, exposure control, gain, backlight compensation, privacy masks

**Audio**
- **Audio Capability**: Two-way audio (full duplex)
- **Compression**: G.711, G.726
- **Interface**: External microphone input, External line output

**Network**
- **Users**: Live viewing for up to 10 clients
- **Protocols**: IPv4, IPv6, TCP/IP, HTTP, HTTPS, UPnP, RTSP/RTCP/RTCP, ICMP, SMTP, FTP, DHCP, NTP, DNS, DDNS, PPoE, CoS, QoS, SNMP, 802.1X, NTP, ARP, SSL, TLS
- **Interface**: 10 Base-T/100 BaseTX Ethernet (RJ-45) "It is highly recommended to use standard CAT5e & CAT6 cables which are compliant with the 3P/ETL standard."

**Intelligent Video**
- **Video Motion Detection**: Five-window video motion detection

**Alarm and Event**
- **Alarm Triggers**: Motion detection, manual trigger, digital input, periodical trigger, system boot, recording notification, camera tampering detection, audio detection
- **Alarm Events**: Event notification using digital output, HTTP, SMTP, FTP, NAS server and SD Card File upload via HTTP, FTP, FTP, NAS server and SD card

**General**
- **Connectors**: RJ-45 cable connector for Network/PoE connection, Audio input, Audio output, AC 24V power input, Digital input1, Digital output1
- **LED Indicator**: System power and status indicator
- **Power Input**: AC 24V, IEEE 802.3at PoE Class 4
- **Power Consumption**: AC 24V: Max. 43.5W/15.6W (Heater on/off), IEEE 802.3at PoE: Max. 23.5W/15.6W (Heater on/off)
- **Weight**: 2.9 kg
- **Casing**: Weather-proof IP66-rated, Vandal-proof IK10-rated
- **Safety Certifications**: CE, LVD, FCC Class A, VCCI, C-Tick, UL
- **Operating Temperature**: AC 24V: Starting Temperature: -40°C ~ 60°C (-40°F ~ 140°F), Working Temperature: -50°C ~ 60°C (-58°F ~ 140°F) IEEE 802.3at PoE: Starting Temperature: -20°C ~ 60°C (-4°F ~ 140°F), Working Temperature: -20°C ~ 60°C (-4°F ~ 140°F)
- **Humidity**: 90%
- **Warranty**: 36 months

**System Requirements**
- **Operating System**: Microsoft Windows 8/7/Vista/XP/2000
- **Web Browser**: Mozilla Firefox 7~43 (Streaming only), Internet Explorer 7/8/9/10/11
- **Other Players**: VLC: 1.1.11 or above, Quicktime: 7 or above

**Included Accessories**
- **CD**: User's manual, quick installation guide, Shepherd, VAST
- **Others**: Quick installation guide, warranty card, software CD, desiccant bag, alignment sticker, wall mount kit, screws, sun shield

**Dimensions**

![Dimensions Diagram]
## Compatible Accessories

### Mounting Kits

- **AM-312**: Pole Mount Adapter
- **AM-412**: Corner Mount Adapter

### Cabinet

- **AT-CAB-001**: Cabinet, IP66, IK10
- **AT-SUN-001**: Sunshield
- **AT-SWH-000**: Power Safety Kit
- **AT-PS-P-001**: Surge Protector
- **AW-IHT-0100**: Industrial Gigabit 30W PoE Injector
- **AW-IHT-0200**: Industrial 1xGE, 30W PoE + 1xGE SFP PoE Switch
- **HLG-80H-48**: Industrial 48VDC/80W Power Supply

### PoE Kit/Power Adapter

#### 24VAC

- **AA-341**: AC 24V 3.5A Power Adapter

#### 30W PoE

**Outdoor PoE Switch**

- **AW-FET-053C-120**: 4xFE PoE + 1xFE UTP Unmanaged PoE Switch, 120W
- **AW-FGT-103C-250**: 8xFE PoE + 2xFE Combo Unmanaged PoE Switch, 240W
- **AW-GET-083A-120**: 4xFE PoE + 2xFE UTP + 2xFE SFP Unmanaged PoE Switch, 120W
- **AW-GET-086A-120**: 4xFE PoE + 2xFE UTP + 2xFE SFP VivoCam L2+ Managed PoE Switch, 120W
- **AW-GET-126A-240**: 8xFE PoE + 4xSFP VivoCam L2+ Managed PoE Switch, 240W

**Indoor**

- **AP-GIC-010A-030**: 30W PoE Injector
- **AW-GEV-267A-370**: VivoCam L2+ Managed 24xFE PoE + 2xFE Combo Switch
- **AW-FCT-260C-380**: Unmanaged 24xFE PoE + 2xFE Combo Switch